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Industry Analysts – how to conceptualise the distinctive new forms of IT Market Expertise?

Abstract

Purpose: This paper explores conceptual issues arising in an empirical study of the emergence of a distinctive new form of expertise - of industry analysts and in particular the leading firm Gartner Group that exercises enormous influence over the IT market.

Design/methodology/approach: The paper critically reviews existing analytical frameworks and especially work from the Sociology of Professions. This has largely focused upon groups which have already succeeded in gaining wide acceptance of the effectiveness of their methods and knowledge. For emerging expert groups a key challenge is to create an audience for whom they are expert (Turner 2001). The study contributes to a 'third wave' of studies that shift the focus of enquiry from the operation of professional institutions to the conduct of expert work – and how knowledge is produced, validated and consumed.

The paper draws upon an extended ethnographic study of Gartner Inc. and other industry analysts to characterize some key features of their expertise. Data sources include over 100 hours of participant observation of industry analysts and their interactions with vendors and technology adopters at IT industry conferences; interviews with over 20 industry analysts from Gartner (including a telephone interview with its founder Gideon Gartner) and other analyst organisations; a substantial body of interviews with technology vendors and clients (particularly in relation to the Customer Relation Management technology sector); together with a review of Gartner documentation and reports.

Findings: The paper compares our empirical findings of industry analysts with accounts from current literature on management consultants and other groups such as journalists and financial analysts. Industry analysts, like consultants, have not sought to follow a classical professional model. Thus the brand reputation of big (industry analyst or consultancy) firms provides an alternative warrant of the quality of expertise to professional institutions. However Gartner analysts identify differences as well as similarities between their work and management consultants. Gartner's ability to rank the offerings of IT vendors requires them to adopt formal

methodologies and internal review procedures to produce *defensible* knowledge and demonstrate their independence. Industry analysts need to establish cognitive authority over rapidly changing technological fields. This imparts some 'public good' elements to their knowledge.

Originality/value: The paper suggests ways forward for analysing new forms of knowledge intermediary in business and accounting, applying perspectives from the 'third wave' of studies, and involving detailed study of the 'epistemic systems' through which such knowledge is produced, consumed and validated (Knorr Cetina 2010).

Introduction

This paper examines the emergence of a distinctive new form of expert labour – industry analysts who provide research for enterprise technology buyers and producers. Over the last 3 decades they appear to have gained considerable influence over the Information Technology (IT) market (Bernard & Gallupe 2013, Author Study forthcoming). Industry analyst research is read and acted on by Chief Information Officers (CIOs) planning organisational IT strategies, IT procurement teams choosing between multi-million pound workplace IT solutions, and company managers and employees wanting to learn more about the potential benefits of digital technologies for their business (Firth & Swanson 2005, Burks 2006). Industry analyst output is also extensively read by technology vendors and investor analysts (Snapp 2013). They have been described (Ikeler 2007: 234) as the “single most influential validators” of IT products and services. Foremost amongst these is Gartner Inc. which has emerged ahead of competitors such as Computer Intelligence, Dataquest, Forrester, Input, International Data Corporation, Ovum and Yankee Group. Its 2013 annual revenue of \$US1.784 billion, meant that Gartner was 6 times larger than its nearest rival Forrester and accounts for about 39% of the industry analyst market (Noble 2014). We have studied how Gideon Gartner established this firm and in so doing constituted a novel and distinctive model of expert work. This paper considers how we may best conceptualise this expertise.

This paper seeks to explore conceptual issues surrounding the emergence of this distinctive new form of expertise that we addressed through an extended ethnographic study of industry analysts and in particular the leading firm Gartner Group that exercises enormous influence over the IT market. Industry analysts are one of a number of types of knowledge intermediary that play a crucial role in the operation of markets including notably security or financial analysts (Bessy & Chauvin 2013). We examine how this new role drew upon templates of various kinds of financial and other profession. The paper seeks to characterise the how the work of industry analysts is conducted and achieves influence. Though this is an under-researched area (Imam

and Spence 2015), a number of pathbreaking studies suggest that analysts influence decisions by establishing ‘frames’ through which developments in uncertain and rapidly changing markets can be viewed (Beunza & Garud 2007). This is particularly in relation to the selection and evaluation of complex and novel non-fungible goods whose properties cannot readily be established by prior inspection (Bessy & Chauvin 2013).

We turn initially to the *Sociology of Professions*, where a substantial body of studies has examined how, over the last century, various groups of specialist labour, ranging from social workers to technical experts, emulated the mechanisms that had been successfully used by scientists, lawyers and medical practitioners to achieve professional status, autonomy and rewards. We review this work and focus in particular upon its application to management consultants – who do not pursue the typical professional model. We identify similarities and important differences between management consultants and industry analysis. We supplement this understanding by drawing in approaches from further afield. Scholars from our own field of Science and Technology Studies have largely neglected the area of accounting and business knowledge (Porter 1992, Akera 2007). There have been important exceptions: notably Shapin (2008) and the recent extension of Sociology of Science into the Sociology of Markets (e.g. Preda 2009).

The paper will examine the particular models that informed the emergence of the industry analyst role. Specialist occupations seeking to establish professional status need to make choices in terms of how their knowledge is produced and applied and how its efficacy is established (Mok 1971). Science and medicine constitute one well-established, and culturally accepted model. However other models are also available (e.g. of management consultant, journalist, financial analyst). We discover that industry analysts drew explicitly upon many of these types of expertise in thinking about their roles. Gartner industry analysts emphasise their independence and their production of ‘defensible knowledge’, demonstrated through their adoption of increasingly formalised methodologies. In this respect they may resemble Porter’s (1992) characterisation of business experts (in particular, accountants) as a source of ‘public knowledge’ needed “to coordinate the activities of diverse actors, and to lend credibility to forms of belief and action when personal trust is in short supply.” (Porter 1992: 640)

Context of our study

Our initial exploration of expertise (Author Study 1998) noted the burgeoning number and range of specialist fields of knowledge and associated experts. This pattern has continued, unabated, into the 21st Century. Growth in the number of experts, and their perceived salience has been

accompanied by the proliferation of new kinds of knowledge, including the industry analysts we examine here. The increasing complexity of computer-based systems and the search for improved organisational performance are just some of the factors seen to drive the growth of management consultants and other forms of business expertise. Moreover, 'lean firm' prescriptions since the 1980s have stressed the economic advantages, indeed competitive imperative, of outsourcing many functions, including specialist labour, that might previously have been employed by the organisation. The outsourcing process has extended from areas seen as outwith the organisation's 'core competences' to include more strategic issues. As a result, today most firms must buy-in substantial parts of their technical and change management expertise.

The resort to expertise – to resolve problems of uncertainty of decision-making under contexts of incomplete information – in turn creates new uncertainties and knowledge requirements (Author Study 1998). In particular, how can organisation managers assess the quality and trustworthiness of different experts and the pertinence and utility of their expertise to its business challenges? Some degree of knowledge is needed to assess the competing claims of different providers of expertise. This dilemma is reflected in the emergence of new classes of expert (individuals and organisations) that can offer firms advice on how to select and manage their relationship with key strategic suppliers of business knowledge (including providers of change management consultancy and of embodied expertise in the form of new technological systems). These complex domains and the capacity of experts over these fields are characterised by considerable ambiguity and uncertainty (Alvesson 2001).

The Sociology of Professions

'Professionalisation' has been held out as one way to resolve this problem of resorting to expert advice. Professionalisation describes the processes whereby a specialist occupation seeks to achieve autonomy/control over the conduct of work and its status/rewards by exercising monopoly over the legitimate application of a body of specialist knowledge, "organizable as common resources for a body of individuals" (Abbott 1988: 324), to solve client problems. A body of research over the last three decades from what has been termed the *Sociology of Professions* has explored the wider uptake of this model, derived from the older professions of medicine and law and the sciences. But do these particular conceptions apply to business knowledge – and the new forms of expertise, such as industry analysts - that are emerging today?

Professionalisation as a solution to the problems of expert knowledge

Professionalisation has long been discussed as a solution to quality problems in occupations that require expert knowledge. As Freidson points out: "In any large and complex community there must be some conventional ways by which people can identify an expert without having to rely on word-of-mouth testimonials, on prior personal experience, or on time- and resource-consuming, risky, trial employment" (Freidson 1994: 159). Experts by definition possess specialised, esoteric knowledge that cannot readily be evaluated by generalists applying everyday criteria (Mok 1971, Freidson 1994). Professionalisation provides an institutionalised way of 'attesting expertise' (Groß & Kieser 2006: 72). As Abbott's (1988) classic study states:

Professions were organised bodies of experts who applied esoteric knowledge to particular cases. They had elaborate systems of instruction and training together with entry by examination and other formal pre-requisites. They normally possessed and enforced a code of ethics or behaviour (Abbott 1988: 4).

This traditional view of professionalisation can be traced back to Carr-Saunders and Wilson's (1934) *The Professions*. This first generation of writings, informed by the 'functionalist' analyses of Parsons (1939, 1954) and Merton (1982), highlight the beneficial role of professional institutions both, in regulating the behaviour of experts by penalising abuse of expert status and opportunistic exploitation of the asymmetrical distribution of knowledge between expert and client and in protecting the autonomy of expert judgement from pressures from external political and economic pressures from vested interests (e.g. of public administration or commerce). Much of the early work of professions, accordingly, was concerned to define and differentiate professionals from other occupations through their possession of various attributes (see for example Raelin 1989). The various accounts broadly share a set of 'core defining characteristics' of professions, including: "formal education and entry requirements; a monopoly over an esoteric body of knowledge and associated skills; autonomy over the terms and conditions of practice; collegial authority; a code of ethics; and, commitment to a service ideal" (Anleu 1992: 24). Though professional behaviour was initially seen to be rooted in conceptions of 'gentlemanly' behaviour, this definition of professionalism has become overtaken by the medical/scientific model (Fournier 2000).

The second generation in the Sociology of Professions

From the 1970s a radical critique emerged of this view - which became characterised as the 'functionalist' account - and the privileged status it accorded to professional expertise (Brante 1988). Thus Freidson (1970), one of the earliest contributions to what we might call the 'second wave' in the analysis of professions, criticised (in the case of medicine) the prevalent

functionalist theories of professions as “scientifically-based, practically-efficacious, and socially altruistic” (Coburn 1992: 497). Larson (1977) in particular revisits Weber’s idea that professional groups exercise social closure to advance their interests. Her concept of ‘professional project’ highlighted the strategies for sectional occupational advancement accompanying professionalism. Notwithstanding the diversity of currents in the Sociology of Professions, most of these, in reaction against the functionalist account, share an emphasis on how expert communities exercise social closure – to gain authority over an area of expert knowledge and to exclude others - in order to increase rewards and, crucially, to achieve autonomy/control over the exercise of their work (Groß and Kieser 2006). In similar terms, Freidson (1994) argues that professionalisation seeks to retain control over the definition, organisation, execution and evaluation of its activities. This encompasses control over who has the right to produce certain services (and how such rights are acquired) and how those services are produced (Muzio et al. 2011).

Here perhaps the most fully articulated contribution is Abbott’s (1988) dynamic analysis of *professionalisation* as an interactive system. Expertise is not exercised by expert groups in isolation; the professionalisation project takes place in an *ecology of professions*. Abbott highlights competition within and between different professional groups - which take the form of ‘jurisdictional conflicts’. Abbott’s work has been highly influential over subsequent debates and it is helpful to review his framework.

Abbott’s analysis explores the activities that need to be controlled in order for the profession to stay in command over its jurisdiction: the classification (e.g. in medicine, diagnosis), reasoning (e.g. inference) and remedying (e.g. treatment) of a problem. Across these three activities, jurisdictional control is maintained through legitimation, research and instruction.

Abbott highlights internal stratification within a profession – the development of vertical divisions of knowledge and status – with some more routine tasks being delegated to lower status groups and perhaps ejected from a profession. At the upper end of the spectrum, he draws attention to *professional regression*. Issues of expert judgement - both matters of substantive controversy and questions regarding the expert status of particular practitioners - are referred to members of the field with the highest status. The elite of the field become internalised within the profession and socially and linguistically distanced from clients.

Central to Abbott’s analysis is the concept of *jurisdictional work*: in their labour, professionals encounter members of other groups and take part in various kinds of boundary work and conflicts for authority with other professional groups. Abbott’s dynamic model highlights a

strategic dilemma facing professional groups – rigid professional organisation facilitates validation of claims in competition with other groups but conversely limits flexibility of professional groups to colonise other problem areas. One corollary is that in areas where there is constant change in the domain of practice and thus of knowledge it may be infeasible to establish professional structures around recognized bodies of knowledge needed to validate experts' status, performance and knowledge claims. Abbott discusses the systematization of knowledge – and how this may vary according to the insertion of a profession into the wider system of professionalisation. For Abbott, a systematised, formalised and codified knowledge base may be viewed as an outcome as well as a prerequisite for professional action (Muzio et al 2011) – a point we return to below in relation to business knowledge.

Professionalisation seen as competing with alternative forms of structuring expertise

With their focus on established professional models, this 'second generation' of writings frequently portrays professionalisation as competing with alternative forms of structuring expertise. Various writers in the Sociology of Professions address the challenges to the professional model and the possibility of alternate forms of structuring expertise.

Professionalisation is by no means the only model for organising expert labour; nor is its success guaranteed. Thus Abbott (1988: 324) argues that “we have professionalization ... because competing forms of institutionalization have not yet overwhelmed it ...

Professionalism...competes with alternate forms of structuring expertise, in particular, with commodification and organisation”. Freidson (1994) offers a similar formulation, portraying professionalisation as competing with markets and bureaucracy: professionals seek autonomy rather than being subject to the dictat of consumers in the market or managers in public administration and large corporations (Groß & Kieser 2006, Muzio et al. 2011).

Abbott (1988) analyses the competition between professionalism and commodification. This:

arises in part because the commodities embodying expertise require development, maintenance and support that increasingly exceed the resources of individual professionals. The commercial organisations and governments that invest in commodified professional knowledge compete directly for client fees with professionals, whether the commodities provide services directly or are simply used by professionals in practice...But nonprofessionals increasingly own and operate professional commodities, which makes the present more dangerous to the idea of professionalism itself (Abbott 1988: 324).

Control over the production of commodified knowledge by large commercial organisations is seen thereby to threaten the professional model in which knowledge is “organizable as common resources for a body of individuals” (Abbott 1988: 324). These challenges posed to established models of professionalisation were seen as likely to both limit the autonomy of professional work

and to restrict the growth of the professional form of expert labour (Coburn 1992, Evetts 2006). Fournier (2000: 68) draws attention to some of the inconsistencies in these debates – for example some portray the ‘logic of the market’ as leading to “a ‘corruption’ of professional practice” (i.e. a loss of autonomy) whilst others see it as “intensifying the bureaucratic trend towards the commodification of professional knowledge”. These discourses often unhelpfully counterpose professionalism to competitive economic and political systems (thus Freidson’s [1994] classic early work portrays professionalism as the ‘Third Logic’ alongside market and bureaucracy). Rather than counterposing self-interest and rationalistic altruism, as in the Weberian tradition, Dingwall (2008: 2) following Parsons, proposes that both are interpenetrated, and that the capitalist economy and the professions/the rational socio-legal order they point to are both historical products of modern society.

These challenges to the professions figure in recent writings on health, welfare and social services and education. Here a range of specialist occupations has, it seems, sought to extend the established model of professional work, derived as we have seen from medicine, science and law, to various other kinds of specialist work – and especially to delivering certified quality of service in various public services and statutorily required functions. There have of course been important shifts in the character of professions in this period. When theories of profession first emerged, medics, for example, were independent practitioners, or partners/employees in small partnerships. This model continues in general practice in the UK and elsewhere but has disappeared from hospital medicine which is provided by large public or private organisations. Today’s professionals are frequently employees – some provide services as labour only sub-contractors – e.g. change management or technology implementation consultants, but more generally they are employed by larger service organisations or as specialist functions providing those services to larger organisations.

Here social scientists have examined professional organisation as a source of resistance to commercialisation pressures and other reorganisation and rationalisation efforts – in particular those arising in the recent period from ‘New Public Management’ initiatives. Writers in this category appear to revert to elements of the functionalist analysis through their identification with the traditional professional model coupled with an often unacknowledged normative commitment towards its ‘public good’ features, in terms of the protection it appears to offer against external pressures. Under this model, expertise, professionally regulated, encourages self-discipline, protecting clients from the risk of being exploited/ensuring quality of service and protecting the autonomy and rewards for professionals in their work (Brante 1988, Fournier

2000).¹ This model of expertise seems to provide a solution to the problem of resorting to expert advice. But do these particular conceptions, derived from the older professions of medicine and law and the sciences, apply to business knowledge – and the new forms of expertise that are emerging today.

The professionalisation of business knowledge

There is a substantial body of research into another, already well-established group deploying business knowledge: *management consultants*. This work has examined the applicability of the analysis of professionalisation to management and systems consultants and other business knowledge experts (McKenna 2006). The number of managerial consultants has grown rapidly - by over 10% per year over the last three decades (Groß and Kieser 2006). Public and private organisations are today spending large sums of money on external consultants. They buy-in expertise that they do not possess from a range of Professional Service Firms and individual consultants. But how can they identify the most trustworthy experts? This state of affairs has been described as ‘ideal grounds for professionalising the consulting industry’ (Groß and Kieser 2006: 71) as this provides a means to protect clients and fellow consultants from poor quality advice.

However writers from the Sociology of Professions have highlighted the extent to which management consultants and other information occupations have failed (Abbott 1988) or, more particularly, *have not sought to achieve* (Groß and Kieser 2006, Muzio et al. 2011) professional status in the sense described above. Thus Abbott (1988: 245), considering computing occupations and the other expert labour involved in developing and maintaining Management Information Systems (MIS) notes that, “[n]o coherent set of people has in fact emerged to take jurisdiction in this area. It continues to be extremely permeable, with most training on the job, most expertise readily commodifiable and careers following wildly diverging patterns”.

Instead, Abbott (1988) notes the emergence and dominance of large inter-professional organisations that supply contractual services. He attributes their success to their efficiency in making available and integrating the range of specialist knowledge and experience needed to develop and implement computer systems:

...new social structures offering these information resources more efficiently...large scale consulting services that install complete information systems for corporate clients have become common only in the last 2 decades. Like many such areas this one was invaded by organisations whose common property was their ability to field the multiprofessional teams necessary...”
(Abbott 1988: 244).

Resubmission

These MIS providers mainly arose from the large international consulting houses, which, in turn, were often based upon the (then Big 8) large international accounting firms. So here we see an alternative to the classic professionalization model based on the ability of these large organisations to deploy multiple kinds of expertise, often constituted through internal training, rather than externally validated training and certification. Abbott (1988) observes that these groups may achieve a certain professionalisation “in the sense of creating a coherent occupational group with some control of an abstract expertise” (Ibid: 154). However, their internal structure differs from that of conventional professions like medicine and law: “They are much less committed to rigid definition of jurisdiction or membership, since they must be flexible enough to move in directions that enable organizational survival” (Idem.).

Groß and Kieser (2006) analyse how these big consultancy organisations resolve potential uncertainties about the capability of their experts through reputational indicators (Glückler and Armbrüster 2003, Armbrüster and Glückler, 2007)). This is foremost by establishing (as a proxy indicator of past performance) and maintaining (as a promise for clients and incentive for consultants regarding their future performance) their corporate brand (Alvesson 2001, Armbrüster 2006, Groß & Kieser 2006, Muzio *et al.* 2011). Perceptions about their capacity to resolve client problems is in turn supported by:

- i) developing distinctive change management concepts (Fincham 1995, Kipping & Armbrüster 2000, Groß & Kieser 2006),
- ii) emphasising the selectivity of their recruiting processes as a guarantee of individual capacity (only the best get in and are retained) (Groß and Kieser 2006, Greenwood et al 2005), and
- iii) emphasising the extensive experience of their consultants in resolving problems with other clients – exemplified by the number of successful cases they had been involved in (Groß & Kieser 2006) which becomes a kind of currency for valuing expertise (Heusinkveld & Benders 2005).

We note that whilst traditional professional certification provides assurance of a requisite standard of performance, these proxies for quality give potential clients something else: a way to identify the *best* service providers who might help them achieve competitive advantage.

The alleged ‘failure’ of the professionalisation project in management knowledge has been attributed variously to the lack of state regulation of expert status (Groß & Kieser 2006, Muzio et al. 2011),² the consequent low barriers to entry (Glucker & Armbrüster 2003), the variety of areas encompassed (IT, management, accounting [Muzio et al. 2011]) which is seen to favour

Resubmission

large firms able to deploy both the broad range of expertise and the skills in managing interdisciplinary teams. The latter points are also seen to underpin the strength of large management consultancy organisations. However, as Muzio et al. (2011: 818) point out:

In these areas, unlike in the case of the traditional professions, large firms have predated and subsequently constrained the development of professional institutions. Firms themselves became the main locus of professional closure and regulation, shaping the development of this field and determining, to a large extent, the status and material conditions of practitioners (Muzio et al. 2011: 818).

Consultants thus seem to have been prevented from sustaining a traditional professionalisation project – or perhaps more importantly, they may have *opted out* as they did not need it. The success of these firms in validating knowledge through their standing in the market – meant that the larger firms had little need for external professionalisation institutions to validate their expertise – and there is some evidence that they inhibited the development of professional institutions (Groß & Kieser 2006, Whittington et al. 2011). “Consultants have been able to establish themselves as widely acknowledged and sufficiently trusted experts. They have done so without professionalization in the traditional sense” (Groß & Kieser 2006: 92–3) [of resorting to formal professional associations].

The apparent ‘failure’ of professionalisation in the area of business knowledge can also be understood in terms of the character and distribution of the expertise involved. Whilst the traditional professionalisation strategy revolved around the possession of a systematised, abstract knowledge base, some have suggested that “consulting knowledge is too elusive, fuzzy and perishable to sustain a traditional professionalization project” (Muzio et al. 2011: 807). More pertinently, the need for business knowledge to be implemented and prove useful for particular organisational clients perhaps limits the abstraction of knowledge (generic models have to be translated to meet particular client needs). Change management knowledge thus revolves around a combination of generic and specific knowledge, of formal knowledge and practical experience (Kipping & Armbrüster 2000, Werr & Stjernberg 2003, Sturdy et al. 2009, Whittington et al. 2011). As Werr and Stjernberg (2003) note, management consultancy, as a knowledge system, involves a distinctive combination of theoretical and practical knowledge: “knowledge as practice...generated, maintained and accumulated through action in a specific context...tightly linked to a specific context and person, its accumulation is dependent on individual actors...continual development of shared understandings among a group of actors sharing a practice” (Werr and Stjernberg 2003: 884). Kipping and Armbrüster (2000) similarly highlight the tension that therefore arises between circulation and implementation of managerial knowledge. Rather than offering universal solutions, firms want to validate the particular utility of their

specific approaches embodied in proprietary methodologies and a distinctive brand (Armbrüster 2006, Muzio et al 2011). These paradoxical features of business knowledge work against the professional model (Muzio et al 2011).

These arguments would seem to have particular pertinence to the case currently under examination (e.g., knowledge of the IT applications domain). Knowledge of these domains is extensive and heterogeneous, reflecting the variety both of technology solutions and of (sectoral and organisational) application contexts. As a result, it is hard to codify and generalise it into the kind of 'abstract knowledge base' that could be appropriated, deployed and certified by a traditional professional organisation. This knowledge is moreover under constant, and arguably accelerating, change as a result of the dynamism of the IT solution markets and of the strategies of their organisational users. Abbott (2005: 254) sees this as a key factor in the "failure of the 'information profession' to emerge as a stable and effective actor in the ecology of professions, despite the massive importance of information work in the current economy. The blunt fact is that knowledge turns over too fast for a real information profession to emerge". Rather different solutions to the circulation and validation of these kinds of knowledge may be called for. We will return to this key question of the temporality of knowledge which is an important factor in understanding differences in epistemic systems between scientists, financial analysts and industry analysts.

Do these models apply to industry analyst expertise?

Many of these arguments about management consultants would seem also to apply to industry analysts. For example we do not find the model of stratification and professional regression anticipated by the Sociology of Professions whereby disputes about performance are referred to a segregated professional elite. There is stratification (i.e. reputational differentiation) within the expert community but this takes place *within* the analyst organisations. And the elite of the field are not distanced from clients; quite the reverse, they become client facing 'stars' (see Author Study 2015).

Moreover, it seems that these analysts do not need professional associations to validate their knowledge. Instead, reputational indicators and above all the brand of the analyst organisation becomes a key proxy for quality of expertise (the 'quality' of the staff the firm employs, the 'rigour' of the methodologies they deploy etc.). There are thus striking differences between traditional professions and industry analysts like Gartner. In many respects, analysts exhibit many similarities with management consultants. However, as our empirical study shows below, industry analysts distinguish themselves from management consultants. Indeed they proved

very keen to draw explicit comparisons, identifying differences and similarities between their expert role and that of consultants, academic researchers, journalists and others.

This draws our attention most immediately to the choices that expert groups need to make in terms of how their knowledge is produced and applied. As Mok (1971: 109) observes, "Every profession's members are confronted with the necessity of choosing a role model". Mok suggests that particular professions adopt distinctive combinations, which then become institutionalised, of *producing knowledge* and *applying knowledge* to solve the problems of a lay clientele, with a current tendency towards the latter given the potential credibility and financial rewards of meeting client needs. Abbott (1988) notes how in making these choices, groups may seek to draw upon culturally legitimated modes of practice, and, particularly over the last century, upon the scientific model. The empirical analysis will focus upon how industry analysts conceptualise their expertise and the strategic choices that Gideon Gartner made in designing this new form of expertise.

The observation raises questions about how relevant conceptual frameworks from the Sociology of Professions are for management consultancy and a range of other new expert occupations that are subject to very different sets of exigencies/forms of validation. Here we find important insights from an apparent convergence between recent insights from the Sociology of Professions and Sociology of Science which point to a third wave of analysis.

New approaches: a third wave of Sociology of Professions and expertise

The Sociology of Professions took as its starting point the classic historical professions - medicine, religion and law etc. - seen as a template for analysing the wider spread of professionalisation. This approach has, arguably, unhelpfully skewed analysis of expertise and professional work. It has tended to draw a gulf between professions and other specialist occupations (and their strategies to attain expert status) even though these share many common characteristics (Evetts 2006). Various writers, noting this, have argued that classical professionalisation should be seen as just one strategy of occupational power (Fincham 2006, Muzio et al. 2011).

The undue focus of the Sociology of Professions on professional institutions and their role in establishing closure has, we argue, held back understanding of the evolving landscape of expert work. It is something of a paradox that, with its focus on social control mechanisms (e.g. jurisdictional competition, closure and boundary work), the Sociology of Professions has paid rather little attention to the actual *content* of professional work and the knowledge(s) involved.

As Eyal (2013: 870) observes, “the sociology of professions has been primarily a sociology of experts and has had comparatively little to say about expertise”.

This critique has informed recent discussions both of new models of professionalisation and of new frameworks for analysing the emergence of these new kinds of expert labour. Though some have sought “modify theories of professionalization so that they effectively come to grips with changes in expert work that have occurred in recent times” (Groß and Kieser 2006: 93), others suggest that these traditional concepts are not capable of comprehensively explaining the expert status of such “new professions” like consultants (Groß and Kieser 2006: 92–3). A ‘third wave’ of scholars have argued for a shift of the focus of enquiry away from professional institutions towards:

1. detailed examination of expert work and the processes by which expert status is achieved (Anderson-Gough et al. 2006; Groß and Kieser 2006; Evetts 2006; Eyal 2013); and,
2. more concrete investigation of the particular contexts, actor configurations and contingencies surrounding expertise formation. These include “the wider historical context of professions and the role of other key actors, such as the state, employing organizations and competing groups in shaping their development” (Muzio et al 2011: 807) as well as the networks through which new professionals achieve and demonstrate professional competence (Anderson-Gough et al. 2006).

Thus Eyal (2013: 871) calls for a Sociology of Expertise (rather than of professions) that addresses how tasks are conducted as well as how jurisdictional boundaries are established: “a full explication of expertise must explore indeed this background of practices and the social, material, spatial, organizational, and conceptual arrangements that serve as its conditions of possibility”.

Colleagues applying perspectives from the Sociology of Science, in particular to financial markets have followed a similar pragmatic turn. Preda (2009), analysing the emergence of a body of expert financial knowledge, insists that: “An account of the constitutions of jurisdiction should start from the content of this expert knowledge and its generation” (Preda 2009: 150). Issues of how to validate expert knowledge arise also in the absence of the social structures of professionalization (i.e. with groups that have not yet achieved cognitive authority). Homologous considerations arise when we examine these other forms of expertise as have been found in relation to established (e.g. techno-scientific) expertise. Preda (2009) for example studies the

emergence of a body of expert financial knowledge ('Chartists') - who offered investment advice based on the "technical analysis" of charts of movements in share and other prices - in the absence of professional or quasi-professional structures in relation to these experts. Preda's discussion of "chartism as expert knowledge" (Preda 2009: 153) drawing, like ourselves, on the *Sociology of Professions and the Sociology of Scientific Knowledge*, is a particularly interesting template for us to build on.

Here Preda turns to Turner's (2001) typology which differentiates experts in terms of their legitimacy with target audiences. We have also found Turner's typology of experts helpful, particularly in clarifying *the establishment of cognitive authority* - a question that is at the heart of our enquiry.

Turner's typology of experts

Turner (2001) argues that: "Expertise is a kind of possession, certified or uncertified, of knowledge that is testified to be efficacious and in which this testimony is widely accepted by the relevant audience" (ibid: 130). Turner notes that studies of (professional or scientific) expertise have tended to focus upon established expert groups like physicists - groups which can draw on credibility that has already been established amongst its wider as well as more immediate audiences. They *already* achieved 'legitimate cognitive authority' (ibid: 131); the efficacy of their knowledge base and methods are widely accepted. For such experts, which Turner calls 'Type I experts', recognition is a corporate achievement: "this corporate authority has achieved a particular kind of legitimation, legitimation not only beyond the sect of physicists, but acceptance that is more or less universal" (ibid: 131). However, as he observes, this begs the key question: "How did cognitive authorities establish their authority in the first place? And how do they sustain this?" (ibid: 130). "Establishing cognitive authority to a general audience is not easy". In the case of physicists, it was major achievements "like nuclear weapons...and new technology [that were] the coin of the realm" (ibid: 133).

Turner notes (ibid: 130) (speaking of Sociology of Science, though the argument also applies to the Sociology of Professions) that "these literatures have generally ignored...the problem of the origin of authority" because they have largely directed attention to those groups which have *already* established a systematized, formalized and codified knowledge base and for which 'legitimate cognitive authority' has already been achieved (Turner 2001: 130-1). Turner develops a typology in terms of the legitimacy experts have established with their audiences.³ His category of Type 3 experts focuses attention on groups who have not yet established wide recognition.

Resubmission

Preda sees his Chartists as belonging to the 3rd group in Turner's schema. Lacking an established audience for their work, they had to go about actively creating it:

users were configured as depending upon a body of specialized knowledge which they cannot obtain by themselves, and as needing experts in the interpretation of price movements... unbiased judgment. At the same time the technological apparatuses on which this knowledge depends are represented as requiring special skills and powers of interpretation which brokers, being too busy, have not developed (Preda 2009: 163).

As well as "establishing control over arcane knowledge" by claiming "epistemic monopoly" over their "observational apparatus" these groups claimed that user judgment depended upon their services (Preda 2009: 163). A paradox arises here because expertise is believed to be effective, but is not completely accessible to outsiders. As Turner (2001) notes: "it is the character of expertise that only other experts may be persuaded by argument of the truth of the claims of the expert" (ibid: 129). Achieving expert status thus required demonstration of the efficacy of that knowledge. Chartists had to persuade "brokers and investors alike that [this new knowledge] was indispensable" (ibid: 153). Preda points out (at least) two elements to this process. This includes "the successful persuasion of users that they need a special form of knowledge in their activities" (ibid: 152) and building up a following also meant "controlling the distribution of this expert knowledge and making it more difficult to access" (ibid., 162). Preda's historical study provides a rich account of how his Chartists were able to create their own following. For example by publishing papers and books, they created a 'tradition' that legitimated their activities. In addition, Preda notes as important their circulation of various tools and devices – such as stock price charts or ticker tape machines – which together constituted a distributed 'socio-material apparatus' (Beunza and Stark 2004) that would reconfigure the work of stockbrokers. Working with this apparatus was not a supplementary but key aspect of what those employed in stock markets from then on did. He discusses how the 'price ticker' produced a constant flow of prices such that it reconstituted stockbrokers' practices:

The ticker transformed the character of price data: a continuous flow of data replaced the rather unsystematic price lists. Trust was shifted from idiosyncratic knowledge of transaction partners to a machine which could travel across social contexts. New modes of attention and observation were introduced, which brought individuals together into price monitoring activities, in public places (Preda 2009: 25).

With the introduction of these technologies, the importance of the outputs of the Chartists became central. Preda (2009) describes how those working in stock markets switched from observing markets to observing 'the tape'.

Whilst the Sociology of Professions has tended to focus upon established, *Type 1 experts* (in Turner's typology), industry analysts exemplify a rather different kind of expertise, resembling

most closely Turner's *3rd type* of expert that need to create an audience for whom they are expert. These are "groups and individuals who create their own following" (2001: 145) because they have "proven themselves to this audience by their actions" (Turner 2001: 131). Here Gartner in particular managed to establish cognitive authority over a number of strategic IT markets and especially enterprise systems solutions.

Methodology

This paper draws upon extensive ethnographic research conducted over a period of over a decade. We obtained early insights into the importance of Gartner Inc. in a previous, extended investigation into the development, procurement, implementation and maintenance of enterprise systems (Author Study 2009). Building upon this earlier research we were able to apply snowball methods to build a wide sample of contacts with industry analysts and other players allowing us to view industry analysts from a number of different perspectives. These respondents proved remarkably willing to discuss their work and to facilitate further exchanges. In this way we were able to gain detailed insights into how industry analysts carried out their work. This encompassed ways in which industry analysts acquired information in detailed interaction with vendors and adopters, produced assessments of the market and presented these outputs to clients.

There were four main sources of data for this paper. First, observing industry analysts at a number of IT forums and conferences, where we conducted over 100 hours of participant observation, which in addition provided opportunities for informal discussions and to observe their structured and unstructured interactions with vendors and technology adopters. Secondly, we conducted formal interviews with over 20 industry analysts from Gartner (including a telephone interview with its founder Gideon Gartner) and other analyst organisations. Third, we were able to draw upon a substantial body of interviews with technology vendors and clients (particularly in relation to the Customer Relation Management technology sector). Finally we had access to Gartner documentation and reports (some of which were available freely on the internet and others which were sent to us by the above players).

We transcribed and coded the analyst interviews until we had reached saturation (i.e. no further topics arose; absence of disconfirming observations). For reasons of brevity we only present a small part of our empirical material here. For a more complete account see Author Study (in press).

How Industry analysts characterised their expertise

How industry analysts distinguish themselves from management consultants

We have already noted some of the similarities between industry analysts and management consultants. There is of course substantial overlap in the areas of expertise and experience deployed by analysts and IT consultants. Their career paths may overlap (many analysts were once consultants for instance). And industry analyst organisations may provide consultancy services – for example in advising technology adopters in the course of their technology procurement or advising a vendor on product development strategy. However analysts from Gartner and other larger analyst organisations will often go to great lengths to distinguish themselves *from* management consultants. Indeed, they portray these consultants as *consumers* of their research. Thus Gartner analyst, Winter, observed that the big consultancy firms “are not competitors, they are clients...Most of the research that they [need] they will get it from us” (interview, Winter). The core of Gartner’s business is its research base.

Independence

Gartner analysts also distinguish themselves from consultants on the basis of their *independence*. Thus Gartner analyst Elias Thomas observes how the big consultants are dependent on securing particular contracts: “they will say that we’ll give you independent advice. And we will say no you won’t. Because they have got to pay for a whole load of consultants to keep them busy. We are paid to give advice and we get very, very upset if that independence is questioned” (interview, Thomas).

Gartner analysts in contrast strenuously emphasise their independence. Protecting their reputation for independence profoundly shapes the methods used by analysts and the character of industry analyst expertise. The independence of large industry analyst firms like Gartner is rooted in their large client base, and in particular on the subscription based services (e.g. for technical reports and advisory services) they provide to large numbers of organisations: “The largest of the firms work on a syndicated research basis. So they try and have 80% of their revenue coming from repeatable annuity based subscriptions that you buy access to” (interview, Mitchell).

Public knowledge?

Despite some similarities with the big management consultancies - for example, in terms of the reputational role of corporate brand - the distinctive model of industry analyst expertise established by Gideon Gartner was rather different from the existing management consultancy

firms. The expertise of Gartner analysts was not couched simply in terms of the efficacy of their advice for particular clients – but also revolved around their ability to produce a wide range of outputs that assessed prospects across entire technical fields. This included:

- identifying and giving a ‘name’ to emerging technical fields;
- constructing and defending ‘signature’ tools like the Magic Quadrant (a graphical ranking);

In naming a field, for instance, industry analysts are conducting a very specific form of work. They are as one analyst described to us ‘drawing a starting line’ that everyone else lines up behind (interview, Thomas). These kinds of naming interventions, in theory, could emerge from academics or could be attempted by vendors, individually or in collaboration. However, as Elias Thomas from Gartner observed, “they don’t have the clout in their own right to name ‘that’ because they haven’t got the independence to be able to, unless they are so huge that they dictate, determine what the market is called. But that is rare” (interview, Thomas). This ‘third party’ role highlights ways in which Gartner’s knowledge outputs exhibit some elements of a ‘public good’. Gartner expertise would therefore appear to correspond to Porter’s (1992) conception (in the case of accountancy) of *public knowledge* with the credibility needed to coordinate action of diverse actors in a context where personal trust is in short supply in the face of the competing claims of vested interests. Though targeted towards the technology adopters, their assessments help shape emerging application markets, including both the procurement choices of adopters and vendors’ development strategies. Industry analysts though often controversial, are highly influential.

We are doing that for the users. The vendors then go ‘great. That is where we are going. Boom. We’re an ERP vendor’. They do it because they can see that we have drawn a box around a market that they are slap right bang in the middle of and they feel that can dominate it or have a serious part to play (interview, Thomas).

Defensible knowledge

Given these potentially crucial consequences, and in particular the potentially immediate implications for the sales prospects of vendors, and the consequent threat of lawsuit, Gartner Inc. may need to be able to defend their claims. Their knowledge outputs must be defensible. Here our research has drawn attention to the increasingly elaborate and formal methodologies used by Gartner for the production of key knowledge outputs like its Magic Quadrant, together with increasingly systematic internal regulation within Gartner of the production of these public outputs, which go through an internal ‘peer review’ process (interview, Lehman).

Resubmission

Gartner also developed elaborate mechanisms to maintain, and visibly demonstrate, corporate regulation of quality and independence of research. Its methods of knowledge production and governance drew some elements from the scientific/technical model of expertise. Though resembling the procedures of conventional technical specialists or medical and scientific professionals, they also differ in some striking ways. For example, we were told by those we interviewed of Gartner's early 'think tank' culture (interview, Levin). The debate that goes on internally within Gartner's research teams bears some resemblance to academic review systems. Gartner outputs are today increasingly subject to internal quality control (e.g. through standardised methods and review by colleagues within the firm). However, review remains internal to the analyst organisation: we do not find the external peer review or scrutiny by a certificating professional body that characterises traditional professional communities or underpins the verification of scientific knowledge.

Pseudo-academic

Analysts themselves drew our attention to these similarities but also to differences from technical or scientific expertise. They describe their knowledge production as similar to science - involving a '*truth element*' - but different: as *pseudo-academic* rather than *scientific*. This was expressed by Elias Thomas:

Ok, we are paid by our company to do our job, but we are, there is a sort of, maybe it is an IT industry thing possibly, it is sort of a righteousness element to it. In other words, a sort of search for the truth. OK, we are paid to write research in that I am paid to do enquires and I am paid to help the client and we get rated on how well the client is happy with our advice. But at the heart of it there is a sort of truth element to it (interview, Thomas).

Whilst Gartner's presentations may emphasise the pursuit of truth, in their work industry analysts prefer a more nuanced account. Gartner analyst Andrew White observes that users look to them for 'truth'. Industry analysts who might be more comfortable with a formulation of "a commonly agreed and accepted set of truths that operate as a foundation, on which we will each derive our own, interpreted contextually centric views" find this not to be a very marketable phrase, so we all tend to use "single version of the truth" (White 2014).

Cognitive authority

Here Gartner Inc. in particular managed to establish cognitive authority over a number of strategic IT markets and especially enterprise systems solutions. Their cognitive authority is sustained not through the operation of a wider professional community (for example through external peer review of their knowledge outputs) but with the reputation associated with the Gartner brand. We noted the emphasis within Gartner Inc. upon internal quality control and

visible warranties of Gartner's impartiality: quality control resides with the brand rather than a broader professional community. As James Governor CEO of the analyst organisation Red Monk observed:

analysts are not even professionals, not in the strict sense of the word that we sort of understand in this country at least. You are not a professional until you have done at least seven years of study. There is no equivalent of that in the analyst business. You can come from any background. And really in some sense an analyst business is just something that certifies people as able to be analysts (interview, Governor).

And what is at stake here differs subtly from the means by which scientific veracity is established through the acceptance of knowledge claims across a scientific community amongst whom there is broad consensus about criteria and methods by which the quality and validity of knowledge can be assessed. The key test of Gartner's expertise is not the enduring truth of its knowledge claims but its *utility value*. The advice analysts' offer is assessed in terms of its perceived relevance for client organisations needing to make decisions (and their willingness to renew subscriptions). Though Gartner Inc. sells its services to technology vendors and investors, it foregrounds (and reserves the term client for) technology adopters seeking to assess different supplier claims.

Strategic choices underpinning the distinctive form of Industry analysis expertise

We have explored the strategic choices pursued in particular by Gideon Gartner that underpinned the emergence of this new category of expert. Though the methods of knowledge production employed by industry analysts embody some elements that resemble conventional technical specialists, they also differ in some striking ways. For example, our research has drawn attention to the increasingly elaborate and formal methodologies used by Gartner for the production of key knowledge outputs like its Magic Quadrants, together with increasingly systematic internal regulation within Gartner of the production of these public outputs, which go through an internal 'peer review' process (Author Study 2009). Though these may resemble the knowledge creation and governance systems of medical and scientific professionals, the analysts themselves describe their knowledge production as *pseudo-academic* rather than *scientific* (interview, Thomas). Thus Gartner outputs are subject to internal quality control within the firm (e.g. through standardised methods and internal review) rather than the peer review by the external professional community that underpins the verification of scientific knowledge. We see these features as closely linked to the need for industry analysts to create an audience for whom they are expert (Turner 2001). In other words, we see industry analysts exemplifying a different kind of expert to the established groups that Sociology of Professions has tended to

focus upon which have already achieved wide acceptance of the efficacy of the knowledge base and methods. This exigency pervades much of their activities.

Gartner as a decision-support company

Gideon Gartner, in establishing the first industry analyst organisation, set out to create a 'decision-support company'. Its staff are encouraged to demonstrate the value of their knowledge outputs and advisory services in helping its customers (technology adopters, vendors, investors) make practical choices (interview, Gideon Gartner). This goal shapes the ways in which they produce and apply knowledge. In developing this distinctive form of industry analyst expertise, we can see a number of strategic choices that drew upon but also differentiated from a variety of available models. Perhaps unusually the thinking behind these choices has been widely and explicitly discussed in blogs and public interviews as well as through our research interviews.

Quantitative Market Studies

In establishing his firm Gideon Gartner decided to move away from one established model – of conventional (e.g. market) research, that applied large scale quantitative techniques to capture the current market and existing trends. The earliest players in the emerging market for IT research were publishers of databases and technical reviews of product markets and quantitative market surveys such as Computer Intelligence, International Data Corporation (IDC) and Yankee (Bernard & Gallupe 2013) established in the 1960s and 1970s. Ovum, established in 1985 as a publishing house, exemplifies this relatively traditional model of large-scale market research into technology sectors. An exhaustive research process, involving interviews with large numbers of vendors and adopters, produces an extensive database, which is then used to generate specialist reports. The upfront costs of collecting and processing this information are very high. The reports therefore need to be heavily marketed (and they can be very profitable if sufficient sales can be achieved). David Mitchell, Research Director at Ovum, told us “In my firm, IP [Intellectual Property] is the main product” (interview, Mitchell). Ovum’s business model involves achieving economies of scope and scale and generating “reproducible IP”.

Though these large-scale quantitative research methods are effective at consistently and reliably summarising existing patterns and established trends, for example growth in markets and market share, these kinds of method are arguably less effective in identifying the possibility of shifts in existing paradigms and trajectories.

From market research to decision-support

Gideon Gartner conceived a different kind of knowledge service – produced by a rather different research process. Speaking publicly about the origins of Gartner Inc. he notes: “our idea was to go way beyond market research; to really help people in their decision making, to be much more strategic...to be a decision-support company” (Gartner 2007). Thus, Gideon Gartner (2011c) exhorted his analysts to “advocate positions explicitly, improve abilities to sell a specific point of view”. As part of a strategy to establish an advisory firm that could help clients make decisions, Gideon Gartner evolved new kinds of research tools and methods - honed to detect changes in existing market trends – and new kinds of knowledge output. Knowledge produced by analysts needed to pass a “so what?” test. Rather than producing long technical reports, new formats were developed that could convey findings rapidly, and could form the starting point for advisory services.

The research process that Gideon Gartner proposed was in part inspired by contemporary efforts to apply ideas from decision theory to business practice – in investment analysis, marketing and company strategic planning – which suggested the need to go beyond such quantitative methods which, in his view, could simply encourage “herd behaviour”. Gideon Gartner drew on the work of decision theory scholars Montgomery and Weinberg who note: “The problem is not to generate data, but to determine what information is relevant and actionable” (Montgomery and Weinberg 1979: 44). Gideon Gartner concluded from this work that “evidence to support research conclusions was often abundantly available, and should be tapped” (Gartner 2011). Drawing explicitly upon Montgomery and Weinberg’s concept of Strategic Intelligence Systems, which applies decision theory to the domain of Marketing, Gideon Gartner’s approach seems designed to foster sensitivity to shifts in sentiment across the analyst’s network that could signal possible changes in the technology landscape. In this context, Gideon Gartner developed the idea of *The Stalking Horse*, as the basis for what a former colleague, Richard Stiennon, described as “thought experiments that would spark innovative thinking” (CIO 2012). The goal here was to generate “original and provocative conclusions” (Gartner 2011a) rather than, for example, to reinforce existing consensus. The approach seems honed to picking up early signals amongst its network of vendor and client contacts and in particular, to provoke responses and thereby detect changes in existing trajectories and patterns. As Elias Thomas told us, “We are deliberately taught to provoke; to push things too far to get people to react. I can think of lots of examples where...provoking vendors and clients is part of the game as far as an analyst is concerned, in order to get to the truth” (interview, Thomas). The key objective seems to be to tap into particular kinds of

knowledge shift – emergent understandings and insights which may be driven by client concerns or by particular successful initiatives – that may change existing taken-for-granted knowledge. This is not a matter of anticipating or predicting the future. Thus Elias Thomas describes how as Gartner analysts “we react to success. If it succeeds and other vendors start piling in, we go ‘right. Something is going on there’ and we go after it” (interview, Thomas).

In this respect, their pronouncements tend to be fairly conservative; they are “fast followers not leaders” (interview, Thomas). Gartner’s knowledge processes were thus designed and continue to be explicitly geared to generating particular kinds of knowledge.

In thinking about the possibility of establishing a market for this novel form of expertise, Gideon Gartner drew perhaps most immediately upon his ongoing experience and links in Wall Street. Rather paradoxically, this influence is not always commented upon in discussion of the industry analyst role. However his previous career in a financial analyst firm, pervades Gideon Gartner’s thinking. Along with ideas about Marketing, these provided a taken-for-granted template. Thus, in considering how industry analysts would allocate their time between functions (and the scope to allocate their time more profitably), Gideon Gartner takes as a starting point the rough breakdown of a “Wall street analyst” time. Likewise Gartner’s decision to employ “senior industry people, who were in fact ‘peers’ of their prospective clients” appears to have been taken from Wall Street practice.

Financial analysts – also known as investment, security or equity analysts – comprise an established group. The market for technology investment advice has been around for more than a century (Preda 2009). They have been subject to enquiry from a range of perspectives – including econometric studies of their effectiveness as well as more recent sociological explorations of how they were formed (ibid.) and how they operate. The former has for example looked at the limited evidence of efficacy of financial advice (Cowles 1933), while noting a bias in their advice which tends to over-estimate growth possibilities and underestimate risks (Wansleben 2012) – a failing that has been attributed variously to: their resort to imitating their peers (Rao et al 2001); their personal economic interests; and, experience that as well as rewarding accuracy of earnings forecasts, positive assessments will enhance their promotion prospects (Hong & Kubik 2003).⁴ Most notably (sell-side) security analysts, in producing forecasts of a firm’s future earnings, develop calculative frames to assess how corporate performance is assessed. Our research (Author Study 2011) suggests that industry analysts may act in a manner akin to security analysts to construct the categories through which the potential of companies are assessed (Zuckerman 1999, Beunza & Garud 2007, Wansleben 2012). This and related ideas from the Sociology of Finance also provides some points of

comparison and contribute to a more generic understanding of how these forms of expertise operate as epistemic systems – of knowledge production and consumption. Thus Knorr Cetina (2010) has observed how financial analysts draw not only upon formal information but also on direct contacts and site visits (which she characterises as ‘mini-ethnographies’) to ‘see through’ performance claims (Ibid. 189). Knorr Cetina (2010, 2012) also shares an interest with us in exploring the temporality of the worlds to which analyst knowledge pertains. The financial analysts Knorr Cetina studied operate in a world of investment and speculation in which assessments of future stock values are perennially vulnerable to events. In such contexts, she argues, “truth takes second place to news and rumor” (Knorr Cetina 2010: 190); in this context the accuracy of a financial prediction “seemingly does not matter all that much” (ibid: 182).

However it is instructive to explore the different temporalities of knowledge and the worlds to which they pertain. Knorr Cetina (2010) contrasts the constantly changing ground of financial analysis data with the stability of the worlds that are the subject of natural science - hence the rather long-lived character of scientific theories and methods. Our industry analysts perhaps represent a mid-point between natural science and financial analysis. They also are seeking to demonstrate mastery and cognitive authority over ephemeral promising technology fields - domains which are constantly shifting as a result of changes in technology and business processes. This was one of the factors undermining the scope to codify industry analyst knowledge into a generic form that could be exploited in classic professionalisation strategies - as described above.

Journalists

Another model that may be pertinent to our enquiry is that of the *journalist*. Gartner has recently established an Office of the Gartner Ombudsman. This idea was explicitly lifted from the media rather than public administration. Nancy Erskine, Gartner Ombudsman told us: “We modelled ourselves initially on the news media and the kind of the voice of the reader, so to speak, more than Government or internal or HR oriented ombuds-people” (interview, Erskine). Their decision to create the Office of the Gartner Ombudsman was motivated “to instantiate the independence and objectivity of Gartner” (interview, Erskine) and it became a brand differentiator for Gartner Inc.

Journalists as professionals deploy an occupational ideology that emphasises ‘integrity’ and ‘objectivity’ (Aldridge & Evetts 2003). Though the latter term incorporates multiple meanings, the main claim advanced is that good journalism is the disinterested search for, and weighing of, evidence. The ‘good journalist’ provides balanced and transparent access to the best

informed/most authentic sources (ibid). There are some obvious parallels with the industry analyst role. Indeed, as we have already noted, one of the precursors for industry analysis comprised publishers of technical and market reviews. The industry analyst expert as conceived by Gideon Gartner, perhaps like journalists, deploy a wide range of contacts in searching for information but also, more like traditional technical experts: i) deploy specialised techniques to bring this knowledge together in consistent ways; and ii) possess the significant body of expertise needed to make complex judgements. In emphasising their impartiality, several of the Gartner analysts we interviewed portrayed themselves as the *Which?* magazine for the sector (see Aldridge [1994] for a discussion of this magazine). They also noted ways in which they were not like *Which?* magazine – particularly in responding to clients' calls and providing personalised advice. Gartner's Elias Thomas argues that what distinguishes analysts from journalists is their "focus and persistence": journalists will shift their attention according to what topics are hot and newsworthy; they will "learn enough about it and then find a story, write a story...so they are constantly flitting around" (interview, Thomas). Gartner's critics make a rather different comparison, pointing out that whilst newspapers and other commercial media make money from advertising, "not every entity [they] report on is a potential revenue source. Over at Gartner, however, every entity they report on is either a current or a potential revenue source" (Snapp 2013: 41-2).

Management consultants

Another obviously relevant example that we have already explored is *management consultancy*. Here the failure of management specialists to conform to the traditional professional model had been attributed by writers from the Sociology of Professions to the success of large firms in deploying a broad range of requisite expertise and in managing interdisciplinary teams. The strong brand identities of these big consultancies provided both a proxy indicator of past performance and presumed guarantor of future performance (Abbott 1988, Muzio et al. 2011). The big firms did not have a need for professional status (Groß & Kieser 2006). Nor, it seems, did industry analysts. There was an attempt to establish professional structures for industry analysts but this was opposed by Gartner. As one experienced analyst, Collins, told us:

Why would Gartner 'allow it'? A professional body is actually a...restricting mechanism. I think they [Gartner] are probably quite happy to make their own decisions as opposed to feel incumbent on other people for a code of conduct or whatever" (interview, Collins).

However, the distinctive model of industry analyst expertise established by Gideon Gartner was rather different from the existing management consultancy firms. Gartner Inc. resembles the big

management consultancies in terms of the reputational role of corporate brand. However Gartner analysts distinguish themselves from consultants: they portray consultants as on the one hand as consumers of their research, and in particular see them as dependent upon particular consultancy contracts. Gartner analysts in contrast repeatedly and strenuously emphasise their independence which lay at the very core of the business for large analyst organisations, rooted in their large client base and in particular on their subscription based services (e.g. for technical reports and advisory services) provided to large numbers of organisations.

Gartner exercise cognitive authority over emerging technical fields

The cognitive authority that Gartner sought and achieved was rooted not just in the efficacy of their advice for particular clients – but their ability to exercise authority over a whole technical field. Over time Gartner have evolved a wide range of knowledge products offering both comparative assessment and predictions about developments across whole fields. Foremost here is its ‘signature’ output the Magic Quadrant that ranks and assesses the relative strengths of vendors in established product markets (Author Study 2009). The Magic Quadrant positions the main vendors in a field along two dimensions: a vendor’s ‘completeness of vision’ and its ‘ability to execute’ on that vision. Gartner has also developed a range of tools for engaging with emergent technology fields (MarketScopes, Cool Vendor Lists) and for tracking the evolution of fields up to their eventual closure (Hype-Cycles; IT Market Clocks). Gartner’s pronouncements, though often controversial, are highly influential. A vendors omission from, or poor position on, a Magic Quadrant can dramatically affect their market prospects (Author Study 2009). Their assessments help shape both the procurement choices of adopters and vendors’ development strategies. Gartner also developed elaborate mechanisms to maintain, and visibly demonstrate, corporate regulation of quality and independence of research. And here we saw how they drew some elements from the scientific model of expertise (e.g. the appointment of an ombudsman, elaboration of formal methodologies and internal peer review of findings).

Conclusions

It would appear that the recently emerged role of IT industry analyst offering advisory services drew elements from a number of domains of practice, including conventional quantitative and market research, academic scientific research as well as others including journalism, financial analysis and marketing.

Resubmission

The Sociology of Professions has provided a stimulating conceptual framework for our enquiry. However, its early writings drew rather narrowly on traditional (medical, legal, scientific) examples and offered rather static analyses that focused upon social control mechanisms and jurisdictional conflicts. In the course of the paper we have however moved away from those approaches that paradoxically paid relatively little attention to the content of professional work and knowledge. Our analysis instead focuses in detail upon the content of expert knowledge, how it is generated (Preda 2009), and how it achieves cognitive authority (Turner 2001, Muzio et al 2011) through an array of interactions amongst diverse actors (Anderson-Gough et al. 2006). The challenge is to examine the detailed work of particular expert groups, how their knowledge work takes place through and is shaped by (and helps constitute) these networks of interaction. Here there has been an interesting convergence between a 'third wave' of scholarship in the Sociology of Professions and scholars from Science and Technology Studies who have addressed the epistemic systems underpinning markets.

The category of industry analyst, whose emergence we document here, is neither uniform nor static. We note that industry analysts must tackle homologous challenges to traditional technical expert groups. The ways in which they organise and regulate their processes of knowledge production resemble, and indeed explicitly draw upon, some elements of the established medical/scientific expertise model. They also differ in a number of important ways. In particular, it seems that industry analysts do not need professional associations to validate their knowledge. Instead, reputational indicators and above all the brand of the analyst organisation becomes a key proxy for quality of expertise (the quality of the staff the firm employs, the rigour of the methodologies they deploy, and 'coins of the realm' like the Magic Quadrant). In this respect, industry analysts exhibit some similarities with another, already well-established group deploying business knowledge: management consultants. However, there are differences. Gartner's assessments may have crucial consequences for suppliers and adopters. They therefore need to be able to defend their claims. As a result, the knowledge outputs of Gartner analysts have become increasingly subject to standardised methodologies and to internal review mechanisms. These bear some resemblance to academic review systems. It is notable, however that analysts themselves characterise their work as similar to but different from science: as *pseudo-academic* involving a '*truth element*'. Review also remains internal to the analyst organisation: we do not find the external peer review or scrutiny by a certificating professional body that characterises traditional professional communities. The importance attached by Gartner Inc. to the quality and independence of their assessments is also reflected in their recent appointment of an Ombudsman.

Resubmission

We traced this back to the distinctive model of industry analyst expertise articulated by Gideon Gartner. This “hodgepodge of ideas” (Gartner 2010b) gradually took shape over the first decade of Gartner Inc. and provided a template for large industry analyst organisations. This was in terms of both the kinds of knowledge produced and the manner in which it is generated, validated and applied;

i) Gartner sought to offer value to its customers by being a ‘decision-support’ rather than market research company; its outputs had to pass a ‘so what’ test. Methodologies like the ‘Stalking Horse’ seemed honed to help analysts detect early signals, patterns and shifts amongst their client network;

ii) At the same time Gartner’s assessments needed to be credible, independent and defensible – produced in recent decades through increasingly formalised methodologies and subject to internal review and governance systems including the Office of the Gartner Ombudsman (through which they distinguish themselves from management consultants);

iii) Whereas some market research organisations instituted a detailed division of labour and skills (e.g. between lower grade data collection staff; statistical analysts; experts) Gartner wanted its analysts to combine advisory activities with research in the course of their engagements with technology vendors and users, and therefore appointed highly expert staff who were peers of those they were dealing with.

iv) Gartner Inc. over time has elaborated a plethora of forms of knowledge outputs that address emergent as well as established technical fields. Through a flood of research outputs we see a struggle to maintain cognitive authority over the commanding heights of the IT market – including more decisive ‘naming interventions’ and the production of Magic Quadrants.

In these respects, industry analyst knowledge outputs – their published assessments of the development of particular IT markets and the relative performances of the main providers – significantly influence evolving technical fields. Their outputs exhibit certain ‘public good’ elements and would appear consonant with Porter’s (1992: 640) description of accountants as producers of *public knowledge* able to “coordinate the activities of diverse actors, and to lend credibility to forms of belief and action when personal trust is in short supply”.

We see this work as contributing to a renewal of scholarship on professions. However research needs to go beyond the historical focus of Sociology of Professions on professional institutions and boundary work and embrace the arguments of a ‘third wave’ of scholars within this tradition, from the Sociology of Expertise and from the Sociology of Scientific Knowledge concerning the

need for a detailed focus on the content of expert work, its practices and knowledge. Our analysis of knowledge intermediaries such as industry analysts and financial analysts has highlighted the production, validation and consumption of their knowledge, including the particular data analysis and presentation devices deployed, conceived as epistemic systems (Knorr-Cetina 2010, 2012).

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Resubmission

1 Brante (1988) makes the telling observation that, though this 'neoWeberian' perspective inverts the traditional functionalist model, both templates effectively reproduce the professional ideology of expert groups. Professional activities are not (allegedly) governed by self-interest, but by a body of objective and scientific knowledge which is used to inform decision and intervention carried out for the public good (Fournier 2000: 76).

2 There have however been attempts in some countries (e.g. Germany) to require certification of business consultants (Groß & Kieser 2006). Intriguingly financial/securities analysts have been regulated, notably by the U.S. Securities and Exchange Commission established in 1935 after financial crises were attributed to unrealistic over-valuation of stocks (Wansleben 2012). The requirement for certification of "sell-side" analysts, who in the US must be members of the Institute of Certified Financial Analysts, has underpinned some elements of professionalisation in the field. Industry analysts, management consultants and other domains of business knowledge have remained a matter for the market to resolve.

3 Turner's (2001) typology also identifies a second group of experts whose authority has been accepted by a pre-determined restricted audience. These Type 2 experts are exemplified by the cognitive authority of the theologian which extends only to the specific audience of a religious sect.

4 Gartner Inc. has similarly been criticized for a generic bias towards IT solutions and a specific bias (rooted in its complex procedures for engaging vendors) towards larger vendors (Snapp 2013).