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Making Up Digital Advertising Audiences: The New Form of Contracting Human Attention

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Introduction

Employment is an important modern institution that regulates the terms by which people enter organizations and become productive agents in society (Hasselbladh & Kallinikos, 2000). Being employed (rather than unemployed) is a source of self-esteem; person's employment is often among the first few things we wish to learn about new people. In addition to exchanging labour for a wage, employment relationship provides a context for socialization, identity building and meaning making that those who are not employed often aspire. Yet, critical observers argue that traditional employment relationships are being progressively undone. The culprit is usually found in neoliberal ideology and associated sociocultural trends, which put considerable pressure on traditional employment contracts at the heart of the institution.

Changes in contemporary employment relations coincide with the rapid evolution of the online environment and digitization of economic activities. This is hardly a coincidence. As Hasselbladh and Kallinikos (2000, p. 702) point out “institutions are not simply free-floating clusters of ideas” but they are, drawing upon Scott’s (2001; 2003) seminal work, supported, maintained and created with the help of various forms of carriers that are “active participants in shaping and reconstructing the ideas being transmitted” (Scott, 2003, p. 888, see also Kallinikos, Hasselbladh, & Marton, 2013). This is particularly true in the case of contractual relationships, for a contract without material means of enforcement can hardly be expected to perform its contractual function. Many institutional carriers are increasingly shaped in the digital ecosystem that, among other things, has made it possible to put new kinds of contracts in practice (Varian, 2010). As a result of these developments, it is often possible to replace an economically inefficient way of contracting labour by fixed salary with much more flexible contracts that are closely bound with individual performance.

Zero-hours contracts, piece rates and various forms of outsourcing including crowdsourcing have become not only much more manageable but sometimes the only competitive option for firms operating in the digital ecosystem. Some new production systems such as Wikipedia and open source software development in general can even be characterized by the lack of contractual relationship between the system and its ‘workers’ (Aaltonen & Kallinikos, 2013; Kallinikos, 2011). These new forms of contracting effort hardly qualify as employment in the traditional, institutionalized meaning of the word that connotes such things as stable income, professional identity and workplace community. The developments have, nevertheless, been lauded welcome not only for their presumed managerial efficiency, but also for their potential to diminish the bureaucratic grip of organizations on actors. New kinds of contracts are used to source often highly granular resources for many new ventures online and offline, and they can be seen to reward agents that would find it difficult to enter into a more traditional employment relationship. At the same time, problems related to undoing of traditional employment are well documented in social sciences.

In this paper, I focus on changing technological conditions that underpin a key aspect of employment contracts and the relationship between the work environment and its workers, that is, monitoring of human behaviour. Monitoring is important because unless parties are able to obtain verifiable information about each other's behaviour, they need to base contracts on mutual trust, which is hardly adequate in most settings of the modern *Gesellschaft*. Moreover, rather than adding to the already well-evidenced story about the disappearance of traditional forms of employment, I argue that we may be witnessing completely new forms of contracting labour in the digital ecosystem, which subject individual people to managerial rationality through media consumption rather than employment. The analysis is based on an in-depth case study on a telecommunications network operator that tries to turn its subscribers into an advertising audience and, hence, extract new kind of value from people consuming telecommunication services.

Critical media theorists argued a long time ago that watching advertisements should be understood as working for media, since it is the attention of consumers that media companies sell for advertisers (Jhally & Livant, 1986; Smythe, 1977). Taking the critical argument about the exploitation of user-generated content and social media consumption to its metaphorical conclusion, Fuchs (2014, p. 276) even argues "the entire planet is today a capitalist factory", since by co-creating and sharing digital content we are not only consumers but also producers of that which we consume. While the entire planet is clearly not a capitalist factory, the idea that consumers could be understood to work for media is relevant in the digital economy. This is in no small part due to vastly expanded capacity to monitor individual performance and, more generally, to hold agents accountable, which are important prerequisites for contracting work. As Varian (2010, p. 2) points out, the contemporary digital ecosystem changes the conditions for monitoring dramatically:

"The record produced by the computer can allow the contracting parties to condition the contract on terms that were previously unobservable, thereby allowing for more efficient transactions."

Tons of data generated by a variety of interconnected systems flow daily to the databases and repositories that make up central parts of the global information infrastructures (Gantz et al., 2008). Much of the data generated and stored entails the recording of a spectrum of transactions or behaviours that lack immediate relevance. What is sampled and recorded is motivated by generic purposes that deliberately displace or otherwise sketchily represent the context within which what is recorded makes sense, such as server logs or CCTV records often stored on 'just-in-case' basis. A mushrooming literature on business analytics (e.g. Davenport, Cohen, & Jakobson, 2005) and big data (e.g. boyd & Crawford, 2012; Chen, Chiang, & Storey, 2012; Constantiou & Kallinikos, 2014) suggests that much of this data can be drawn upon to enhance and occasionally expand traditional techniques of planning, measuring and controlling economic outcomes.

However, new breeds of data thus amassed escape the systematic nature of professional classifications and other methods of recording, measuring and assessing human efforts, such as those entailed in accounting, auditing or other forms of institutionalised measurement systems. Formal systems of ordering represent an approach to record keeping, classification or measurement that is characterized by high observational selectivity serving particular projects or purposes. Classifications, in particular, are made of categories that are the outcome of professional definitions resting on longstanding empirical observations, scientific developments and pragmatic compromises (Berg & Timmermans, 2000; Bowker & Star, 1999; Desrosières, 1998). In contrast, the overall scheme, which the digital ecosystem epitomizes, can roughly be summarized as follows: first data then search for any possible uses of what is already available as data.

It should be obvious that even such default recordings need cognitive pigeonholing of some kind on the basis of which they can be sampled and stored. Such pigeonholing is commonly provided by data fields in which data, say, about a person (e.g. name, address, occupation) or an item (e.g. book, price, author,

year of publication) are kept. Data fields are primary elements in databases that are modelled on the basis of minute, universalistic traits or behaviours within the confines of a system or network. The largely atomistic nature of this data contrasts with the knowledge items and categories that guide data collection and use in ordinary contexts of professional practices. Thus standing on its own, each data field should be able to be brought to contingent combinations with other data fields, on varying considerations that transcend the semantic homogeneity and cognitive inflexibility of classifications.

In this paper, I explore the trends to which we have been referring through a case study of the technological, data-based processes by which advertising audiences are assembled in the current digital ecosystem. More specifically, we investigate what kind of relationship can be constructed between a media company and individual audience members when audience measurement data is generated automatically by the infrastructure, and is not *a priori* constrained by classifications.

Industrial context

In order to sustain itself by advertising, a television channel, print publication or a website must demonstrate that a relatively well-defined group of people pay attention to its content. Commercial media has traditionally sold advertising space on the basis of predicted audience for a particular placement (Napoli, 2003), which is then compared *a posteriori* to a sample-based estimate of the actual audience. This makes audience measurement a critical activity for advertising funded business and consumer attention its key resource. Smythe (1977; 2006) describes watching advertisements as a kind of labour (see also Jhally & Livant, 1986), although traditionally media companies have not been able to force people to watch advertisements. People 'work' by providing their attention to media that measure and package it as audiences for advertisers. Yet, there is no distinct contract about watching advertisements, and as such the

work of watching can hardly be seen as a firm resource (e.g. Barney, 1991)¹. Unlike employees, individual audience members have traditionally remained unknown to the media, because it is neither feasible to enrol an entire population to panel studies nor to survey each individual advertisement. The talk about watching as working has until now been a *metaphor* for yet another form of capitalist exploitation of human labour.

The imperative to demonstrate the existence of audience remains in the digital ecosystem that, nevertheless, allows sourcing data about consumer attention in entirely new ways. The masses of naturally occurring data in the digital ecosystem have made it possible to develop new pricing models and advertising formats, and, as the empirical analysis shows, to control the audiencemaking process as a kind of work rather than passive consumption of advertisements. To begin with, the temporal sequence of predicting, then selling and only afterwards measuring an audience collapses. In online media, *a priori* predicted audience does not have to define the price of a specific placement, which can change in real time as people interact with the advertisement (Varian, 2010). Also, demographic classifications (male vs. female, age group) as proxies for consumption preferences are less relevant when people actively indicate their interests by clicking links and typing search keywords, not to mention when the entire chain of clicks from a particular advertisement to purchase can be traced. From the perspective of an advertiser, it may matter little who the recipient is as long as he or she intends to buy the product. This has been historically masked by the necessity of relying on demographic classifications as proxies for consumption patterns.

The case of advertising-funded telecommunications operator

I study a telecommunications operator company that offers a relatively straightforward illustration of the developments discussed above. The company pioneers a new business model by relaying advertising as text and picture

¹ According to Barney (1991, p. 101), "*firm resources* include all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies..."

messages to people's mobile phones. The author spent in 2009 three months working at the headquarters of the company offering telecommunications services for consumers, while advertising was supposed to become the main source of revenue. The observer was present at the open-plan office normal working hours participating, observing and overhearing a good deal of everyday action. The empirical evidence consists of 62 days of continuous observations notes, 34 semi-structured interviews and hundreds of internal and external documents. The main objective of the study was to understand new technologies and data-based practices involved in the construction of audience as a sellable asset (see Aaltonen, 2011; Aaltonen & Tempini, 2014).

The following analysis focuses on a peculiar contract that governs the relationship between the company and its subscribers, and how the contract configures the causal setting for audiencemaking operations. The analysis starts from the contract consumers have to accept in order to subscribe to the service, and moves on to analysing how specific aspects of the contract are made possible by the new kind of monitoring data, and, finally, how contractual sanctions are put in practice. By opening up these three attributes of the relationship between the company and consumers, we can empirically compare the role of an audience member to that of a worker.

A contract between the media and people

Consumers subscribe to the company telecommunications service by providing a simple demographic profile and allowing the company to send marketing messages to their mobile phones. The company then provides monthly free voice call minutes and text messages in return. The approach is reminiscent permission-based marketing in which a person grants a permission to target him or her with advertisements using a personal channel such direct mail, email or text messages, yet goes in some respects much further by setting clear behavioural expectations. The relationship between the company and consumers is formally constructed in Terms and conditions document that a new subscriber has to accept before his or her service is activated.

“To remain a Company member you need to keep the SIM Card in a Capable Phone with the correct settings activated. You should also have your phone switched on to be able to receive the brand and other messages that Company sends to you.”

(Terms and conditions document)

As a member of the service, people are supposed not just use their free communications allowance but also remain available to receive advertisements. This is a clear departure from how people are usually treated as recipients of advertising. Consumers are normally allowed to resort to whatever tactics in order to avoid advertisements and, as is often the case, they regularly do. Such behaviour is, to an extent, accounted for in statistical models that estimate the number of people who have had an opportunity to see the advertisement. Also, it is well known to parties that the economics of audience measurement arrangements have traditionally put considerable limitations on the quality of measurement, which advertisers have had to accept as reality (Bolin, 2009). By contrast, if the company a subscriber deviates from his or her role as a recipient of advertising set in the contract, a number of sanctions can be imposed:

“Company will keep track of how many messages you have received. Company understands you can’t have your phone on all the time, so doesn’t require you to receive all the messages it has sent to you. However, if you have not received more than half of the messages sent to you during a 30-day period Company may advise you via text or email to help you get back on track. If after being sent notice by Company you continue to receive less than half of the messages sent to you, your Refill may be suspended and your membership may be terminated as specified below.”

(Terms and conditions document)

The Terms and conditions document stipulates obligations and behavioural expectations each member is supposed to observe; it also defines sanctions that can be imposed if a member breaches the contract. In other words, the document sets norms toward which the company has a legitimate authority to steer people and states that it can and will monitor specific aspects of the individual relationship. The benefits accrued by the consumer are therefore connected to certain, verifiable minimum level of performance by the consumer. This capacity to track individually the reception of advertising and to condition benefits on this information sets the new medium apart from most other types of advertising audiences. Not only there is an explicit requirement to receive advertisements, but also the fulfilment of that requirement can and will be monitored. By accepting the agreement, consumers submit their performance to be controlled toward specific productive purposes.

The verification of behaviour

The measurement data exists as Call Detail Records (CDRs) in a digital telecommunications infrastructure. CDRs are log file entries stored by network components as a result of their normal functioning. An individual entry records the time, type, the sending and receiving end of a (trans)action, and a few other technical details. There is no information about the setting, intentions and activities that triggered the action. The following example illustrates how CDRs capture people's behaviour from the digital network infrastructure. The record is made up of data fields mapping to aforementioned variables with semicolons separating the fields.

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097369D2D7372762D31080000000000000001;1;33668741168;3322208  
;6;20081101004923;20081101004923;20081101004923
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(Advenage SMS Gateway Router 1.0 documentation)

An individual record is a string of alphanumeric characters that carry little meaningful content by itself. It operates at the level of most basic categories such

as timestamps, phone numbers, etc. The existence of such microscopic data tokens allow verifying an audience in a new way that departs from traditional media. By contrast, traditional broadcast systems (not to mention print distribution) typically do not provide any information whether anybody has actually received the transmitted content. A digital telecommunications infrastructure generates a CDR for every individual message or package of transmitted data. The log entries represent ephemeral clicks, calls and messages that had originally nothing to do with advertising or, for that matter, with any industry-specific classification.

The data are not only more plentiful and detailed than before, but the CDRs represent the totality of individuals and their actions in the system. This has important implications. Audiences making operations are not constrained by fixed sampling criteria based on demographic classifications as before. Indeed, the data allows inspecting and intervening into the behaviour of any individual subscriber, whereas a sample could only be used to estimate how many people have seen an advertisement on an aggregate level. The new kind of measurement based on CDRs reveals the actual audience members. Otherwise, it would be impossible to know if a particular consumer is fulfilling his obligations and to assign sanctions. These two managerial operations would not be possible using sample data.

Individual sanctions and interactions

The comprehensive and granular data make it possible to verify the behaviour of individual audience members at an unprecedented detail. If and how this opportunity is actually put in use, is another matter. I observed a number of different ways in which the company interacted with its subscribers on the basis of individually measured behaviour. To begin with, some of the advertising formats were interactive, building dialogue with the recipient on the basis of his or her previous responses. The data were also used to enforce the boundaries of acceptable behaviour. At one point, the management decided to remove people who used their free communications quota but failed to receive any advertising

messages, therefore merely incurring costs to the company. Over a period of days in February 2009, I followed how team members debated, ran spreadsheet simulations, and consulted an in-house lawyer in an attempt to identify subscribers whose service could be deactivated.

X1 ask which members will be deleted. [...] MCM ponders what is morally okay. One approach would be to pick those who use the free quota [immediately] but do not top up their account.

(Observation log entry, 18 February 2009)

According to the lawyer, the interpretation of the contract between the company and its subscribers was clear. The Terms and conditions document states that the company has an authority to deactivate accounts that fail to perform as an audience for advertising messages. It was the first time such an operation would be executed at a large scale, and the document left considerable leeway on how to actually target the operation. For this purpose, the available data again allowed simulating the set of members by applying various criteria and observing how the amount of subscriptions to be deactivated changed.

MCM and BMMA discuss how many message a member must have received – one picture message and one text message advertisement. [...] They continue adjusting the set of members based on text and picture message reception rates. BMMA notes that it might be that we have not sent any picture messages. MCM points out that we have sent at least one picture message to all of the members under scrutiny.

(Observation log entry, 20 February 2009)

The episode shows that tracking the reception of advertisements is not an empty phrase in Terms and conditions, but the way it is enacted in practice creates a normative obligation and denies the role of passive consumer from audience members. The company has a contractual authority, technological monitoring

capacity and managerial intention to control aspects of individual consumers' attention to advertisements. While Terms and conditions documents are often seen as a mere legal requisite and they are typically blindly accepted by consumers, in the case the contract between the company and its subscribers emerges as a mechanism that is used to actively regulate behaviour of the latter. Constructing an advertising audience this way makes its members look less an unruly mass and more like 'workers' from the perspective of the media company.

Discussion and concluding remarks

In this paper, I have explored shifting technological conditions for contracting work and how people enter organizations and become productive agents in the digital economy. Such relationships fell previously more easily under the term *employment*, forming a reasonably coherent social institution including the promise of professional identity, stable income, workplace culture, etc. One of the most important institutional carriers of employment is the contract (Scott, 2003), which is an artefact that preconfigures the employment relation. There are many other carriers but the employment contract would seem to be pivotal in terms how the vastly increased capacity to monitor human behaviour will bear upon employment relations. This is no small due to the capacity to put in place new kinds of contracts that could perhaps previously be envisioned only in theory.

The gradual undoing of traditional employment contracts and, hence, employment in its institutionalized form over the last twenty years or so is well documented. In this study I have explored more inconspicuous developments made possible by new technology. People may provide valuable inputs to companies under contractual sanctions without even realising that they are performing work for service providers. The recent proliferation of user-generated content, social production systems, crowdsourcing and, more generally, the idea of sharing economy (Aaltonen & Kallinikos, 2013; Benkler, 2006; Brynjolfsson, Kim, & Oh, 2013; Kallinikos & Tempini, 2014; Saxton, Oh, & Kishore, 2013) suggest that a lot of economic value is created today outside

traditional employment relations. Even if many of these systems are currently based on voluntary contributions and sharing, the current study shows that, is possible to impose contractual obligations that attach people to organizations and subject them to managerial rationality without actually employing them. Let us call such a role, for the sake of better term, 'consumer-worker'.

The contractual relationship between employers and employees is an important part of the institutional infrastructure of society and the modern project of rationalization of public and economic life (Hasselbladh & Kallinikos, 2000). The new form of contracting work I have analysed does not mean that more traditional employment would disappear or that we would enter the dark visions of painted by critical scholars. However, rather than seeing a linear trajectory from traditional to more flexible forms of employment, I suggest there is another trend by which companies source work without employment. The proliferation of advertising-funded digital services and, more generally, what Alaimo (2014) calls 'computational consumption' could be seen emblematic of the latter trend. The idea that consumers work for media companies by watching advertisements was invented by critical media theorists to explain how commercial media exploits labour by providing content seemingly for free (Jhally & Livant, 1986; Smythe, 1977; 2006), and the metaphor has been subsequently extended to discuss contemporary digital ecosystems (Andrejevic, 2002; Bermejo, 2009; Fuchs, 2014). The current study goes further than these writings a number of ways. For critical media theorists, the idea of watching advertisements has mainly remained a neat metaphor for yet another form of capitalistic exploitation. By contrast, I have analysed the rise of an actual contractual relationship between a commercial media company and consumers as its audience members. It would be implausible to call an audience member an employee, yet the relationship between the company and its audience members expresses similar attributes with employment contract such as normative expectations, individual monitoring and the allocation of sanctions, as well as a fixed remuneration.

The new kind of relationship between production systems and their agents is made possible by the contemporary digital ecosystem and can undoubtedly be seen as a part of modern project of rationalization of economic and public life. It shows that while the digital environment may in some respects loosen the grip of large-scale bureaucratic organizing on the production of value, it also allows extending the managerial rationality to new kinds of relationships. To properly analyse these changes, it may be often necessary to reflect upon the basic assumptions about employment and human resources underpinning much of organization and management theory.

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