

Management Accounting and Sociology

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Abstract: After a long period of neglect, the roles of accounting in shaping the economy are currently being rediscovered by sociologists (Callon, 1998; Fligstein, 1990; Granovetter, 1985). This neglect is curious, in so far as accounting was accorded a pivotal role at the outset of the sociological enterprise. The writings of Weber in particular placed accounting at the heart of 'rational' capitalistic economic activity. Yet the initial and bold pronouncements concerning accounting that played an important role in shaping the sociological imagination at the beginning of the twentieth century were followed by virtual silence on the part of sociologists for approximately half a century. This chapter reviews the different ways in which accounting has been given a wider sociological significance across the twentieth century. The first section considers briefly the work of Max Weber in the early twentieth century, and the link established in his writings between accounting and rationalisation. The next section considers a subsequent stage, with a markedly different focus, namely the emergence of a substantial literature on budgeting in the 1950s and 1960s. The following section examines a further stage, characterised by the elaboration of a range of methodologies from approximately 1980 onwards that had as their concern to analyse the social and organisational aspects of accounting. The final section considers one particular strand of the recent economic sociology literature, that which concerns the calculative capacities of agents and their embeddedness in social networks. A concluding section summarises the paper and offers some suggestions for ways of building on the links between management accounting research and sociology.

1. Introduction

After a long period of neglect, the roles of accounting in shaping the economy are currently being rediscovered by sociologists (Callon, 1998; Fligstein, 1990; Granovetter, 1985). This neglect is curious, in so far as accounting was accorded a pivotal role at the outset of the sociological enterprise. The writings of Weber placed accounting at the heart of 'rational' capitalistic economic activity, while those of Marx accorded accounting a central role in the development and reproduction of capitalist social relations. Yet the initial and bold pronouncements concerning accounting that played an important role in shaping the sociological imagination at the end of the nineteenth and the beginning of the twentieth century were followed by virtual silence on the part of sociologists for approximately half a century. It was not until the 1950s that the interest of social scientists in accounting

resurfaced,¹ to be followed in the 1960s by the burgeoning of 'behavioural accounting'. It was only in 1976 that accounting at last had a journal—*Accounting, Organizations and Society*—dedicated to exploring its organisational and sociological dimensions.

This chapter reviews the different ways in which accounting has been given a wider sociological significance across the twentieth century. The first section considers briefly the work of Max Weber in the early twentieth century, and the link established in his writings between accounting and rationalisation. The next section considers a subsequent stage, with a markedly different focus, namely the emergence of a substantial literature on budgeting in the 1950s and 1960s. Heavily influenced by theories of group dynamics, this literature focussed primarily on management accounting in an intra-organisational setting. The following

¹See, for instance, Argyris (1952) and Dalton (1959)

section examines a further stage, characterised by the elaboration of a range of methodologies from approximately 1980 onwards that had as their concern to analyse the social and organisational aspects of accounting. The methodologies developed and applied here included those that focus on the institutional environments of accounting, the political economy of accounting, ethnographic approaches and a concern with the networks within which accounting is embedded. The final section considers one particular strand of the recent economic sociology literature, that which concerns the calculative capacities of agents and their embeddedness in social networks. A concluding section summarises the paper and offers some suggestions for ways of building on the links between management accounting research and sociology.

2. Accounting and Rationalisation

Max Weber, writing in the first two decades of the twentieth century, considered accounting to be at the heart of the rationalisation of society under capitalism. Weber rejected the idea that capitalism was a matter of greed or acquisitiveness. Instead, he argued, capitalism should be understood as the continuous pursuit of profit by means of ‘rational, capitalistic enterprise’ (Weber, 1930, p. 17). Economic action, according to Weber, is capitalistic in so far as it depends on an expectation of profit through the utilization of opportunities for exchange. And this ‘rational’ pursuit of profit required as its counterpart calculations in terms of capital. The modern, rational organisation of capitalistic enterprise would not have been possible, Weber argued, without the calculative practice of bookkeeping.

Rationalisation provided the overall theme for Weber’s sociological project. This multidimensional rationalisation of the conduct of life was termed *Lebensführung*. Weber was concerned with the conditions that gave rise to and enabled the spread of the ‘specifically modern calculating attitude’ (Weber, 1978, p. 86). Accounting, in the sense of both budgetary management and capital accounting, was central to his analysis of the sociological conditions of economic activity. He argued that money is ‘the most “perfect” means of economic calculation’ (Weber, 1978, p. 86), that is, ‘formally the most rational means of orienting economic activity’ (Weber, 1978, p. 86). Calculation in terms of money, rather than its actual use, was the mechanism by which rational economic provision could be conducted, and capital accounting was the form of monetary accounting peculiar to rational economic profit-making.

Weber defined an economic enterprise as ‘autonomous action capable of orientation to capital

accounting’ (Weber, 1978, p. 91), and stated that ‘this orientation takes place by means of “calculation”’ (Weber, 1978, p. 91). To this extent, he placed a concern with calculation at the heart of a sociological analysis of economic activity. Calculation was the crucial mediating machine, located mid-way between rational profit-making enterprises and the opportunities available to them. Double-entry bookkeeping, according to Weber, was ‘the most highly developed’ (Weber, 1978, p. 92) form of bookkeeping, in so far as it permits ‘a check in the technically most perfect manner on the profitability of each individual step or measure’ (Weber, 1978, p. 93).

Weber’s arguments were complemented by those of Sombart who put forward a similar albeit stronger argument concerning the relationship between double-entry bookkeeping and capitalism. Sombart argued not only that rational calculation was important to the capitalist enterprise, but also went so far as to speculate whether it was double-entry bookkeeping that had given rise to capitalism. The plausibility of this proposition is less important than the pivotal role and sociological significance it gave to economic calculation. It accorded economic calculation a central and formative role in economic activity, rather than a subsidiary role. Together with the arguments of Weber, Sombart helped establish a link between accounting and sociology that has continued to the current day. Accounting was identified as a proper object of sociological analysis.

Prior to Weber, Marx had also signalled the importance of the relationship between accounting or bookkeeping and capitalism. In an oblique reference to the imaginary world of political economy, Marx remarked in Volume I of *Capital* that one of the first tasks of Robinson Crusoe on his desert island is to keep a set of books (Marx, 1974a, p. 81). In Volume II of *Capital*, where Marx deals with the costs of circulation, namely those associated with the transformations of the forms of capital from commodities into money, and from money into commodities, he addresses the issue of the labour-time expended in bookkeeping. A part of the variable capital has to be used, he argued, to ensure that the process of circulation can continue. Bookkeeping is depicted as a deduction from the productive process, albeit an essential part of the circulation process. The machinery of the office, which includes labour power, thus mirrors the movement of value through the productive process (Marx, 1974b, p. 136). In so far as capital seeks its own reproduction, this deduction from what Marx regarded as the real process of production is an essential part of the capitalistic process. And as the production process becomes ever more social in

character, and loses its individual character, book-keeping becomes ever more necessary.

Marx did not accord accounting as central a role as did Weber. Nonetheless, when placed in the context of a theory of value and the concept of mode of production, Marx gave accounting an important place alongside other political interventions in the relations of production. In Marx's writings, accounting is accorded a macro-structural role, both shaping and reproducing the nature of capitalist relations of production. To this extent, Marx and Weber occupy a similar terrain. For both, accounting helps define the social and economic relations that define a society. Thus did the interrelation between accounting and sociology commence. However, little was to be made of these beginnings until the 1950s and 1960s when 'behavioural accounting' began to emerge.

3. Management Accounting, Sociology and the Analysis of Groups

Following the writings of Weber and Sombart, there was little or no interaction between the disciplines of accounting and sociology until the 1950s. When a sociological concern with accounting did resurface in the 1950s, the focus had shifted from a macro-level concern with processes of rationalisation and accumulation to a more micro-level concern with groups, group dynamics and the role of accounting in them. One can mark the shift by reference to Argyris' (1952) seminal paper on the impact of budgets on people. Argyris examined what 'budget people' think of budgets and how factory supervisors think differently about budgets. He combined a study of accounting practices with a sociological concern with groups. Rather than taking groups as given and self-evident, he described the interaction between people and budgets as one of the *creation* of groups. If management puts increased pressure on individuals, he argued, groups are likely to form. These groups can in turn help absorb the increased pressures placed by management on individuals. Once formed, such groups can persist even after the initial pressure to produce them has disappeared.

In proposing that the interaction of people and accounting practices be understood in this way, Argyris was drawing on two decades of research in sociology that had substantially re-focussed the discipline since the late nineteenth and early twentieth century. From 1930 onwards, groups and their dynamics became a major preoccupation for social scientists. The boundaries between social psychology and sociology became blurred, and social scientists found groups everywhere. The character of Elton Mayo is central to this change in ways of analysing

the relational life of the enterprise. The studies conducted under his supervision at the Western Electric Company's Hawthorne Works in Chicago between 1927 and 1932 illustrate the transformation. These studies had a clear conclusion: the dynamics of groups explain changes in industrial output more successfully than changes in the physical environment. Further, the relations among individuals, and between an individual and his or her work, should no longer be considered explicable in terms of a bundle of physiological attributes. The enterprise can be viewed as a social system, and interpersonal relations and group dynamics are at the heart of this social system.

A number of other influential administrative theorists endorsed and extended this sociological analysis of groups and their importance within the firm. As early as 1918, Mary Parker Follett had sought to sketch out a role for the modern corporation within a democratic polity, arguing that the modern corporation should be the principal arena within which a group ideal of democracy could be realised (Follett, 1918). Her position was simple: There is neither individual nor society, but 'only the group and the group-unit—the social individual' (Follett, 1918, p. 21). Two decades later, Chester Barnard remarked that 'the most usual conception of an organisation is that of a *group* of persons...'. (Barnard, 1938, p. 68). He argued that the 'system of interactions' is the basis of the group, and that formal organisation should be regarded as 'a system of consciously coordinated activities or forces of two or more persons' (Barnard, 1938, p. 73). World War II and its immediate aftermath provided a 'laboratory' in which group relations could be studied in their depths and details (Miller, 1986).

In the 1950s and 1960s, the concept of the group became a central preoccupation for the rapidly expanding discipline of sociology. Sociologist Homans (1951) was the first to attempt a theoretical synthesis based on the concept of the group. A range of influences as diverse as Freudian theory, Kurt Lewin's social psychology and the sociometry of Moreno fuelled the growing interest in the study of the small group. The contribution of Homans was to attempt to draw these diverse strands together and to work towards a general sociological theory that would make the group the starting point for the study of social relations.

Alongside the theoretical synthesis being attempted by Homans, sociologists were busy examining issues such as absenteeism, staff turnover, morale, productivity and industrial conflict as problems of group relations. A 'wildcat strike' was analysed by

Gouldner (1954) in terms of a 'general theory of group tensions'. The interrelations between individuals, or 'inter-relatedness' as he described it, was the focus for Gouldner's concerns. The painting of toys in an assembly line situation could just as readily be understood in terms of group dynamics and inter-group relations, as Strauss (1955) demonstrated. Strauss depicted the factory as a social system made up of mutually dependent parts; and Dalton (1959) proposed that cliques, small groups of persons with a common interest, could be the indispensable mechanisms for promoting, stabilising and resisting change.

This line of reasoning was reinforced by a number of writers on the other side of the Atlantic. Bion (1946) coined the idea of the 'leaderless group' as a way of analysing the location of the individual within a complex of interpersonal relations. Jaques (1951) depicted industrial conflicts between managers and workers as manifestations of underlying problems of group relations. In place of an industrial relations model of bargaining, he proposed a psychotherapeutic one that he termed 'working through'. And even accidents at work came to be defined as matters of group relations. Rather than viewing accidents in terms of a dangerous physical environment to which individuals were exposed, they were understood in terms of legitimate forms of withdrawal from the work situation.

'Behavioural accounting' is the label used to describe the wave of studies that appeared from the late 1950s onwards, and which built on these developments in the sociological analysis of groups. Located at the point of intersection of sociology and accounting, behavioural accounting examined in differing ways the interrelations between accounting and group relations. In an early paper directed more towards sociologists than accountants, Dalton (1959) showed how pressure to meet cost targets, when combined with reward schemes based on success in meeting such targets, can result in the distortion of records. Drawing on theories of decision-making (March & Simon, 1958) and the ideas of 'human relations' writers such as McGregor (1960), Likert (1961) and Herzberg (1968), behavioural accounting consolidated the focus on group relations within organisations.

The organisational and behavioural aspects of budgeting became a central preoccupation of researchers across the 1960s and early 1970s. Becker & Green (1962) extended the concerns of Argyris with the group dynamics of budgeting processes. They examined the interrelations between the cohesiveness of work groups and the acceptance of budget goals, and the impact of this interrelation on outcomes. A highly

cohesive work group with a positive attitude towards the budget goal would be likely to yield maximum output, while a similarly cohesive work group with a negative attitude towards the budget goal would result in a slowdown of production. As with Argyris' study, group process and dynamics appears to be the key factor in explaining the budget process. Hofstede went one step further by depicting the budgetary process as a game that people play for their own sake. Although Hofstede found some evidence that participation in the budgetary process was positively associated with motivation to meet budget targets, the results were mixed. Participation appeared to be a necessary but not sufficient condition for high budget motivation. Target levels needed to be realistic, and the attitudes of senior managers was also important. The key ingredient, however, was identified by Hofstede as the 'game spirit' with which managers entered the 'budget game'.

This line of reasoning was extended significantly by Hopwood (1974), who drew explicitly on sociological and administrative theories of groups and organisations. He problematised the link between participation and budgeting, arguing that participation can mean almost anything to anyone and adding that much of the debate had turned inquiry into dogma. Hopwood re-focussed the debate by identifying three distinct ways of using budgetary information in the evaluation of managerial performance. He identified a 'budget constrained' style, a 'profit conscious' style and a 'non-accounting' style. Empirical evidence indicated that both the 'budget constrained' and 'profit conscious' styles of evaluation resulted in a higher degree of involvement with costs than the 'non-accounting' style. Only the 'profit conscious' style, however, succeeded in achieving this involvement without defensive behaviour or undue tension and worry on the part of the managers in charge of the cost centres. The 'budget constrained' style often resulted in manipulation of accounting reports, incorrect charging to budgets, delays in carrying out repairs until the money was available in the budget and a general deterioration in the relationships between managers and those to whom they reported.

Two decades of research into the behavioural aspects of budgeting and related evaluation mechanisms transformed the discipline of accounting. In the process, the interrelation between accounting and sociology was altered permanently. Accounting was no longer to be perceived as a purely technical process, but was to be viewed as organisational and behavioural. What this meant, however, was soon to change in line with developments in sociology and the wider social science environment.

4. Accounting as an Organisational and Social Practice

If behavioural accounting was firmly established by the mid-1970s as a way of posing sociological questions about accounting practices, its focus was almost exclusively focused on processes that occurred within organisations. The agenda outlined by those such as Weber, Sombart and Marx, and that sought to analyse the interrelations between large-scale social change and accounting change, had been almost entirely supplanted by a concern with groups and group dynamics.

The need to remedy this by reinstating the macro-level analysis of accounting was set out clearly by Hopwood (1974). He argued that the processes by which groups influence and control the accounting function within organisations are matched by pressures arising in the wider social and economic environment. To the extent that much contemporary accounting reflects the ethos of capitalism, so too would one expect the forms and philosophies of accounting to change in line with changes in the social and political environment. He reinforced this point in 1976 in an editorial in the first edition of *Accounting, Organizations and Society*. He spoke there of an 'urgent need for research which can provide a basis for seeing accounting as both a social and organisational phenomenon' (Hopwood, 1976, p. 3), arguing that studies of power, influence and control should complement studies of the behavioural aspects of accounting within organisations.

It was to be a few more years, however, before things began to change. In 1978, Hopwood could still comment that there had been little research that addressed the wider social and political influences on accounting. The more micro-level focus characteristic of the North American research tradition continued to dominate, in contrast to the more macro-European approaches focusing on questions of organisational sociology and the broader structural and environmental influences.

Even as late as 1980, a sociological analysis of accounting that could blend successfully micro-level and macro-level concerns remained largely an aspiration. Indeed, it was not even clear what concepts and issues would guide such a research agenda. Some suggestions, however, were put forward in 1980 in an influential paper that sought to identify the roles of accounting in organisations and society (Burchell et al., 1980). A wide range of hitherto neglected issues should, it was argued, be brought within the purview of accounting researchers, and the basic premise on which accounting was analysed should change. Rather than seeing the technical dimensions of accounting as

independent of the social dynamics, they should be seen as interrelated. Just as Argyris had argued that accounting practices can create groups, so too it was argued can accounting create other social forms. The role of accounting in creating organisational visibility, in creating particular patterns of organisational and social management, and in creating structures of power needed to be addressed. The analysis of accounting within organisations should be connected explicitly with the analysis of more general forms of economic and social management. Accounting should, that is to say, no longer be conceived as a purely organisational phenomenon. The earlier tradition of sociological enquiry concerning accounting, as embodied in the writings of Marx and Weber, was appealed to as having identified issues worthy of systematic study. Processes of rationalisation should be addressed, as should the mythical, symbolic and ritualistic roles of accounting. Studies of the organisational roles of accounting should be complemented by studies of the societal roles of accounting.

From 1980 onwards, things began to change. The range of methodologies drawn upon by researchers broadened, as did the focus. Institutional structures and processes, and their interrelations with accounting practices, were given increasing attention. Across the following two decades, the interactions between sociology and accounting altered. The sociological analysis of accounting came to be located more within the discipline of accounting, and in the process the concepts used and the definition of the object of attention itself altered. No longer was it simply a matter of applying pre-given sociological concepts to accounting. Rather, the concepts themselves were developed in close connection to the calculative practices of accounting. The discipline of accounting became more reflective, and itself contributed to the wider development of the social sciences.

Four strands of research contributed to this expansion of the domain of accounting research: first, a concern with the *institutional environments* of accounting; second, a *political economy* of accounting; third, an *ethnography* of accounting and fourth, the study of the *networks* within which accounting is embedded.

The ground was already laid within sociology and organisation theory for the analysis of the institutional environments of accounting. In the late 1970s, the study of the institutionalised 'myth structure' (Meyer & Rowan, 1977) of rationalised societies had emerged. Meyer and Rowan argued that prevailing theories neglected a concern with the legitimacy of rationalised formal structures, as distinct from day-to-day work activities. In so far as rationalised and

impersonal prescriptions attribute a social purpose to technical activity, and specify the appropriate manner in which to pursue this activity, these rationalised prescriptions were worthy of study in their own right. Terming such prescriptions 'myths', their importance stems from the extent to which they become institutionalised, that is to say taken-for-granted ways of achieving organisational ends. Such myths, Meyer and Rowan argued, become binding on particular organisations and shape the development of organisations and societies.

The myths of the accountants thus took their place alongside those of doctors, lawyers and others. Whether it was a matter of a particular category of cost or the broader ceremonial role attributed to financial values in a rationalised society, myths, organisations and rationalisation were to be linked. Echoing some of Max Weber's formulations, formal organisations were depicted as being driven to adopt practices and procedures defined as rational. The conventions of modern accounting, the vocabularies of personnel experts and the labels of the organisation chart are mechanisms by which organisations come to be linked to their institutional environments. To the extent that organisations incorporate practices defined as rational within their institutional environment, it was argued that they increase their legitimacy and survival prospects. The rules embodied in such practices then become binding on the organisation. The formal structures of organisations thus come to reflect the myths of the institutional environment, rather than the demands of the work activities of the organisation.

Viewed in institutional terms, accounting is understood as one of the mechanisms through which organisations come to incorporate rational conceptions of ways of organising. Accounting is just one of many such practices in contemporary societies, albeit a highly significant one in a number of contemporary western societies. It provides a set of techniques for organising and monitoring activities, and a language with which to define and delineate organisational goals, procedures and policies. Accounting performs a ceremonial function that helps legitimate an organisation among its 'users', whether these be participants within the organisations, stockholders, the public or regulatory bodies such as the Securities Exchange Commission. Instead of presuming only efficiency effects, the adoption and diffusion of particular accounting practices can be studied with regard to their roles as rational institutional myths. At a societal level, one can study how the amount of accounting done in a particular society or organisation is determined by its environment, rather than by the intrinsically necessary technical work processes.

A major new research agenda was opened up by this focus on the institutional environments of accounting. The links between an organisation and its environment were accorded a central place in the analysis of accounting. Researchers within accounting were encouraged to look beyond the organisation and to see changes within the organisation as dynamically linked with changes in the wider environment. Accounting lost some of its apparent uniqueness in this view, and became part of the cultural apparatus of a society. Budgetary practices within an organisation were no longer viewed as a matter only of group dynamics and games among the participants. They could be viewed in terms of the articulation, enforcement and modification of societal expectations of acceptable budgetary practices during a period of organisational decline (Covaleski & Dirsmith, 1988). Questions such as how this occurred, to what purpose, and from whom and where such expectations arose could be directed to a range of actors beyond the organisation. The increasing dominance of finance personnel in the control of large corporations could be explained by pointing at changes in the strategy and structure of organisations, changes in anti-trust laws and the mimicking of firms in similar environments (Fligstein, 1990). A shift in intra-organisational power relations is viewed as a result of events within the organisational environment, and as a result of the way in which key actors within organisations define their problems. A range of further studies drew more loosely on the institutional perspective (Ansari & Euske, 1987; Berry et al., 1985; Espeland & Hirsch, 1990), and demonstrated the importance of linking changes in accounting practices within an organisation to the demands and expectations of the institutional environment.

A *political economy* of accounting also drew attention to the importance of addressing the macro-environment within which organisations exist, and did so in ways that drew upon and extended the writings of Marx and later writers. Political economy writers emphasised the conflicting political and economic interests at stake in accounting, and the importance of addressing such interests both within and beyond the organisation. They placed particular emphasis on the ways in which power relations, which are historically specific, are shaped by and in turn shape accounting practices. The image of accounting as a technically neutral and objective practice was rebutted sharply by political economy writers. Accounting was viewed instead as a partial and interested language and practice, one that represents and reinforces the interests of particular occupational groups and classes.

The scene had been set for a renewal of interest in political economy issues by the publication of *Labor and Monopoly Capital* (Braverman, 1974). This was an intellectual call to arms to those interested in understanding changes in the productive process and in the occupational structure of the workforce that had occurred across the past century. For, as Braverman stated, little had been added by political economy writers to the analysis of such issues since Marx's death. Braverman pointed particularly to the emergence of a new stratum of clerical workers in monopoly capitalism, and emphasised that although clerical workers had existed in the nineteenth century, this new stratum was fundamentally different both in terms of social status and their role within the productive process. He vividly charted the growth of a new class of worker whose sole task, he argued, was the increasingly complex one of representing value in monopoly capitalism. He argued that entire new industries had emerged, such as banking and insurance, in which 'the productive processes of society disappear into a stream of paper' (Braverman, 1974, p. 301). Monopoly capitalism, according to Braverman, devotes ever more resources to accounting for value, to the point at which the labour expended on such processes begins to approach or even exceed the labour used in producing the underlying commodity or service. The growth in the amount of accounting carried out in monopoly capitalism, according to Braverman, is not just a function of increasing complexity. It is a matter also of trust or the lack of it. A presumption of dishonesty, 'the first principle of modern accounting' (Braverman, 1974, p. 303), gives rise to the immense duplication that is at the heart of double-entry bookkeeping. And if distrust is the norm, then auditing, cast by Braverman with deliberate irony as a 'profession of honesty', is called forth to certify to outside parties the truth of the financial records. Out of all these differing demands, Braverman argued, emerges a vast paper empire which appears as real as the physical world, and which comes increasingly to dominate it.

Within accounting, a number of writers developed and extended the political economy approach, albeit with differing emphases. The changing form and content of *Annual Reports* were linked to changing strategies of capital accumulation (Neimark, 1992; Neimark & Tinker, 1986). A 'social critique of accounting' was proposed, coupled with a proposal for an 'emancipatory accounting' (Tinker, 1985, p. 201). Other writers in the same tradition drew less directly from the writings of Marx and more from recent political economy approaches. Variations in modes of regulation of accounting practices were linked to

variation in the institutional and political structures between countries (Puxty et al., 1987). The roles of accounting in industrial relations and wage determination negotiations were addressed (Bougen, 1989; Bougen et al., 1990). The dominance of accounting controls over the labour process in the UK were explained by reference to the 'collective mobility project' of the accounting profession in the UK, and the dominant position it has achieved within the 'economic functions' of the global function of capital (Armstrong, 1985, 1987). And the differential spread in the US and the UK of practices such as standard costing, budgeting and performance reports were examined using a historical-comparative method. A number of further studies were conducted drawing broadly on the principles and concepts of political economy. The interaction between state actions and the distributional consequences of accounting policies were examined (Arnold, 1991), as were the links between cost accounting techniques and attempts to control the labour process. More recently, the importance of using concepts of class, ideology and social structure in analysing labour relations, and a factory reorganisation programme in particular, has been reaffirmed (Arnold, 1998; Froud et al., 1998).

A different agenda, one that can be labelled an *ethnography* of accounting, also emerged in the early 1980s. The concern here was with the meanings and perceptions of the actors who develop and use accounting practices in localised settings. The conditions and consequences of accounting in specific organisations provided the focus here. The 'lived experience' of individual actors was addressed through case analyses that emphasised the symbolic use of accounting for individuals (Boland & Pondy, 1983). An understanding of how accounting practices contribute to the production and reproduction of organisational life was the aim of such research (Roberts & Scapens, 1985).

An ethnography of accounting seeks to understand what was said, done and understood in a particular situation. A focus on the changing relations between volumes and costs in advanced manufacturing (Jonsen & Gronlund, 1988) allows one to understand how practices and procedures are worked out in local settings. In so far as new ways of accounting have to be understood and made sense of, an understanding of accounting change in a particular organisation can similarly be facilitated by referring to the meanings people attach to the social world (Nahapiet, 1988). The emergence of a new accounting based organisational culture can be analysed using an interpretive or ethnographic frame (Dent, 1991). The fabricating of budgets (Preston et al., 1992), and the influence of the

inspection and review processes of the British Inland Revenue on internal accounting processes (Preston, 1989), can highlight the chains of reasoning involved. An ethnography of three hospitals can help us understand how and why new accounting numbers are produced, and how the social linkages among a relatively small group of people enables this to occur (Chua, 1995). Meanwhile, the process of 'becoming' a professional accountant (Power, 1991) can be viewed as analogous to that of the 'moral career' of the mental patient (Goffman, 1961). More generally, one might say that most behaviour, even within the sphere of the market-driven economy, is deeply embedded in networks of interpersonal relations (Granovetter, 1985).

The fourth agenda is focussed on the networks within which accounting is embedded. As with all three of the previous themes identified, this grew out of developments within the wider social sciences as well as from attempts to address intellectual challenges identified by accounting researchers. In so far as previous research within accounting had sought to analyse and explain the links between accounting and the environment, a dualism had formed: On the one hand there was the environment, on the other the organisation. In place of such a dualism, a number of writers began to explore more dynamic and process-based ways of explaining the interrelations between organisations and their environments. Burchell et al. (1985) called for researchers to analyse the interpenetration between accounting and society. Instead of two mutually exclusive domains—accounting and society—attention was focussed on the specific practices and institutions in which the accounting category 'value added' appeared. In this interpretation, the environment is not external to accounting but 'passes through' it, and accounting in turn shapes and modifies the social. Burchell et al. examined three 'arenas': accounting standard setting, the management of the national economy and the industrial relations system. The 'accounting constellation' was the particular social space where these three arenas intersected and intertwined, a network or assemblage of intersecting practices, processes and institutions. The 'value added event' is a field comprising a very particular set of relations established between institutions, economic and administrative processes, bodies of knowledge, systems of norms and measurement, and classification techniques. In a related manner, although drawing on different reference points within sociology, Robson (1991) set out explicitly to apply and extend this approach to a study of accounting standard setting in the UK. Drawing upon the writings of Latour (1987, 1988), he focussed on discursive

processes of accounting change and the concept of translation in particular. Accounting change occurs, Robson argued, when a particular group or institution is able to successfully enrol other actors in their proposals by incorporating and translating the interests of others into the solutions proposed. In this process, problems are defined as shared, alliances formed, arguments mobilised, and the interests of other groups, parties and institutions enrolled towards a common interest.

These four research agendas clearly do not exhaust the sociological analysis of accounting across the past two decades or so. They serve, however, to indicate the extent to which accounting researchers have re-defined the domain of accounting research by drawing on and contributing to sociological research. In the following section, the revival of interest in economic calculation among sociologists in the past decade is considered in greater detail.

5. Agents, Networks and Assemblages of Calculative Practices

The recent rediscovery of the economy by sociologists has taken a particular form. The focus has been on the ways in which calculating agents embed economic processes in social networks. An early contribution by Polanyi (1957), which argued that the economy should be viewed as an 'instituted process', provides an important reference point for this literature. Polanyi spoke of 'the transcending importance of the institutional aspect of the economy' (Polanyi, 1957; cited in Granovetter & Swedberg, 1992, p. 34), and argued that it is the instituting of economic processes that integrates them and gives them unity and stability. Polanyi identified three forms of integration—reciprocity, redistribution and exchange—and argued that their integrating effect is conditioned by definite institutional arrangements. Integration, according to Polanyi, means something more than the aggregation of individual behaviours and interactions.

Three decades later, and in a similar vein, Granovetter (1985) argued that economic behaviour is 'embedded' in a network or system of social relations. Sociologists since Weber had, he argued, cut themselves off from a large and important part of the European tradition, as represented particularly by Max Weber. For that tradition, economic action is viewed as only one category, albeit an important one, of social action. Interlocking directorates among firms, industrial purchasing, subcontracting relationships, intra-firm audits and transfer pricing are identified by Granovetter as examples of the important role played by webs of social relations in shaping economic behaviour. Most economic behaviour, according to

Granovetter, is closely embedded in networks of personal relations. Rather than view these relations as merely causing friction within an otherwise rational market process; such relations were seen by Granovetter to be central and amenable to sociological analysis. Careful and systematic attention is required, he argued, to the actual patterns of personal relations through which economic transactions are carried out.

More recently, Callon (1998) has addressed the issue of embeddedness, with particular respect to the interrelation between the economy as a thing and economics as a discipline. Arguing that economics as a discipline shapes rather than observes the economy, Callon's arguments are broadly consistent with those of many accounting researchers across the past two decades.² If accounting practices and concepts shape ways of organising economic processes within and among organisations, it is consistent to expect a similar interrelation between the discipline of economics and the formation of actual markets. Whereas accounting researchers have tended to focus on particular calculative practices or ideas, Callon's focus is on the more general issue of the calculative capacities of agents. According to Callon, calculating is a complex calculative practice that involves tools and inscriptions. Also, calculating is viewed as intrinsically linked to the networks within which agents are entangled. Appealing explicitly to Granovetter's notion of embeddedness, Callon argues that the calculative capacities of agents are inseparable from the network of social relations in which they are situated. The agent is not immersed in a network viewed as a context or an institutional environment. Rather, agents and networks are considered to be two sides of the same coin. The ability of agents to calculate is wholly dependent on the network of relations within which the agent is immersed. This attempt to avoid the distinction between macro- and micro-, as well as the notion of context, is consistent with earlier writings in the accounting literature discussed above. Equally consistent is a focus on the intrinsic links between calculative agents and networks.

6. Conclusions

This paper has examined the recent rediscovery of the economy and economic calculation by sociologists. It has outlined briefly the curiously punctuated history of a sociological concern with management accounting across the 20th century. Initially central to sociology at the beginning of the twentieth century,

accounting disappeared from view for approximately half a century. When accounting was 'rediscovered' by social scientists in the 1950s and 1960s, the concern had shifted from a macro-level concern with rationalisation processes to a micro-level concern with groups and group processes. From 1980 onwards, and within the accounting literature, a further shift occurred. Accounting researchers sought to understand and analyse the links between accounting practices within organisations and broader institutional and social pressures. Most recently, there has emerged a concern with the ways in which economic processes are shaped by agents who embed them in social networks. But the primacy attributed to the concept of network, the notion that networks are webs of interconnected agents and the emphasis on the role of economics in shaping the economy raise a number of further issues for accounting researchers that are worth noting.

First, if a history of the construction of markets and market organisations is yet to be invented, this should commence with an analysis of the concepts and practices through which such a domain is formed. Rather than presume and begin with the role of networks in connecting agents, we should focus on the historically and geographically variable practices that make calculation possible. For it is these practices that make it possible to intervene, to act upon and alter the capacities of individuals, entities and processes, to transform them and achieve specific ends. It is through calculative practices that we can affect the type of world we live in, the way in which we understand the choices open to organisations and individuals, the way in which we manage and organise the activities of others and ourselves. Accounting researchers should attend to the complex interplay between ways of calculating and ways of managing social and organisational life. A history of the formation of markets and of the economy should commence with the heterogeneous practices and ideas that have made organisational life calculable.

Second, rather than presuming that the discipline of economics shapes the actual economy, we should examine empirically the complex of knowledges and practices that reflect on and intervene in economic life. To study the economy 'as a thing', we should not necessarily take economics as a starting point. We should consider instead the relations among the disparate disciplines and practices that have helped shape the economy in its modern form. Accounting, actuarial science, applied psychology, engineering, finance and operations research are just some of the disciplines we should be considering. Clearly, a number of these disciplines have important interrelations with economics,

²For a summary of these debates, see Miller (1994). See also: Miller & O'Leary, (1994a, 1994b, 1998, 2002); Miller & Rose, (1992).

and in some cases have borrowed extensively from economics (Miller, 1998). It is the assemblages that form among a variety of concepts and practices, the variable boundaries between them and the interventions that they make possible that we should attend to.

Third, we should pay attention to the links between calculative practices and the programmes they seek to operationalise. We should consider the ways in which calculation is endowed with a significance that extends beyond the immediate tasks to which it is put. Within individual organisations, the calculation of costs can be linked to much wider concerns, such as national competitiveness and the perceived need for benchmarking. Rationales such as decision-making, responsibility and efficiency can give meaning to apparently mundane tasks such as budgeting and variance analysis. And, on a much broader scale, the language of markets can help transform the boundaries between the private and the public sector, and call forth an avalanche of numbers produced by a variety of calculating machines. Liberalism and neo-liberalism are not just models for the conduct of economic activity, but for the whole of social life. The concept of the market provides a rationale not only for the exchange of goods and services, but an idea and an objective for transforming citizens and institutions that had previously operated according to very different logics. Whether it is a matter of the delivery of health and social care, and the boundaries between them, or the monitoring and evaluation of the police and probation services, ways of calculating are intrinsically linked to wider political concerns. Our understanding of these processes and interactions is still very limited, both empirically and theoretically. However, there is increasing acceptance of the contributions that can be made by researchers working at the interface of management accounting research and sociology. By building on these existing links, we can enrich both management accounting research and the discipline of sociology.

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