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FROM “MAD MEN” TO “MATH MEN”: THE RISE OF EXPERTISE IN DIGITAL MEASUREMENT AND THE SHAPING OF ONLINE CONSUMER FREEDOM

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Abstract

Purpose – We study how communication agencies became important sites for the rise of measurement expertise in the government of consumer conduct following the development of online consumption. Our examination focuses on the processes by which digital measurement developed (within the agencies) as a new legitimate form of expertise, able to produce relevant and detailed knowledge about the government of web-users.

Design/methodology/approach – We carried out a field examination in France, predicated on 100 interviews with actors involved in communication consultancy. Drawing on the concepts of governmentality and inter-jurisdictional experimentation, we examine how digital measurement expertise acquired legitimacy within agencies. We also analyze how contemporary technologies of measurement and surveillance, as operated by in-house digital experts, provide advertising specialists and advertisers with increasingly precise data on consumer conduct and thought.

Findings – The constitution and legitimization of digital measurement expertise was characterized by experimentation, culminating in the production of persuasive claims of tangibility concerning communication impact, and in relative agreement on the relevance of digital expertise in operating increasingly powerful technologies of measurement and surveillance.

Originality/value – While the role of experts in promoting and implementing neoliberal governmentality is emphasized in the literature, our study indicates that considerable work is needed to develop and legitimize expertise consequent with neoliberalism. Also, our analysis highlights that the spread of digital measurement expertise and knowledge production in the government of web-users constitutes a noteworthy step in the neo-liberalization of society. Behind the front of “free” conduct lies an increasingly powerful network of technologies and expertise aimed at rendering consumer conduct knowable and predictable.

Keywords: communication consultancy, consumer behavior, digital expertise, inter-jurisdictional experimentation, measurement, neoliberal governmentality.

FROM “MAD MEN” TO “MATH MEN”: THE RISE OF EXPERTISE IN DIGITAL MEASUREMENT AND THE SHAPING OF ONLINE CONSUMER FREEDOM

Introduction

A dominant theme in the sociology of professions is the historical role of the state in granting a monopoly of service (or similar privileges) to occupations whose body of professional knowledge is considered prestigious, legitimate and/or instrumental for the achievement of certain types of work (Macdonald, 1995).¹ However, over the last few decades, important changes in the professions have significantly reduced the role of the state in legitimizing professional work (Freidson, 2001; Johnson, 1995). A key factor in limiting the state is the spread of neoliberalism, which advocates the primacy of market mechanisms in all spheres of society (Harvey, 2005). This significant change in the political economy has altered how professional work is legitimized, as well as the extent to which professionals adhere to the core, historic values of professional work (Freidson, 2001; Suddaby *et al.*, 2007) as defined in Hall (1968). Research on professions, thus, has shifted to focus on understanding how the advent of neoliberal markets has influenced the structure and character of professional occupations (Suddaby and Muzio, 2015). As Johnson (1995) observes, expertise must be re-conceptualized in the context of the diminishing influence of the state and the emergent power of the market. As a result, we need to better understand how expertise develops in neoliberal settings, how it is articulated in practice, and its consequences for organizations and society.

Our study focuses on the development of professional expertise in a social context characterized by the growing influence of neoliberal governmentality. Foucault’s concept of governmentality is premised on the idea that power is exercised through governing the conduct of individuals. This implies the promotion and dissemination of norms of appropriate conduct that aim to influence individual thoughts and behavior. This view of power, as a diffuse form of social control that shapes individual identity and subjectivity, stands in sharp contrast to traditional notions of state control, where power is objective, coercive and highly visible.

The notion of governmentality is consistent with the discourse on neoliberalism, which celebrates individual’s entrepreneurial freedoms while emphasizing that these freedoms need to be taught and circumscribed (Foucault, 2004; Rose, 1999). Empirical studies of governmentality have examined how discourses convey images and representations that aim to instill certain ideas and values that, often in subtle ways, constrain liberties (Donald, 1992). Studies have also shown that expert work plays a fundamental role in governmentality projects (Rose and Miller, 1992). Expert work, for example, is critical in constituting detailed knowledge on individual conduct and in policing those standards against people whose conduct is not in line with what “freedom” is supposed to be. While the role of experts in promoting and implementing governmentality projects is well recognized in the literature (Miller and Rose, 1997; Rose, 1999; Rose and Miller, 1992), there is substantially less research on the processes by which new forms of professional expertise develop and become legitimate in governmentality situations. This study addresses that gap. Our research is consistent with Johnson’s (1995) call to better understand the legitimization of expertise in governmentality settings.

Our objective is to extend the governmentality literature to understand how new forms of expertise that are important to projects of governmentality emerge and exercise power. We do so through a case study of changes in expertise, in the advertising profession, that occurred as a result of

¹ Our title is not meant to be discriminatory to women but instead seeks to capitalize on an analogy with a popular TV series entitled “mad men”.

the emergence of digital media. Specifically, we investigate the processes, within advertising and communication agencies, by which digital measurement developed as a legitimate form of expertise, able to produce relevant and detailed knowledge in the government of online consumers. Empirically, we describe the powerful impact of the emergence of the Internet on the advertising profession, which gave rise to unprecedented ways of measuring advertising impact and tracking consumer behavior. Theoretically, we seek to better understand the “suspense” of expertise in measurement and calculation (Vollmer, 2003) and the underlying consequences on the government of consumers following the introduction of the Internet in retail markets. As Humphrey and Miller (2012) observe, exploring accounting (understood in a broad sense) at the margins of non-accounting disciplines, such as communication consultancy, can provide important insight into the complex processes by which the power of measurement is constituted and exercised in contemporary society. In a seminal book, *The System of Professions*, Andrew Abbott (1988, p. 325) provocatively argued that, because of its emphasis on the rationality of measurement, accounting is now “far more socially important” than traditional professions like medicine and law.

In the last few decades, research has produced insights into accounting’s normative and disciplinary power. The notion of visibility has been found to play a key role in how accounting power operates. Accounting facilitates control at a distance, through inscriptive techniques that allow distant others to “see”, evaluate, and act upon the behavior and performance of surveillance targets (Carmona *et al.*, 1997, 2002; Miller and O’Leary, 1987; Robson, 1992). Accounting inscriptions have been shown to influence the socialization of organization members. That is, the fear of being seen by more or less distant others may become internalized as a self-disciplinary form of control (Hoskin and Macve, 1988; Roberts, 1991). Accounting information is a fundamental technique of inscription because it creates distant lines of sight on behavior in organizations. As a result, accounting is deeply involved in substantive change, as well as stimulating resistance to change, within organizations (Baxter and Chua, 2003; Burchell *et al.*, 1980; Dent, 1990). In more formal terms, the visibility of accounting measurement is a socially constructed process of normative change ensuing from disciplinary and self-disciplinary power as exercised through some behavioral norms (Dechow and Mouritsen, 2005; Roberts, 2009). Consistent with this body of research, Miller (2001) explicitly calls for studies examining how new calculative practices and technologies of government are established and how they may enable new ways of thinking and intervening in fields of practice. Despite this, there are relatively few in-depth empirical analyses of the ways in which accounting and measurement expertise, as instruments of governmentality, become established and legitimated in unconventional domains.² We chose to study this process in the empirical context of communication consultancy because the arrival of the Internet offered a profound shift that moved the advertising industry from a mysterious art to a measurable science. As such, this empirical context allowed us to observe processes of governmentality and analyze the ways in which emergent techniques of inscription and measurement affected cognition and practices in an organizational field. Our analytical gaze is upon transformations in professional expertise in the context of communication agencies in France subsequent to the arrival of the Internet.

In communication consultancy, advertising specialists have historically prevailed over other disciplines such as public relations and direct marketing (Martin, 1992).³ The relationship between

² Notable exceptions are Fourcade and Healy (2013) as well as Kornberger and Carter (2010).

³ When we collected our data, advertising specialists held most power positions in their field. They sat on group boards (e.g., WPP, Omnicom, Publicis) and ran international networks (e.g., BBDO Worldwide, Euro-RSCG Worldwide, Ogilvy Worldwide) as well as the local agencies of those networks (e.g., BBDO New York, BBDO London, BBDO Paris).

advertising specialists and their clients (i.e., the advertisers) has always been unstable, however, since advertisers have always asked for accurate consumer knowledge and measurement of campaign outcomes (Cochoy, 1999). Yet until the advent of the Internet, the accuracy of measurement was often thought to be questionable: the correlation between advertising investment and campaign outcomes was commonly perceived as being impossible to grasp. How could any kind of convincing causal connection be established between advertising action in traditional media and the commercial outcome, since other factors can also influence behavior (recommendations from friends, word of mouth, in-store promotions, etc.)? When measurement was possible (such as in pre- and post-testing of campaigns), it was often downplayed by advertising executives who deemed it to be not only dubious in methodological terms, but also detrimental in terms of a creative efficacy logic predicated on the appeal of seducing consumers and disrupting conventions (Bordas, 2010; Dru, 1996; Michel, 2005). Advertising, thus, was promoted as an art not a science.

However, with the introduction of the Internet to public use in 1994 and its subsequent institutionalization, the advertising discipline found itself facing a significant challenge – in that new possibilities for measuring the impact of digital communication campaigns were beginning to emerge. The tentative development of new measurement technologies as well as advertisers' growing demands for measurement created conditions for transformation of the order of things within communication agencies, which increasingly had to hire digital experts (digital “natives”) in order to explore how to articulate credible measurement in this new domain. Gradually, traditional advertising firms shifted their strategy toward online marketing. The traditional creative norm did not disappear, but now had to coexist with measurement requirements. In this respect, there was a transformation in the norms governing the field, eliciting strategic adaptations by the individual and collective players involved.

Using the notion of governmentality (Foucault, 1997; Rose, 1999), we analyze how the encounter between advertiser expectations and the possibilities of new technologies gave rise to a credible form of expertise in the measurement and creation of knowledge of consumer conduct. We were particularly interested in examining the legitimization processes through which digital measurement expertise came to be viewed as offering more precise knowledge of consumer behavior and more rigorous calculations of communication impact. Our findings indicate that digital measurement expertise did not develop overnight. Instead, the spread of the Internet led communication consultancy agencies to experiment in diverse ways in trying to define and secure a key role for themselves in a shifting domain of practice. This implied a range of “inter-jurisdictional experimentation” within the agencies as a number of digital natives became employed by advertising experts. New role boundaries eventually stabilized, with digital specialists being extensively involved in implementing and operating powerful technologies of measurement and surveillance, under the auspices of agency executives – often advertising specialists. If neoliberal competitive markets can indeed be viewed as collective experiments (Callon, 2009), then the range of such experiments comprises an important set of activities where expertise in the conduct of people's conduct (Foucault, 1997) is gradually invented, negotiated and articulated – until it temporarily stabilizes. Our study, therefore, consolidates the view that the development of expertise constitutes a central aspect in the spread of neoliberal governmentality in contemporary societies.

More broadly, we illustrate how professional expertise is (re-)constituted by an established discipline in the communication consultancy industry, i.e. advertising. We demonstrate, in our case study, that the development trajectories that underlie professional expertise are not endogenous – in that they were influenced by a global technological shift (Internet) and the importation of ways of thinking and practices from another emerging discipline (digitalization of organizational work).

The rise of digital measurement expertise not only modified inter-jurisdictional relationships within communication agencies, it also engendered new and powerful technologies of surveillance eroding what belonged, previously, to the private life of the individual. Our analysis indicates that by scrutinizing web-users in their everyday digital life and storing and analyzing personal data, the technologies of governmentality strengthen the “conduct of conduct” (Foucault, 1994) of consumers while threatening private life boundaries. As a result, the neoliberal project aiming to promote a particular political economy, where individuals are free to choose according to the “natural” laws of the market (Rose, 1999), gains traction in reality. In this environment, consumer freedom is far from being unbridled, however. Instead, consumer freedom is closely circumscribed by networks of socialization and surveillance mechanisms. Particularly through exposure to social media, television and cinema, individuals are taught and socialized about their role as “free” consumers, happy to purchase goods and services electronically while leaving on the web multiple traces of their thoughts, preferences and behaviors. These lifestyle traces are captured by sophisticated surveillance methods, providing advertisers and their communication agencies with detailed knowledge that can be used to influence and orient consumer “freedoms”.

Overall, we locate our research at the encounter of two streams of accounting research respectively dedicated to the spread of calculative practices (Miller, 2008; Vollmer *et al.*, 2009) and the processes by which professional expertise develops and is legitimized (Macdonald, 1995; Power, 2003). These two streams of research have not influenced that much one another, as if some boundary prevents them from overlapping (for a discussion of similar boundaries in sociology, see Eyal, 2013). However, calculations and measurement work undertaken in organizations are inevitably connected to the construction of legitimacy surrounding professional expertise. In other words, professional status is achieved not only in public arenas through the promotion of wide-ranging knowledge claims but also in the workplace, where diagnostic and treatment protocols are articulated in concrete work situations (Abbott, 1988). Through our focus on work in digital measurement undertaken within an organizational setting characterized with inter-jurisdictional rivalry, we highlight that the development of calculative practices constitutes a fundamental part of projects that aim to establish the legitimacy of professional expertise. In addition, our governmentality template allows us to connect organizations’ calculative practices to the social environment, especially the web of people whose daily life is increasingly and significantly impacted by digitalization. In short, our study is characterized with multi-level analysis. By analyzing the growing expertise of digital measurement and how this expertise is experimented then appropriated by established advertising professionals to govern the conduct of consumers we try to bridge the domains of organizational work, profession and society.

Our paper is organized as follows. We begin by describing the conceptual framework used for the investigation, and its methodological aspects. We then examine how communication agencies became important sites for the government of consumer conduct. Our examination proceeds in three stages. First, we present the traditional position of advertising specialists on the nature of valuable communication work in the field. Second, drawing on the concept of inter-jurisdictional experimentation, we examine how digital measurement expertise acquired legitimacy and came to be integrated within communication agencies, even in the eyes of advertising specialists. Third, we investigate how digital measurement expertise, through sophisticated technologies, provides advertising specialists and their clients (advertisers) with increasingly precise and microscopic data on consumer conduct and thought. In the discussion section, we reflect on the development and spread of digital measurement expertise and knowledge production in the government of web-users, maintaining that this movement constitutes an important and noteworthy step in the neo-liberalization of society. Behind the front stage of “free” conduct lies an increasingly powerful network of technologies and

expertise aimed at rendering consumer conduct knowable and predictable. In the conclusion, we underline some of the main implications ensuing from our analysis.

Theoretical framework and literature

The micro-physics of power (Foucault, 1977) bring to the fore the emergence of an art of government that Foucault labels “governmentality”, which can be “understood in the broad sense of techniques and procedures for directing human behavior” (Foucault 1997, p. 82). According to Rose (1999, p. 3),

In [Michel Foucault’s brief writings and lectures on governmentality], Foucault sketched some pathways for analysing power that were not transfixed by the image of the state. [...] [The pathways] defined their problem space in terms of government, understood, in the words of Foucault’s much cited maxim, as “the conduct of conduct”. Government, here, refers to all endeavours to shape, guide, direct the conduct of others, whether these be the crew of a ship, the members of a household, the employees of a boss, the children of a family or the inhabitants of a territory.

Governmentality should be viewed as a flexible framework to examine the formation and transformation of discourses, strategies and technologies for “the conduct of conduct” (Rose, 1999, p. 3). From a governmentality perspective, both advertising and digital marketing expertise aim to shape consumers’ mindsets – that is to say, they strive to influence their ways of thinking. When this happens through internalization processes, the consumers will then, on their own, be inclined to act “freely” in accordance with the spirit of neoliberal markets. Communication consultancy expertise can therefore be viewed as aiming to conduct (i.e., to influence) consumers’ conduct (i.e., their “free” behavior) not only in terms of product purchasing but also in terms of ways of thinking and living that celebrate the institutions of consumption.

Initially, Foucault developed governmentality as a template to analyze changes in the way power is exercised in society. In this view, power in modern societies is conveyed through rules of conduct that shape behavior and identity at “the finest grain of the social body”. These rules of conduct tend to generate a sort of anticipated calculation of punishment, shame and reward that may incite individuals to behave in accordance with certain norms. Internalization of these norms may later develop as anticipation is experienced on a repetitive basis or through avowal processes, where the individual reflexively accepts to commit.

In some of his work, Foucault stressed the role played by certain spaces in inculcating rules of conduct; disciplinary institutions such as asylums, prisons and schools are social spaces where bodies and minds are trained and shaped. But these institutions do not only instill norms, they are also “apparatus of knowledge” production (Foucault, 1977, p. 126). Through systems of observation (e.g., prison surveillance techniques) and measurement (e.g., school examinations), these institutions convert the individual into numerical equivalents (Townley, 1993, 1995). These mechanisms of data collection and classification result in what Foucault called the “constitution of ‘tableaux vivants’ [i.e., “living pictures”] which transform the confused, useless or dangerous multitudes into ordered multiplicities” (1977, p. 148). The new methods of government were applied to industry as well (Macintosh, 2002). With the spread of scientific management, early 20th century factories adopted calculation and grid templates to increase worker productivity (Loft, 1986; Miller and O’Leary, 1987).

However, knowledge production as an instrument of power is not limitless. Power and resistance being consubstantial (Foucault, 1983), individuals are not devoid of resources in the face of

injunctions. It is in this context that Foucault's concept of governmentality – the conduct of conduct – becomes particularly meaningful. Around the turn of the 1980s, Foucault observed the growing individualization of society, heavily supported through neoliberal discourse. The latter essentially celebrates market wisdom while being critical of welfare policies and Keynesian interventionism. The goal to be pursued is, therefore:

[...] to extend the rationality of the market, the schemes of analysis it offers and the decision-making criteria it suggests, to domains which are not exclusively or not primarily economic: the family and the birth rate, for example, or delinquency and penal policy. (Foucault, 2004, p. 137)

In other words, “the dissemination of the ‘business’ or ‘enterprise’ form throughout the social body is [...] the key objective of neoliberal politics” (Foucault, 2004, p. 154). The scope of neoliberalism included, of course, markets of consumption. Our point is that the digitalization of retail markets and the rise of digital measurement expertise deeply reinforced the waves of neoliberalism (Morales *et al.*, 2014), thereby consolidating its influence on the social body.

It is widely understood that the spread of neoliberalism contributed to the erosion of the influence of the state from the 1970s onward (Harvey, 2005). In contrast to welfare policies and market regulation, neo-liberalism promotes free action of individuals and self-regulation of corporate enterprises through the alleged “discipline” of the market (Rose *et al.*, 2009). Yet, the governmentality literature indicates that this kind of freedom is not natural. In a neoliberal era, individuals have to be taught what freedom is and how it should be exercised. The overall expectation is that economic prosperity follows from the reign of individualization and “unconstrained” entrepreneurialism, as defined and circumscribed by the forces of the market:

Only individual economic actors possess the information to enable them to make the best judgements on risks and potentials in order to guide their conduct; they must be freed to choose according to the natural laws of the free market on the one hand and human nature on the other. (Rose, 1999, p. 139)

Neoliberal proponents soon understood that government is a “work of thought”, and it was especially through thought that they developed and disseminated their views (Rose, 1999, p. 140) – for instance through think tanks and other institutions of knowledge production (Chabrak, 2012). Drawing on and extending Foucault's theorizing on governmentality, Rose (1999) offers a thorough analysis of the exercise of governmentality (especially but not exclusively in a neoliberal context) by arguing that freedom and power are not opposed notions but, on the contrary, that freedom is a condition of power, that “freedom is an artefact of government” (p. 63). One of the key ideas, therefore, is to institute mechanisms that allow the *conduct of “free” conduct*. In other words, individual's “freedom” becomes one of the playing fields of power. To govern is to influence individuals through freedom. As such,

When it comes to governing human beings, to govern is to presuppose the freedom of the governed. To govern humans is not to crush their capacity to act, but to acknowledge it and to utilize it for one's own objectives. (Rose, 1999, p. 4)

From this perspective, neoliberalism implies a fragmented political economy where the state's role is downplayed (except in matters of law and order). This economic regime is highly dependent on multiple systems of knowledge production and intervention aimed at consumers (or citizens conceived of as consumers, from birth to death), which operate through a ramified, more or less interconnected, network of organizations and experts.⁴ One of the goals of these centers of calculation and surveillance

⁴ Lyon (2001) conceives of these multiple systems as “leaky containers”, to emphasize their (variable) degree of interconnectivity.

is to gather information and act upon the details of the conduct of consumers, in order to influence their “purchasing freedom” in ways that increase retailers’ profitability. As specified by Rose (1999, p. 65),

Constructing a “free market” seems to entail a variety of interventions by accountants, management consultants, lawyers and industrial relations specialists and marketing experts in order to establish the conditions under which the “laws of supply and demand” can make themselves real, to implant the ways of calculating and managing that will make economic actors think, reckon and behave as competitive, profit-seeking agents, to turn workers into motivated employees who will freely strive to give of their best in the workplace, and to transform people into consumers who can choose between products.

Therefore, in a neoliberal economy, the freedom of consumption should not be presumed. Vast energies are devoted to shaping “free conduct” – inculcating it within the purview of individual subjectivity and monitoring it through the tracking of consumer behavior. Importantly, specific kinds of expertise will be needed to operate the web of socialization and surveillance mechanisms surrounding consumer freedom.

Neoliberal governmentality depends on expertise (Rose and Miller, 1992). Expertise is involved in developing and operating various technologies through which neoliberal programs for action are realized.⁵ It is through these technologies (and their underlying bodies of expertise) that data on individual conduct is constituted, thereby providing authorities with important means of intervention. Experts are particularly mobilized in addressing the integration problems of people who cannot self-govern in accordance with the prevailing order of acceptable behavior in a “free” society. For instance, while people in a neoliberal society are taught how to manage their own finances (Bay, 2011), intervention is required to address problems of overconsumption and excessive indebtedness. Exercising freedom in a society where consumption is promoted as a central value is not without unintended consequences (Rose, 1999).

While the governmentality literature stresses that citizen freedoms are not spontaneous and must be inculcated, it is worth noting that expertise does not adjust expediently to neoliberal regimes. Drawing on the sociological literature on the auditing profession, it can be expected that the neoliberalization of the political economy will open up spaces for experimentation (Gendron *et al.*, 2007; Malsch and Gendron, 2013; Mennicken, 2010), particularly in terms of constructing, through trial and error, acceptable expert role definitions. Inter-jurisdictional rivalry may also be stimulated in the process. While the construction of experts’ receptivity to the neoliberal doctrine is clearly of interest and should not be taken for granted (for an interesting problematization see Freidson, 2001), in this study our focus was more on the extent of inter-jurisdictional experimentation within communication agencies.

In summary, retail markets, particularly in a neoliberal climate, can be understood as important spaces for the shaping and government of conduct. In this context, consumer conduct becomes an object of knowledge and the appropriate expertise in observing conduct and measuring communication impact needs to be developed and legitimized. This is a challenging endeavor, however. As stressed by Vaivio (1999), the construction of individuals as enthusiastic consumers is an intimidating task.

According to Rose (1999, p. 85), the “technologies of mass consumption as they took shape over the course of the twentieth century, established a new relation between the sphere of the self and the world of goods”. After the Second World War, the American way of life, together with new methods of

⁵ Expert involvement may also confer legitimacy to neoliberal programs for action (Miller and Rose, 1990; Radcliffe, 1998).

management, spread with the significant support of the Marshall plan in Western Europe (Boltanski, 1982). Initially, emerging communication specialists were sent to the United States to learn the “spirit” and techniques of “state-of-the-art” marketing communication within the context of productivity improvement (Viale, 1997). Back in Europe, the scope of their work expanded – from the stimulation of household demand for recent appliances and goods to the shaping of minds. Their task was facilitated by a stream of applied research disseminating “consumption technologies” (Miller and Rose, 1997) such as “psychodynamically interpreted group discussions” and “new techniques of calculation, classification and inscription such as flavor profiling” (Miller and Rose, 1997, p. 31).

In the process, patterns of consumption became increasingly viewed as related to personal identity, providing marketers with a platform to develop creative and persuasive advertisements aimed at resonating with (and influencing) the customer mindset. According to Rose (1999, p. 85), “For the first time, this power of goods to shape identities was utilized in calculated form, according to rationalities worked out and established, not by politicians, but by salesmen, market researchers, designers and advertisers who increasingly based their calculations upon psychological conceptions of humans and their desires”. The individualization of society and the desire to influence consumer conduct, therefore, emerged prior to the spread of neoliberalism (Rose, 1999). The latter, arguably, acted as a catalyst, providing a socioeconomic context that was eminently receptive to a project fundamentally aimed at knowing and influencing the psychology of consumers. The basic challenge is to establish “ambiences that program consumer freedom to evolve in ways that permit the harnessing of consumers’ newly liberated, productive capabilities” (Zwick *et al.*, 2008, p. 165) – and this heavily depends on the measurement and monitoring of online consumption.

Thus, expert-based practices and technologies (Miller and Rose, 1997) play a key role in the neoliberal project to govern consumer cognition. One of the overarching principles is that through consumption, consumers do not only purchase commodities; they also work their identities and display a lifestyle reinforcing social position and providing meaning to their lives. By being exposed to a range of consumerist discourses and representations, individuals “learn” how to behave as “skilled” consumers, eager to exert free choice in retail markets. As Rose observes (1990, pp. 102-103),

Through consumption we are urged to shape our lives by the use of our purchasing power. We are obliged to make our lives meaningful by selecting our personal lifestyle from those offered to us in advertising, soap operas, and films, to make sense of our existence by exercising our freedom to choose in a market in which one simultaneously purchases products and services, and assembles, manages, and markets oneself.

In sum, the key theoretical point underpinning our study is that any governmentality program is constituted through the interplay between government, expertise and subjectivity (Rose, 1999, p. 141). Web consumption provided opportunities to deploy new gazes of visibility on consumption, therefore providing new or additional work for different kinds of expertise involved in the constitution of knowledge and means of intervention in consumer behavior. The overarching intent is to favor certain types (and only certain types) of “freedom” in the area of consumption behavior while policing and circumscribing this “freedom”, seeking to make it consistent with certain norms regarding what a “free” consumer is supposed to think and buy. Technologies of neoliberal government are therefore aimed at establishing, through “soft” but persuasive forms of power, a type of social control surrounding consumer “freedom”.

Our work can be viewed as illustrating the relevance of governmentality perspectives (Foucault, 1983, 1997; Rose, 1999) in understanding the ascendancy of measurement expertise in today’s digitalized age, all the more so as the vast majority of extant Foucaultian studies in the accounting

literature relate to pre-digitalization times (e.g., Hopwood, 1987; Knights and Collinson, 1987; Loft, 1986; Miller and O’Leary, 1987). Based on the above theorizing, our investigation is focused on two questions:

- How did communication agencies react to the spread of the Internet in economic life and increasing advertiser demand to measure the productivity of marketing investments and provide more detailed knowledge of consumer conduct?
- What kind of measurement and knowledge production expertise, targeted at online consumer conduct, developed within the agencies?

Methods: field, collection and processing of data

Circumscribing the field and its transformations

The overarching term “communication consultancy” emerged in the early 1990s as a rhetorical tool that aimed to unite multiple communication disciplines (Viale, 1997). The concept of “advertising” blended in gradually with the other disciplines, such as direct marketing, corporate communication, public relations – and, more recently, digital marketing. The changes made to the name of the main professional body are illustrative in this respect. Today’s Association of Communication Consulting Agencies (AACC), which “defends and represents the interests of communication agencies”, was known as the Association of Advertising Consulting Agencies (AACP) prior to the 1990s.

We studied three of the main disciplines within the field: advertising, direct marketing, and Internet-related (digital) communication.⁶ The choice of advertising ensues from its historical status in the field, where it is considered as the original discipline around which the field was created. We included direct marketing because it is linked closely to information technology (IT) development and customer database use. Finally, we selected digital communication because this specialty expanded since the mid-1990s and was identified as a significant vector in the field’s economic development as a whole. These three disciplines quite commonly cohabit within communication agencies, historically dominated by advertising.

Our initial interest focused on the extent of transformation generated by the spread of digital technologies within the field. To investigate the development of digital measurement expertise and its effects on the communication disciplines, we relied on a two-pronged approach: an archival study and series of interviews. The archival study consisted of collecting information from three types of sources: market studies dedicated to communication consulting firms (Xerfi Sector 700 from 1996 to 2009; Datamonitor from 2002 to 2007); websites of professional organizations; and press articles via the Lexis-Nexis, Factiva, and Delphes-Indexpresse databases from 1988 to 2008, through queries using

⁶ Advertising encompasses organizations such as agencies, international networks, worldwide groups and professionals of a variety of profiles (account managers, creative personnel, strategic planners, media planners, etc.) who develop communication strategies to promote brand awareness. Their activity consists mainly of making brands visible, better-known and liked. Direct marketing devises communication campaigns that are more directly intended to generate product sales and create a direct relationship with the customer. Digital communication consists of Internet-based marketing. With regard to direct and digital marketing, IT plays a decisive role as it opens up the possibility of intensive database exploitation, website construction, interaction with marketing targets, etc. (Lendrevie and Baynast, 2008).

search words such as “communication consulting”, “advertising”, “direct marketing”, “digital”, “advertising investments”, etc.⁷

Our archival study found that a succession of economic crises transformed both the relationship between advertisers and communication agencies but also inter-jurisdictional relationships between different types of advertising professionals. The growing demand by advertisers for tangible results accentuated interdisciplinary competition between traditional advertising professionals and “digital natives”. This rivalry involved a transformation of resource allocation away from traditional advertising campaigns to digital campaigns. Measurement and knowledge production then became key aspects of professional skills. As such, our emerging understanding of the transformation of the field and the issues at stake informed our preparation of the field phase and strengthened our capacity to be viewed as a knowledgeable and credible party in the eyes of participants.

The field phase consisted of conducting 100 (mostly semi-structured) interviews, with a few in-depth. Eighty-five communication professionals, some interviewed several times, participated in the interviews. As indicated in Table 1, we carried out the interviews in four distinct waves: an exploratory wave and three data-collection ones. The exploratory wave served to validate our questions using input from ten professionals from a variety of backgrounds to develop a multidimensional perspective on the field: experienced top managers for their panoramic and strategic vision of the profession; middle managers for their hands-on operational involvement in day-to-day agency work; independent experts in communication consultancy for their familiarity with and “outside view” of the profession; and advertisers’ representatives, to obtain the viewpoint of agency clients.

[Insert Table 1 about here]

Through these exploratory interviews, we organized and validated our interview guide on the following themes: the organization of the communication consulting sector, developments in the professional disciplines, relations between advertisers and agencies, the breakdown of investments between the various media, and the different measurement techniques of communication campaigns. We carried out the rest of the data collection in three stages and we structured the interviews along four profiles (top managers, middle managers, experts, advertisers).⁸ We had an initial wave of 53 interviews from June 2008 to January 2009. A second set of 30 interviews took place from April to December 2009 to answer questions that emerged during transcription of the first interviews. We conducted a third wave of seven interviews from June to August 2013 to collect additional data on measurement expertise and practices.

⁷ The websites consulted include: AACC, France Pub, the Institut de Recherches et d’Etudes Publicitaires (IREP), the Union des Annonceurs (UDA), the Union des Entreprises de Conseil et Achat Média (UDECAM), the Union Française du Marketing Direct (UFMD), the Observatoire des Métiers de la Publicité, the International Advertising Association (IAA) and the Interactive Advertising Bureau (IAB). Also, the scope of press articles covered the trade press specializing in communication consultancy (Stratégies, CB News, CBNewsletter), the national daily press (Le Figaro and its media section, Le Monde, and Libération) and the daily business press (La Tribune, Les Echos).

⁸ The top managers had the overall strategic view of the professional field, but they were used to talking to journalists and sometimes sounded overly formal. The middle managers involved in day-to-day agency work had a more operational and often more critical view. It was not rare for them to pinpoint contradictions between formal pronouncements and actual practice. The experts, meanwhile, tended to place the field’s difficulties in the perspective of their position as outsiders and were able, in principle, to speak more freely. Finally, the advertisers described their expectations and means of placing pressure on the field.

Data collection and analysis

In almost two-thirds of the interviews, we met the participant face to face; the other interviews were conducted by telephone. All participants were guaranteed anonymity of identity, accounts and clients.⁹ The meetings were generally held in the workplace, but occasionally away from the office, in places such as the interviewee's home, a café or sometimes in more unusual places.¹⁰ All interviews were conducted by one of the authors and were digitally recorded. Most interviews lasted 45 to 60 minutes. Several (9) lasted longer; these were primarily meetings with top executives we wanted to meet a second time on account of their volubility and interest in the subject.

We transcribed all interviews in full – including any silences, interjections, hesitations or repetitions. This aimed to provide a better understanding of the thinking process and sequence of ideas, while taking into account any moments of embarrassment on points being addressed. This process produced more than 1,900 pages of interviews. The collected data was then analyzed through several successive readings, producing a series of themes and subthemes emerging from the interviews. These themes and subthemes, along with the corresponding excerpts, were next classified in five verbatim books, representing altogether 251 pages extracted from the raw material of the original transcripts.¹¹ Throughout this process we were able to triangulate our data across interviews, and through comparisons between interviews and documents (Denzin, 2006). This allowed us, in particular, to connect our understanding of the structure and dynamics of the field (emerging from our documentation analysis) to interviewees' reflexivity and discourse on their professional practices. In this article, we focus our analysis on how the neoliberal governmentality project targeted at the consumer level is articulated in a context characterized by the emergence and consolidation of expertise in digital communication and measurement. Our reliance on a governmentality template emerged in the course of data analysis.

Inter-jurisdictional experimentation and the neoliberal government of online consumption

This section examines how communication agencies reacted to the spread of online consumption and advertisers' increasing demands to measure communication impact. Our data indicates that the development of measurement technologies targeted at online consumer conduct required the elaboration of expertise in constituting, interpreting and acting upon relevant data. A series of inter-jurisdictional experiments to renegotiate the division of labor (Freidson, 1994, p. 49) took place within

⁹ We anonymized and coded the interviews as follows: the top managers were TPM (from 001 to 041), middle managers MOP (001 to 016), independent experts EXP (001 to 015) and advertisers ADV (001 to 013). It is worth noting that eight interviewees mostly provided superficial information and played a very limited role in the analysis (5 middle managers, 2 experts and 1 advertiser).

¹⁰ The interviews themselves and the places chosen by some of the interviewees testify to the somewhat original character of professionals in communication, often with a keen eye on their image and the environment in which they stage themselves, while often pretending to be relaxed. For example, an interview with one of them, a music enthusiast, began in a café not far from his home, then continued one hour later in a lounge fitted out as a venue for rock concerts and then continued one hour later on the terrace of an apartment. Another top manager, whose agency shared its premises with a well-known Paris concert hall, insisted on conducting the interview on the circle of the concert hall. We were face to face in the half-light of the immense and empty hall.

¹¹ The first book covered the theme of market transformations (40 pages and 160 quotations). The second addressed digitalization (42 pages and 169 quotations). The third concerned organizational change (38 pages and 152 quotations) and the fourth fees and measurement (88 pages and 278 quotations). The last book covered professional cultures and the images practitioners have of their discipline (43 pages and 181 quotations).

the agencies, as they sought to adjust their practices to the range of measurement opportunities that online consumption appeared to present.

Online measurement constituted a significant challenge for advertising specialists. Eventually, they concluded that they had to fill the vacancy of expertise (Abbott, 1988, pp. 88-89) generated by the Internet and open up to online technologies. To reach this conclusion, however, the traditional advertising experts needed, through experience, to be convinced that the measurements were credible and that they could still legitimately oversee and remain in control of the scope of activities within the agencies, including digital measurement. When it became evident that traditional advertising professionals would remain in control of digital advertising campaigns, they developed an attitude of relative tolerance and benign acceptance of their digital counterparts.

The process that led to the ascendancy of measurement in the communication consultancy field resulted from a combination of three sources of influence. First, the clients of communication consulting services became increasingly demanding to know the precise effects of their investments. Second, their demands were facilitated by the emergence of the Internet and progress in the technological capability to amass and analyze data regarding online consumers. Third, and equally important, is that the first two changes occurred against the backdrop of a series of successive economic crises that generated budget restrictions among advertisers. We elaborate each of these items below.

Advertisers have long been interested in strengthening the understanding of each communication campaign's impact on the consumer (Miller and Rose, 1997). In addition, our archival analysis indicates that the first two oil crises (1973 and 1978), the first Gulf War (1990-1991), the passing of the Sapin Law (1992-1993), the explosion of the Internet bubble (2000-2001) and the sub-prime mortgage crisis (2008) formed a sequence of economic shocks that made advertisers more cautious in their investment decisions.¹² They wanted empirical evidence of campaign effectiveness with reports, minutes, ratios, and so on. Increasingly, the enrolment of advertisers in marketing strategies aiming to influence the conduct of consumers necessitated the production of knowledge and evidence about the impact or likely impact of marketing initiatives. Governmentality is a costly endeavor, and demonstrations of tangibility reportedly helped to secure commitment and investment. Accordingly,

There's a culture of measurement that is spreading. The return on investment [ROI] is very present among advertisers. It even affects the agencies' revenues which are increasingly required to show the results of their work. (EXP 008, 2008)

Measurement has come to have a big influence. It gains more and more influence in digital life. I think that this is linked, to a large extent, to the [global financial] crisis because advertisers have budgets that are becoming tighter and tighter. At the same time, when they invest, they want to minimize risks, and digital lends itself well to this. Minimizing risks means measuring the return on investment. In any case, it's obvious that now they no longer invest saying, "OK, I'll blow 200,000 or 300,000 euros on a campaign." Moreover, we need to reassure them because they take a personal risk in their enterprise. So measurement now plays a very important part in the decision to invest. (MOP 012, 2013)

¹² The Sapin Law regulated agency commissions, tackling what was deemed to be an opaque system of bilateral agreements between agencies and media. Typically, agencies get a commission from their clients, i.e. the advertisers. The regulation aimed to prevent agencies from charging an additional fee to the media where their clients' advertisements were to be placed.

These two excerpts indicate that the logic of measurement increasingly affected practices in the field to the point that at the end of data collection, it was quite common for agency revenues to be tied, somehow, with communication effectiveness as captured through performance indicators. Again, the government of consumer conduct is a costly endeavor; a range of initiatives developed in the field to reassure advertisers about the actual impact of their communications. As we will see below, tangibility took the form of demonstrations claiming microscopic precision in the data collected on consumer behavior.

As such, the incorporation of digital communication expertise within the agencies engendered a twofold (overlapping) effect: tangibility pressure prompted the disciplines to provide empirical evidence of economic efficiency; and a more sophisticated knowledge of consumer conduct. However, it would be naïve to believe that the governmentality project was homogeneously perceived and articulated throughout the field of communication consultancy. Expertise needed to be constructed and role boundaries had to be defined (Abbott, 1988, p. 135). These engendered inter-jurisdictional rivalry as attempts were made, within the agencies, to define what ultimately came to be viewed as proper digital expertise and measurement practices.

All communication experts seemingly shared the same objective: shaping identities and lifestyles that free consumers will enact by choosing appropriate brands and products (Rose, 1999). However, this apparent unanimity in goal attainment contrasts with different and quite antagonistic conceptions on measurement and use of knowledge. For advertising specialists creativity is paramount. In their eyes, creativity may be facilitated by consumer knowledge, but never be hindered by issues of measurement. In advertising, data is considered as part of the context that may support what is viewed as the “creative leap”. Data is a means to an end: the more creative a given idea is, the better it is in terms of making a difference on the consumer’s mind. In contrast, digital measurement experts consider data and measurement as ends. They endeavor to track the conduct of web-users, recording on-line browsing activity and preference cues they leave on the Internet. Importantly, our analysis indicates that these differences between advertising and digital experts needed to be worked out and reconciled through inter-jurisdictional experimentation.

Celebrating creativity: the traditional posture of advertising specialists

Shaping brand image in ways that convey a lifestyle in order, ultimately, to carve out a place for this image in the consumer’s mind is the fundamental aim of advertising experts. They assume that creativity is the best way to win consumer attention and strengthen retention. It must be noted that advertising experts typically obtain information – whether on consumers’ evolving preferences or the impact of some advertisement – *from other experts*. By and large, measurement work is delegated to specialists, either internally or through some outsourcing arrangement with market survey specialists working for polling organizations, which developed some recognized methods to study consumer behavior. To put it differently, measurement is not a top priority in the eyes of advertising specialists.

The measurement of advertising “appreciation”, in its traditional form, is obtained by pre- and post-testing measures. This approach analyzes three main communication campaign aspects: 1. message impact on the audience; 2. image perception; and 3. the audience’s level of exposure to the campaign. For example, before a campaign, and within the scope of pre-testing, consumers can be

invited to express in focus groups their perception of a brand or product.¹³ Focus groups may also be used to examine the understanding of the message or visual elements before launching a campaign. Post-tests are used to evaluate notoriety evolution or brand awareness after a campaign.¹⁴ The audience's exposure to the media or "advertising pressure", for its part, is calculated through devices such as the Gross Rating Point (GRP).¹⁵

One common criticism of these methods is that measurements are based on a "declarative" approach, relying on answers made by small samples of consumers in response to questionnaires or during focus groups designed to investigate campaign reaction. Study validity, based on this kind of protocol, is questionable because individual responses may be influenced by the experimental context and result in completely different in-store behavior.

Focus groups are consumers who are paid to give their opinion. They know they are being observed behind a one-way mirror and that if they don't speak out, they'll look like idiots. So they necessarily speak out. All those results should be taken with a grain of salt. (TPM 023, 2008)

Throughout this conventional process, precise links between the advertising campaign, declarations of consumer intent, and real action remain quite vague – the approach relying on guesstimates. This relative obscurity about precise outcomes may historically have allowed advertising specialists to firmly hold the belief that the main factor for campaign effectiveness was the extent of creativity inherent in the advertising message. In other words, what is not creative is pointless, because it leaves consumers psychologically unaffected by the message. As a result, most advertising professionals expressed skepticism, and sometimes even disdain, towards measurement tools within their field, arguing that such tools, whether traditional or novel, tended to measure things that do not really matter. As indicated in the excerpt below, from the advertising person's viewpoint, what matters, i.e. the degree of consumer "indifference", is not and probably cannot be measured. In the eyes of the interviewee, lack of creativity results in no desire to adhere to the lifestyle promoted through brands and products.

Measurement has gone crazy. We have developed more and more evaluation methods, but old measurements [...] and new digital measurements, such as "big data", are not really compatible.¹⁶ [...] However, in life, the real problem is indifference. People see nice advertisements, but they forget them. What is necessary is maintaining their attention by using strong ideas again and again and using creative ideas. This is something that cannot be measured. (TPM 019, 2013)

Overall, our data indicates that advertising specialists were highly destabilized by the development of digital measurement expertise. They lacked expertise both in the use of the Internet and techniques for measuring its impact and, as a result, were highly suspicious of anything that might

¹³ Image assessments define what individuals think of a brand, product or company. The main objective is to determine how it is perceived in terms of positive or negative feeling, opinion, etc.

¹⁴ The assessment of notoriety or awareness gauges the extent to which a given brand is known and by whom. In operational terms, the main objective is to measure the communication campaign's effectiveness on a quantitative scale. Most commonly used measurements are top-of-mind awareness (e.g., brands spontaneously cited when the consumer is asked to name detergent brands) and prompted awareness (i.e., brands are cited and the consumer must say the ones they know). Within the scope of these measurements, it is also possible to calculate attribution scores (link between advertisement and brand) and satisfaction scores (degree of satisfaction regarding the campaign).

¹⁵ GRP or index of a campaign's advertising pressure is the combination of "coverage" or "reach", meaning the percentage of the target population effectively exposed to the campaign, with a criterion of "average repetition" of the message, meaning the average number of opportunities to see (OTS) per individual.

¹⁶ The term "big data" describes volumes of information that are so important and data that are so varied that they can no longer be processed through traditional methods and tools of database management (Davenport, 2014).

render their subjective and somewhat mysterious profession subject to the ascendancy of objective measurement.

Integrating digital expertise within the agencies

Feeling pressured by advertiser demand to develop online communication and increase the precision of impact measurement, the agencies began to hire digital specialists. Their integration was challenging, however, given the extent of concerns that the spread of the Internet in economic life engendered, especially in the eyes of advertising specialists.

Our interviews indicate a backdrop of upheavals occurring at a breathtaking rate. Many interviewees expressed the feeling of having experienced “several revolutions” since the appearance of the Internet. This implies a perception of constant change that rendered traditional reference points less relevant.

I have been in the business for six years and something changes every year. There was the revolution of broad band, ADSL and the penetration rate. There was the 2.0 revolution. There was the analytics revolution. There was the content revolution. In the end, there is a revolution every year. So it is fascinating. (TPM 033, 2009)

For those more familiar with IT, this perpetual movement is presented as “fascinating”. However, those for whom Internet is not second nature (especially most advertising specialists) acknowledge that this unrelenting change is enough to lose them. The vocabulary used by top managers who are not digital natives (“chaos”, “death”, “terrifying”, “shambles”, “misfortune”...) conveys a loss of control, associated with a high-magnitude earthquake in their professional experience.

How can we find our bearings in the chaos we have been in since the Internet arrived? I think we have got to the crunch. (TPM 034, 2009)

The market around us, is, is, is in the process... is dying, is dying. It is terrifying. (TPM 012, 2008)

Everyone is looking to find their way. No one knows where to start. It all contributes to a permanent shambles. [...] It’s misery. (MOP 016, 2009)

In short, advertising specialists initially saw the Internet as a disconcerting source of confusion and vacancy (Abbott, 1988, pp. 88-89), which defied established disciplinary jurisdictions as well as historical categories of professional understanding. Further, the incorporation of digital expertise within the agencies generated inter-jurisdictional rivalry, threatening the status order in the field. Who does what, exactly, and when? “We are stepping on one another’s toes,” as the creative manager of a British network acknowledges.

The group is in the process of changing and in fact the boundaries are shifting, they are more blurred than before. Everyone is getting in each other’s way, which is complicated. (TPM 006, 2008)

A series of experiments and jurisdictional renegotiations then took place within the agencies – the ultimate purpose being to see how the world of communication could or should be adapted to the Internet. The stakes involved were important and multiple. For some, the Internet was perceived as carrying a significant potential in engendering different, innovative ways of communicating with consumers. However, this potential depended on advertising and digital specialists learning to work

together – not only in developing new communication channels but also in measuring impact in a more accurate way:

There is the promise to [...] make marketing and communication much more rational, much more predictable and thus much more manageable and steerable. [...] This makes the digital realm totally central to the rationalizing agenda, because digital communication is measurable. (TPM 038, 2009)

Our data indicate that two processes were significant in rendering advertising specialists comfortable with the involvement of digital experts in the agencies. First, the technologies of measurement provided concrete demonstrations of digital experts' abilities to evaluate impact, in ways that were palatable to advertisers. The following excerpt is perhaps one of the most telling demonstrations of tangibility that was conveyed to us by an advertising specialist highlighting on a humorous – and maybe sarcastic – tone the extent of precision associated with the new technologies of government:

A guy who is capable of looking you straight in the eyes and saying, "I have databases, I have 150 of them and I know where the homosexual notaries are in Western France; I know where to find them." That really demands industrial knowledge. It demands genuine mastery of things. (TPM 019, 2008)

Second, in their daily undertakings with advertisers and digital experts, advertising specialists learned that they still could control the relationships with advertisers despite the presence of digital expertise within the agencies. That is, over time, advertising experts came to the conclusion that they were still comfortable (and viewed as credible) overseeing the variety of activities involved in servicing large accounts. The way in which access to the advertiser's brief is "negotiated" is an illustration of this. The brief is the initial meeting during which the advertiser meets one or several agencies and informs them of its communication needs on a given subject, detailing their communication issues, marketing objectives, budget and calendar. Access to this information is decisive because it largely determines the finer understanding of the request and campaign issues.

The first stage in a campaign is taking the brief. [...] I always say that selling an ad campaign starts with the brief because you start badly if you don't understand the issue, if you don't absorb the advertiser's DNA. (TPM 023, 2008)

The following excerpt illustrates the resistance of advertising specialists to making space around the table for their counterparts from other disciplines during these moments (i.e., the briefs) considered critical in terms of holding onto power:

Interviewee: Officially, there is a discourse of openness [*towards the disciplines of service marketing and digital marketing*]. But in fact [*although he works in a digital unit of the same agency, located a few meters from the advertising unit in charge of the client*], the advertising specialists only provide us with the basic information regarding the briefs one week before the presentation [*of the communication strategy to the client*].

Interviewer: So you don't go to the brief?

Interviewee: No, I don't go to the brief. [...] Digital is trying to catch up with advertising, but it always falls into the hands of advertising because at group level, we get our knuckles rapped. When [*the management of the group advertising agency*] learned that we [*digital marketing*] were going to be presenting the communication strategy for the 2009 consultation [*of a very big advertiser*], the [*digital*] unit executive was reprimanded. In the end, [*a group of advertising specialists*] we had never seen before came directly from London to Geneva where we were giving the presentation. It

came to take over from digital marketing. (MOP 009, 2008)

By the end of data collection, we found that most advertising specialists were convinced that digital expertise was relevant in contemporary agencies. Some advertising specialists even related the presence of digital expertise to a sense of greater accountability – not without some concern over the constraints this may engender in terms of creativity. Indeed,

How can anybody resist accountability? That would be irresponsible. Everybody wants the facts; so they're irresistible. This is the current obsession of the advertising industry. Where does it lead? It may lead... I'm just pointing out the danger [smiling with a sarcastic tone]. The drivers for quantification could lead to standardization and to conformity. I think this is a serious danger. There are many people I am sure who have said to you that advertising has already arrived as a commodity market. (Saatchi, Executive Director of M & C – see Buzz Média Orange-Le Figaro, 2014)

The seductive rhetoric of creativity could not make most advertising specialists ignore the business logic to which they felt accountable – as they sometimes acknowledged at the end of their interview. Although quite aware of society's tendencies, advertising professionals recognized that digital measurement took on an unsuspected dimension:

Where I have been developing since 2008 [the last time we spoke together] it was... Damn it! It is just that today, I need people who know how to collect data and make valid measurements! Before [the Internet], above all I needed sociologists and philosophers to inspire me. Really people just like me. Now I know that I'm in danger of dying with all my pals [CEOs] who lead [advertising] agencies if I don't work closely with people who have mastered relevant data and proven measurement tools. The insights of yesterday were made by people like me who were using a mixture of common sense, culture, and capacity to compile various qualitative and quantitative studies. The data of tomorrow will come, above all, from IT and the Internet in particular. Now what people think and do is known from tracking them on Twitter or Facebook. That's where we should be. (TPM 019, 2013)

This interviewee recognizes that digital experts can produce precise information on individual consumption patterns, thereby reducing the distance “between the sphere of self and the world of goods” (Rose, 1999, p. 85). However, most advertising experts were swift in seeking to put everyone back in their “natural” place, in order to take back control of their agency's destiny – by hammering home the idea that, while digital measurement now is indispensable, it still remains subordinate to the “good creative idea”, their point being that good ideas inevitably come from advertising expertise.

Digital natives [experts] tend to overstate measurement. However, it's the “good idea” that makes the effectiveness of a campaign 10 or 20 times better. It's not one [digital] versus the other [advertising]. Both are important but they don't work along the same lines. Yet fundamentally, the idea is worth more than the communication system and measurements that go with it. The owners of the central idea, of the brand idea [i.e., the advertising professionals], are still the ones who really count. Their role is that of strategic planners – of very powerful and creative people having the capacity to find crucial branding ideas. (TPM 007, 2013)

Expertise needs to play a pivotal role if neoliberal governmentality is to reach and influence consumers. Our study indicates that considerable work and energy are necessary to craft and legitimize a body of expertise consequent with the dictates of neoliberal governmentality. Learning to produce knowledge on the consumer's free conduct constitutes a significant investment that requires various trials before the form and content of expertise (temporarily) stabilize. In our case, learning also took

place on the advertising specialist side, as they gradually became comfortable with the role of digital measurement expertise within the agencies.

Deploying measurement expertise targeted at online consumer conduct

As maintained by Abbott (1988, p. 135), claims of expertise intertwine with prescriptions on how specific tasks (here, measuring communication impact) should be conducted. Studying the construction and legitimization of expertise therefore implies the examination of expert work carried out in the field.

The digital experts manifested a sense of detail and a form of fascination for data that contrasts dramatically with the distance maintained by most advertising professionals. This discrepancy relates to different ways of considering the government of conduct. If the advertising expert aims to shape behavior with “big ideas” that make consumers dream, the digital expert endeavors to create lines of sight which will be indispensable for the government of conduct. As stated by Rose (1999, p. 36),

To govern, it is necessary to render visible the space over which government is to be exercised. This is not only a matter of looking; it is a practice by which the space is represented in maps, charts, pictures and other inscription devices. It is made visible, gridded, marked out, placed in two dimensions, scaled, populated with icons and so forth.

Specifically, the work of the digital expert is predicated on “web analytics” – with the aim of tracing web-users’ lives and representing them in templates and figures. In other words, web analytics seek to “map” online consumer behavior and preferences through measurement devices. Web analytics focus on two major areas: observing and monitoring web-users on the web in general; and analyzing navigation on a particular site. These two approaches engender two measurement methods. The first categorizes web-users through the creation of profiles. The second focuses on the measurement of a website’s economic performance. It is through such kinds of data collection that consumers are increasingly made knowable, predictable, and governable.

There are two levels of measurement. The first relates to the level that has a bearing on what is said in the blogosphere or on social networks. This is used in the early stages of a campaign, as a source of information for creative and strategic purposes. This is the first measurement level. The second one relates to performance measurement. During and after a campaign, we can watch conversion rates, which are indicative of a campaign’s performance. Then take stock, comparing with last year’s figures without the campaign. (MOP 012, 2013)

While these work processes were well established by the end of data collection, it should be recalled that they developed through various trials.

A. Listening on the web to govern what the market says

While approaches centered on web-user measurement (“user centric” methods) emerged around the end of the 1990s, these approaches really thrived following the emergence of social media, such as Facebook in 2004 and Twitter in 2007. Through social media, web-users have the means to say what they think or what they are in the middle of doing to practically the whole world. By using a Facebook account, web-users can show their holiday snaps, display their taste in music or films, talk about their preferences for brands with “likes”, share must-have buys with “share”, recreate their biography (scholarly institutions they went to, towns they lived in, countries they visited, etc.). They can also send messages to friends, issue “posts” expressing their mood, etc. Twitter, more minimalistic, allows them to write very short messages (140 characters maximum) that may be immediately read by

“followers”. On YouTube, which was created in 2005, web-users can upload and watch videos. In 2010, Instagram offered a space to share photos. All this information, typically understood to reflect the individual’s psychology, tastes and aspirations, is now potentially accessible to a wide public audience through a snowball effect.¹⁷

The need for people to express themselves exists and always has. Yet, with the creation of Facebook or Twitter it’s now easy for people to take the floor and voice their views to a large audience. For us [digital experts], it’s easy, extremely easy to find out what’s being said on the web. (EXP 015, 2013)

Specifically, digital experts can rely on social media analytics tools, such as Quintly, Socialbakers or Radian6, to scrutinize and listen to web-users’ conversations. These tools analyze discussions as “voiced” in the social media. Said one such expert: “Behind every tweet, Facebook post, or status update is a customer — and it’s your job [as a marketer] to engage, in a timely, responsive manner with compelling content”. Digital specialists seek to record what consumers say about brands, products, and competitors. They identify which topics generate interest and where the most influential conversations are happening. Digital measurement therefore provides a meaningful platform to develop a detailed knowledge of consumer psychology.

[A famous foodstuff brand] uses a [name of tool] licence at €300,000 per year that allows the surveillance of all its brands. As a result, they know what’s said on any social network about their products in real time. (MOP 012, 2013)

Most of these listening devices function through the recognition of keywords (one’s own brand, a topic in the news...). The listening perimeter is determined by choosing the “sources” that are included in the surveillance initiative, such as Facebook and Twitter for conversations and opinions, YouTube for videos, and Instagram for photos. Then, dashboards can be personalized for follow-up purposes, using relevant and personalized “widgets” regarding specific issues, although dashboards typically comprise common activity layers, such as brand reputation analysis, competitor profiles, target population analysis, etc. (see Figure 1).¹⁸

[Insert Figure 1 about here]

At least in appearance, dashboards may provide users with a feeling of power, in that the different boxes can be viewed as reflecting an extensive gaze, able to monitor a range of discursive targets, such as the company’s brand, Twitter conversations, or what is said in the social media about competitors. Dashboard users are even offered an option that allows them to exert concrete influence on consumer behavior through the “engage your community” function (Figure 1).

A series of indicators considered generic to most campaigns can be found at the center of such interfaces. Among these indicators are “share of voice”; “level of change”; “conversation cloud”; demographics, such as age and geographical origin; “view by sentiment”; and the influential web-users list.¹⁹ From these indicators, cross-tabulations can be carried out to refine knowledge about a targeted

¹⁷ Indeed, any information or image posted on a “private” Facebook account can be viewed by authorized “friends” and then made publicly available when any friend decides to share this information with their own Facebook network and so on. In the same way, someone following a Twitter account can re-tweet any tweet to their network of followers.

¹⁸ Widget is derived from “window gadget”, which is an interface for presenting results through graphics or dynamic tables.

¹⁹ “Share of voice” is the number of posts or messages (tweets in the case of Twitter) dedicated to a brand versus the number of posts about rival brands. “Level of change” reflects the volume of posts over a given period of time; this measures the growing or diminishing interest in a given subject. “Conversation cloud” is predicated on a list of words used in the posts relating to the brand; the most important words are emphasized by larger font and bright colors. “View by

population – such as discovering that posts of influential web-users have a negative “sentiment” concerning the brand. Following successive filtering, the target population is increasingly visible to the analyst and individual users can be contacted to make them change their opinion on a given brand. Interviewees clearly considered web-based analytics to be a valuable and effective way of accessing the realm of individual consumption, not only as a knowledge production mechanism, but also as a basis for intervention on conduct.

By way of illustration (see Figure 2), a dashboard screenshot brings up certain key indicators for monitoring a site. The analysis is carried out using 51,914 recorded posts or messages. In the upper left, the manager can visualize the “conversation cloud” that relates to the brand or its website. The most frequently used words, such as “infographic”, are emphasized with large characters and colors to provide a sense of information hierarchy. In the upper right is detail that underlies the word “infographics”; specifically, it provides a list of Twitter users whose tweets include this word. When the most influential web-users, that is to say those having many followers (one of the web-users has 1,071 followers, so her/his opinion is considered quite influential), issue negative comments, the dashboard user can contact them directly. The box in the lower right provides geographical distribution details about the web-users’ brand-related communications (e.g., United States, 73.5%). Finally, the box in the lower left shows the extent of conversations (or buzz) relating to the brand; for instance, we can see that peaks of activity took place on August 19 and 26.

[Insert Figure 2 about here]

Unlike questionnaires, focus groups or panels that always run the risk of social reactivity bias, social media are viewed as superior, because users tend to express themselves more freely and spontaneously on a number of subjects. For digital communication experts, following web-user conversations is an opportunity to understand them better and to use that knowledge to influence the web-user’s consumptive behavior. Ironically, consumers’ freedom of expression becomes a powerful tool to shape, constrain and discipline behavior. As a result, digital experts tended to conceive of as credible, even tangible, the linkages between data and action; in their eyes, the data collected shapes the communication campaign that, in turn, is expected to influence the conduct of Internet users.

Before [the Internet], communication campaigns were done on a massive scale with large targets. Things were learned but they were not precise. It was known that consumers had such and such consumption habit from sociological studies. Then focus groups were formed to make them respond, to find out more specifically what they thought and what they wanted. However, all this was just so much handiwork with the collection of different kinds of data that did not have much to do with each other. Today, piles of information on what people think and say can be collected from social networks without even asking them a question. This is more credible and we know our targets and what we should say to them better. (EXP 015, 2013)

The last quotation is notable, in particular, for the links it establishes between consumer knowledgeability and confidence in web-tracking expertise. Such narratives, more or less implicitly, promote the relevance of digital experts’ involvement as knowledge producers. For instance, after monitoring social media, a popular Swiss watch brand confidently concluded that more technical information had to be released in order to increase brand interest.

We [digital experts] did a semantic and quantitative analysis of what was said on Facebook about luxury watches. We realized that if the company wanted to be followed on Facebook and obtain

sentiment” is the distribution of positive and negative posts with the characteristics of the authors. Finally, a web-user’s influence level is calculated according to the number of followers, usually the web-users that follow their posts on Twitter.

quite a lot of “likes” and “shares”, or at least a strong interest, the web-users’ posts [messages on Facebook] had to have between 3,000 and 5,000 characters. Why? This is because in the high-quality watch making area web-users are focused on detail. By talking about a technical innovation that has just come about, they are sent into a dream world. The web-users want to know more about the innovation, they want technical facts, they are interested in the brand and talk about it more easily to their friends on Facebook or elsewhere. (MOP 012, 2013)

Monitoring tools do not just improve understanding of the consumer’s psychology. They can also create immediacy in the relationship as illustrated in the example below regarding a brand that was highly sensitive to its “e-reputation”. One negative comment made on Twitter that includes the name of the brand was immediately captured by a monitoring device and then displayed on a dashboard with the notation “negative sentiment”. The community manager in charge of online tracking promptly reacted to solve the problem.

There was someone in a shop lining up to buy coffee capsules. On their Twitter account this person ended by saying, “Right, I have been lining up for a quarter of an hour, it’s just unacceptable, etc.” The e-reputation of the brand was so well monitored that one of the brand’s community managers saw this tweet before the person arrived at the till and he brought the information back down to the shop. When the client reached the till, the seller apologized for the delay and offered them a gift. (MOP 009, 2013)

According to our interviews, the latest fashion in user-centric measurement is the arrival of “big data”. The growing volume of data generated by web-user online activities presents communication agencies with a gigantic task, namely, how to make sense of this mass of information.²⁰ As a result, we are far removed from panels based on samples of a few hundred or thousand voluntary consumers answering questionnaires with approximate statements. Consumers are now traced and recorded on the basis of what they do, say and think.

Today it’s not a thousand people who are analyzed but millions. Work is not done on samples; work is done on the whole population in real life. We are flooded with data from everywhere. (EXP 007, 2013)

With all the behavioral data from web-users who see such and such product, we are in the process of developing mega-bases on consumer behavior that are much more detailed and powerful than the behavioral bases we had previously. (MOP 009, 2013)

Data mining experts segment populations into categories and produce more and more credible “tableaux vivants” from these huge databases. These tables transform the “confused multitudes” into relevant categories (Foucault, 1977, p. 148), aiming to provide an acute sense of knowledge of consumer preferences and communication campaign effectiveness. This is done at a worldwide scale, in real time and real life. The following excerpt even describes a situation where powerful technologies of surveillance provide communication specialists with the capacity to establish models that allegedly predict what should be said with accuracy to whom, where, and when.

There’s a story about big data that struck me and I find it very interesting. It’s the story of [brand X] in the USA that developed models predicting consumer behavior from their online behavior. [...] One model could predict what the client was going to buy from what she had already purchased. They had defined predicting rules for identifying women in the first trimester of pregnancy in order to give them priority offers on childcare, maternity, etc. One day, they were so

²⁰ According to Radian6’s tool developed to follow social media, web-users make 60 million Facebook hits, 200 million tweets on Twitter, and 3 billion YouTube views every day. Source: corporate website Salesforcemarketingcloud, 2013.

granular in their division of the databases that they sent emails to promote offers. Then, they received an email, a message from the father of a family who was a little confused because [the brand] had sent an email on its maternity products to his daughter who was sixteen years old. [The brand] apologized profusely. Several weeks later, they received a second email from the same father of the family who apologized too because it turned out that his daughter was actually pregnant. It's a true story! This is where we are today. We have succeeded in this type of measurement. What for? To predict and be able to rush priority offers as quickly as possible. (MOP 009, 2013)

Overall, these quotations provide a persuasive sense of the relevance of digital expertise for the government of consumer conduct – through knowledge of consumption details then used to influence consumption. Our data indicate that digital measurement gave rise to considerable advances in persuasive and detailed knowledge of web-users. By placing “great ears” to listen to the web, the behavior and attitudes of potential targets can be scrutinized and data stored in mega databases. The latter provide communication campaigns with customized information to strengthen results through powerful selecting and targeting devices.

B. Tracking consumer behavior to govern what the market does

Detailed statistics on web browsing behavior were provided by “site centric” tools such as Xiti from 2000 onwards and Google analytics from 2005.²¹ Through appealing dashboards, these statistics allow quick visualization of a given site’s traffic and a follow-up of its performance. Whatever the site’s vocation (e-commerce, information, etc.), it is rare, nowadays, that a site is not the subject of evaluation given the field’s eagerness to develop an increasingly finer understanding of online behavior.

Measuring site activity may be done by examining “log files” and/or “tag” markers that record consulted pages.²² However, this type of recording does not establish a specific link with the web-user; it only provides aggregate information like the enumeration of most visited pages. A more refined method relies on the “cookie” technology, which is a file placed by the site visited onto the web-user’s browser, most often without their consent. The cookie links real pathways to the persons involved, even if they remain anonymous. When the anonymous web-user returns to the site, the cookie provides a personalized offer in line with her or his browsing history.

Despite an explosion in the amount of data collected, digital specialists are particularly focused on a small set of indicators to provide a compelling representation of web browsing behavior. Among the most widespread indicators are keywords used by the web-users to access the site. Other indicators include a visitor’s geographic location, method of access, entry and exit pages, total number of visitors and pages seen, average visit length, and pathways most frequently taken once on site.

User-friendly dashboards bring together online traffic analysis results. The aim is that, with just a single glance (see Figure 3), the web manager can make sense of site activity – in this specific example

²¹ Towards the end of the 2000s, the Xiti company claimed it had more than 320,000 sites registered and monitored. With a portfolio made up of nearly half the enterprises from CAC 40 (the biggest enterprises on the French stock exchange) and of prominent public administration sites, Xiti presented itself as the French leader in the market of web analytics.

²² A log is a file that recapitulates all the events that occurred on a web server. This includes requests or hits to the server done by web-users and responses coming from the server. Log analysis consists of establishing frequentation statistics of the website, thereby producing a sort of analytical accounting of the server’s frequentation. Frequency measurements with tags consist of marking each page of a site with a javascript code. When a page is called up by an Internet browser, the code placed on the page sends a request to an independent server specifically dedicated to traffic monitoring.

emphasis is on total number of daily visits (blue dotted curve) and monthly total compilation (17,311 visits) distinguishing between returning visitors (5,996) and new visitors (11,315). Complementary figures are provided on matters such as number of pages per visit (1.74), average time spent on site (2:06 minutes) and “bounce rate” (69.61%).²³

[Insert Figure 3 about here]

By synthesizing what is considered essential data from a commercial viewpoint, these tools facilitate marketing team work, so they can devote more time to site enhancement. For example, thanks to visualization of the most frequently used pathways (see Figure 4), site content can be modified to exploit pages most often consulted. Site structure (tree structure) and access methods for it (ergonomics) can be revised to make navigation more intuitive. Product or key information on frequently used pathways can be placed to increase purchase or consultation probability.

[Insert Figure 4 about here]

In addition, key performance indicators are produced with the goal of making sense of economic performance. The most common performance indicators include new clients/customers acquisition costs, the percentage of new visitors, the average shopping cart and, favorite among favorites, the conversion rate related to a given action made by the web-user. This last indicator comes in several forms. For instance, the sales conversion rate is measured by the number of shopping carts validated in relation to the total number of visitors over a given period of time. The registration rate follows the same reasoning, except that it relates to the number of people who subscribe to a newsletter or complete a questionnaire. Finally, the reading rate takes into account the number of clicks on an email or a specific page.

There’s a huge number of metrics. [In our agency specialized in digital measurements], we began with ten metrics. Today, there must be some 200. However, among what is actually used, we come back to some twenty or so metrics that are a kind of norm now. The most common ones are impressions, clicks and, of course, conversions. [...] The most important one is the conversion rate. It deals with a specific action like the number of people who visited your site and ended up purchasing your product, or registering for a newsletter. (EXP 007, 2013)

Figure 5 presents a dashboard of online sales that emphasizes conversion rate statistics. The blue curve traces the monthly conversion rate development, i.e. the number of buyers versus the number of visitors. The figures below the curve show the average conversion rate (0.94%), the number of transactions (481) and number of products purchased (819). While these figures highlight sales volumes, they do not give much information on sales processes as such.

[Insert Figure 5 about here]

To more precisely analyze a website’s capacity to convert visits into sales, some measurement tools offer a “goal funnel” template. This consists of dividing up the sequence of stages that ultimately translate into sales, namely, the beginning and end of personal detail entry, bank detail entry, and sale validation (see Figure 6). Each stage highlights the number of web-users who abandoned the process and those who remained in the funnel until sale validation. For the month over which the analysis took place, 110 users began a registration procedure and 27 completed it; 23 typed their bank details and 14 purchased the product.

[Insert Figure 6 about here]

²³ The bounce rate is the percentage of visitors who left the site right after accessing the entry page.

All traces left by the web-user on a site may help improve the site's functioning and sustain its economic performance even after the web-user leaves. For example, cookies placed by a website can follow users during a browsing session on other sites, the same day or at a later time. As a result, the original website is in a position to do "real time marketing" and display to the web-users, via their computer screen, offers corresponding to their last browsing session.

You're going on some site [name of the brand]. You look at two or three products then you leave. The next day, you visit another site that has nothing to do with [brand]. In the banner, as odd as it seems, you see similar products to those you saw the day before. This is what we term re-targeting. The idea is to follow you only according to the things that you've seen. Companies then stop sending you ads that are not likely to interest you. The idea is to go very deep in terms of granularity. (MOP 012, 2013)

"Free" conduct in terms of navigating online is, therefore, far from being an unconstrained journey. It is not exaggerated to maintain that online users are monitored, quite often insidiously, every time they click on a site's option or hyperlink. This information is not only used to develop customized communications but is also influential in more finely adjusting websites to consumer preferences – in order to orient consumption behavior along some pre-established goal. That being said, the continual progress in measuring and tracking online behavior should not make us overlook the potential limits of these efforts to make the individual more transparent.

At the time of our interviews, citizen resistance to the powerful gazes of surveillance was possible – although resistance is costly, and these costs should not be minimized. For instance, citizens need to remain continuously informed of latest advances in web protection, and how to use the software effectively. On a broader level, web policy regulation needs to be enforced, which has costs and the issue of regulation is extensively compounded by the globalization of Internet commerce. In addition, companies are creative in devising fidelity programs where significant discounts are provided to customers who voluntarily accept to make their consumption behavior identifiable. Research has shown that most people are not significantly concerned with powerful gazes of observation being deployed on their activities (Lyon, 2001). As a result of all this, it can be maintained that progresses in digital measurement expertise make the web-user's attitudes and consumption patterns increasingly visible to corporate interests. Despite the web of online surveillance deployed on them, however, part of web-user life remains inaccessible to intrusion – for now.

Neoliberal governmentality is an evolving project impacted by technological advances and regulatory changes. In today's markets of consumption, citizens are not completely without resources in trying to slow down or constrain the ambitions of governmentality in terms of collecting consumption data. Nevertheless, in a world where neoliberalism and deregulation prevail to a greater and greater extent (Harvey, 2005; Morales *et al.*, 2014; Zhang and Andrew, 2014), several interviewees were worried about the growing capacity of web analytic tools to shed light on what was previously inaccessible. The same interviewees were also skeptical about the claims of enterprises that they can constrain their profitability desires and voluntarily conform to ethical ideals regarding personal data collection. Digital experts themselves recognize that, in the wrong hands, data may be used in detrimental ways, both individually and socially.

As with all tools that make the world progress, it must be regulated. Otherwise, in the wrong hands, situations prejudicial to individual freedoms can arise quickly. (MOP 012, 2013)

Discussion: Digital measurement expertise and the assault against consumer subjectivity

Drawing on Foucaultian dialectics (1983), the power of the Internet should be viewed as both liberating and constraining. It liberates the individual's capacity for expression, so that commercial and political organizations can now be challenged through the social media. But the Internet is conversely a place, and equally a tool, for the government of the market (Rose, 1999) – especially in terms of establishing further and consolidating the overarching project aiming to subvert the “free conduct” of consumers on the web. Ironically, the Internet increased consumer surveillance capabilities, under the guise of encouraging freedom of expression and maximizing consumer choice. As we demonstrate in our analysis, the development of measurement expertise among digital natives has converted the promise of free expression and unfettered capitalist consumption to an illusion of choice and a subversion of freedom.

Despite the technological limitations on tracking devices (such as temporary cookies and difficulties in breaking anonymity), digital measurements and surveillance are commonly understood as being much more reliable and powerful than their counterparts during the pre-Internet era. Thanks to so-called “site centric” and “user centric” tracking tools, digital experts have the web quite covered, compiling gigantic databases (“big data”) that aim to serve corporate interests (Lyon, 2001).

According to the Foucaultian principle that “discipline organizes an analytical space” (Foucault, 1977, p. 145) based on elementary location and partitioning, the web-user became a strategic object of knowledge. Digital experts, who gained important knowledge production powers in the process, became holders of crucial know-how. Accordingly, the technologies of digital government that they operate enable microscopic gazes of visibility to be deployed on consumer behavior and psychology, therefore providing powerful means to realize the conduct of conduct. In the process, advertisers and the communication agencies they employ are provided with the capacity to develop detailed knowledge on consumer preferences, and to intervene accordingly in retail markets – more or less surreptitiously. Behind the front stage of free conduct lies an increasingly powerful network of technologies and expertise aimed at rendering consumer conduct knowable and predictable. This, arguably, constitutes a noteworthy step in the neo-liberalization of society.

Importantly, digital expertise offers what previous market techniques did with less accuracy, namely, to “identify the specific insecurity and attachments of these different groups of consumers, to illuminate the non-rational gratifications and emotional features of consumption” (Rose, 1999, pp. 85-86). Indeed, by opening what was just recently considered consumption black-boxes – by penetrating the details of consumer aspirations, it is now possible to elaborate campaigns that may strengthen people's identification to the lifestyle symbolized by a given advertised product. On this basis, it can be argued that online communication and measurement constitute a paradigmatic illustration of the latest evolution in the technologies of neoliberal governmentality, as applied to consumption markets (Rose, 1999).

One of our key contributions is the observation that significant energies were required to develop expertise in line with the neoliberalization of consumption. In our case, this expertise related to digital measurement and the conception and operation of technologies aimed at listening, observing and recording what occurs on the web.²⁴ Given their sensitivity to the measurement demands of advertisers, communication agencies were important sites where expertise construction and experimentation took

²⁴ That a number of the digital technologies used in agencies were developed externally by some large-scale organizations does not change our argument. In-house expertise was needed to adapt these technologies, operate them, interpret the results, and provide strategic advice.

place. In particular, digital specialists were hired to explore and develop online communication and the underlying measurements. A number of persuasive demonstrations of tangibility and objective performance measurement were produced in this process characterized by expertise building and jurisdiction negotiation (Abbott, 1988; Freidson, 1994). Eventually, the appeal for objective measurement of communication impact became so irresistible that even the advertising specialists, who tended to prefer a world of unconstrained creativity, recognized that they now could not escape digital measurement. In their eyes, they needed the digital expert's mastery of detail to realize their own dream – that is to say getting a strong foothold in the promised land of consumer dreams. Our analysis indicates that the receptivity and progressive acceptance of digital measurement expertise by established advertising professionals arose, largely, from recent positive experiences they had working with digital experts. In so doing, digital expertise came to be seen as nonthreatening to the advertising specialist's dominant (in most communication agencies) hierarchical position. In brief, *experimentation plays a central role in the constitution of professional expertise surrounding governmentality projects.*

At the end of data collection, digital experts can now rely on knowledge technologies to get in touch with targeted audiences at an ever finer grain, even by means of an individual-by-individual real-time approach. This capability contrasts sharply and competes with the traditional blindfolded broadcast approach of mass communication (which is on the decline but is far from having disappeared altogether). From this detailed knowledge of individual consumption emerges a vast area for intervention, where communication experts actively aim to construct and manipulate individual subjectivity. As a result of user centric monitoring scoreboards, digital experts can single out influential or critical individuals and start “one-to-one” conversations with them in order to shape their opinions and positively influence their respective networks. We maintain that developing individualizing knowledge and intervention protocols represents one of the most significant milestones in the modern, neoliberal quest to shape human subjectivity related to consumption (Rose, 1990, 1999). In contrast to the considerable efforts that are necessary, in certain areas of business (e.g., fair-value accounting, tax auditing), to constitute what, in the end, are quite fragile and relatively imprecise lines of sight deployed on monitoring targets (Boll, 2014; Durocher and Gendron, 2014), our case analysis indicates a range of web-based devices in which precise techniques of social observation and control are masked by convivial and “intimate” interpersonal relationships. Importantly, persuasive stories about the power and precision of “big data” circulate in the communication community, and play a role in enrolling others in the digital governmentality project through apparently credible demonstrations of tangibility. Governmentality is costly and persuasive rhetoric can be influential in legitimizing certain kinds of expertise in the conduct of people.

In sum, the Internet disrupted continuity patterns in the field of communication consultancy and allowed the neoliberal governmentality project targeted at consumers to develop to an unprecedented degree. Further, as Suddaby and Viale (2011) observe, our study demonstrates a critically important but under-examined symbiotic relationship between the professional project of communications consultants and the neoliberal project aiming to govern consumers' subjectivity. A series of trials and experimentation took place within the agencies in order to develop credible expertise in conceiving and operating technologies of neoliberal government deployed on online consumer conduct. As such, digital measurement expertise, as it developed within communication agencies, strengthened the governmentality of consumers in two chief ways: it allowed gazes of visibility to be deployed on consumer behavior and psychology, and it engendered a range of diagnostic and intervention protocols. In the process, the analytical gaze of digital specialists increasingly came to be focused on specific consumers as surveillance and intervention targets – which we view as a significant step in the neoliberal quest to monitor and orient consumers' freedom to act in retail markets. Ultimately, the

growing institutionalization of digital measurement and surveillance is well positioned to provide grounded knowledge on consumers' ways of thinking and behaving and to then use this increasingly refined and sophisticated information to construct more and more powerful means of intervention on consumer identity (Miller and Rose, 1997).

One final point is worth stressing. Measurement's extension in digital life, which we documented, not only brings to the fore a newly developed approach to capture individual subjectivity. We argue that it also reflects a mutation of traditional accounting logic, by promoting more precise measurement beyond the organization's boundaries. Accordingly, one dominant feature of our findings is that the power of measurement records and associated interventions now increasingly extends to social media, as a space offering free expression for web-users, while simultaneously creating a place for extensive and quite often insidious observation of their speech and behavior. That management accountants are not formally and directly implicated in the process changes nothing; the fact is that accounting's measurement logic is deeply embedded in daily life on the web. Although a number of studies have documented the declining role of management accountants in large corporations (Lambert and Sponem, 2009; Morales and Lambert, 2013), it is quite ironic to see that through the work of non-accountants, the accounting measurement logic consolidates its foothold in web-based consumption areas. As mentioned by Burns and Vaivio (2001), management accounting is now often undertaken by business managers rather than by accountants per se. While the field's significant reliance on notions such as "conversion rate" and ROI is consistent with accounting's power extending its tentacles in day-to-day life, quite paradoxically, this expansion is undertaken through a form of secularization, in that implementation of accounting's "sacred" vocabulary is increasingly removed from the hands of accounting experts. It is as if the power of accounting numbers expands at the expense of the power of professional management accounting experts.

While Abbott (1988) is undeniably right about accounting being highly influential in contemporary society, it is quite intriguing to think, as suggested by our study, that accountants themselves are not deeply involved in expanding and consolidating accounting measurement logic within critical segments of society. This reflects a confusion of roles that says much about accounting's cultural influence today.

Conclusion

The Internet is frequently viewed as a key development in contemporary society, not only from a technological perspective, but also from a sociological one. Being malleable and flexible, the Internet is often understood as an instrument and reflection of social change (Castells, 2001) that fosters individualizing trends in society, with people being decreasingly involved in physical face-to-face relationships (Lyon, 2001). The Internet also extends the scope of control on people, organizations, and transactions (Bogard, 2006). Further, the Internet disrupts the nature of work as carried out in professional service firms and other types of organizations. New forms of expertise have to be developed and legitimized in organizational settings, engendering a series of trials and jurisdictional contests between emerging and established occupations.

In this study, we investigated the processes by which digital measurement developed (within communication agencies) as a legitimate form of expertise, able to produce relevant and detailed knowledge in the government of web-users – focusing on the French communication consultancy domain. One of our key arguments, which we sought to illustrate empirically, is that the development of digital measurement expertise, with its emphasis on web-tracking mechanisms deployed on

consumer behavior, deeply sustained the expansion of neoliberal governmentality (Morales *et al.*, 2014). The Internet expanded measurement's scope and precision, conveying a sense of factuality and tangibility to the relationship between marketing communication and consumer behavior, which had previously resisted any serious attempt of formalization.

The governmentality of consumers, therefore, gained extensively in concreteness with the digitalization of commerce – which constitutes a noteworthy social trend given the rhetoric of unconstrained freedom that we often hear about cyberspace. Also, the spread of the digital governmentality project had a significant effect within the communication discipline. Traditional epistemological referents, such as the obviousness of top-down advertising, focus group use, and declarations of intent, became gradually perceived as being less and less helpful for actors when trying to justify communication investments. As a result, the confidence of practitioners in the ability of their traditional disciplines to shape consumer perceptions was destabilized and new forms of expertise sought to develop and take root within the communication agencies. This engendered a range of trials and inter-jurisdictional experimentation, culminating in the production of persuasive claims of tangibility concerning communication impact, and in the constitution of interdisciplinary agreement regarding the role and relevance of digital expertise in operating technologies of online measurement and surveillance. Digital measurement expertise provided a means of accumulating knowledge about individual online consumers by compiling massive databases. As a result, customer mindset and freedom, both as an object of study and intervention (Rose, 1990), became more clearly seen within the epistemological purview of the marketing disciplines. In sum, our interviews reflect a field of beliefs and expertise in which the capabilities to govern the conduct of consumers, through reliance on digitalized communication and measurement means, are now much more established than only a decade ago (e.g., Jeacle and Walsch, 2002; Vaivio, 1999; Walsch and Jeacle, 2003). While the Internet provides “freedom” to web-users, this “freedom” is now crisscrossed by surveillance apparatuses that allow knowledge production mechanisms and governmentality power to operate on consumer subjectivity to an unprecedented degree. The neoliberal project to mold citizens as enthusiastic consuming agents leaving multiple traces of their thoughts and behaviors along their purchasing journeys, gained extensively in reality with the deployment of digital measurement expertise in retail markets.

Drawing especially on Rose (1999), our governmentality template is particularly relevant in bringing a fresh viewpoint on the notion of freedom on the web, which tends to be celebrated ad nauseam in the literature and popular discourse. Freedom should not be viewed as a natural notion; it is socially constructed, as recognized, especially, by some of the key minstrels of neoliberal thought (Rose, 1999). Freedom therefore constitutes an important matter from the viewpoint of researchers, given its alleged naturalness and the stakes it engenders in political debates. Our empirical study aimed to investigate how digital measurement expertise developed and acquired legitimacy in the context of consumer governmentality. This form of expertise comprises two components. The first one relates to technological development, for instance through software that aims to capture conversations on social media. The second consists of digital specialist know-how in operating these technologies – often on behalf of communication agencies. Juxtaposed, these two expertise components allowed new gazes of visibility to be cast on consumer conduct, thereby providing extensive knowledge that could then be used, in diverse ways, as a platform for intervention. Interventions seem to have been plentiful, as indicated by the vast number of “success stories” circulating in the communication community – which promote a sense of tangibility surrounding the relevance of digital expertise in advising advertising specialists and measuring campaign impact. As a result, the legitimacy of the consumer governmentality project gained in credibility – therefore in reality in the eyes of many. Ultimately, our

study brings to the fore the role of key concepts in the spread of governmentality, namely, technologies of visualization, functional expertise, and persuasive claims of tangibility.

Our work analyzes recent developments in governmentality technologies and the underlying expertise of measurement and intervention. In a way, our study reminds us that sociological understandings of professions should not downplay the role of micro processes and of the actors involved in them. More generally, it seems to us that research in the sociology of professions would benefit significantly from further investigations in what we call the *sociological foundations* of professions. From this perspective, greater insightfulness on the sociological foundations of professions is consubstantial with more knowledge of the underlying actors. As a result, the understanding of how professionals and experts delineate boundaries, legitimize their status and gain credibility will remain underdeveloped as long as the sociological origins of these people are not better appreciated. In other words, the sociology of professions should not neglect the undertaking of a *sociology of professionals*. In particular, there is a dramatic need for more studies analyzing resources embedded in the social skills (Fligstein, 1997, 2013) of professionals and experts, and the role of these resources in the constitution of professional boundaries. In this respect, Suddaby et al. (2016) show that biographical data are critical to the objectification of social skills and this kind of analysis may offer a new understanding of the dynamics of professions – for instance in terms of the difficulties for certain occupations to reach professional status, the construction of professional legitimacy, and inter-jurisdictional negotiations between experts and professionals who belong to different domains.

References

- Abbott, A.D. (1988), *The System of Professions*, University of Chicago Press, Chicago, Ill.
- Baxter, J. and Chua, W.F. (2003), “Alternative management accounting research – Whence and whither”, *Accounting, Organizations and Society*, Vol. 28 Nos 2/3, pp. 97-126.
- Bay, C. (2011), “Framing financial responsibility: an analysis of the limitations of accounting”, *Critical Perspectives on Accounting*, Vol. 22 No. 6, pp. 593-607.
- Bogard, W. (2006), “Welcome to the society of control: the simulation of surveillance revisited”, in Haggerty, K.D. and Ericson, R.V. (Eds), *The New Politics of Surveillance and Visibility*, University of Toronto Press, Toronto, Ontario, pp. 55-78.
- Boll, K. (2014), “Shady car dealings and taxing work practices: an ethnography of a tax audit process”, *Accounting, Organizations and Society*, Vol. 39 No. 1, pp. 1-19.
- Boltanski, L. (1982), *Les cadres, la formation d’un groupe social*, Editions de Minuit, Paris, France.
- Bordas, N. (2010), *L’idée qui tue! Politique, business, culture... Les secrets des idées qui durent*, Eyrolles, Paris, France.
- Burchell, S., Clubb, C., Hopwood, A., Hughes, J. and Nahapiet, J. (1980), “The roles of accounting in organizations and society”, *Accounting, Organizations and Society*, Vol. 5 No. 1, pp. 5-27.
- Burns, J. and Vaivio, J. (2001), “Management accounting change”, *Management Accounting Research*, Vol. 12 No. 4, pp. 389-402.
- Buzz Média Orange-Le Figaro. (2014, February 17), “Interview avec Lord Saatchi”.
- Callon, M. (2009). Civilizing markets: carbon trading between in vitro and in vivo experiments. *Accounting, Organizations and Society*, Vol. 34 No. 3/4, pp. 535-548.
- Carmona, S., Ezzamel, M. and Gutiérrez, F. (1997), “Control and cost accounting practices in the Spanish Royal Tobacco Factory”, *Accounting, Organizations and Society*, Vol. 22 No. 5, pp. 411-446.
- Carmona, S., Ezzamel, M. and Gutiérrez, F. (2002), “The relationship between accounting and spatial practices in the factory”, *Accounting, Organizations and Society*, Vol. 27 No. 3, pp. 239-274.
- Castells, M. (2001), *The Internet Galaxy: Reflections on the Internet, Business, and Society*, Oxford University Press, Oxford, England.
- Chabrak, N. (2012), “Money talks: the language of the Rochester School”, *Accounting, Auditing & Accountability Journal*, Vol. 25 No. 3, pp. 452-485.
- Cochoy, F. (1999), *Une histoire du marketing, discipliner l’économie de marché*, La Découverte, Paris, France.
- Davenport, T.H. (2014), *Big Data at Work: Dispelling the Myths, Uncovering the Opportunities*, Harvard Business School Publishing, Cambridge, Massachusetts.
- Dechow, N. and Mouritsen, J. (2005), “Enterprise resource planning systems, management control and the quest for integration”, *Accounting, Organizations and Society*, Vol. 30 Nos 7/8, pp. 691-733.
- Dent, J.F. (1990), “Strategy, organization and control: some possibilities for accounting research”, *Accounting, Organizations and Society*, Vol. 15 Nos 1/2, pp. 3-25.
- Denzin, N.K. (2006), *Sociological Methods: A Sourcebook*, Aldine Transaction, Chicago.
- Donald, J. (1992), *Sentimental Education: Schooling, Popular Culture and the Regulation of Liberty*, Verso, London, England.
- Dru, J.M. (1996), *Disruption: Overturning Conventions and Shaking Up the Marketplace*, John Wiley & Sons, New York.
- Durocher, S. and Gendron, Y. (2014), “Epistemic commitment and cognitive disunity toward fair-value accounting”, *Accounting and Business Research*, Vol. 44 No. 6, pp. 630-655.

- Eyal, G. (2013), "For a sociology of expertise: the social origins of the autism epidemic", *American Journal of Sociology*, Vol. 118 No. 4, pp. 863-907.
- Fligstein, N. (1997), "Social skill and institutional theory", *American Behavioral Science*, Vol. 40 No. 4, pp. 397-405.
- Fligstein, N. (2013), "Understanding stability and change in fields", *Research in Organizational Behavior*, Vol. 33, pp. 39-51.
- Foucault, M. (1977), *Discipline and Punish: The Birth of the Prison*, Penguin Books, London, England.
- Foucault, M. (1983), "Afterword: the subject and power", in Dreyfus, H.L. and Rabinow, P., (Eds), *Michel Foucault: Beyond Structuralism and Hermeneutics* (2nd edition), University of Chicago Press, Chicago, Ill., pp. 208-226.
- Foucault, M. (1994), *Dits et écrits IV*, Editions Gallimard, Paris, France.
- Foucault M. (1997), *Ethics: Subjectivity and Truth. Essential Works of Michel Foucault, 1954—1984. Vol. I*, New Press, New York.
- Foucault, M. (2004), *Naissance de la biopolitique: Cours au Collège de France, 1978-1979*, Editions Gallimard, Paris, France.
- Fourcade, M. and Healy, K. (2013), "Classification situations: life-chances in the neoliberal era", *Accounting, Organizations and Society*, Vol. 38 No. 8, pp. 559-572.
- Freidson, E. (1994), *Professionalism reborn. Theory, prophecy and policy*, Cambridge, England, Polity Press.
- Freidson, E. (2001), *Professionalism, the third logic: on the practice of knowledge*, University of Chicago Press, Chicago, Illinois.
- Gendron, Y., Cooper, D.J. and Townley, B. (2007), "The construction of auditing expertise in measuring government performance", *Accounting, Organizations and Society*, Vol. 32 Nos 1/2, pp. 101-129.
- Hall, R. H. (1968), "Professionalization and bureaucratization", *American Sociological Review*, Vol. 33 No. 1, pp. 92-104.
- Harvey, D. (2005), *A Brief History of Neoliberalism*, Oxford University Press, Oxford, England.
- Hopwood, A.G. (1987), "The archeology of accounting systems", *Accounting, Organizations and Society*, Vol. 12 No. 3, pp. 207-234.
- Hoskin, K. and Macve, R. (1988), "The genesis of accountability: the West Point connections", *Accounting, Organizations and Society*, Vol. 13 No. 1, pp. 37-73.
- Humphrey, C. and Miller, P. (2012), "Rethinking impact and redefining responsibility: the parameters and coordinates of accounting and public management reforms", *Accounting, Auditing & Accountability Journal*, Vol. 25 No. 2, pp. 295-327.
- Jeacle, I. and Walsch, E.J. (2002), "From moral evaluation to rationalization: accounting and the shifting technologies of credit", *Accounting, Organizations and Society*, Vol. 27 No. 8, pp. 737-761.
- Johnson, T. (1995), "Governmentality and the institutionalization of expertise", in Johnson, T., Larkin, G. and Saks, M. (Eds), *Health Professions and the State in Europe*, Routledge, London, England, pp. 7-24.
- Knights, D. and Collinson, D. (1987), "Disciplining the shopfloor: a comparison of the disciplinary effects of managerial psychology and financial accounting", *Accounting, Organizations and Society*, Vol. 12 No. 5, pp. 457-477.
- Kornberger, M. and Carter, C. (2010). Manufacturing competition: how accounting practices shape strategy making in cities, *Accounting, Auditing & Accountability Journal*, Vol. 23 No. 3, pp. 325-349.

- Lambert, C. and Sponem, S. (2009), "La fonction contrôle de gestion: proposition d'une typologie", *Comptabilité – Contrôle – Audit*, Vol. 15 No. 2, pp. 113-144.
- Lendrevie, J. and Baynast, A. de (2008), *Le publicitor* (7th edition), Dunod, Paris, France.
- Loft, A. (1986), "Towards a critical understanding of accounting: the case of cost accounting in the U.K., 1914-1925", *Accounting, Organizations and Society*, Vol. 11 No. 2, pp. 137-169.
- Lyon, D. (2001), *Surveillance Society: Monitoring Everyday Life*, Open University Press, Buckingham, England.
- Macdonald, K.M. (1995), *The Sociology of the Professions*, Sage Publications, London, England.
- Macintosh, N.B. (2002), *Accounting, Accountants and Accountability: Poststructuralist Positions*, Routledge, London, England.
- Malsch, B. and Gendron, Y. (2013), "Re-theorizing change: institutional experimentation and the struggle for domination in the field of public accounting", *Journal of Management Studies*, Vol. 50 No. 5, pp. 870-899.
- Martin, M. (1992), *Trois siècles de publicité en France*, Editions Odile Jacob, Paris, France.
- Mennicken, A. (2010), "From inspection to auditing: audit and markets as linked ecologies", *Accounting, Organizations and Society*, Vol. 35 No. 3, pp. 334-359.
- Michel, P. (2005), *C'est quoi l'idée? Publicité, création et société de consommation*, Editions Michalon, Paris, France.
- Miller, P. (2001), "Governing by numbers: why calculative practices matter", *Social Research*, Vol. 68 No. 2, pp. 379-396.
- Miller, P. (2008), "Calculating economic life", *Journal of Cultural Economy*, Vol. 1 No. 1, pp. 51-64.
- Miller, P. and O'Leary, T. (1987), "Accounting and the construction of the governable person", *Accounting, Organizations and Society*, Vol. 12 No. 3, pp. 235-265.
- Miller, P. and Rose, N. (1990), "Governing economic life", *Economy and Society*, Vol. 19 No. 1, pp. 1-31.
- Miller, P. and Rose, N. (1997), "Mobilising the consumer: assembling the subject of consumption", *Theory, Culture and Society*, Vol. 14 No 1, pp. 1-36.
- Morales, J., Gendron, Y. and Guénin-Paracini, H. (2014), "State privatization and the unrelenting expansion of neoliberalism: the case of the Greek financial crisis", *Critical Perspectives on Accounting*, Vol. 25 No. 6, pp. 423-445.
- Morales, J. and Lambert, C. (2013), "Dirty work and the construction of identity. An ethnographic study of management accounting practices", *Accounting, Organizations and Society*, Vol. 38 No. 3, pp. 228-244.
- Power, M. (2003), "Auditing and the production of legitimacy", *Accounting, Organizations and Society*, Vol. 28 No. 4, pp. 379-394.
- Radcliffe, V.S. (1998), "Efficiency audit: an assembly of rationalities and programmes", *Accounting, Organizations and Society*, Vol. 23 No. 4, pp. 377-410.
- Roberts, J. (1991), "The possibilities of accountability", *Accounting, Organizations and Society*, Vol. 16 No. 4, pp. 355-368.
- Roberts, J. (2009), "No one is perfect: the limits of transparency and an ethic for "intelligent" accountability", *Accounting, Organizations and Society*, Vol. 34 No. 8, pp. 957-970.
- Robson, K. (1992), "Accounting numbers as "inscription": action at a distance and the development of accounting", *Accounting, Organizations and Society*, Vol. 17 No. 7, pp. 685-708.
- Rose, N. (1990), *Governing the Soul: The Shaping of the Private Self*, Routledge, London, England.
- Rose, N. (1999), *Powers of Freedom*, Cambridge University Press, Cambridge, England.
- Rose, N. and Miller, P. (1992), "Political power beyond the State: problematics of government", *British Journal of Sociology*, Vol. 43 No. 2, pp. 173-205.

- Rose, N., O'Malley, P. and Valverde, M. (2009), "Governmentality", *Annual Review of Law and Social Science*, Vol. 2 No. 1, pp. 83-104.
- Suddaby, R., Cooper, D.J. and Greenwood, R. (2007), "Transnational regulation of professional services: governance dynamics of field level organizational change", *Accounting, Organizations and Society*, Vol. 32 No. 4/5, pp. 333-362.
- Suddaby, R. and Muzio, D. (2015), "Theoretical perspectives on the professions", in Empson, L., Muzio, D., Broschak, J. and Hinings, C.R. (Eds), *Oxford Handbook of Professional Service Firms*, Oxford University Press, Oxford, England, pp. 25-47.
- Suddaby, R. and Viale, T. (2011), "Professionals and field level change: institutional work and the professional project", *Current Sociology*, Vol. 59 No. 4, pp. 423-442.
- Suddaby, R., Viale, T. and Gendron, Y. (forthcoming 2016), "Reflexivity: the role of embedded social position and entrepreneurial social skill in processes of field level change", *Research in Organizational Behavior*.
- Townley, B. (1993), "Foucault, power/knowledge, and its relevance for human resource management", *Academy of Management Review*, Vol. 18 No. 3, pp. 518-545.
- Townley, B. (1995), "Managing by numbers: accounting, personnel management and the creation of a mathesis", *Critical Perspectives on Accounting*, Vol. 6 No. 6, pp. 555-575.
- Vaivio, J. (1999), "Examining "The quantified customer"", *Accounting, Organizations and Society*, Vol. 24 No. 8, pp. 689-715.
- Viale, T. (1997), *La communication d'entreprise: Pour une histoire des métiers et des écoles*, L'Harmattan, Paris, France.
- Vollmer, H. (2003), "Bookkeeping, accounting, calculative practice: the sociological suspense of calculation", *Critical Perspectives on Accounting*, Vol. 14 No. 3, pp. 353-381.
- Vollmer, H., Mennicken, A. and Preda, A. (2009), "Tracking the numbers: across accounting and finance, organizations and markets", *Accounting, Organizations and Society*, Vol. 34 No. 5, pp. 619-637.
- Walsch, E.J. and Jeacle, I. (2003), "The taming of the buyer: the retail inventory method and the early twentieth century department store", *Accounting, Organizations and Society*, Vol. 28 Nos 7/8, pp. 773-791.
- Zhang, Y. and Andrew, J. (2014), "Financialisation and the conceptual framework", *Critical Perspectives on Accounting*, Vol. 25 No. 1, pp. 17-26.
- Zwick, D., Bonsu, S.K. and Darmody, A. (2008), "Putting consumers to work: "co-creation" and new marketing govern-mentality", *Journal of Consumer Culture*, Vol. 8 No. 2, pp. 163-196.

Table 1: Detail of the interviews

Profile and code	Number of interviewees	Time of data collection				Number of interviews
		Exploration March-June 2005	First wave June 2008-Jan 2009	Second wave April-Dec 2009	Third wave June-Aug 2013	
Top Managers (TPM)	41	3	28	17	2	50
Middle Managers (MOP)	16	3	10	3	2	18
Experts (EXP)	15	2	8	5	2	17
Advertisers (ADV)	13	2	7	5	1	15
Total	85	10	53	30	7	100

Figure 1: Parameter interface of dashboard

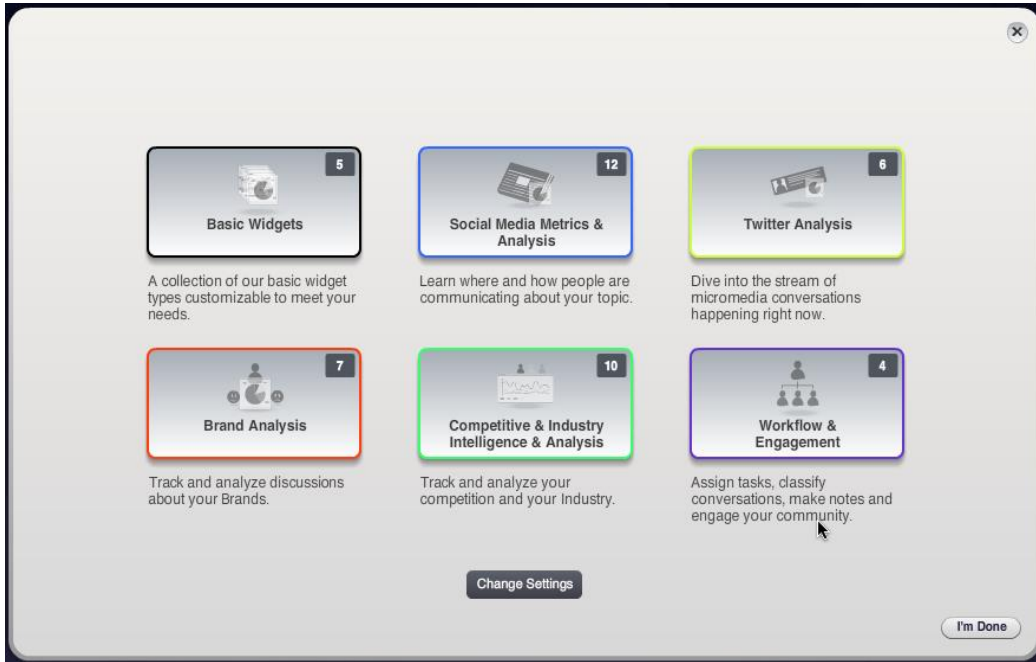


Figure 2: Dashboard showing key indicators

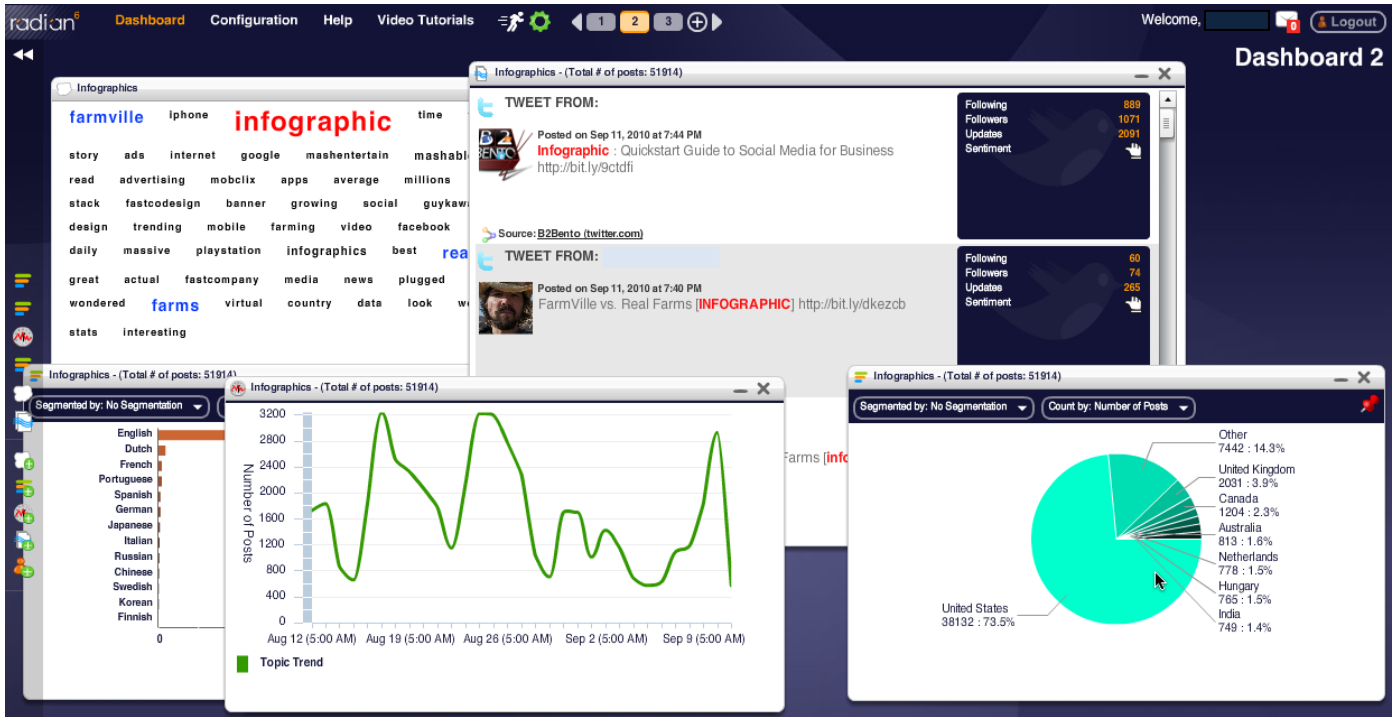


Figure 3: Dashboard on traffic follow-up

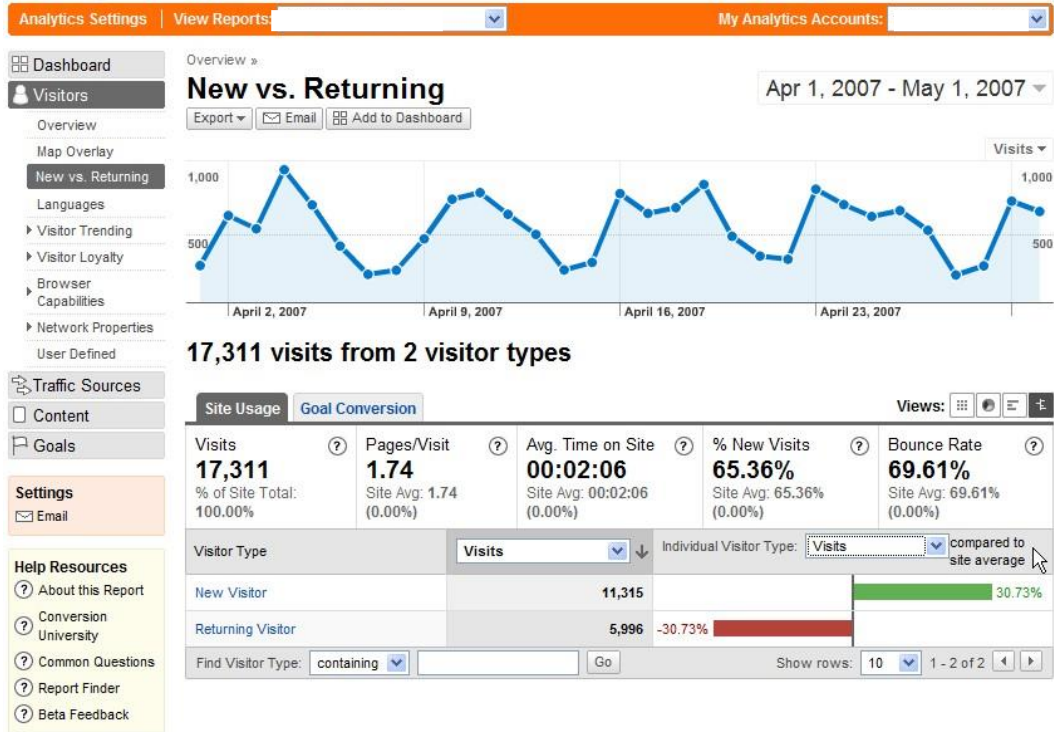


Figure 4: Visualization of most used pathways

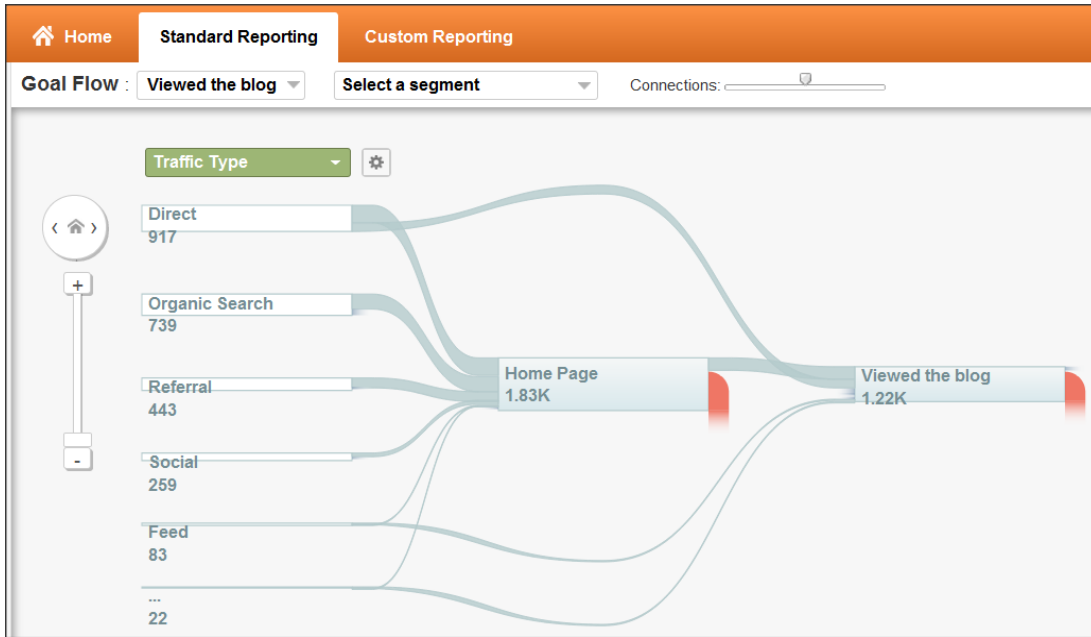


Figure 5: Dashboard indicative of economic performance



Figure 6: "Goal funnel" visualization

