Accounting, Organizations and Society, Vol. 12, No. 3, pp. 207–234, 1987.
Printed in Great Britain

0361–3682/87 $3.00+.00
Pergamon Journals Ltd.

THE ARCHAEOLOGY OF ACCOUNTING SYSTEMS*

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Abstract

Accounting systems change over time. However relatively little is known of the preconditions for such change, the process of change or its organisational consequences. Existing perspectives on accounting change are reviewed and evaluated in this article. Thereafter three examples of accounting change are discussed. Based on these cases, a number of theoretical issues relating to the understanding of the process of accounting change are examined. Emphasis is placed on the diversity of factors implicated in accounting change, the constitutive as well as reflective roles of accounting and the ways in which accounting change can shift the preconditions for subsequent organisational changes.

Accounting is not a static phenomenon. Over time, it repeatedly has changed. New techniques have been incorporated into the accounting craft. It has been called upon to serve an ever greater variety of different and changing purposes. Different accounts have been provided of organisational activities, processes and outcomes. Different emphases have been incorporated into accounting practices. Over time, accounting has been implicated in the creation of very different patterns of organisational segmentation. New patterns of organisational autonomy and interdependency have been highlighted, if not more actively created by accounting means. Different managerial functions have come to be emphasized by the changing accounting representation of them.

When seen in such terms, accounting continually has had a tendency to become what it was not. A fluid and emergent craft, its techniques and their attendant perspectives have been implicated in a number of very different ways in organisational and social transformations. Unfortunately, however, very little is known of the processes of accounting change. As of now we have only a limited understanding of the conditions which provide the possibility for particular conceptions of the accounting craft, the forces that put accounting into motion, the processes accompanying accounting elaboration and diffusion, and the varied human, organisational and social consequences that can stem from changing accounting regimes.

Although a great deal of attention has been devoted to the history of accounting (American Accounting Association, 1970; Baladouni, 1977; Parker, 1977, 1981), most of the studies that are available have adopted a rather technical perspective delineating the residues of the accounting past rather than more actively probing into the underlying processes and forces at work. Antiquarianism has reigned supreme. Much of the significance for accounting of the wider economic and social setting of the organisation has

* The financial support of the Anglo-German Foundation for the Study of Industrial Society and the Foundation for Management Education is greatly acknowledged. The paper has benefited enormously from discussions with Stuart Burchell, Colin Clubb, John Hughes and Janine Nahapiet. The more specific comments of Shahid Ansari, Simon Archer, Mark Covaleski, Mark Dirsmith. Graeme Harrison, Pat Keating, Brendan McSweeney, Peter Miller, Ted O'Leary, Charles Perrow and Ross Stewart have greatly assisted in the revision process. Finally, I wish to acknowledge the facilitative environment provided by my Summer colleagues at Pennsylvania State University which helped the preparation of the final draft of the article.

been ignored. The roles which organisational accounts might have played in the emergence of organisations as we now know them, the external and internal boundaries which they are conceived of having, and the relationships which they have to other bodies and interests have been subjected to very little investigation. Relatively little consideration has been given to the ways in which accounting has become implicated in, and, in turn, shaped by, the emergence of processes of organisational governance and management. For until recently (Armstrong, 1985, 1987; Hoskin & Macve, 1986; Loft, 1986a; Merino & Neimark, 1982; Miller & O'Leary, 1987), most historical analyses of the accounting phenomenon, if not adopting a quite atheoretical stance, have been content to see accounting change as a process of technical elaboration and, almost invariably, improvement.

Rather than being perceived as an outcome of processes that could make accounting what it was not, accounting has more frequently been seen as becoming what it should be. A teleological trajectory of development has provided a basis for understanding changes in the accounting craft. Discursive conceptions of technical or economic rationality and purpose have been called upon to make sense of the emergence of practical developments in the accounting arena.[1] Instead of being interrogated in the name of the factors that either impinge upon accounting or are changed as a result of it, a relatively unproblematic progressive and functionalist interest has been imposed all too readily on the residues of the accounting past.

A not dissimilar perspective also has tended to pervade many of the attempts that have been made to gain a more explicit organisational understanding of the accounting phenomenon. Relatively little has been done to advance our understanding of the pressures that impinge on accounting in practice; we have few insights into how the very practice of accounting might itself create a dynamic for accounting change and reform; and little is known of the precarious and often uncertain relationships which the practice of accounting has with the potential in the name of which it is advanced.[2] Despite the fact that accounting has and still does become what it is not, despite the fact that accounting can be quite centrally implicated in wider processes of organisational functioning, and despite the fact that accounting gets mobilised in the name of ends that do not enter into its own justification (Burchell *et al.*, 1980), many organisational enquiries into accounting have tended to see and study it in ways that are disconnected from the contexts in which it operates. It is still perceived

[1] For a somewhat more detailed discussion of the relationship between accounting (and related) discourses and accounting practice see Hopwood (1984b). Also see Miller & O'Leary (1986, 1987). A fuller consideration of the practical consequences of accounting discourse also would probe into the discursive cohesion given to disparate accounting practices by textbooks and manuals, the diffusion roles served by these sources, and the significance for the development of an accounting rhetoric of the extension of accounting discourse into the arena of the organizational and, particularly, the managerial uses of accounting techniques. Accounting discourses also have played an influential role in interpreting the heterogeneous nature of practice, isolating from amongst the diversity examples of both "good" and "bad". By so appealing to conceptions of practice that are not in any sense implicit in the craft itself, the accounting discourse articulates a normalising logic that concerns itself with the achievement of what is seen to be accounting and organizational improvement. For a further discussion of these points see Hopwood (1986a).

[2] Although many enquiries have sought to identify the dysfunctional aspects of accounting functioning, these usually have been seen as phenomena to be confronted and changed in the name of an accounting potential rather than manifestations of the organizational tensions and conflicts created by the increasing encroachment of the accounting craft on other aspects of organizational life. As such, analyses of dysfunctions have tended to tell us much about the conceptions of the ideal from which practice is deemed to have deviated as they do about the functioning of accounting systems in practice. Indeed such a primary concern with the accounting potential rather than its actuality also is reflected in the increasingly sophisiticated attempts that have been made to utilize behavioural understandings to fine-tune the sociotechnical practice of accounting. Rather than seeking to confront the technical practice of accounting, and the aims that are attributed to it, with insights gained from an appreciation of its organizational emergence, functioning and consequences, many behavioural and organizational studies have tended to be used to mobilize the technical interest.

as a relatively static technical phenomenon that enables rather than more actively shapes organisational functioning as we now know it.

The need for an alternative view of accounting in action is now a very real one, however. On the other hand, there are a number of quite significant pressures on accounting to change. Questions are being raised about the relationship which accounting might have to different organisational forms and processes (den Hertog, 1978; Hedberg & Jönsson, 1978; Hopwood, 1977, 1979). Increasingly accounting is being interrogated in the name of a more strategic conception of organisational management (Goold, 1986; Simmonds, 1983). Accounts are being demanded of different organisations, not least those residing outside the domain of the "private" (Hopwood, 1984a). Different information technologies are creating the potential for continued shifts in the locus and organisational significance of the accounting craft. And, not least in significance, increasingly accounting is being examined in terms of the consequences which it actually has rather than those to which it continues to aspire (Hopwood, 1986; Kaplan, 1985). So albeit slowly, the factors implicated in accounting change, its organisational advancement and the actual consequences of the accounting craft are startingto enter the research agenda. On the other hand, the research perspectives from which accounting is examined also are starting to change. Rather than necessarily seeking to advance only the technical rationality of the craft, there are signs of both more appreciative and more critical stances emerging within the research community. Not unrelated to this, very different questions are starting to be asked of accounting. Rather than accepting its technical rationality, such research is beginning to probe into the wider organisational and social origins of accounting as we now know it. Questions are being asked of the variety of organisational pressures and rationales underlying the accounting craft. Consideration is being given to the ways in which conflicting interests are intertwined with the development of forms of economic calculation, such as accounting. And with accounting no longer seen as a disinterested endeavour, but as one that creates a very particular visibility and pattern of organisational significance, more explicit attention is being given to its consequences for both organisational and social action.

When seen in such terms, the agenda for research is a large one. The technical and static emphases of the past stand in stark contrast to the emerging interest in a wider view of accounting dynamics. Recognising, however, that such an agenda is beyond the scope of any single analysis and review, the present discussion has a number of more particular objectives. Initially some existing perspectives, both explicit and implicit, on accounting change are examined. The aim is to consider their adequacy for understanding both the forces that put accounting into motion and the ways in which the accounting craft becomes intertwined with organisational and social action. Thereafter, an appeal is made to a number of illustrative cases, both historical and contemporary, in order to illuminate at least some of the pressures and processes involved in accounting change. Rather than striving to present comprehensive analyses of accounting becoming what it was not, the objective of the case discussions is the more tentative one of trying to tease out some bases for an alternative questioning of the accounting craft. Based on these case analyses, a number of important issues relevant for an understanding of accounting change are identified and discussed. The aim of the analysis as a whole is to move towards a more questioning, a more organisationally grounded and a more dynamic understanding of the accounting craft.

SOME PERSPECTIVES ON ACCOUNTING CHANGE

Accounting and organisational improvement

As has been made clear already, the majority of conventional discussions of accounting change see it in terms of organisational reform and improvement. Accounting is changed in order to get better. Albeit slowly, the craft is seen as having progressed. Analysis, enquiry and experiential learning together are seen as having resulted in the increasing realisation of an accounting potential. In becoming what it was not, accounting has been seen to be in the process of becoming what it should be.

Such characterisations of accounting change invariably appeal to the role which accounting is seen as playing in the enhancement of organisational performance. Organisational economy, efficiency and effectiveness are seen not only as being capable of being improved by accounting means but also as having an existence independent of the accounting or other calculative representations of them. Moreover, the positive roles which accounting plays in organisational functioning also tend to be defined prior to and independently of the specific organisational practices by which they are effected. Accounting is seen as being implicated in processes of direction, planning, decision making, co-ordination, control and the management of motivation, amongst other things. In all of these areas specific practices of accounting can be, and indeed are, compared with abstract conceptualisations of what they essentially should be about.

In such ways conceptual bodies of knowledge play a powerful role in informing our understandings of the accounting craft. Accounting, even in the conventional view, is not a mere technique. Knowledge does not stand outside of accounting. Our appreciations of the technical nature of accounting are infused by a rhetoric of economic and managerial rationality and functioning. Appeals are made to a "conceptual network" (Foucault, 1972) of ideas, categories and theories that are seen to illuminate and give guidance to the pragmatic accounting task. Actual accounting practices thereby can be seen as manifestations of the realisation or frustration of these abstract imperatives. They can be seen as being more or less adequate in ways that are not solely dependent on their specific functioning in specific organisations. And because of this, attempts can be made to improve accounting in the name of what it should be rather than what it is.

As a discipline, accounting has invested a great deal in the articulation of abstract bodies of knowledge concerned with what it should be.[3] Ideas exist as to good, indeed, "best", costing practice, good planning, good modes of management reporting and good approaches to the appraisal of new investment possibilities. Attempts have been made to tease out the abstract characteristics of good co-ordination and direction, and their implications for the reform of accounting practice. Both economic and cognitive conceptions of decision making and its rationality have been related to the accounting concrete. Regimes of thought thereby have been developed which have an existence and dynamic of change which are not dependent on the practice of the accounting craft. By drawing on bodies of knowledge from such more autonomous discourses as economics, political theory, public administration and psychology or emergent notions of strategic management, as well as by abstracting from the practice and functioning of the craft itself, accounting can be evaluated in terms of what it is not. Specific practices can be appraised on the basis of their conformity to more general notions of management and the manageable. An abstract external body of knowledge can be imposed on them in order both to assess their adequacy and to reform them so that they can become what they really should be. Accounting is seen as being able to be mobilised and changed in the name of an abstract image of its real potential.[4]

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[3] Such understandings are not only future orientated. Very particular appreciations of the past also have informed our view of what accounting is and might become. As has been discussed already, quite specific trajectories of emergence have been imposed on accounting developments, at times creating a basis for a powerful continuity between what accounting was and what it should become. For more general discussions of the mobilization of understandings of the past see Hobsbawm & Ranger (1983), Lowenthal (1985) and Wright (1985).

[4] In the area of financial accounting, the debates over inflation accounting would provide an interesting arena in which to study such processes at work.

Undoubtedly much accounting change has resulted from such conceptions of an accounting potential. However, as a basis for understanding either the process or the consequences of such change, conventional views are severely limited. For rather than providing a history of the emergence of accounting as it now is, they provide the basis for the compilation of a history of inadequacy, ignorance and obsolescence when accounting was not what it should be, peppered with only occasional moments of enlightenment when accounting moved nearer to realising its potential. Presuming that the functions of accounting exist independently of its practice, that its practice is orientated towards particular goals that themselves are autonomous of the accountings that are made of them and that the problem of practice is to reform organisational procedures so that their intrinsic goals are achieved, accounting change is described and evaluated by reference to a body of knowledge that is assumed to be external to accounting itself. So, whilst the realisation of the accounting potential may be problematic, the potential itself is only rarely, if ever, seen in either problematic or emergent terms. It is endowed with a privileged epistemological status such that although accounting is seen as being laboriously constructed, its essence is not. Rather than enquiring into their own patterns of emergence, the means by which they have gained a current significance and the circumstances under which they come to be intertwined with the specifics of technical change, accounting has taken for granted the discourses that are credited with mobilising change.

Such a view of accounting development also ignores the duality of the interactions between accounting and ideas of its potential. In both historical and organisational terms the apparatus of organising has played a profound role in influencing our conceptions of the organisation. Ideas about organisational goals, functions and functioning have emerged amidst the development of specific means of organisational action and calculation. Equally, organisational participants have not been defined externally to the practices in which they are engaged. The concepts of management and the manager were actively constructed in a particular way at a particular socio-historical juncture and are inseparable from the practical means of administration and calculation which were, and still are, implicated in their emergence and functioning. There was no *a priori* manager to whom one can appeal as having interests and needs which can mobilise the development of management practices. Equally, there was no primeval concept of accounting which shaped the development of accounting as we now know it. Accounting has emerged in a more positive way than the mere realisation of an essence. Indeed, in part, the present imperatives of accounting which can and do guide its development have emerged from the practice of the craft. And, in similar terms, accounting practice needs to be seen as playing a more active role in creating rather than merely enabling organised endeavour. Accounting change is as much a history of organisational construction as organisation realisation and enablement.[5]

That is not to deny that external discourses of an accounting potential can and do mobilise accounting change. They provide an incentive for action and an understanding of specific organisational targets for intervention can be constructed on their bases (Nahapiet, 1984). They can also provide criteria for both gauging the presumed need for change and reading its effects. But such appreciations of the roles served by discourses which can direct and facilitate change still do not help us to understand the mechanisms of change, the forces mobilising the deployment of different accountings and different accounting rhetorics, the precise practices involved, the resistances which they engender and the actual organisational consequences which they gave rise to. For it would be inap-

[5] Such a point is emphasized by Litterer (1963) in his discussion of the emergence of systematic management in American manufacturing firms. He states that "in fact, it is systems such as those we have been discussing and many others like them which constitute the great bulk of managerial activities" (p. 388, also see p. 391).

propriate to assume that there is any invariant relationship between a rhetoric and discourse of accounting and a programme of intervention in the organisation conducted in the name of it. The variety of forms that such a relationship can take should be a problem for investigation rather than presumption.

Accounting and the construction of an organisational order

Increasingly accounting practice has itself become the focus of research interest. Realising the ambiguous relationship between the abstract discourse of an accounting potential and the specifics of accounting as it functions in organisations, research has come to be more concerned with analysing and understanding accounting in action (Hopwood, 1978, 1983; Kaplan, 1983; Scapens, 1983, 1984). In the vast majority of such investigations, however, the phenomenon of accounting change has not been emphasized explicitly. Primary consideration has been given to the present diversity of the accounting craft and the use made of the resultant accountings at any particular point in time.

Although studies have started to investigate the organisational tensions engendered by the use of accounting systems, comparatively little consideration has been given to how these might provide bases for a re-appraisal and change of the accounting craft. Some histories of accounting resistance and dysfunctions have been written, but, with relatively few exceptions (Argyris, 1977; Berry *et al.*, 1985), little or no consideration has been given to the counter histories of accounting elaboration and change as attempts are made to ensure the continued integrity, legitimacy, effectiveness and power of the craft. So, although accounting is starting to be examined in its organisational context, the underlying perspective remains a relatively static one. The analyses that have been made of accounting diversity are not dissimilar. Although the differences in the contemporaneous practice of the craft have provided an incentive for the analysis of some of the factors that impinge on the forms that accounting takes, the resultant contingent analyses have many of the characteristics of an exercise in comparative studies (Otley, 1980). Accounting is seen as it was and as it is rather than in the process of becoming. Moreover the organisational calculus implicit in accounting adaptation is still one that is posited on the functional roles that accounting plays in the enhancement of a neutral and highly generalised concept of organisational performance. Little role is acknowledged for management discretion and choice (Child, 1972; Thompson, forthcoming), let alone the active exercise of politics and power (Cooper, 1981; Pettigrew, 1972). Accounting change also is seen as a reflective rather than a constructive organisational endeavour. With accounting conceived of as enabling rather than more actively shaping organisational affairs, other organisational factors are seen as impinging on it, but accounting seemingly is seen as having no similarly active role to play. Different accountings are seen as reflecting different circumstances rather than themselves being implicated in a more positive process by which accounting becomes what it was not. The analysis of accounting diversity thereby has resulted only in a presumption of change rather than more specific analyses of the processes involved which make no prior assumptions as to either the underlying logics at work or the organisational roles and consequences of the accounting craft.

Still, such organisational appreciations have been useful. Despite the many problems to which they are subject (Dent, 1986; Otley, 1980), accounting at least is being shown as a craft that is embedded in the functioning of the organisation, co-existing and interdependent with such other aspects of the organisation as its strategy, structure, approaches to the segmentation of work and other organisational technologies and practices. Not existing as an isolated craft, accounting is shown as being an organisational practice that is constructed and used amidst the configuration of a specific culture, be it organisational or national (Horovitz, 1980), a specific organisational environment and a specific set of approaches to the management of the organisational task. Accounting has at least been grounded in the organisational contexts in which it operates. And by being seen as a phenomenon that is so interdependent with its context and subject thereby to the vicissitudes of other organisational practices and concerns, the possibility is at least opened up that accounting is not necessarily adequate to the ends in the name of which it is advanced (Argyris, 1977; Kaplan, 1983). So although the perspectives remain preliminary and partial, abstract conceptions of the potential of the craft are nevertheless being faced by a growing understanding of its practices.

Accounting and the construction of a social order

Preliminary though they are, organisational insights into accounting all still see accounting as a practice that has a rationale that can be understood purely in terms of the needs and requirements of the specific organisations in which it functions. Accounting is seen as having its origins within the problems created by the need to co-ordinate and manage a complex process of transformation within the context of a particular regime of organisational constraints and objectives. More recent inquiries are starting to question such an organisationally isolated view however. Increasingly accounting is coming to be seen as having some of its origins in the social conflicts which are enacted in the organisational arena (Cooper, 1980, 1981; Hopper *et al.*, 1986; Tinker, 1980; Tinker *et al.*, 1982). Rather than seeing organisational accounts as a technical reflection of the pregiven economic imperatives facing organisational administration, they are now being seen to be more actively constructed in order to create a particular economic visibility within the organisation and a powerful means for positively enabling the governance and control of the organisation along economic lines (Clawson, 1980). Accounting, when seen in such terms, is not a passive instrument of technical administration, a neutral means for merely revealing the pregiven aspects of organisational functioning. Instead its origins are seen to reside in the exercising of social power both within and without the organisation. It is seen as being implicated in the forging, indeed the active creation, of a particular regime of economic calculation within the organisation in order to make real and powerful quite particular conceptions of economic and social ends.

From such a perspective, organisational options, decisions and actions are seen as being positively shaped by the ways in which they intersect with accounting practices. Accounting is seen as having played a very positive role in the creation of a manageable organisational domain. A regime of economic visibility and calculation has positively enabled the creation and operation of an organisation which facilitates the exercising of particular social conceptions of power. Economic motives have been made real and influential by their incorporation into legitimate and accepted economic facts. The labour process in the organisation has been exposed, ordered and physically and socially distributed. The resultant organisational facts, calculations, schedules and plans have positively enabled the construction of a management regime abstracted and distanced from the operation of the work process itself.

So, although functioning within the organisation, accounting is best seen from such a perspective as an artifact residing in the domain of the social rather than the narrowly organisational. It has been implicated in the radical transformation of the organisation in the name of the social. Indeed, accounting is considered as one of the important means by which the organisation is incorporated into the social domain.

Accounting change is clearly a specific focus of attention from such a viewpoint. Not only has the development of accounting practice been addressed quite explicitly but also a particular trajectory of development sometimes has been imposed upon it. Indeed, in some senses, accounting, when seen from such a perspective, still has an essence, a mission which mobilises its development. Accounting, from such a stance, is still a revelatory endeavour, making real, by the active construction of the organisation as we know it, interests which are independent of both the accounting and the organisational representation of them. And, like the more conventional presumptions of accounting in motion, it can still be seen as an endeavour that is adequate to the ends in the name of which it is advanced. Accounting is seen to be both purposive and purposeful.

Towards a view of accounting in motion

Albeit slowly, our understanding of accounting change nevertheless is advancing. Attempts are being made to confront the conventional view of accounting improvement with insights from analyses of the organisational and social functioning of the craft. Accounting is in the process of being seen as an organisational practice in motion, the changes and consequences of which are dependent on its intertwining with other approaches to the creation of a manageable organisational regime. A very real start has been made on locating the construction and functioning of accounting in the domains of the organisational and the social rather than purely the technical.

As has been discussed above, existing approaches are still preliminary however. Relatively few attempts have been made to confront the specifics of accounting in action. Reference still tends to be made to the mobilising potential of general tendencies for organisational, environmental or social change (Burchell *et al.*, 1985). Little has been done to uncover and describe the precise mechanisms of accounting change. The domains of the organisational and the social also have tended to remain independent ones. Few attempts have been made to delineate the both overlapping and interdependent spheres of the two, to appreciate how accounting might enable the concerns of the social to pass through and thereby transform the organisation and, in turn, to create organisational practices which can be influential in the construction of the world of the social as we know it. Be it from an organisational or social perspective, the roles of accounting are still defined externally to the practice of the craft. Organisational agents are still seen as existing in isolation of the practices in which they are engaged. Possibly because of the distancing of inquiry from practice, only the reflective rather than the constitutive tendencies of accounting (Burchell *et al.*, 1985; Hopwood, 1985b) have been emphasised in the accounts that we now have of accounting change.

In the context of such an agenda for development, the subsequent discussion has only a modest aim. Using some instances of accounting change, an attempt is made to tease out some of the processes at work at the organisational level. By drawing on some specific illustrations of accounting in action, the aim is to illuminate some of the factors that are implicated in the processes by which organisational accountings become what they are not. No attempt is made to construct an alternative theory of accounting change however. The aim is the much more modest one of delineating a few of the issues and problems that any such theory or theories would need to address. The intention is merely one of expanding the conceptual arena rather than of seeking its resolution.

ON PUTTING ACCOUNTING WHERE ACCOUNTING WAS NOT

It rarely is possible to witness the birth pains of a newly emergent accounting. Normally we have to content ourselves with observing the process of accounting elaboration, as one organisational account is extended and refined as it becomes transformed into another. However, in the case of Josiah Wedgwood, the eighteenth century English potter, is is possible to do this indirectly by means of the extensive correspondence and records that have been preserved (McKendrick, 1960, 1961a, b, 1964, 1973).[6]

Wedgwood was a successful entrepreneur in the early days of the British industrial revolution.

[6] I do not wish to imply in any way whatsoever that the "protean manifestations" of cost accounting "sprang full-grown" from Wedgwood's initiatives (Jenks, 1960, p. 423), nor that there were no precedents. That clearly was not the case. Although earlier costing systems have been poorly documented and analysed (see, however, Jones, 1985), a costing craft was emergent. In addition, and of particular significance, I think, a relevant more general economic discourse was available to serve as an

A man of scientific and analytical temperament, as well as acute commercial acumen, he created one of the first British industrial (as distinct from craft) manufacturies of pottery, pioneering not only in production methods (McKendrick, 1961a) but also in product design, the application of scientific research (Schofield, 1956) and the commercial exploitation of his products (McKendrick, 1960, 1961b). Wedgwood quickly established himself as the supplier of pottery to the wealthy. His business quickly became a very profitable and rapidly expanding one.

Initially Wedgwood made little use of accounting, particularly for what would now be seen as management purposes. Accounting information did not inform his product and pricing decisions or the selection of his methods of work. As McKendrick (1973, p. 48) has observed:

> So handsome were the profit margins which he could normally expect, and so high the prices which he could regularly charge, that the incentives towards anything more than routine costing were usually rather slight.

Indeed Wedgwood himself admitted that "he could do little more than guess at costs" and "further conceded that his attempts at total costing were out by a factor of two" (McKendrick, 1973, p. 49).

That situation was to change however. In 1772 the expansion came to an abrupt end. The pottery industry was caught in a major economic recession. "Panic spread through most of the cities of northern Europe", according to Ashton (1959, p. 128). Prices, profits, wages and employment all fell sharply, and bankruptcies soared in the pottery industry as elsewhere. Wedgwood, like others, was well aware of the impending difficulty:

> The evidence of accumulating stock and falling sales mounted miserably through the autumn, as the slackening demand, so evident in London, spread farther afield. In November he reported very poor sales in Edinburgh. "Mr. Ferrier... has sold nothing at all since the month of June"... And as sales slackened, production at Eturia had to be cut back to a dangerous level. Reluctant as Wedgwood was to recognise the drop in demand, he finally *had* to recognise it. He stopped overtime only when "we have not work for them the common hours". At this stage Wedgwood refused to believe that the situation was "in such a desperate way and that we should set our best hands adrift to the establishment of our antagonists"... Wedgwood was determined to hang on to the men he had taken such pains to train but already many of his men were out of work — "our Gilders have not a piece to do and are all at play". With the coming of Winter things grew steadily worse. On 19 September Wedgwood wrote that "any opening" should "be pursued with all our might". On Boxing Day any trivial aspect of fashion was being frantically exploited... Two days later he announced with relief that he was laying off the men for Christmas, but three weeks later the situation was even worse. "We begin, after 3 weeks rest, to work again on Monday. If you can make us any orders pray send them, for I really do not know what to set them to work upon, however they must begin for they attacked me in a body yesterday morning and insisted on being either employ'd or discharg'd" (McKendrick, 1973, p. 63).

In times of such crisis business methods often are re-examined. With such an aim in mind, Wedgwood started to turn his attention to the level of his production expenses. And it was in this context that his cost accounts were born.

Wedgwood had the idea that he might better survive the recession if he could lower his prices in order to stimulate demand. Such a view was conditioned, however, by the need to ensure that the price still exceeded the cost. And there the problem arose. For although a concept of cost entered into the discourse of commerce and trade, and could thereby mobilise action, there was no well established apparatus for operationalising the discursive category. Cost remained an idea, not a fact.

It was the facts of costing that Wedgwood set

incentive for the production of a new visibility (Tribe, 1978). Costs could be talked about, if not observed. So despite the fact that, to use Jenks' (1960) characterization of the process of change in a somewhat later era, "problems of organization... were solved *ad hoc* empirically for each establishment", resulting in the development of "little clusters of socially sustained norms and concepts, whose communication beyond the individual firm was rare, accidental, or the result of individual transfer of employment" (p. 424), we nevertheless should recognize the important discursive and practical conditions of possibility underlying such innovative steps.

out to discover. As he noted to Bentley, his business partner:

> It will deserve our serious discussion whether we shd not lower the prices of Pebble and Gilt Vases very considerably, for this purpose I am forming a price book of Workmanship &c which is to include every expence of Vase making as near as possible from the Crude materials, to your Counter in London, upon each sort of Vases, of this we will send you a specimen & you will then be able to judge better what we can do in this respect, what will be most prudent is the next question for our Consideration (McKendrick, 1973, p. 49).

The task was not an easy one. No established procedures were available for observing the inner workings of the organisation through the accounting eye. The organisation could not be readily penetrated. The facts of costing had to be laboriously created rather than merely revealed.

> I have been puzzling my brains all the last week (Wedgwood wrote to Bentley on 23 August 1772) to find out proper data, and methods of calculating the expence of manufacturing, Sale, loss &c to be laid upon each article of our Manufacture & a very tedious business it has been, but what is worse I find what I have done is wrong — somewhere, very essentially so, but do not know where or how to amend it though I shall not give up being sensible of the importance of the enquiry, and what I now send you is only to shew you what steps I have taken & the grounds I have gone upon, & to desire you will sit down some morning & consider the subject & try to put me in a better way, for it will be of the greatest use for us to establish some such scale as I have now been attempting to examine all our new articles by, that we may not fix the prices so high as to prevent sale, nor so low as to leave no profit upon them (McKendrick, 1973, p. 49).

Such endeavours resulted in the construction of an increasingly detailed account. Still, however, Wedgwood was not satisfied with his efforts.

> Some of my difficultys I have laid before you, but what perplexeth me most is, that although I am very positive what I have allowed for the expences of making & selling our goods is quite enough yet it appears from comparing this expence of Manufacture for a year, with the amot of goods made, to be little more than half the real expence attending the making & selling so many goods (McKendrick, 1973, p. 53).

Shortly thereafter, however, he was to obtain some insight into some of the reasons for his uneasiness. Comparing his financial accounts with his emergent costings, he found that the two did not agree.

> This Acc[t] is very exact as to the *whole* but we cannot make it agree with its parts viz the separate pieces — It agrees with the small Vases very well but those we sell at 2 or 3 G-s do not appear to cost us 1/10 of that money. We are now taking a stock & shall then try another method (McKendrick, 1973, p. 61).

Being of a curious disposition, Wedgwood soon discovered why the various parts of his accounting experiments did not mesh together. His inquiries revealed "a history of embezzlement, blackmail, chicanery, and what Wedgwood called 'extravagance and dissipation'" (McKendrick, 1973, p. 61). His head clerk, Ben, whom he had "long been uneasy on this account being fully perswaded (*sic*) that matters were not right with . . . His Case acc[ts] being always several months behind, & yet to jump exactly right when he did Ballance them" (McKendrick, 1973, p. 61), had had his hand in the till. On further investigation, Wedgwood found that "the plan of our House in Newport St.", where the clerks resided, "is rather unfavourable to Virtue & good order in young men", "that the housekeeper was frolicking with the cashier", "that the head clerk was ill with 'the foul Disease' and had 'long been in a course of extravagance and dissipation far beyond anything he has from us (in a lawfull way) wd. be able to support'" (McKendrick, 1973, p.61).

Only after such revelations as to the sources of accounting inconsistency did Wedgwood feel confident in his newly fledged facts. As he went on to report:

> Our House may be looked upon as unfixed, & afloat, the first Clerk and Cashier being remov'd, it seems the properest time to introduce any new regulations we may think proper, or to change the whole plan if we can adopt a better . . . now we know that all goods *sold for money* & not *brought to account* must appear as *increase of* stock in *stateing the* acc[ts] & we have such strong reasons for suspecting our Head Clerks fidelity such an amazing increase of stock is an alarming circumstance & I shall not be easy 'till the stock is taken to clear my doubts in this respect (McKendrick, 1973, p. 61, emphasis in original).

Immediate steps were taken to correct the matter. A new clerk was installed and, in order "to put the necessary business of collecting into a way of *perpetual motion*" (McKendrick, 1973, p. 62, emphasis in original), a routine of weekly accounts implemented.

The birth of Wedgwood's accounts had been difficult and laborious. There had been no easy relationship between the idea of costing and a specific programme of intervention in the organisation conducted in the name of that idea. Costs had had to be constructed rather than merely revealed. An organisational economy grounded in a domain of accounting facts had to be forged painstakingly rather than merely exposed.

Once constructed, however, Wedgwood had a powerful instrument for observing the organisation in economic terms. His strategic conception of the role which records could play in the management of crisis had resulted in a means by which he could penetrate the inner workings of the organisation. A new visibility had been created. The organisation had been colonised by economic facts (Patton, 1979). A calculative means had been found for conceiving the functioning of the organisation in different terms. An accounting eye had provided Wedgwood with a new means for intervening in the organisation.

And intervene he did. As we have seen, the administration and control of the financial records was reformed. More substantially, during the depression, prices were actively changed in the name of the new knowledge of costs and profits[7] (McKendrick, 1964, 1973). A basis for a more systematic consideration of marketing policies was created (McKendrick, 1960, 1961, 1973). The newly emergent facts of the economic provided a basis for re-appraising the organisation of the manufacturing processes, the advantages of large volume production, and the calculation of piece rates, wages and bonus's (McKendrick, 1960, 1961a, 1973). The inner workings of the organisation had been made amenable to a new form of economic analysis.

Wedgwood's discovery of the advantages of large scale production illustrates this well. Faced with his newly emergent costing facts, Wedgwood noted that:

> If you turn to the columns of calculation & see how large a share, Modeling and Moulds, & the three next columns bear in the expense of Manufacturing out goods, & consider that these expenses move like clockwork, & are much the same whether the quantity of goods be large or small, you will see the vast consequence in most manufacturers of *making the greatest quantity possible at a given time* (Wedgwood's italics). Rent goes on whether we do much or little in the time. Wages to the Boys and Odd Men, Warehouse Men & Book-keeper who are a kind of Satalites to the Makers (Throwers, Turners &c.) is nearly the same whether we make 20 doz of Vases or 10 doz per week & will therefore be a double expence upon the later number. The same may be said in regard to most of the incidental expences . . . .
>
> We now have upwards of 100 Good forms of Vases, for all of which we have the moulds, handles & ornaments & we cd. make them almost as currently as useful ware, & at half the expence we have hitherto done, provided I durst set the Men to make abo[t] 6 to 13 doz of a sort; perhaps (as the first expence of all these apparatus's is over, & our Men in full practice, and many have some fears of losing a good branch of business) at much less than half.
>
> The first expence will be all sunk if we do not proceed in the business this apparatus is adapted for.
>
> The Great People have had these Vases in their Palaces long enough for them to be seen & admired by the Middling Classes of People, which Class we know are vastly, I had almost said, infinitely superior in number to the Great, & though a great *price* was, I believe, at first necessary to make the Vases esteemed *Ornament for Palaces*, that reason no longer exists. Their character is established, & the Middling People wd. probably by [sic] quantitys of them at a reduced price (McKendrick, 1973, p. 55).

[7] Outside periods of depression, Wedgwood was well aware that in an imperfect market, with explicit strategies for product differentiation, there was no necessary relationship between cost and price. As McKendrick (1964, p. 29) points out: "The phrase 'The prices Mr Bentley will regulate as he thinks proper' occurs so frequently in letters on pricing that one soon recognizes it as a familiar refrain". As Wedgwood himself put it, "When I fix a price upon any new article, please to remember that I have more regard to the *Expence of workmanship* than the *apparent and comparative value* with other things so you'll correct it by the latter which is often most essential" (emphasis in original). In McKendrick's (1964, p. 29) words, Wedgwood judged "the cost of production, the difficulty of making, and the number he could easily make, and then Bentley would decide at which market to aim them, at what price to charge them and in what quantities to make them".

As McKendrick (1973, p. 54) notes, Wedgwood's costing "had other more permanent repercussions on his business management". In often unanticipated ways, the organisation was changed in the name of the knowledge of it. For "by his own persistence, by an unfailing attention to detail, by founding, if not creating, the traditions of a foreman class and equipping it with rules and regulations, he transformed a collection of what in 1765 he called, 'dilatory, drunken, idle, worthless workmen' into what ten years later he allowed to be 'a very good sett of hands'" (McKendrick, 1961a, p. 46). What is more, Wedgwood's observations could now be conducted indirectly. No longer did he have to rely solely on walking around the pottery constantly on the lookout for "unhandiness", scolding those individuals who did not follow his instructions (McKendrick, 1961a, pp. 43–44). Such personal observation and supervision could start to be complemented by the exercising of control at a distance, both in time and space.[8] Wedgwood now had available to him the basis of a more anonymous and continuous means of surveillance.

Although born amidst crisis and doubt, the consequences of Wedgwood's accounting system started to be quite profound. Initiated to reveal what had been presumed to be there already, once established, it provided a basis for significantly changing, if not eventually transforming, the functioning of the enterprise. The newly established accounting system enabled a different set of dynamics to be set into motion. The fine details of the production process could now be related to the aims and performance of the organisation as a whole.[9] Policies created at the top of the organisation could be related to specific aspects of organisational functioning. The organisation could be observed and managed in terms different from those in which it functioned. Attempts could be made to co-ordinate and plan divergent parts of the organisation in the name of the economic. An organisational economy could start to be emergent. As Patton (1979) has said in a very different context:

> The emergence of [a practice] cannot be explained by the functions it subsequently comes to fulfil; new roles may be forced upon it, foreign to those it was introduced to bear.

ACCOUNTING, ORGANISING AND THE ORGANISATION[10]

Turning to an organisation which already has a long history of accounting, the aim is to consider in a little more detail some of the processes through which organisational accounts change as they become intertwined with the organisation itself. By examining another case of accounting change, an illustration is provided of

[8] In his detailed study of the history of Boulton and Watts' Soho engineering factory, opened in 1796, Roll (1930, p. 250) also notes how the introduction of time sheets for workmen started to serve a number of different roles. In addition to providing a basis for ascertaining the workers' wages and entering into the determination of prices by calculating the labour costs of the engines being made, Roll commented on the ways in which the new detailed visibility of wage costs influenced the organization of work and the relationships between effort and remuneration. The data provided a starting point for making changes in the methods of production, suggesting possibilities for speeding up work and introducing further machinery. The new records also served to establish a standard or a norm for efficiency in the enterprise, enabling wages to become more related to detailed task performance. Here, as with Wedgwood, the newly established visibility of the economic itself created a dynamic for changing the organization of which it was presumed to be a reflection.

[9] Loft (1986b, pp. 93–94) usefully notes the interdependence between production methods and record keeping, with each facilitating the construction of the other. As she comments: "Sophisticated cost accounting systems go hand in hand with the standardization of products and production methods. The 'facts' which cost accounting systems demand can only be created with enormous difficulty where work is carried on in a disordered, anarchic way. The opposite also applies, for the operation of a complex and detailed system of organization may be virtually impossible without records. Roll (1930, p. 252) points this out, noting that many aspects of the re-organized Soho Works (of Boulton and Watt) were such as to make any check except that through written records impossible".

[10] I acknowledge the help of John Hughes (now of the Open University) in assisting with the research on which this case study is based. The analysis also has benefited from discussions with Sten Jönsson.

some of the ways in which the processes, practices and perspectives that characterise organisational life impinge on accounting. Continuing the theme introduced in the analysis of Wedgwood, consideration also is given to the ways in which accounting, in turn, impinges on the process of organising.

M was established in the early days of the present century. In the business of industrial component manufacturing, it quickly established itself as an international enterprise with manufacturing and marketing establishments in a wide variety of countries throughout the Western world. *M* grew rapidly, not least during the 1950s. Those were years of prosperity and expansion with good profits and a high return on assets employed. But this situation changed after 1960. Although product demand eased slightly, change was most evident on the supply side of the industry. In particular, the entry of Japanese manufacturers into the world market ushered in a decade of fierce competition. During the 1960s the total value of Japanese output rose by over 350% but their exports increased by almost 1,700%. Suddenly *M* was exposed to intense competition and this was greatest at the volume end of the market where, on certain individual products, the Japanese selling price was below M's calculated unit cost.

A growing awareness of the dangers of Japanese competition and a dissatisfaction with the measured performance of the company caused a major re-appraisal of the company's competitive position to be undertaken. During the early 1970s a number of working parties were established to undertake a thorough investigation of the problems facing the company.

The first problem to be identified was, perhaps paradoxically, that of giving too good a service to customers. *M* had prided itself on providing for any application "the right (component), at the right price — regardless of cost". Special design departments, part of the marketing function, liaised with customers to produce components for each and every application with little company-wide engineering and design collaboration because of the semi-autonomous nature of the organisation's constituent plants. The result was a proliferation of marginally different components produced in different plants in a number of different countries. Moreover, the decentralised strategy of organising also resulted in the same or similar products being produced in each country where there was a market for them, with a consequent duplication of tooling, set-up and other manufacturing costs for each operation and a high value of work-in-progress because of the large decentralised stocks. The problems were further exacerbated by the sheer proliferation of manufacturing plants, there often being many in the same country. During the highly profitable 1950s these problems had been of relatively little concern. Faced with a very different competitive situation, however, *M* decided to reduce considerably the number of product variants.

The perception of an external market threat thereby resulted in a detailed examination of internal manufacturing operations. At that time the batch production methods used by *M* gave a large measure of independence to the separate functions of the manufacturing process. This resulted in a great deal of operational flexibility. Rush orders could be injected easily into the system and the ramifications of machine breakdowns minimised. Such an approach was not suited to more concentrated and, consequently, higher volume production, however. The lack of inter-operation handling equipment resulted in long throughput times and high inventories. Moreover batch production of this type put a heavy burden on local production control systems, stores personnel, operators, inspectors and factory supervisors. So very active consideration was given to alternative production methods.

M decided to move, as far as possible, to production organised by means of multi-machine lines. Under this arrangement a number of similar machines are connected individually with an extensive inter-operational conveyor system. The latter provided not only transportation but also a buffer storage, enabling machine groups to work at different paces and the effects of a breakdown to be relatively contained. The capital costs of this type of plant were high, but production speeds were increased, throughput time was reduced and, as a consequence, inventory requirements were reduced also. However those advantages were gained not only at the expense of higher capital investment but also at the loss of considerable operational flexibility. The production systems would have to become more autonomous of the market, the very turbulence of which had been the initial stimulus for change.

Originally each of *M*'s plants had produced a full range of products to meet the demands of the local market. However, if production costs were to be reduced, as the international market was perceived to necessitate, it was decided that multi-product lines would have to be introduced. In turn, this meant that production runs needed to be longer if the economies of scale were to materialise. One way of doing this was to reduce the number of variants produced, but in the fiercely competitive market of the late 1960s and early 1970s this in itself was not sufficient. It was decided therefore that the manufacturing of each type of product should be concentrated in one location to maximise production volume and reduce costs.

A new production strategy gradually emerged from these examinations and discussions, and it was formally agreed in 1971. The method of implementing and achieving these aims was laborious however. The initial allocation of production represented a significant balancing problem and discussions went on for a number of years. "Weeding out" non-essential variants was also a large task as each final product variety was tested for commercial, financial and technical viability. In 1973 all variants were classified on the basis of sales value, thus identifying those which had such low sales that they were probably unprofitable. Each candidate for elimination was then examined individually. In parallel with the commercial examination, once again a technical assessment was carried out. The design, quality and materials of each were examined critically. Manufacturing and marketing considerations also entered into this assessment. Together these processes enabled *M* to reduce its product range from 50,000 final variants in 1972 to 20,000 in 1978. Over the same period the average annual volume per final variant rose by 300%. An additional category of product, namely "special" products, was also introduced, enabling products to be produced to customer specifications, but at extra cost. Overall, *M*'s managements considered that the product range concentration had reduced market coverage by only 1% but that this had eliminated what had been the unprofitable sectors of the operation.

Production methods, product policies and production locations were thereby all radically changed in the name of cost. All of these strategic considerations had been infused not only by the language of cost, however, but also by the specific accounting calculations in use at *M*. The reduction of a *measured* notion of cost had been a primary aim. In the deliberations and policy intitiatives cost had operated not only as an influential abstract category entering into the language of strategy but also as a seemingly precise outcome of a specific set of accounting procedures.

In such ways the technical practices of accounting became intertwined with the managerial functioning of *M*. Organisational policies came to be interdependent with the accounting representation of them. For a complex set of accounting rules defined what was and was not to be regarded as costly. Definitions of "productive" and "unproductive" cost categories influenced the changes made to specific production locations and eventually, the production of specific products. Rules by which overhead costs were to be allocated to production operations, and by what means, had a significant impact on reported cost levels. Debates over the capacity assumptions on which overhead costs were to be allocated were similarly influential in the highly detailed cost assessments, as were the technical procedures for determining how frequently standard costs were to be updated to take account of inflation and exchange rate fluctuations. Also of great importance were the procedures for accounting for operational change in *M*. For although the problems of the company had orginated from the perception of a changing environment, *M*'s accounting system operated under assumptions of steady state production. The calculation and reporting of set-up and order costs and operation start costs were such that although the financial ramifications of stable production were made clearly visible, the equally significant implications of production changes were much less visible and the costs of operational flexibility and inflexibility did not enter into the accounting calculations at all. In all of these ways not only did the rhetoric of accounting come to play a significant mediating role in the policy deliberations but also the very particular physical, spatial and temporal assumptions and biases incorporated into *M*'s formal accounting systems came to influence the relative preferences assigned to the various production strategies. The accounting system started to be not only reflective of *M* but also constitutive of its options and policies (Burchell *et al.*, 1985).

However the network of changes at work in *M* was such that accounting itself came to be subject to pressures to change. Not only had it played a significant role in mediating the relationship between managerial perceptions of a strategic need for change and the operational responses decided upon but also *M*'s formal information systems, including those of an accounting nature, were also to be significantly changed by the different production policies that had followed the recognition of a market crisis. Under the old system of multiple local production the relationship between marketing and manufacturing had been dealt with at a local (national) level. Many of the relevant liaisons and linkages had been done informally. Although there were formal systematic flows of information, these were primarily local in nature. That was no longer adequate however. With geographically concentrated production, the marketing and manufacturing functions had been uncoupled. A new way had to be found to aggregate total forecast and actual demand for every product variant in order to plan the utilisation of capacity in each plant. What had previously been informal had now to become formal. The new production strategy had given rise to the need for a new mode of organising and radically different formal flows of information.

To deal with these problems, two new organisational structures were established. A central co-ordinating committee was set up to judge market demand and decide upon appropriate production levels in line with available capacity, inventories and strategic and operating policies. The interface between marketing and manufacturing thereby became subject to much more centralised control and new functional staff groups were set up in the head office to support this new influence structure. Also, with these rather crucial decisions requiring accurate and up-to-date information, a new management information system was established with its operating team based in a central geographical location. Utilising the forecast parameters established by the co-ordinating group, the new central information office decided upon capacity booking, factory loading, assembly scheduling and distribution instructions. To facilitate this process, feedback of actual levels of manufacturing, sales and stocks was required to be made monthly by all local establishments via *M*'s new computer-based data transmission systems. The increasingly centralised interdependent decision making and control processes were investing in a great deal of formal information (Galbraith, 1973). *M* was in the process of becoming a more information intensive and information dependent organisation.

As a result of these changes, consideration also had to be given to the formal organisational structure of *M*. Previously the company had been structured around the national manufacturing and marketing units. As relatively self-contained entitities, they had constituted useful business responsibility units. Performance was measured on an annual basis in traditional balance sheet and income statement terms. Longer term planning of the enterprise as a whole had been attempted but had proved a difficult and unsatisfactory endeavour. Now, however, *M* was a more integrated and centralised organisation. The relationships between local marketing and manufacturing had been severed. Local sales were no longer dependent on local production. Performance in total was more dependent on central decision making. With this in mind, the whole organisation started to be structured along product lines.

In the midst of such organisational changes it was recognised that the previous rudimentary controls were no longer adequate. Consideration had to be given to a more frequent, more disaggregated reporting system. Budgeting became a more iterative and time consuming process. Even when arrived at, the budget was updated by a regular series of quarterly plans. The centre now needed to be much more closely informed of local developments and revisions in local expectations. Local performance, in turn, was assessed monthly with the previous summary financial information now being replaced by an extremely detailed reporting of financial, marketing, operating and even personnel results. And, in such a newly centralised enterprise, even local performance was now conditioned by centrally mediated and much contested accounting policies for transfer prices and the allocation of costs.[11]

As is shown in Fig. 1, the accounting system and its resultant problems now started to be a complex residue of marketing, production and organisational strategies. Just as accounting had mediated some of the early crucial policy decisions, now accounting was itself subject to the implications of some of its own effects.

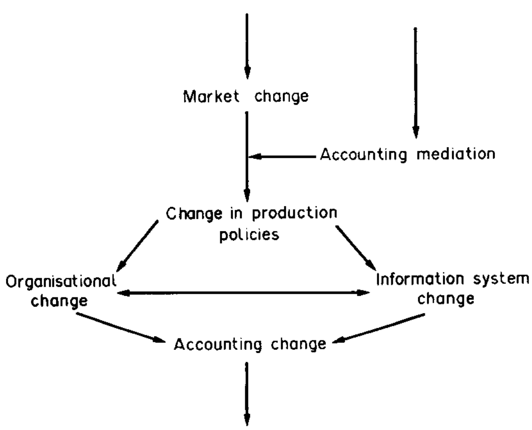

Fig. 1. Accounting implicated in organisational action.

Accounting was firmly embedded in the organisation rather than being any clearly separable part of it. The organisation was not independent of the accountings of it. Although at a point in time the practices of accounting could be identified, their functioning was intertwined with that of the organisation in both reflective and constitutive ways. Other important aspects of organisational functioning had impinged on accounting, providing pressures for it to change. In this sense accounting was a residue of past strategic choices, past decisions on models of organising and past commitments to policies for making visible, and thereby potentially governable (Miller & O'Leary, 1987), particular aspects of organisational action. All of these activities of the past had played a role in undermining the accountings of the past and creating the possibility for the accountings of today. Accounting, however, had not only been a passive phenomenon. It was not only a reflection of other aspects of organisational life but also had played a more positive constructive role in organisational functioning. Accounting had provided an operational and influential language of economic motive, its calculations had infused and influenced important policy decisions, and the visibilities it created played an important role in making real particular segmentations of the organisational arena. Accounting not only reflected the organisation as it had been but it also played a not insignificant role in positively making the organisation as it now is.

ACCOUNTING AND THE RESIDUES OF THE ORGANISATIONAL PAST

The constitutive roles of accounting provide a major focus for analysing *Q*, also a major manufacturing enterprise. Like *M*, it also had to face

[11] With increasing emphasis being placed on the control function of local performance reports, "fairness" rather than decision relevance was an important criterion for evaluating such accounting practices and changes in them. I am grateful to Sten Jönsson for bringing this point to my attention.

extreme market turbulence and change. Increasing competition, changing consumer expectations and a squeezing of profit margins also engendered in Q a sense of organisational crisis.

As an organisation, Q is even more information intensive than M. It has invested heavily in formal information and control systems, paying particular attention to those of a financial and accounting nature. The tentacles of these systems penetrate deep into the manufacturing, marketing, distribution and administrative functions of the enterprise. Detailed aspects of the organisation are made economically visible on a very regular basis. Standards, budgets and plans play a central role in the co-ordination and integration of a very large, functionally specialised and geographically dispersed organisation. Indeed it is through the formal flows of economic information that many important aspects of Q come to be known, managed and assessed. No pockets of local autonomy are consciously allowed to exist. Not only are all the parts of the vast, dispersed and varied enterprise drawn together by the information systems which provide the basis for the operational governance of Q but also the rhythms of the accounting year thereby become very influential components of the organisational construction and management of time.[12] The accounting eye is indeed a significant and omnipresent one.

The information economy of Q had been elaborated and refined during periods of growth and relative prosperity. Although difficulties had been encountered with this vast and expensive machinery of abstract information and administration, conditions of stable growth had rarely placed these at a premium. The abstract categories of cost and profit had been deemed to provide an adequate portrayal of the functioning of the organisation. The management of the general rather than the particular had not been seen as problematic. The resulting periodisation of governance had not created any insurmountable difficulties in the context of relative stability. The systems, for there were a vast number of only partially integrated ones, had been fine tuned and developed in relation to specific problems and presumed needs. In this way the information regime of Q had marched ever forward, gaining, in the process, an increasing measure of autonomy and further creating the basis for a detached, specialised and abstract arena of management that seemingly had less and less direct contact with the operational specifics of the enterprise.

The market crisis was to make such an information regime increasingly problematic however. With mounting uncertainty, the need for information that was not collected became ever greater. The senior management of Q started to realise that what it had been regarding as a detached and independent source of illumination — information — was in fact a direct reflection and an integral component of its system of administration and governance. What had been controlled — costs, profits, variances and volume — had given rise to an information residue. What had not been controlled, but what was now seen to be in need of control, was unreflected in the organisation's battery of information systems. The previously unmanaged — quality, detailed aspects of the functioning of the production process, employee and managerial commitment and motivation, throughput times and operational inventory holdings, technological progress, the detail of customer responsiveness — resided in the domain of the unknown. The visibilities of the present were partial, reflecting only the locus of past problems, past controls and past patterns of authority. However significant it might be, in Q the new had enormous difficulty filtering through the old. The dimensions of concern were just so different.

The organisation of the present was thereby tethered to the concerns of the past. The information systems of Q had become not only so detailed, so seemingly precise and so apparently comprehensive but also so fundamentally intertwined with the present organisation of Q that for a long time they had served to deny the legitimate existence of alternatives. Not only had their very technical quality come to be seen

[12] For a further discussion of the role of accounting in the construction of conceptions of time see Hopwood (1986b).

as so high and so all embracing that gaps had not been perceived but also the present information and control flows had become co-determinous with the enterprise itself. In an important way the accounting system of *Q* had become isomorphic with the organisation. Both had changed such that each was now both dependent on and reflective of the other. What had once been direct and specifically identifiable bureaucratic controls had, over time, become much more unobtrusive ones (Perrow, 1986), a central part of *Q* itself. Now they were implicated in the establishment of the very premises of decision making, "the control of the cognitive premises underlying action" (Perrow, 1986, p. 129), determining at a very basic level the structure of meaning and significance in the organisation.[13] Change is extremely difficult in such a context. It is only with great difficulty that people can start to conceive of doing anything differently. The new has few means to penetrate the consciousness established by the old.

Eventually, however, circumstances were such in *Q* that the radically changed environment was recognised. It slowly started to be reflected in even the traditional indicators. And although delayed, investigations prompted by this provided a basis on which some members of the organisation started to realise the significance of the changes underway.

In the context of such a perception of crisis important aspects of the organisation of *Q* that had been positively shaped by its regime of information systems started to be regarded as problematic. The batteries of standards, budgets and plans were seen as creating a relatively inflexible and inward looking enterprise. The phrase "paralysis by analysis" started to enter the organisational vocabulary. It was perceived that emphasis had been placed on the management of the normal rather than the irregular. The management of the abstract had created an organisation that found it difficult, if not positively traumatic, to respond to the particular. The systems of information also were recognised as having played a very crucial role in the creation of conceptions of time in *Q*. No only was the continual stream of organisational action periodised in a very particular way but also the regime of routine planning and reporting had resulted in a celebration of the present and the short-term. By extensive processes of budgeting and planning, the future had been brought into the present, seemingly becoming more certain, less contingent, less debatable and, possibly, less readily subject to influence in the process. After an era of emphasising the immediate in many aspects of its management, *Q* now found it extremely difficult to instill a more proactive conception of an influencable and manageable longer term future.

As in *M*, important features of organisational life had become intertwined with the functioning of an accounting system. Accounting had developed such that is was embedded in the organisational fabric, both reflecting and creating the contexts in which it operated. In *Q*, however, this process had gone much further. While such tendencies clearly were at work in *M*, in *Q* they had become fully realised. Although autonomous developments could and did take place in the design and functioning of *Q*'s accounting systems (and which by feeding into the functioning of the organisation, could subsequently lose their autonomy), accounting in *Q* had become a phenomenon that could not be regarded as being in any sense separable from the enterprise as a whole.

Past investments in a finely tuned economic visibility had radically increased the salience of the economies that could be gained from functional specialisation, geographical dispersion and a regime of administrative co-ordination. The accounting eye had become a very strategic one. The organisation had been mobilised in the name of what was known of it. Economic objectives and strategies for meeting them had been

[13] As Perrow (1986) points out, with unobtrusive control, what he terms the "control of premises," organizational participants "*voluntarily* restrict the range of stimuli that will be attended to ('Those sorts of things are irrelevant', or 'What has that got to do with the matter?') and the range of alternatives that would be considered ('It would never occur to me to do that')". (Perrow, 1986, p. 129; emphasis in original). Such attitudes were indeed prevalent in *Q*.

given a very precise meaning. Investments had been made in the context of a very particular economic knowledge. As a result, *Q* was now composed of different machines and different people with different skills located in different places, and subject to a different management regime. What is more, *Q* now needed its accounting systems in order to function as it did. They satisfied needs that they had played a role in creating (Ignatieff, 1984). The present structuring of the organisation presumed the existence of accounting. No longer just discrete technical procedures, the accounting systems were infused into the organisation itself.

The creation of accounting residues that, in turn, played a role in creating the organisation in which the accountings functioned had been an important part of *Q*'s development. A visibility had become a reality. But that visibility had not always been so centrally implicated in the functioning of *Q*. It had been born amidst a different reality, serving different purposes than those now required of it. The accounting residues had been laid down in an organisation different from that which *Q* now is.

Important features of the emergent economic visibility had been created in the context of attempts to control the labour process (Clawson, 1980). A conflictful and organised work force had provided one significant base for the rise of a regime of economic calculation and administration in *Q*. The control of economically orientated effort had been a mobilising problem. Investments had been made in the specification of work expectations, in the linking of effort to reward and in the measurement and control of actual performance. A regime of detailed economic calculation had been created in order to render visible in a quite particular manner the functioning of the operational core of the organisation. The social control of work had provided an important incentive for *Q*'s investment in an enhanced visibility of the economic.[14] Now, however, that socially constructed visibility had created an enterprise organisationally dependent on the resultant knowledge. The organisation had been reformed in the name of the knowledge of it. A managerial regime based on facts and analysis had arisen (although in a different corporate context, see Geneen, 1984). More precise articulations of objectives had been made, and these had been diffused throughout the organisation by means of the accounting calculus. New segmentations of work had been initiated in the organisation and new bases for administrative expertise forged. What had been initiated in the organisation in the name of the social came to function in the name of both the organisational and the social.

ON THE CONSIDERATION OF ACCOUNTING IN MOTION

Together the cases illustrate not only that accounting can be conceived as being in motion but also that such a perspective provides a rich insight into the organisational practice of accounting and its consequences for action. What conventionally have been seen to be the statics of the accounting craft have been seen to be in the process of changing, becoming thereby, what they were not. And such a portrayal has enabled an analysis of some of the ways in which accounting, by intersecting with other organisational processes and practices, influences the patterns of organisational visibility, significance, structure and action.

In the case of Wedgwood the emergence of a new accounting was observed. The categories and inter-relationships of an economic discourse and rhetoric (McCloskey, 1985) provided an incentive for the creation of a practical means for observing the organisation in economic terms, so making seemingly real what previously had been abstract. Although initiated as a tool for deciding upon prices and product volumes, a means thereby was created for interven-

[14] Several independent and very detailed historical studies support this conclusion. Moreover these have been conducted from a number of different theoretical perspectives. However, in the name of preserving the anonymity of *Q*, no references are given.

ing in and transforming the organisation in the name of the new economic knowledge of it. As we left our consideration of Wedgwood a basis was starting to be established upon which the accounting craft would become a more powerful means for organisational intervention and governance, able to play a more active role in the shaping of the trajectory of organisational development. Initiated to reveal what was presumed to be, the accounting eye was starting to be suggestive of organisational reform.

Such a proactive role for accounting was seen in operation in the early days of the formulation of *M*'s response to a market crisis. The otherwise abstract languages of economic motive and managerial analysis had been made into a more precise calculus for the assessment of organisational change by the accountings that had been laid down in *M* in times past. In this way, the quite specific properties of the accounting system played an active role in mediating the organisational response to the perceived need to change. The mobilising potential inherent in the early costings of Wedgwood was now seen in action, helping to shape in quite particular ways the marketing, production, and thereafter, the organisational, information and even accounting strategies in *M*. For accounting, by becoming more embedded in the organisation, not only shaped other important aspects of organisational life, but it, in turn, also was influenced by them, overtime thereby playing some role in creating the possibilities and conditions for its own transformation.

In *Q* the organisational embeddedness of accounting was such that it played a significant and extremely influential role in the functioning of the organisation. Although created over a long period of time and originally appealed to for reasons different from its present functioning, the accounting and other related information and control systems now created the dominant means of visibility in *Q*. The organisation was seen and managed through an accounting eye. The selective patterns of accounting visibility had provided a means for mobilising and changing the organisation such that it not only was dependent upon but also almost synonymous with the particular flows of information which had become intertwined with its development and current mode of functioning.

For all three organisations accounting had played some role in their transformation. The processes through which their accountings had become what they were not were starting to become, or already were, embedded in the very fabric of their functioning. Particular regimes of accounting facts had been created. An operational significance was given to economic and managerial categories and rhetoric. A seemingly precise and specific calculus had entered into organisational deliberations and debate. Accounting, in being propagated and changed, had become implicated in wider processes of organisational perception, governance and strategic mobilisation.

The consequences of such a trajectory of development were significant for all the organisations, providing, in the case of *M*, an important mediating influence at a time of a key strategic change, and, in *Q*, creating a form of organisational dependency that was to constrain and thereby, for a time, to influence the organisation's responsiveness to environmental turbulence.

Such consequences are amongst those that have provided the basis for a more widespread development of "worrying about management accounting" (Hopwood, 1985a). As was discussed earlier, there is now an increasing tendency for accounting systems to be assessed in terms of their actual as well as their intended organisational consequences. The full range of impacts that they can have on organisations is now starting to be discussed. If only because of this it is important to try to tease out and analyse in a little more detail some of the issues inherent in the cases, albeit that they have to be expressed in a tentative and partial manner at this stage in the development of our knowledge of the organisational nature of the accounting practice. For when seen in such terms, the cases are suggestive of a number of considerations which have a wider significance for the ways in which we can conceive of accounting in action and the processes of accounting elaboration and change.

Perhaps most importantly, the changes we have analysed have not reflected any simple, linear pattern of accounting development. Although abstract rhetorics of change have played a role in disturbing a prevailing status quo, no unitary mobilising force, be it an economic rationality, a social intent or a political will, has been found to be silently embedded within the shifting course of accounting's subsequent path of modification. Indeed in Wedgwood there was no easy and obvious relationship between an abstract economic category and a programme of intervention in the organisation conducted in the name of it. A diversity of quite specific issues, rationales and constraints impinged on the course of accounting change in *M*, together providing a means by which accounting could both shape the perception of problems and their solutions, and itself be adjusted by the shifting patterns of other organisational phenomena. In *Q* accounting had become so firmly embedded in both the structure and the consciousness of the organisation that it, for a time, defined what was perceived to be of economic significance. So in none of the companies were the accounts marching forward towards a conception of what they should become. No unproblematic pattern of accounting progress has been charted. The changes were specific ones, orientated to the resolution of quite particular problems and issues. Although there were most certainly doubts and uncertainties accompanying the path of accounting change, equally there was no evidence that some pre-existing accounting order was merely masked by the ignorance of the particular organisational participants we have considered. Complex, nuanced and subtle though they sometimes may have been, the processes of organisational functioning have not been shown to have hidden any abstract *a priori* path of accounting improvement.

The emergence of a particular account has been shown to be neither an unproblematic reflection of a more abstract intent nor a sudden discovery or transformation. Rather the cases have illustrated the more positive ways in which specific local origins moderated the path of accounting development and the multiple and even conflicting conditions of possibility that gave rise to particular manifestations of the accounting craft. They have pointed to the manner in which particular configurations of issues, problems and other organisational structures and practices both provided a context for and shaped the development of specific accounting changes. Some of the ways in which the particular meanings and significances attached to accounting information influenced the pattern of its transformation have been illuminated, as have the manner in which accidents, errors and deviations left their marks on the accounts that emerged. So although appeals were made to a body of accounting knowledge and technical practice, and to mobilising accounting and wider rationales, taken together the cases point to the need to see the resultant accounting changes as a combined result of both these and a multiplicity of other often minor changes in disparate parts of the organisational arena, each of which was itself engaged in for a diversity of local, tactical and conjectural reasons.

Although the process of accounting change thereby has been shown to be complex, the cases hopefully have demonstrated that such a local and contingent pattern of change is an intelligible one. An appreciation of accounting change has been shown as being able to be grounded in the circumstances in which it occurs. However, as the above discussion has tried to make clear, intelligibility is not to be confused with necessity. In none of the cases was any imperative driving a particular outcome. Nor could any be constructed on the basis of the organisational circumstances which resulted in accounting change. Rather than either assuming what accounting must be or deriving any retrospective view of the necessity of what happened, the cases demonstrate the need for an appreciation of change to be based on a more detailed awareness of the means through which accounting comes to be embedded within an organisation and the processes which provide a basis for accounting solutions to be related to other organisational problems and phenomena. They also point to the need to understand the more pro-active ways in which accounting can shift the configuration of organisational practices and processes, thereby itself providing a context for modification and change. Of equal importance, they are suggestive of the need to appreciate both the contingent and interactive nature of the circumstances surrounding those processes in any particular setting. Seen in such terms, the intelligibility which we seek to advance is shown to be dependent on the means by which we can question, interpret and interrogate the organisational functioning of the accounting craft and, thereby, on those conceptual concerns and modes of investigation and analysis which provide a basis for the appreciation of both the accounting particular and the accounting general rather than an appeal to any overarching rationale that is deemed to be implicit in either accounting practices or the circumstances that force them to change. Whilst it is recognised that organisational life involves a continuous dialogue between the possible and the actual, and that thereby conceptions of an accounting potential can play a role in mobilising accounting change, this is not to attach an obviousness, a priority or an imperative to the rhetorical claims that are associated with the accounting craft or to provide them with any privileged role in enabling accounting to become what it was not. What effects such claims have need to be seen as arising from their interaction with the other circumstances that characterise organisational life rather than an all embracing, powerfully penetrating and unproblematic logic.[15]

Reflecting the need to articulate a wider appreciation of accounting in action and the processes by which it changes, the analysis of the cases has been conducted in terms of a number of analytical themes. Emphasis has been placed on the particular visibilities created by accounting systems and the means by which they, in turn, shifted perceptions of organisational functioning, mediated the recognition of problems and the options available for their resolution, and infused the patterns of language, meaning and significance within the organisation. From such a stance, attention was directed to the constitutive as well as the reflective roles of accounting. For although it was recognised that a diverse array of other factors could and did impinge upon the accounting craft, at times causing it to shift its focus of attention and locus of organisational embodiment, equally the analyses were undertaken with an awareness of the more enabling properties of accounting itself. By moulding the patterns of organisational visibility, by extending the range of influence patterns within the organisation, by creating different patterns of interaction and interdependence and by enabling new forms of organisational segmentation to exist, accounting was seen as being able to play a positive role in both shifting the preconditions for organisational change and influencing its outcomes, even including the possibilities for its own transformation. Through such mutual processes of interaction, accounting was conceived as a phenomenon embedded within the organisation rather than as something that had a meaningful independent existence. The forms that it took and the influences that it had were not seen as being able to be appreciated outside of the context of the other organisational practices, functions and processes with which it became intertwined. Together they reflected a particular specificity of alignments and although it was sometimes possible to distinguish one organisational phenomenon influencing another, the analysis was conducted in terms of the possibility for, but not the necessity of, such influences since the mobilising factors were often so numerous, diverse, ambiguous

[15] Keat & Urry (1982, pp. 245–246) make a similar point in their more general consideration of social phenomena:

> ... the profound interdependence of social entities ... is important ... (because) the conditions under which the causal powers of important social entities are realized consist in fact of other social entities and of the at least partial realization of their powers. This fundamental interdependence of such entities thus means that the causal powers of some entities constitute the conditions necessary for the realization of the powers of other entities. And this, of course, means that the empirical events which then come to be generated are the product of highly complex interdependent processes ... Moreover, these processes are not merely to be listed so that they can be "added up" — rather they are to be *synthesized* so that their combination qualitatively modifies each constitutive entity (emphasis in original).

and uncertain, and had such an equivocal *a priori* relationship to the craft of accounting, that change, be it accounting or otherwise, was seen as being something that was created rather than determined. Moreover, as organisational practices and processes over time changed together, it appeared more useful to understand the configurations of which they all formed a part since the presence of any one practice came to presuppose the existence of the others. Perhaps hardly surprisingly, such analytical themes were also sensitive to the nuances and uncertainties which moderated the trajectories of accounting change and to the ways in which the interdependent nature of the resultant organisational processes gave rise to the unintended, the unanticipated and the problematic.

The constitutive roles of accounting are worthy of particular attention, not least because they have been little appreciated or discussed.

For as we have seen, at times accounting can play a significant role in the creation of the possibilities for other organisational phenomena to become what they are not. Through its interwining with the discursive notions of accountability and responsibility, accounting can play a role in the reconstitution of organisational agents, enabling different configurations of organisational arrangements to exist. By its routinisation of information flows and the ways in which it imposes a spatialisation on time, it can change conceptions of the past, the present and the future, contributing different saliences to each which can, in turn, moderate temporal preferences and emphases, and thereby, organisational actions. Creating quite particular objectifications of the otherwise vague and abstract, and particular conceptions of economic facts, accounting also can create not only a context in which the conditions exist for other organisational practices to change but also a means by which a particular organisational visibility can compete for or be imposed upon managerial attention and, if such strategies succeed, perhaps even eventually exclude the visibility and significance of other ways of characterising the organisational terrain, as in *Q*. If such developments occur, the transformational potential of accounting is only enhanced, as the facts created by the craft give rise to an influential language and set of categories for conceiving and changing the organisation in economic terms. As Foucault (1972, p. 167) has noted:

> a succession of events may . . . become an object of discourse, be recorded, described, explained, elaborated into concepts, and provide the opportunity for a theoretical choice.

So although not frequently analysed, the importance of accounting's constitutive roles should not be under-emphasised. They represent one of the significant ways in which accounting becomes embedded in the organisation of which it is a part.

Indeed accounting can become so integral a part of a configuration of organisational practices that it can create some of the possibilities that provide the basis for changing the conditions that themselves mobilise accounting change, as we saw in both *M* and *Q*. In *M* it mediated the selection of not unproblematic marketing and production strategies that provided the context in which the subsequent organisational changes created new information and accounting problems. And in *Q*, a particular regime of economic visibility laid down in the context of one set of organisational problems played its role in creating an economic awareness that transformed the organisation and created a basis for its own dependence on a much elaborated regime of accounting facts. Such illustrations point to not only the transformational potential of accounting but also some of the ways in which accounting can become a part of the factors that impinge upon it.

Central to such a view of accounting is the possibility of there being an equivocal relationship between the aims in the name of which the craft is advanced and its actual organisational consequences (also see Burchell *et al.*, 1985; Hopwood, 1983, 1986b). Not least because the generality of the accounting rhetoric can have difficulty interfacing with the detail, the complexity, the diversity and the specificity of organisational action, some of the anticipated consequences of a particular accounting intervention may not be realised (see Hopwood, 1986a).

Moreover, a whole domain of the unanticipated can realise itself as accounting intersects with other organisational practices and processes, as it actively creates a new sphere of organisational visibility, objectivity and potential significance, and as, in the process of so doing, it engenders resistances to the strategies and interventions which it seeks to further.[16] As all the case analyses have illustrated, the consequences of accounting interventions in the organisation can disturb, disrupt and displace the organisational arena that was presumed in their formulation, thereby having the power to transform rather than merely modify the processes of organisational change.

From such a perspective accounting also can be conceived of as creating residues of organisational consequences that can change the pre-conditions for subsequent organisational change. It is as if organisational transformations deposit sediments which not only interact with the organisational past but also modify the possibilities for the organisational present, and its future. In this sense "the present really does contain the past which preceded it", although as Gross (1981–82, p. 76) went on to add, "this may be unperceived". A temporal interdependency is so built into organisational life and the task of analysis, as reflected in the cases, in part becomes one of delving through the residues of organisational affairs to illuminate the patterns of pre-conditions that moderate the accounting craft.

It was with such metaphors in mind that the task of analysis was seen to be an archaeological one of carefully and cautiously sorting through the sediments of organisational history, however recent, to reconstruct the ways in which the present emerged from the past.[17] However, as Foucault (1972, 1977) has come to use the terms, the mode of analysis mobilised in the present discussion has features of both a genealogy and an archaeology. An "archaeology tries to outline particular configurations" (Foucault, 1972, p. 157) in order to reveal "relations between discursive formations and non-discursive domains (institutional, political events, economic practices and processes)" (p. 162). As in the present analysis, an archaeology strives to isolate the conditions of possibility of social and organisational practices and bodies of knowledge aiming to reconstruct "a heterogeneous system of relations and effects whose contingent interlocking" (Gordon, 1980, p. 243) constitute the basis on which practice is formed, functions and has its effects. Moreover, it is the active construction of an archaeology that creates a sensitivity to the power creating potential of bodies of knowledge and organisational and social practices that come to create a conception of reality within which they function. Genealogy, on the other hand, concerns itself with ruptures and transitions whereby words, categories, practices and institutions adopt new meanings and significances as they become intertwined with new purposes and new wills, an equally important theme of the present discussion. With its emphasis on change, it is the genealogical perspective that serves to alert us to the dangers of assuming any underlying coherence, tendency or

[16] The observations of Hirschman (1977, p. 131) are interesting in this respect:

> On the one hand, there is no doubt that human actions and social decisions tend to have consequences that were entirely unintended at the outset. But, on the other hand, these actions and decisions are often taken because they are earnestly and fully expected to have certain effects that then wholly fail to materialize. The latter phenomenon, while being the structural obverse of the former, is also likely to be one of its causes; the illusory expectations that are associated with certain social decisions at the time of adoption may keep their *real* future effects from view. Moreover, once these desired effects fail to happen and refuse to come into the world, the fact that they were originally counted on is likely to be not only forgotten but actively repressed (emphasis in original).

[17] In fact the imagery of archaeology emerged from the initial field work in *M* and provided a basis for analysing and structuring the observations made there. At that time I was unfamiliar with Foucault's theorizing and used the metaphor in a more primitive sense. Subsequently the mobilization and structuring of the arguments in this and related articles (see, e.g. Burchell *et al.*, 1985) have been informed by an awareness of the powerful analytics proposed by Foucault (1967, 1972, 1973, 1977, 1979). However, even though it may result in a little confusion for some, the archaeological metaphor is preserved in the title out of both a sense of loyalty to the original formulation and a sense of ease with the imagery in the present context.

logic, such as progress, mobilising patterns of historical and organisational transformation towards some ultimate fulfilment or conclusion. As Foucault (1977, p. 146) made clear, genealogy "does not pretend to go back in time to restore an unbroken continuity that operates beyond the dispersion of forgotten things".

Although the present investigations have been both more focused and constrained than the inquiries undertaken by Foucault, they nevertheless have provided an appreciation of some of the ways in which accounting can both be transformed by and serve as a vehicle for the transformation of the wider organisation. Both a fluidity and a specificity have been introduced into our understanding of accounting in action. The significances attached to accounting have been shown in the process of their reformulation. The craft has been seen as becoming embedded in different organisational configurations and serving very different organisational functions in the process of its change. The mobilising vehicles for these changes have been seen as residing in a very diverse number of organisational processes and practices and, not least, in accounting itself.

However, at this stage in our understanding it is still important to exercise some element of interpretative caution, not least in respect of the mobilising factors that can put accounting into motion. For although the cases have provided a rich insight into at least some of the internal processes of accounting elaboration and change, together they provide less of an understanding of the means through which the external might be able to recast the internal. Tempting though it may be to suggest an analysis in terms of the mobilising potential of a perception of crisis, not least an economic crisis, some care needs to be exercised before too strong a theory is articulated on this basis. Undoubtedly crisis and economic restraint can and do generate action, not least in the accounting area (Khandwalla, 1973; Olofsson & Svalander, 1975). However, the analysis of the cases suggests that the relationship is far from being a straightforward one. In Wedgwood economic recession did provide a stimulus for change, although the relationship between an economic rhetoric of change and its implementation was not unproblematic, requiring, as it did, an intersection with operational bodies of knowledge and specific organisational practices. In *M* accounting mediated the response to a major market change, although it was only itself changed after marketing, production and organisational changes had created a new organisational configuration and a new set of accounting problems. And in *Q*, so unobtrusive and embedded within the structure and consciousness of the organisation had accounting become that initially it served to constrain change by masking the exact nature of the turbulent environment. So together the cases certainly provide no basis for any general theory of crisis driven accounting change. Indeed the mode of analysis that has been articulated should moderate our desire to state any such general view. Instead it should encourage a more precise and careful investigation of the ways in which either the perception or the actuality of external events can disturb the organisational configurations of which accounting forms a part (see Czarniawska & Hedberg, 1985). Seen in terms of the possibility to so shift the organisational terrain and the visibilities that form a part of it, a role exists for the mobilising potential, but certainly not necessity, of a whole series of intrusions into the organisation. Alongside a more nuanced view of the role of crisis (also see Brunson, 1985), we need to appreciate the ways in which new bodies of knowledge, new specialists associated with their practice, government regulatory attempts, changing theoretical and practical conceptions of organisational governance and order, and even the development of a different accounting rhetoric can provide a basis for action and change.

All too clearly there is a need for a great deal more research and a very considerable elaboration of the theoretical and analytical premises on which it might take place. Hopefully, however, the present investigation at least has served to illustrate the possibility for an analysis of accounting change that is not dependent on abstract conceptions of potential and does not impose any unifying orchestration of action. It also aims to have indicated the ways in which historical (however recent that means) analyses can give insight into accounting dynamics and, by recognising that the roles that accounting serves cannot be considered in isolation of the practices of the craft, the need for appreciations of the specific practices that constitute the craft and the organisational processes which endow them with a significance and meaning.

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