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COMMODIFYING FREE LABOR ONLINE: SOCIAL MEDIA, AUDIENCES, AND ADVERTISING

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A news segment reveals the latest in mobile phone technology. In the clip, a woman on the phone asks a friend, "Where do you want to go for lunch?" "There are some great restaurants in my neighborhood," he replies. Suddenly, a third voice enters the call. "Hungry?" asks the rapid-fire baritone. "Sonny's barbeque. The-best-place-to-grab-comfort-food-hundreds-of-locations-nationwide." The friends' decision has been made, explains a reporter, thanks to a new service from Google that provides mobile phones for free, subsidized by advertisements whispered directly in speakers' ears. Using similar technology to its email service, Google's phone software detects keywords in conversations and, the reporter notes, "verbally suggest[s] related products and services on the spot." Soon, he continues, "users won't remember a time when they *didn't* have a voice whispering in their ear."

Fortunately, this segment was created by news parody website *The Onion* (2010) to poke fun at advertisers' increasingly intrusive tactics. Although intended as a joke, the fake news clip provides discomfortingly prescient commentary on the lengths advertisers would go to reach consumers, if they could. After all, users of Google's email program already receive advertisements that reflect the contents of their messages. And, thanks to what marketers call "personalized retargeting," someone who views a pair of shoes online may find that exact pair of shoes following her around the web, popping up on sites she subsequently visits (Helft and Vega 2010). Online advertising became very personal in January 2011 when Facebook, the world's largest social network, began transforming information members input into their profiles into ads that appear on friends' pages. Now, when someone mentions a business or product, that bit of information is turned into an ad—or a "sponsored story," in Facebook's more obfuscating term—with the person's name and photo alongside a corporate logo. This process also occurs when a Facebook member "likes" something on a third-party website or "checks in" to a location via mobile phone. Members cannot turn off or opt out of this feature (Facebook 2011).

Online advertising has become increasingly personalized, targeted, interactive, and lucrative since banner and pop-up ads first appeared in the 1990s, when online ad

placement was based on proximity to content (Angwin 2010). Now, sites and marketers are able to target specific advertisements to specific people, based on what we click on or type online. This is a profitable strategy: online advertising spending reached $26 billion in the United States in 2010 and CAD$2.3 billion in Canada (IAB 2011; IAB Canada 2011). In 2010, Twitter earned $45 million in advertising revenue, and Facebook is projected to earn $4.05 billion in ad revenue in 2011 (Reese 2011; Slutsky 2011). These high financial stakes mean that social media, with their promises of personalization and interactivity, have become the new frontier for online advertising.

"Social media" is the catchall phrase for websites and platforms that have emerged in the transformation to Web 2.0, the second generation of online production, where audiences of millions participate and interact by creating and circulating content online. At their most basic, social media sites such as Facebook, MySpace, Twitter, YouTube, and LinkedIn provide space for users to build profiles, link to networks of contacts, and share information in various forms (boyd and Ellison 2008). On these sites, people voluntarily reveal personal information, including birthdates, phone numbers, and political and religious affiliations, interact with friends and strangers, swap links, share videos, and upload pictures, all under varying degrees of privacy. People use social media applications on the go, sharing locations via GPS to let friends (and sometimes strangers) know where they are eating lunch or getting a haircut. Social media offer businesses new, boundary-pushing opportunities to tap into people's online activity by collecting enormous amounts of personal information and seamlessly integrating advertising and social networks. The shift to the social, participatory web has become a virtual gold mine for corporations running up against the limits of the "old" mass advertising system, which depended on large groups of people watching the same thing at the same time.

Social media have ushered in a major adjustment in the role of the audience. Users, formerly known to media companies as consumers, are now integral to the production process. On social media sites (or sites that incorporate social media elements), consumers are transformed into producers, creating the content that is fundamental to these sites' existence. The sites then capitalize on the time users spend participating in communicative activity. As media consultant Tim O'Reilly (2005) notes, using similar terminology to Marxist scholars, Web 2.0 harnesses the "collective intelligence" of crowds to create value from information that participants share online. Although people participate voluntarily and enjoy participating, this productive activity is transformed into profit for privately owned companies.

In 2010, Facebook syndicated use of its "like" button to third-party websites. With a quick mouse click, users can "like" a product on another website and it will instantly appear on their Facebook profiles. Twitter users can follow products and businesses, retweet promotional messages, and have public conversations with companies. Twitter recently introduced promoted (i.e., paid-for) accounts, and "promoted trends," which lets advertisers pay for placement atop a list of topics that are popular at a given time. Soon the site will begin inserting promoted tweets—advertisements in 140 characters—into users' Twitter feeds, a non-optional feature (Peterson 2011). And, when it comes to emerging location-based social networks, advertising is built into their very use. On Foursquare, members "check in" via a smartphone or text message, share their locations with their networks, and collect points and virtual badges for places they visit. Not only does merely using Foursquare provide free promotions for companies, but the site actively works with companies to help them "utiliz[e] a wide set of tools to obtain, engage, and retain customers and audiences" (Foursquare 2011).

Social media platforms are designed to make advertising more personalized and user-specific. They strive to build advertising features into the sites' architecture in a way that is "core to the user experience" (Facebook Marketing Solutions 2011), which means sites can help advertisers capitalize on the time people spend online without completely alienating users. Social media advertising is purposefully pared down and unobtrusive, as marketers have happily discovered that recommendations from friends or even strangers online can deter "ad burnout," and that "everyone clicks more if a friend likes an ad" (Webtrends 2011: 1, 4). Self-initiated and self-organized social networks provide advertisers with immediate and endless feedback loops, their messages rolling through layers of online social networks. It is clear that social sharing of cultural tastes online has smoothly transitioned into free advertising for a growing number of companies. The "prosumer"—a somewhat benign term coined in 1980 to describe the offloading of paid work onto consumers who perform it for free (Toffler 1980)—has evolved, as Taylor (2010) puts it, into the digital serf.

To understand the dynamics of capital accumulation online, in this chapter I examine social media advertising and the shifting nature of the audience's productive activity. I explore the economic significance of audience participation on social media: as we spend time online, we generate information that is instantly collected, analyzed, sold, and then presented back to us in the form of targeted advertisements that reflect our online behavior and consumption patterns. Online audiences are increasingly subject to dataveillance, or "systematic monitoring of people's actions or communications through the application of information technology" (Fuchs 2010: 15). Social media sites have capitalized on these practices thanks to a shift in the audience's role, from consumers sold as demographics to advertisers to an active online audience that creates content and generates valuable personalized information for media companies and advertisers. Audiences' communicative activity and sociality are captured and commodified, feeding the circuits of flexibilized media production.

Considering theorizations of what has been called free labor online (Terranova 2004), I argue that the process of commodification is at the core of capital accumulation on social media sites. Users do not just generate value for companies by creating and circulating content, but also generate a new commodity form: the cybernetic commodity, which consists of the information or feedback created from their actions and interactions online. A double process of commodification is underway on social media sites: audiences are attracted to sites and access to them is sold to advertisers, but audiences also create a new commodity that generates value for social media. Information they generate through online activity is mined for profit, a crucial component of a growing market in metadata. The notion of double commodification speaks to the dual role of social media users: a source of free labor as well as providers of information that is sold for profit or used in the process of profit generation. This practice reflects larger patterns of capitalist exploitation, under which general social relations are increasingly becoming productive.

Theorizing the Audience's Shifting Role in Advertising

Dallas Smythe was the first to identify the role the audience plays for media companies. Smythe (1981) examined how media companies, advertisers, and audiences are integrated into the capitalist economy through a productive relationship that generates surplus value. Assessing advertising-based mass media, Smythe argued that media

accumulate capital by generating audiences to "sell" to advertisers.[1] The audience then works for advertisers, laboring by learning to desire, generating demand for, and consuming mass-market goods and services. By naming the audience as the primary commodity that media produce, Smythe sought to demonstrate how media industries are productive for capitalism and, critically, bound up in processes of commodification.

Smythe introduced the idea of the audience as both commodity and workers. His notion of audience work anticipated current audience-as-participant digital media forms, in which the time people spend interacting on social media websites—which has been conceptualized as free labor, or unpaid working time—is transformed into surplus value for corporations (Cohen 2008; Coté and Pybus 2007; Fuchs 2011; Terranova 2004). However, in Smythe's formulation, the work of the audience came after a program was produced and broadcast. Social media, free of the strictures of time and place, have pushed the work of the audience to the extreme: these sites still package audiences into demographics for advertisers, but the audience also provides the content that is the very constitution of these sites. We upload the videos and photos on offer on YouTube and Flickr. We create profiles on Facebook and MySpace and link to others, creating the substance of social networks, and then fill our profiles with the information that entices our friends to log in, day after day. We let social media websites and applications comb our contact lists and invite our friends to join, relieving firms from undertaking expensive promotions. And, crucially, the content we provide and the way we interact with these websites generate information that is collected, analyzed, packaged, and sold to marketing firms, or aggregated and sorted to attract advertisements placed alongside Facebook profiles or in lists of trending topics on Twitter. The generation of data is what has advertisers most excited about the potential for marketing online.

Marketers are not the only celebrants of the ascendancy of the active audience. Media commentators have hailed the arrival of interaction online as a form of "revolutionary participation" (Andrejevic 2007: 15). Technology and business scholars have optimistically assessed the power audiences have been imbued with to create and distribute content, to interact with traditional media outlets via comments, and to speak directly to companies through social media. Boosters of online mass collaboration praise the audience's new role, arguing that "informed, networked, empowered, and active consumers are increasingly co-creating value" with firms (Prahalad and Ramaswamy 2004: 5). Celebrants highlight the benefits, for both companies and for consumers, of active audiences willingly contributing to marketing efforts. The term "co-creation" implies a partnership, whereby companies and consumers collaborate for equal benefit. In this model, everyone seems to win: companies can perfect their products and hone marketing efforts, while customers choose which firms to have "relationships" with (ibid.). Pitt et al. (2006: 118) go so far as to claim that power and control in "customer–organization relationships" are now "radically decentralized and heterarchical." Tapscott and Williams (2008) praise the new model of production emerging online, wherein companies source new ideas (and new sources of profit) from activated online audiences. However, such celebrations of crowdsourcing tend to conflate participation, activism, and collaboration online (such as contributing to open-source software development or the not-for-profit, user-produced *Wikipedia*) with companies outsourcing unpaid labor to users, labor that could be—and in many cases used to be—performed by paid workers.

Co-creationists recognize that value is generated from users' interactions with social media, but these advocates focus predominantly on the benefit companies accrue from engaging in dialogue about consumption habits and preferences. They do not

acknowledge that value is extracted from users' online activity, often unknowingly. Rather than desiring simple engagement in "open dialogue" with customers, companies want access to and use of data collected from people navigating and interacting with social media. Instead of flattening power relations between consumer and producer via social media, firms harness the activity of Internet users and frame this practice in a discourse of benign interaction, obscuring the economic relations circulating through these spaces (Facebook's tagline, for example, states simply that it "helps you connect and share with the people in your life"). When information is collected from every user clicking through social media sites, and when users have no control over how this information is collected, processed, or disseminated (Andrejevic 2011; van Dijck and Nieborg 2009), significant power disparities are at work.

Traces of Smythe's concept of audience labor are present in critical scholars' understandings of how value is created online. Terranova (2000) identified early forms of what she called free labor online, such as creating websites, modifying software, and participating in e-mail lists. This is activity that is not immediately recognized as work, does not produce material goods, and is not defined by terms of a wage-labor relationship, yet it produces value for capital. Free labor online was "not developed simply as an answer to the economic needs of capital" (Terranova 2004: 79), but demonstrates the ways in which collective social and cultural knowledge are channeled online and transformed into value. Drawing on autonomist Marxist theorizing of the transition to post-Fordist modes of production, Terranova argues that "the production of value is increasingly involving the capture of productive elements and social wealth that are outside the direct productive process" (75). For autonomists, this transformation has meant that people's communicative capacities and sociality—what is described as immaterial labor—are increasingly becoming productive for capital. Immaterial labor refers to work that "produces the informational and cultural content of the commodity" (Lazzarato 1996: 133) and which generates knowledge, communication, and affect (Hardt and Negri 2000). The concept is useful for recognizing how, more than ever before, communication is vital for the creation of value in contemporary capitalism (Brophy and de Peuter 2007: 179). For Dean (2010), interaction and participation online via blogging and communicating on social networks animate contemporary capitalism. She uses the term "communicative capitalism" to describe how capital captures communicative activity, engaging users in "extensive networks of enjoyment, production, and surveillance" (3–4).

Researchers have drawn on the concepts of free and immaterial labor to examine the dynamics at work in social media, arguing that users create value for sites by generating and circulating content and producing online social relations (Cohen 2008; Coté and Pybus 2007; Zwick, Bonsu, and Darmody 2008). In this way, Web 2.0, particularly social media, has transformed the nature of the work audiences perform. Smythe's audience, whose work took place in people's heads after the content was produced, has evolved into an audience of immaterial laborers, filling out profiles, checking in via mobile phones, uploading video, and generating communicative activity online. People's interactions and use of websites and applications are the productive activity that activates these sites and attracts further participation. As social media sites continue to emerge, and as their profits and stock-market valuations increase, it becomes increasingly clear that users' immaterial labor generates critical inputs for the digital economy (Terranova 2004).

However, there is more to this story. Recognizing free or immaterial labor online and tracing the evolution of Smythe's watching audience to a working audience do not fully

capture the process of value creation online. As Andrejevic (2011: 280) emphasizes, the source of value for social media firms does not come solely from creating and distributing content online, but rather from the "capture and use of . . . data" (see also Fuchs 2011; Zwick, Bonsu, and Darmody 2008). Consumption and production are indeed blurred on social media sites through the generation of user-created content, but there is an additional layer of activity at work. Free labor on social media sites is productive not just because it creates free content, but because it generates valuable "information commodities" (Andrejevic 2011: 286).

Smythe's original argument is worth revisiting here, for it was not only the work of the audience that he aimed to identify. Rather, his formulation developed in response to an academic debate at the time: What commodity does the media produce? Smythe's initial concern was with commodification, or the transformation of something that satisfies a human need or want into something that can be exchanged for a price on the market: a transformation of use values into exchange values (Mosco 2009). Smythe demonstrated how the process of commodification occurs in mass media: individuals assembled to watch a television program are transformed into groups whose attention and potential to consume are sold to advertisers.

The commodification process, more so than audience labor, is central to the generation of value online. Social media commodify user information, transforming data collected through people's useful, satisfying, or entertaining interactions on these sites into products that can be sold. Foregrounding the processes of commodification on social media reveals obscured dynamics of power and value creation, providing a deeper account of the relationship between advertising and social media. Social media companies are in the data collection business, generating information marketers desire to target advertising to specific potential customers. Search giant Google pioneered this practice. As van Dijck and Nieborg (2009: 865) write, "Google is less interested in co-creation or content than it is in people making connections—connections that yield valuable information about who they are and what they are interested in." Following suit, social media firms have found a strategic method of creating value from sociality by commodifying the information generated by human interaction, effectively commodifying social relationships. Prahalad and Ramaswamy (2004: 7) implore firms to "co-create value with customers through an obsessive focus on personalized interactions." This focus cannot get more obsessive, or more personalized, than tracking people's every online move.

The Cybernetic Commodity and the Valorization of Surveillance

Concern about information tracking online is mounting. Even *Time*, the magazine that in 2006 appointed the interactive "You" its person of the year, expressed alarm about this practice in a cover story: "You know how everything has seemed free for the past few years? It wasn't . . . instead of using money, you were paying with your personal information" (Stein 2011). Although *Time* may have just caught on, companies have been collecting information about media consumption habits since the late nineteenth century in an effort to manage consumer demand and improve production efficiencies (Ardvisson 2004). Traditional audience measurement tracked audience exposure to content through readership reports, syndicated ratings services, surveys, polls, and focus groups (Napoli 2011). While these activities have increased dramatically over the past two decades, techniques have evolved with the development of technologies that can

provide finer-grained details about consumers. Market research strategies can now differentiate market segments to more precisely profile consumers, and emphasis has been placed on generating databases of information that can be systematically collected and sorted (Pridmore and Zwick 2011).

Moving these activities online has granted marketers unprecedented precision with which to track customer behavior and amplify marketing efforts. Whereas previous methods of audience monitoring required consent—people were asked permission to participate in telephone surveys or agreed to keep viewer diaries—audience monitoring has become more obscure and difficult to detect. Crucially, users are no longer asked for permission. The development of digital technology enabled information to be collected, sorted, and transmitted faster and more precisely than ever before (Mosco 1989), and the Internet has vastly increased the possibilities of extracting value from information. On social media sites, where much of this data is collected, users are engaged in a double process of commodification: not only are audiences assembled and access to them sold to third parties (commodification as Smythe described it), but the information a user inputs, either directly as content or by clicking and typing on a website, is commodified, transformed into something sold for profit.

In the decades preceding social media, Meehan (1984) argued that the primary commodity that ad-supported media produce is ratings, or measurements of and reports about who watches and when. Mosco (1996: 151) defines ratings as cybernetic commodities to describe the way feedback (in the form of television ratings) is transformed into a commodity, either to be sold outright or to be used in the production of another commodity (the television program, for example). As a feedback mechanism, ratings contribute to the constitution of other commodities. The cybernetic commodity emerges out of developments in information and communication technologies that enable monitoring and surveillance (Mosco 1996), capacities that have been greatly enhanced online. Now, cybernetic commodities are produced through the surveillance of online audiences and the collection of data, which becomes the private property of firms (Andrejevic 2007). The outcome of the social media production process has become a commodity in and of itself: the latest version of the cybernetic commodity. Social media, argues Andrejevic (2011: 284), "rely on the redoubling of user activity in the reflexive form of information about this activity." In addition to users constituting these sites by creating and circulating content, social media sites benefit from the extraction of information.

It is through this commodification process that value is created online. Each link shared, each search term inputted, each "check-in," tells a website something about its users. This shift in the audience commodification process is notable. Whereas previously advertisers sought information about large undifferentiated audiences, acquired through sampling mass viewership (Smythe 1981), albeit with some demographics more desirable than others, advertisers now seek more precise information: intimate details about individual users and their online preferences and behavior. Digital technology and the interaction-based design of social media sites have provided firms with the ability to gather, aggregate, and analyze information about people that was previously unreachable, including information about "audience members' media consumption habits, content preferences, degree of engagement, and levels of interest in, anticipation about, and appreciation of, the content they consume" (Napoli 2011: 9). Critically, firms can now monetize this information, which is driving the growth of social media.

The cybernetic commodity is produced in a variety of ways, most overtly from the biographical details people offer willingly when they sign up for a social media account,

including names, street and email addresses, phone numbers, gender, birthdates, nationality, and income (van Dijck 2009). In addition, sites log IP addresses, pages visited online, length of time spent on websites, ads viewed and clicked on, articles read, purchases made, search terms typed, language, web browser and operating system preferences, and geographical location online and via mobile phones (Office of the Privacy Commissioner of Canada 2010). Most social media sites provide details about the information they collect in their terms of use and privacy policies. These are lengthy and complex legal documents users are required to agree to in order to participate, but which most people do not consult and, if they do, find difficult to understand (Harris/Decima 2011; Turow, Hennessy, and Bleakley 2008).

Still, a large amount of the data listed above is collected through third-party companies that trawl the web, collecting information used to target advertising and marketing campaigns. Data mining techniques have developed to include real-time monitoring online, descriptions of behavioral patterns, and predictions of future behavior. Third-party companies monitor online "chatter" using scraping software to search keywords, measuring and analyzing conversations on blogs and social networks (Berkman 2008; Napoli 2011). Firms collect data using cookies or beacons, which track text entered onto a website or trace mouse movements, and flash cookies, which can "secretly reinstall" regular cookies that users may have deleted (Angwin 2010). These tools enable advertisers to engage in behavioral targeting. Advertisers can check for cookies, learn about what you view online, and deliver a related advertisement in real time, tailored to your "location, income, shopping interests, and even medical conditions" (ibid.).

Under Smythe's audience commodity model, an advertiser's payoff on their investment occurred when a consumer made a purchase. However, advertisers could not know if a particular ad was effective and had no way to measure how a person responded. Social media monitoring, on the other hand, gives advertisers unprecedented feedback. As one Internet marketing company puts it, "measurable is the new 'gee, I hope this works'" (HubSpot 2011), which is why social media monitoring has become very profitable. Profiles created about individuals are bought and sold on "stock-market-like exchanges" such as BluKai, which sells 50 million pieces of information about individuals' online behavior daily (Angwin 2010). Companies like ReSheriff, Acxiom, RapLEAF, and Phorm have developed sophisticated ways to track and bundle data, transforming what used to be a scattering of niche companies into a rapidly growing, consolidated industry (see Turow in Chapter 8 of this volume for more on behavioral targeting).

Google pioneered precision advertising by developing a cost-per-click advertising model built around the process of cybernetic commodification. Its AdWords program enables advertisers to bid to place small text ads beside search-term results, paying only when someone clicks on an ad. Google's DoubleClick places display advertising in a similar way, and in 2009 the company's advertising revenue reached more than $20 billion per year (Auletta 2009). DoubleClick, writes Auletta:

> boasts that it "track[s] more than 100 metrics" . . . including which ads users download, how long they view them, where they scroll, what links they click on, if they view an ad and later visit the site, what products interest them, what ads "resonate the most," what they buy and choose not to buy and how much they spend.
>
> (174)

Google offers marketers hourly or daily clicks and sales reports, keyword traffic, and details on the number of clicks that result in a purchase. The company initiated a dramatic shift toward targeted advertising, transforming the practice of audience measurement from a tally of eyeballs that viewed a commercial to documenting the intimate details of a person's online habits.

Similarly, social media sites are developing new ways to cash in on the cybernetic commodity. Facebook, which previously only allowed advertisers to target users based on demographic characteristics entered into profiles, is testing a program called "Related Adverts," which will place ads based on words people type into their status updates and wall posts (Constine 2011). Twitter now sells data culled from the 155 million tweets its users send per day, filtered by keywords. This service provides access to message contents, user names, and account biographies (Kirkpatrick 2011). In an announcement about improved user analytics, a Twitter executive explained, "If you want to advertise against the term 'jeans' to people in Cleveland, you can now do that. Tweet by tweet by tweet, for each organic and paid tweet, we're able to tell you how it's resonating" (cited in Slutsky 2011). This information, and the ability to generate and process it quickly and cheaply, provides advertisers with unparalleled opportunities for personalization and precision targeting. Online ads can and will continue to be delivered based on people's immediate interests and expressions, deeply tying online sociality to the process of commodification.

Surveillance is central to these activities, but identifying the cybernetic commodification process emphasizes that surveillance is not just an intrusion on personal privacy, but productive for capital (Andrejevic 2011; Fuchs 2011). This argument effectively redirects a concern about privacy online to directly engage with the economic processes and political implications underlying social media. As Andrejevic (ibid.: 282) notes:

> The prospect that advertising might become more effective because it will be able to predict human behavior with a greater degree of reliability, and thereby to help manage the populace more efficiently in accordance with commercial imperatives, is disturbing in a different way from privacy concerns. There is more at stake in interactive forms of surveillance than violations of traditional privacy norms: specifically the concentration of new forms of predictive power in the hands of commercial interests.

Indeed, as Shepherd (2012) observes, Facebook's privacy policy declares that "Sometimes we share aggregated information with third parties to help improve or promote our service. But we only do so in such a way that no individual user can be identified or linked to any specific action or information" (Facebook 2009)—promising individual privacy while generating aggregate information, a commodity Facebook does not pay for but profits from.

The capacity to track and process data is viewed as "a key competitive advantage in contemporary information capitalism" (Pridmore and Zwick 2011: 270), and social media are becoming leaders in this area. Positioned in terms of the valorization of surveillance and commodification of user information, social media cannot be understood outside of the broader context of capitalist accumulation in a digital age, where the relentless drive to accumulate and to rationalize production has moved online, speeding up processes of commodification and exploitation already underway in the broader economy (Mosco 1989).

Power and Exploitation in Communicative Capitalism

Under conditions of communicative capitalism, social media are primary sites of commodification, places where the spirit of access, interactivity, and participation is harnessed and capitalized on, creating surplus value for corporations. "Just as industrial capitalism relied on the exploitation of labor," writes Dean (2010: 4), "so does communicative capitalism rely on the exploitation of communication."

Here, again, Smythe's analogy of a laboring audience is useful. Just as wage laborers exercise power or agency, the audience can, too, but it is "power circumscribed within terms largely set by capital" (Mosco 2009: 138). Mosco, Dean (2010), and Terranova (2004) emphasize the tensions and contradictions structuring communicative capitalism, acknowledging that online activity can bring users pleasure at the same time as fuelling a power imbalance between those who produce content and provide metadata, and those who profit from it. Andrejevic (2011) in particular has emphasized the power inequities between users and owners of social media sites, not just in the provision of free content, but because of the process and social relations that result from the commodification of information. This power imbalance demonstrates that the cybernetic commodity, like all other commodities, represents a congealed set of social relations, specifically the social relations of capitalist production. Its use online reproduces existing power relations, concentrating wealth in the hands of the capitalist class.

User-generated content online is "redoubled" in the form of the cybernetic commodity, transformed into secondary information over which users have no control: we cannot decide when and where data is collected or determine how data is used (Andrejevic 2011: 286). Data collected is returned to us in an "unrecognizable form" (287), as advertisements appear as we surf the web, or alongside Facebook profiles and in Twitter feeds. For Andrejevic, this is a form of separation, or alienation, as the products of people's productive activity appear to them in an alien form. In this way, critics propose that what celebrants call co-creation is in fact exploitation, since someone else extracts and controls the results of users' productive activity (Andrejevic 2011; Fuchs 2011; Zwick, Bonsu, and Darmody 2008).

The capture of productive activity online reflects the condition of value extraction in contemporary capitalism, where work seeps into leisure time and leisure time becomes work, where autonomous communicative creation and alienation overlap, and, critically, where processes of commodification extend beyond the traditional workplace and wage-labor relationship, extracting value from ever-widening aspects of our lives. Capitalizing on information shared online is part of a larger pattern of capital accumulation in the information age as companies seek to commodify information in the form of intellectual property, copyrights, and patents, not only from the labor of paid workers such as scientists, artists, and writers (see Fisk 2009), but also from the free labor of video game players online, for example (Grimes 2006; Kücklich 2005). As larger portions of the web become subject to monitoring and exploitation, participation online will increasingly carry with it the condition of surveillance—people must consent to being watched—and to the commercialization of more and more aspects of our lives (Andrejevic 2007), including activities we may pursue precisely because we are seeking non-commodified spaces or social relations (Smythe 1981; Terranova 2004).

Mosco (1996) refers to this process as extensive commodification, whereby market forces enter spaces previously untouched, or lightly touched, by capitalist social relations to shape and reshape life. The effect of this process is a naturalization of

commodification, further entrenching the social relations of capitalism as inevitable, a "taken for granted reality of social life" (Mosco 2009: 144). Like most processes under capitalism, however, the extraction of value online is not guaranteed, and social media firms' paths to monetization have not been easy. Advertisers can target ads as precisely as technology permits, yet there is no guarantee a user will click on an ad, let alone make a purchase. Recent reports note that growing numbers of people are "unliking" brands on Facebook (Sachoff 2011), and that only 6 percent of 12- to 17-year-olds in the US "are interested in interacting with brands on Facebook," despite teens' heavy use of the site (Titlow 2011).

Some signs point to user fatigue. The *Daily Mail* reported that 100,000 Britons deactivated their Facebook accounts in May 2011, because of either privacy concerns or boredom (Bates 2011). One blogger wonders if Facebook users should be remunerated for their efforts, asking "Shouldn't we come together and demand our rightful portion of its wealth?" (Kirn 2011). Another complains of supplying websites with hundreds of free reviews in a post titled "I'm Tired of Creating Your Content" (Jozefak 2010). Savvy Internet users block advertisements with programs that are available to expose and block data-tracking applications. People value social media, but many dislike being constantly marketed to, and thoroughly commodifying these spaces means that some users may stop logging in. This is likely why Twitter has introduced in-stream advertising tentatively, limited to people who already follow particular companies or products that advertise, demonstrating recognition of people's reluctance to have ads in what they consider to be personal space.

These small signs of refusal, however, are undermined by evidence that social media use is increasing and that users are revealing larger amounts of personal information online. For example, even as early adopters tire of social media or grow concerned with privacy policies, new batches of users, particularly younger users, take up social media (Gartner 2011). In addition, the percentage of people who provided personal information in their public Twitter biographies has more than doubled, from 31 percent in 2009 to 63.3 percent in 2010 (Watters 2010). Eighty-two percent of users provide their real name to the site, and 73 percent provide their location (ibid.).

As social media use increases, governments are seeking improved privacy protections through research, campaigns, public service announcements, and direct engagement with social media firms (see the activities of the Office of the Privacy Commissioner of Canada, for example). The German state of Schleswig-Holstein has proposed a ban on the use of Facebook's "like" button, its data protection officer citing concerns with privacy and data tracking (Eddy 2011). Advocacy groups in Canada and the Federal Trade Commission have recommended that governments implement a digital "do-not-track" list, yet Shade and Shepherd (forthcoming) raise concern that this model is based on industry self-regulation. In April 2011, US Senators John Kerry and John McCain introduced the Commercial Privacy Bill of Rights Act of 2011, aimed at granting web users control over what information is collected about them and how it is used. The bill would require companies, including social media sites, to alert users when data are collected and would require companies to collect data only on an opt-in basis. Critics, however, note that such a bill does not bar companies from building and selling "cyber-dossiers" on users, but rather "requires consumers to take a proactive step and demand it be stopped—likely by finding links on websites and on ads to opt out" (Kravets 2011).

Despite these small challenges, it is likely that companies will continue—successfully or not—to expand processes of commodification online, harnessing new and

emerging technologies to exploit information, communication, and sociality. As history has shown, technology has consistently been used by capital to wrest control over production from workers, reorganize production, and increase the exploitation of surplus value. Over two decades ago, Mosco (1989) identified the ability of developing communication technologies to further processes of commodification, and, unless the mode of production is radically transformed, social media sites will continue to develop innovative ways of monetizing metadata. As users continue sharing personal information, knowingly or not, social media sites will continue to mine it for profit. Facebook indicated as much in a recent letter to Congress, which stated that, despite privacy concerns, the company planned to continue to provide third-party developers with access to users' phone numbers and current addresses (Morrison 2011). Even more brashly, Facebook Canada's managing director argues that consumers believe it is "their right" to receive personalized, targeted advertisements, noting that social media platforms are finally able to facilitate the "meaningful and rich relationships with brands" that he believes consumers crave (cited in Chung 2010).

Social media companies' efforts to tap into new and growing revenue streams will likely result in even more personalized, targeted, and interactive marketing in order to be seen through the clutter, producing new techniques that continue to push the boundaries of what we had previously thought were the limits on invading private lives. As Murdock (2010: 166) warns, these processes extend the "allowable forms of promotional communication." Soon, it might not seem unreasonable to have an advertisement whispered directly in your ear.

Note

1 Whether media sell the audiences, their watching time, or neither, has been subject to debate. See Jhally (1987), Lebowitz (2009), and a review in Mosco (2009).

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