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Mobilizing the Audience Commodity 2.0: Digital Labour and Always-On Media

Vincent Manzerolle

Abstract

This paper re-examines the work of Dallas Smythe in light of the popularization of Internet-enabled mobile devices (IMD). In an era of ubiquitous connectivity Smythe's prescient analysis of audience 'work' offers a historical continuum in which to understand the proliferation of IMDs in everyday life. Following Smythe's line of analysis, this paper argues that the expansion of waged and unwaged digital labour facilitated by these devices contributes to the overall mobilization of communicative, cognitive and co-operative capacities--capacities central to the accumulation strategies of 'informational capitalism.' As such, the rapid uptake of these devices globally is an integral component in this mobilization and subsumption. In the case of Smythe's provocative (and somewhat controversial) concept of the audience commodity, the work of the audience is materially embedded in, and articulated by, the capitalist application of communication technologies. Consonant with Smythe's emphasis on the centrality of communication and related technologies in the critical analysis of contemporary political economies, this paper elaborates upon the concept of digital labour by rethinking Smythe's theory of the audience commodity as a central principle organizing the technical and social evolution of IMDs.

Introduction

Work under contemporary capitalism is profoundly bound up with the development, deployment, and colonization of everyday life by digital information and communication technologies (ICTs). The near ubiquity of mobile Internet-enabled devices (IMDs), particularly those that exist at the convergence of computing and mobile telephony, are paradigmatic technologies illustrating this point.¹ This paper focuses primarily on one example of these devices—the smartphone², which now constitutes the global mainstream of mobile communication and Internet access. The implications drawn from the following analysis can also be applied to a wide variety of yet to be designed mobile and wireless devices and technologies.

The paper engages with the critical work of Dallas Smythe to frame an analysis of digital labour in an era of ubiquitous connectivity. Smythe's concepts have, arguably, gained a renewed saliency amidst the emerging practices and celebratory rhetoric catalyzed by the emergence of web 2.0 rhetoric in the mid-2000s (see Mcguigan and Manzerolle, 2014). Following his line of analysis, the expansion of both waged and unwaged labour facilitated by devices such as the

¹ According to industry analysts at Gartner Research Inc. (2017), smartphone sales totaled 1.5 billion units in 2016, increasing 5% from the previous year. Fourth quarter sales alone reached 432 million units sold, with Apple and Samsung responsible for the majority of sales.

² IMDs might also include devices like tablets or wearables like smartwatches. Technologies associated with both virtual and augmented reality will similarly offer up new avenues for analysis. The category might also increasingly include technologies not traditionally considered to be ICTs like automobiles or drones.

smartphone, involves, this paper argues, the mobilization of communicative, cognitive and co-operative capacities—capacities central to the accumulation strategies of ‘informational capitalism’ (Fuchs, 2010) or what has been more recently referred to as ‘platform capitalism’ (Srnicsek 2016).³ I argue that the rapid uptake of these devices globally is an integral component of the mobilization and subsumption of human capacity, fitting within longer standing logics of exploitation and accumulation associated with capitalist economies more generally. In the case of Smythe’s provocative (and somewhat controversial) concept of the audience commodity, the ‘work’ of the audience is materially embedded in, and articulated through, the capitalist application of communication technologies. Consonant with Smythe’s emphasis on the centrality of communication and related technologies in the critical analysis of contemporary political economies, this paper elaborates the concept of digital labour by rethinking Smythe’s concept of the audience commodity as a central principle in the technical and social evolution of IMDs.

The argument, therefore, has two central components: first, it examines, Smythe’s contribution to Marxist thought, highlighting the place of communication and communication technologies in the organization of waged and unwaged work. The paper will then develop this framework as it applies to ubiquitous connectivity generally and IMDs specifically. Finally, it will briefly outline how these considerations shed light on the rapid evolution of IMDs as they become dominant across a variety of everyday settings.

From Marx to Smythe: Communication, Labour and Media

Before detailing Smythe’s contribution to the analysis of contemporary forms of digital labour, it is instructive to highlight his connection to key components of Marx’s critique of capitalism, specifically the exploitation of co-operative and communicative capacities by industrial capital. In a section from *Capital Volume 1* entitled ‘Co-operation,’ Marx outlines how a necessary precondition for the creation of surplus value involves enclosing the social and communicative relations between workers (Marx, 1976: 451). Mediated by the process of capital accumulation, these relations materialize as a “free gift” that underpins the production of surplus value. For example, the concept of the division of labour as initially conceived by Adam Smith requires the stable communication and co-operation of individual labourers in order to yield increases in productivity. Under industrial capital, particularly advanced forms associated with “Fordism,” similar capacities are subsumed by, not only internal mechanisms of surplus value production, but also mobilized in the realization of surplus value in the sphere of consumption (e.g. formally unwaged time). As a result of the gains in productivity engendered through the organization and co-ordination of workers, and guided by various bourgeois fetishistic myths,⁴ technology (capital) is seen as the creator, and hence rightful owner, of value rather than the co-operative labour power subsumed by capital. In reality, Marx argues, it is the co-operation of workers, and

³ Communicative capacity refers to a finite index of human potential involving the encoding and decoding of meaning. Moreover, capacity of this sort enables the individuation and articulation of the self as a socially constituted agent within certain social relations. Smartphones are an essential “infrastructure of Being” (Peters, 2015) in contemporary capitalist economies. As a function of capitalist innovation, these capacities are increasingly the object of technical mediation leading to their reconstitution, amplification and prospective exploitation by the commercial application of ICTs.

⁴ For an insightful overview along these lines see Mosco, 2004.

the surpluses created from their co-operation, that generates “surplus value.” For this reason, ‘co-operation remains the fundamental form of the capitalist mode of production...’ (Marx, 1976: 454).

Following Marx’s understanding of the communication and co-operative basis of labour and as a result, surplus value, Smythe demonstrates via a materialist analysis of ICTs under capitalism that the co-operative and creative basis of human labour is a regular object of capitalist mediation and technological innovation. Indeed, technological innovation increasingly mediates the articulation of human communicative capacities in general.⁵ As this mediation increases, it becomes more ‘visible’ to capital via information and data about users and audiences, and more closely incorporated into the feedback loop of production and consumption. For Smythe, one of the key abstractions emerging from this process of mediation is the conceptualization of the audience as a central commodity organizing the “production” of media content and systems. In the commercial broadcast model, viewers’ attention to commercial messages is exchanged for television programmes (the ‘free lunch’). The audience participates in the necessary work of consuming, and responding to, commercial messages. Moreover, this work is essential to the overall reproduction of consumer-facing capitalism by redistributing wages and thereby facilitating the realization of surplus value by making purchases. By performing this service *gratis*, the audience works for media capital by marketing goods and services to themselves and others (Smythe, 1981: 9). In so doing, ‘(a)udiences thus labour for advertisers to assure the distribution and consumption of commodities *in general* (Jhally, 1987: 67, emphasis added). The necessary expansion of consumption required by declining production costs and increasing productivity calls into being the ‘[m]ass media of communications’ as a systemic creation of industrial capitalism ‘whose purpose is to set a daily agenda of issues, problems, values and policies for the guidance of other institutions and the whole population. They [media capital] mass produce audiences and sell them to advertisers’ (Smythe, 1981: xii). Thus, the increasing productive capacity of industrial capitalism is mirrored by a concurrent production of audiences as ‘a new major institution which now holds a central place in the interwoven complex of institutions—the family, workplace, school, church, and state’ (1981: xiii).

Smythe therefore places mass communication, consciousness and communicative capacities within the same productive framework of industrial mass production and consumption by highlighting their necessary role in realizing, as well as conserving, surplus value within the sphere of circulation (i.e. consumption).⁶ It is in this process that the audience commodity becomes central. As Sut Jhally explains,

Industrial capital seeks a means of reducing its circulation costs. Media capitalists offer access to audiences to accomplish this, thus sharing in the surplus value of industrial capital. Consumers participate in the process of buying...It appears that broadcasters sell

⁵ For example in May of 2017, US consumers spent roughly 5 hours using their mobile devices with more than a third of that time dedicated to messaging and social media, (Perez, 2017). These numbers may vary by region and demographic group, but all indications suggest an overall trend towards more time and attention channeled into mobile devices (see Manzerolle, 2014).

⁶ See Marx, 1978.

consumers to industrial capitalists rather than seeing their activities as part of the process of selling commodities of industrial capitalists to consumers. (Jhally, 1987: 117)

Seen from the perspective of the total circuit of capital, the media and cultural industrial are important components in the expanding and speeding up this circulation of commodities through the incorporation of pre-existing communicative and co-operative capacities by evermore sophisticated and ubiquitous ICTs. The broadcasting model that defined the rise of the audience commodity, and the more contemporary forms of fragmentation that mark Internet users, are successive evolutionary steps in the ever-expanding circuit of capital—a circuit comprising the integration of both production *and* circulation.

Though Smythe's emphasis on the capitalist application of ICTs, the sphere of circulation can be seen as productive in two senses: 1) it literally facilitates the expanded circulation of commodities and thus the realization and accumulation of surplus value; and 2) it facilitates the subjective reproduction of the wage-labourers themselves. To this end, the capitalist application of ICTs creates what Smythe calls the 'consciousness industry'—a consortium of institutions emphasizing the productive articulation of communicative capacities and the overall management of consciousness itself.⁷ In so doing, it enables the reproduction of the wage-relation *in general* by compelling consumers back to work so as to consume an expanding bundle of goods through the willing, and sometimes involuntary, acceptance of new and novel needs.

Real Subsumption, Mobilization and the Consciousness Industry

The operation of the consciousness industry, however, has an evolving technical and material basis. As Smythe detailed, the development of spectrum-based wireless technologies able to overcome the temporal and spatial barriers dividing the places of work from the places of leisure has been central to the production of audiences by and for the consciousness industry. This has involved the exploitation of a commonly held resource: the electromagnetic spectrum. The integration of the radio spectrum and wireless technologies into the management of consumer consciousness is part of a more general *mobilization* of productive capacities across entire populations, or sub-groups within those populations. Citing the work of John Paul de Gaudemar, Frank Webster and Kevin Robins argue that the language of mobilization offers a compelling analytic framework within which to understand 'the ways in which capital uses labour power and how populations are "mobilized"' (Robins and Webster, 1999: 111). Moreover, within this framework, we can situate Smythe's concept of the audience commodity as a way of understanding the specific ways commercial media mobilize audiences (and users) in the service of capital writ large.

⁷ Smythe elaborates on the consciousness industry: 'Although the mass media began the mass production of information, they are linked through interlocking business organization and a complex of largely managed, i.e., oligopolistic, markets with a much broader base of information production and exchange. The whole complex is [the] Consciousness Industry. Advertising, market research, photography, the commercial application of art to product and container design, the fine arts, teaching machines and related software and educational testing, as well as the formal educational system, are all part of it' (Smythe, 1981: 5).

De Gaudemar outlines two major forms of mobilization: *absolute* mobilization, in which ‘the traditional way of life of rural populations (is) systematically undermined in order to create a factory workforce. This process involve(s) disciplinary efforts, both within the factory and across the fabric of everyday life’ (1999: 111); the other form of mobilization is *relative* mobilization, in which earlier ways of policing workers are ‘replaced by an internal factory discipline in which technology [comes] to play a core role and in which control coincide[s] with the goal of productivity and surplus value extraction: the machine as dual instrument of control and of increased productivity’ (1999: 112). Relative mobilization is typified by the rise of Fordism and Taylorism as socio-technical systems linking waged and unwaged time.

While the application of ICTs in the realm of waged labour makes work more intensive, it also progressively blurs the boundaries between ‘waged’ and ‘unwaged’ time. The colonization of everyday life ICTs—leading to what might be called an era of ‘ubiquitous media’ (Daubs and Manzerolle, 2017)—catalyzes a transformation whereby ‘[f]ree time becomes increasingly subordinated to the “labour” of consumption’ (Robins and Webster, 1999: 116). In this case, we might expand the idea of consumption to include not just of commodities, but of services (e.g. platforms or social networks), software (e.g. apps) and, more generally, information. As discussed later, labour should be expanded to include the explicit production of user-generated content as well as the automated generation of personalized data that is entangled with the embedding of ICTs into the rhythms of everyday life.

As concept describing the transmutation of labouring capacities into surplus value under capitalism (including co-operative, communicative and creative capacities), absolute and relative mobilization map onto Marx’s distinction between the processes of formal and real subsumption. The former depends on clear divisions between work and leisure time, whereas the latter attempts to erase all such distinctions. In this latter case, the condition of relative surplus-labour—that is, the intensification of work within a given working day—is the precondition, and material expression, of real subsumption (Marx, 1976: 1035). Real subsumption is intimately tied to cycles of rapid technological change, particularly when labour practices have, through technological innovation, become subject to relative surplus value (e.g. an intensification of work) (Marx, 1976: 1035). As real subsumption comes to define ever-greater parts of the collective labour process through ICTs, ‘capital puts to work...the lifestyles, desires, and knowledge that are formed outside it’ (Read, 2003: 18).⁸ Real subsumption therefore becomes an active force outside of the factory once the circulation of capital has become completely inseparable from the social and subjective reproduction of the individual worker.

The history of ICTs explored by Robins and Webster via de Gaudemar’s concept of mobilization is, in fact, a history in which the synchronization of the factory and home is facilitated by the capitalist application of ICTs. The growth of demographic, psychographic, and other lifestyle data about consumers through the expansion of commercial broadcast media made possible the

⁸ What arises from the completion of this process is what some contemporary Marxists call the ‘social factory’. The constitution of a social factory as the metaphor to understand the effects of real subsumption has been explored at length by autonomist Marxists like Tronti (1966), Negri (1989), Dyer-Witheford (1999) and Virno (2004) and constitutes an important stream in communication research that parallels and often complements many of the research interests expressed in Smythe’s work.

appearance of the audience commodity, a process which would, through the growing ubiquity and interactivity of communication media, result in ‘the integration of advertising, market research, point-of-sale devices, and just-in-time inventory’, thereby creating a ‘single, integrated constellation’ (Dyer-Witheford, 1999: 81), which extends across spaces of work, sociality and domesticity.

Smythe’s view of who and what is alienated under the conditions of real subsumption not only includes workers dispossessed of the means of production, but also includes processes of self-production. Self-commodification occurs when one’s self-reflexive and social capacities are increasingly inseparable from the machination of capital accumulation and capital intensive ICT infrastructure, which are increasingly central to the articulation of one’s personal capacities. The evolution of Facebook as a platform in which the self and sociality are mediated so as to better align the needs of capital evidences the technological basis of this alienation. Here alienation can be said to occur as the inability to control the products of a social self—products that exist as valuable data monetized by, in this case, Facebook. As Smythe writes, ‘Today and for some time past, the principal aspect of capitalist production has been the alienation of workers from the means of producing and reproducing themselves’ (Smythe, 1981: 48).

For Smythe, the concept of real subsumption characterizes a process that brings social and communicative capacities within the gravitation pull (i.e. enclosure) of capitalist social relations; it is this particular process described in Smythe’s approach to the capitalist application of communication technologies. Taken to its logical end, the process of communicative enclosure, which begins in the factory, evolves into a seamless integration of work and non-work time through the integration of capitalist technologies and social relations (like the commodity form) into the social lives of workers. Smythe’s analytic starting point—the capitalist application of ICTs—offers an important contribution to the concept of real subsumption as it takes up ‘the place of communications in the wider system of social reproduction and the reproduction of capital’ (Jhally, 1987: 67). Communicative capacities channeled according to the logic of the consciousness industry contribute to increased synchronization between the production of subjectivity and the speeding up of circulation.

Smythe’s concept of the audience commodity and audience work has been criticized for its phantasmal and seemingly un-Marxian characteristics (Lebowitz, 2009: 217). The claim that audience work actually generates surplus value has been a specifically disputed one. Although the creation of surplus value in a classical Marxist sense does not neatly map on to the ‘work’ of the audience (particularly in the case of commercial mass broadcasting), arguably, it is the *appearance* of the audience as a saleable commodity that provides the means of harnessing communicative capacities for the purposes of circulation *as if* they were producing surplus value. Under traditional mass broadcasting, the appearance of surplus value is really, in the first instance, an abstraction—a necessary abstraction—but an abstraction nonetheless. It is an abstraction of the process by which consumers are mobilized towards the *realization* of surplus value in the exchange of money for commodities and services.

The audience commodity and audience work do not *actually* produce surplus value directly. Rather, the conservation and realization of surplus value in the sphere of circulation (e.g. consumption) occurs through the intervention of capital to specifically mobilize the

communicative, co-operative, and cognitive capacities of audiences; it is in this sense that the audience can be said to actually ‘work’. That is, the audience is active in the ‘production of circulation’ as a necessary, though ‘unproductive’ (Marx, 1976: 1038) function required by post-Fordist capitalism. The work of the audience is an abstract category that, at first glance, merely reflects the conservation of surplus value through the speeding up of circulation—that is, in producing the moment of exchange in progressively shorter intervals. The net savings incurred through this mobilization, however, produces the audience *as* a (primarily informational) commodity, which then guides the development and deployment of commercial media systems, and in particular, the commercial application of spectrum-based technologies. This function gains a greater material reality with the spread of interactive digital media. In this way, the abstraction of the audience commodity and its work becomes a *real* force in the world—a real abstraction (Toscano, 2008).

The contemporary IMD industry, its rapid evolution and colonization of everyday life, is, therefore a material expression of shifts in the nature of waged and unwaged digital labour in a political economic milieu defined by ubiquitous and personalized digital ICTs. In terms of the necessary and unwaged labour involved in the sphere of circulation, the colonization of these devices in ‘free’ time has spurred on the valorisation of user generated content and other potentially valuable personal data—data used to both commodify personal information and to enhance, rationalize, and personalize marketing and advertising in exchange for user’s attention, functioning as Smythe’s ‘free lunch’ inducement. IMDs are key components in the valorisation of co-operative and communicative capacities. The resulting configuration creates the conditions for what Christian Fuchs (2010), following Smythe, suggestively calls the ‘prosumer commodity’ as a structuring principle in the development of the mobile web and digital labour generally.

Always-On Media: Rise of the Prosumer Commodity?

The increasing forms of self-commodification that mark a variety of digital labour practices (Hearn, 2008) are reflected in the technical, functional and social capacities of always-on mobile media. The sinews of digital labour write large, comprising both waged and unwaged labour, increasingly demand the maintenance of digital identities and social networks as a function of the highly competitive categories of so-called ‘creative’, ‘intellectual’ and ‘affective’ labour (see Fuchs, 2009b; 2010; Cohen, 2008; Scholz, 2017). These digital labour practices are made materially possible in part by increasingly ubiquitous media like smartphones and tablets, and are systematically performed by an increasingly precarious, alienated and exploited workforce.⁹

⁹ In waged labour, as technologies to maximize the communicative and co-operative capacities of paid labourers, these highly complex devices reflect an increasingly precarious working arrangement. Not only are contracts shorter, requiring workers to be more flexible in terms of their scheduling and skills set in order to keep up with industry changes, but the integration of these ubiquitous media have made work both more intensive and extensive for waged workers (see the Pew Research Center report ‘Technology’s impact on workers’ by Purcell and Rainie, 2014; see also Wajcman, 2015). *Intensive* because workers are now expected to accomplish more ‘within the traditional time and space confines of their job’; and *extensive* because it has become ‘much easier for individuals to work longer hours’ (Middleton, 2006: 169-170).

The personalization of consumer ICTs catalyzed by the web 2.0 era, including IMDs, creates the basis for scalable audiences within varying degrees of heterogeneity and segmentation for the purposes of direct marketing and advertising (see Manzerolle and Wiseman, 2016 for further discussion). As highly personalized consumer devices, IMDs are increasingly employed to further the constant capability and cultural status of polling and marketing surveillance under the guise of democratizing culture by creating instant feedback mechanisms (Daubs, 2015; Zwick and Bradshaw, 2014). The intensifying rhythms of capitalist cultural production and its ubiquitous flows of information are now increasingly inseparable from the human body.

As opposed to traditional mass media audiences, in the post-web 2.0 era ‘users are also content producers: there is user-generated content, the users engage in permanent creative activity, communication, community building and content production’ (Fuchs, 2009a: 82). In this case, the more apt term is the ‘prosumer commodity’; but, rather than signifying a democratization of media content, Fuchs contends the term signifies ‘the total commodification of human creativity’ (2009: 82). Coined by Alvin Toffler (1980), the term ‘prosumer’ reflects the convergence of the cultural roles of producer and consumer. Crucial to this convergence is the role of ICTs in amplifying the communicative capacities of individuals in everyday settings. This convergence is also marked by the rapid expansion of a flexible, precarious and contract-based workforce (Neilson and Rossiter, 2008; Gill and Pratt, 2008). It must be reiterated that the relative alienation and precarity of this category of workers is masked by the triumphalism of the prosumer. As Edward Comor argues, ‘surely what the prosumer reflects and develops—including social norms and attitudes—is itself little more than an alien force: the abstract power of private property and social relations mediated by contracts and the price system’ (Comor, 2011).

It is worth remembering, however, that web 2.0 does not refer to a specific object, technology or application. Rather, it is more fruitfully understood as a set of marketing discourses promoting the interactive and personally empowering nature of the Internet, which ostensibly stems from the valorisation of user-generated content. ‘Web 2.0’ reflects an effort to re-brand the commercial opportunities of the web, advocating its incorporation into professional and social settings via an assemblage of interactive, networked and digital media. In addition to the perception of empowered users across a variety of technologically mediated settings, ‘web 2.0’ reflects a new web-based marketing approach that strategically employs user-generated content in the production and targeting of commercial messages. As Fuchs concisely summarizes, ‘[i]n the case of the Internet, the commodification of audience participation is easier to achieve than other mass media’ (Fuchs, 2009: 84).

Web 2.0’s purported democratization of culture (e.g. Jenkins, 2006; Tapscott and Williams, 2008) acted as a kind of Trojan horse for a much more powerful interest in monetizing online behaviour. The software and Internet-based operations of media conglomerates like Google and Facebook do not break from, but, instead, build upon business models already established in traditional mass media; for example, Google’s AdMob network automates and digitizes the process of audience commodification. AdMob, acquired by Google in 2009 for \$750 million USD, is a central part of Google’s overall mobile strategy because of its ability to monetize data traffic to and from personal devices, and create more personalized and, more importantly, context specific marketing opportunities and profiles. In so doing, it produces and sells a mobile

audience commodities through the generation of detailed user information across a number of metrics and profiles. As of 2017, AdMob is used on 1 million apps, with over a million advertisers participating in the network.¹⁰ In conjunction with Google's Firebase analytics platform, AdMob allows realtime analytics of user behaviour, multi-platform tracking, and ad metrics to provide "a richer view of Lifetime Value" of users, allowing content publishers a ready-made platform for optimizing the revenue generated through sales of their audiences.

As in traditional commercial media, monetization hinges on audience attention as the primary resource captured by the audience commodity concept as it is offered up to advertising and marketing interests. In the context of post-web 2.0 mobile-enabled media environment, digital content tends to be personalized in order to both capture the attention of users but also to deliver highly targeted audiences.¹¹ Personalization enables a greater scalability of audience commodification; groupings can vary between extremely large (e.g. millions) all the way to a particular user in time and space (e.g. context-dependent). Not only is the audience more easily segmented and sorted in digital media, but it is also spatially *mobile* and *mobilized* by, for example, the tools and values associated with the post-Web 2.0 era. Hence, the rapid global adoption of IMDs is significant not only because of their innovative technical capabilities, but they represent a platform for reconstituting the audience commodity as one composed of discrete and knowable identities. As a platform for the mobilization of the prosumer commodity, IMDs are largely 'app-centric' media (Daubs and Manzerolle, 2016). Apps offer a means to embed the logic of audience commodification directly into the mobile experience by enabling the creation of personalized data to both the app creators and the platform controllers (e.g. Apple, Google). Furthermore, apps are the prototypical example of the contemporary 'free lunch' expressed in the realm of mobile media.

Given the propensity to incorporate the unpaid labour of the user/prosumer, it is not surprising that IMDs are at the vanguard of 1:1 marketing (Mitra, 2008) or 'participatory marketing' that relies on social media to incorporate user-generated content (UGC) and realtime behavioural analytics directly into the marketing process. Platforms like Instagram, Snapchat and Facebook offer up a 'free lunch' in the form creative and expressive tools for content production and social sharing. In exchange, users not only give up personal data but also tacitly agree to the advertising and marketing logic that supports the business model of these platforms. These examples reflect the way in which the mobile prosumer commodity is being constructed in application-based services—services offering new revenue streams premised upon the collection of personalized data through the willing participation, or unpaid 'work', of the device user. These examples express the developmental pathway that has shaped contemporary IMDs; pathways in which a particular user—the prosumer—and their creative and communicative capacities become the object of commodification. Moreover, IMDs offer a personalized platform closing the loop between informational production and consumption (i.e. prosumption).

¹⁰ <https://www.google.com/admob/index.html>

¹¹ In considering the cultural and political implications of this economic logic, Pariser (2012) has promoted the term 'filter bubble' to describe how personalization shapes the distribution of content for particular users.

The production of a mobile prosumer commodity by offering some sort of ‘free’ lunch must be juxtaposed against the ongoing battle of incumbent telecommunications and mobile service companies to eliminate or minimize net neutrality principles in the regulation of mobile broadband. This prospectively two-tiered system comprising a ‘free lunch’ model premised on the prosumer commodity and a pay-per-byte model, is allowing for further consolidation of control in the hands of either telecommunications companies (e.g. Verizon, AT&T) or platform providers (e.g. Google, Facebook and Apple).

Although the conversion of mobiles into platforms for the articulation of the prosumer commodity actually fulfills a certain ontology of capitalist media identified by Smythe, it is the radio spectrum itself that is the least understood, yet most important component (O’Dwyer, 2013). Policies governing this limited resource constrain how the paid and unpaid labour of mobile users will come to define future evolution of IMDs. Both mobile broadband and web 2.0 arose from the ashes of the first dot-com bubble. Like the euphoria surrounding web 2.0, high-speed mobile Internet has been called the ‘great white hope of the telecommunications industry’ (Brody and Dunstan, 2003). These two technological moment—web 2.0 and mobile 3G/4G—represent what Fransman (2002) calls ‘consensual views’ within the telecom and IT industries regarding, in this case, the path of ICTs in the private sector. This view provides a collective promotional narrative that is able to draw investment from public and private sectors alike. This narrative is significant because the choice to pursue increasing mobile broadband speeds and bandwidth is prospectively risky, premised on an assumption that consumer demand will steadily increase and pay off the huge investments needed to upgrade infrastructure, hence the industry opposition to net neutrality.

The rising demand for mobile bandwidth precipitated by the popularity of the first few generations of iPhone made the question of spectrum policy and allocation all the more pressing for both industry and regulators. As noted by then FCC chairman Julius Genachowski (Schatz and Sheth, 2009).

Conclusion: Spectrum as Commons

As ever more bandwidth is required to keep up with demand, choices made regarding spectrum allocation policies and technologies will become all the more important. Addressing the changing demands of waged and unwaged digital labour calls for rethinking the possibility of a spectrum commons (Lehr and Crowcroft, 2005; O’Dwyer, 2013). As it stands, the monopoly control of much of the spectrum by telecommunications and other commercial interests acts as a kind of rent placed upon an existing natural phenomenon that arguably belongs to all of humanity.

Since all current trends point toward a society of ubiquitous connectivity premised on the organization and allocation of the spectrum, and since it is through IMDs that our creative, communicative, and co-operative capacities will be increasingly articulated (and commodified)—fostering a world wherein each person becomes, more and more, an island technologically linked to others—Smythe’s prescient comments on the spectrum as commons gain a renewed importance:

The radio spectrum is to communications today as is land to crops and water to fish. It is a peculiar natural resource, one whose politico-economic and social aspects have been largely ignored by social scientists. Like all other features of the human environment, it must be looked at in its relationships with people...Like no other resource, the radio spectrum is the first form of world property. (Smythe, 1981: 300)

Smythe's analysis of the specifically capitalist application of communication technologies offers an analytic entry point into examining the ways digital technologies more fully subsume communicative capacities as forms of 'digital labour'. Smythe described technology as a 'mystifying term, which describes the ongoing capitalist system' as well as comprising 'capitalism's more potent propaganda weapons in the struggle between the rich and the poor nations and the rich and the poor within nations' (Smythe, 1981: 20). Considering how spectrum-based technologies now constitute the infrastructure of everyday life, a normal and necessary bundle of goods and services demanded by individuals, both in their capacity as wage labourers and social agents, Smythe's warnings become even more salient and vital for contemporary media criticism.

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