

ACCOUNTING AND THE CONSTRUCTION OF THE GOVERNABLE PERSON*

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Abstract

The concern of the paper is historical. It addresses one familiar event within the literature of the history of accounting — the construction of theories of standard costing and budgeting in the first three decades of the twentieth century. A different interpretation of this event is offered from that commonly found. This is seen to have significant implications for the relevance of historical investigation to the understanding of contemporary accounting practices. Instead of an interpretation of standard costing and budgeting as one stage in the advance in accuracy and refinement of accounting concepts and techniques, it is viewed as an important calculative practice which is part of a much wider modern apparatus of power which emerges conspicuously in the early years of this century. The concern of this form of power is seen to be the construction of the individual person as a more manageable and efficient entity. This argument is explored through an examination of the connections of standard costing and budgeting with scientific management and industrial psychology. These knowledges are then related to others which, more or less simultaneously, were emerging beyond the confines of the firm to address questions of the efficiency and manageability of the individual. The more general aim of the paper is to suggest some elements of a theoretical understanding of accounting which would locate it in its interrelation with other projects for the social and organisational management of individual lives.

Accounting has remained remarkably insulated from important theoretical and historical debates which have traversed the social sciences. Accounting history, for example, is a context in which one can begin to substantiate this lack of a problematisation of the roles of accounting. A standard concept which guides accounting history is one that sees accounting as

essentially having functional roles in society, albeit ones which can change (American Accounting Association, 1970). Little or no suspicion seems to surface that different methodological starting points could be entertained, which could lead to rather different understandings of accounting's history.

There are ripples, however. Recently there

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have been attempts to indicate the directions which a fully social interpretation of accounting might follow (Burchell *et al.*, 1979, 1980). These seem to us to be very useful first steps.

Our concern in this paper can be designated historical. We are concerned with the emergence of standard costing and budgeting in the early decades of this century and the way this can be related to other social practices. To identify our concern as historical is, however, to beg the question as to the meaning and significance of historical analysis. Care is needed in formulating an appeal to an historical viewpoint from which to understand changes in accounting thought and practice. There are a number of quite different ways in which to understand the contribution of an historical perspective. One request voiced from time to time is for more histories (see e.g. Parker, 1981, p. 290; Solomons, 1968, p. 17). These would, it is suggested, uncover the how and the what of accounting. What, for instance, was actually accounted for in a particular firm in the early nineteenth century? It is tempting to rally around this call. It has an innocent appeal and would appear to have undeniable force.

In one sense we have no objection to the call for more facts. However, the simplicity of the request can be misleading. We would like to propose a different agenda for the interpretation of accounting's past, one which casts a different light on the understanding of accounting practices. This is one which we feel has considerable relevance for understanding accounting today, and which enables us to develop a theoretical understanding of accounting as a social and organisational practice.

One conception of accounting history, which appears to have a significant level of acceptance at the present time, is one which sees accounting as changing, or capable of being changed, in response to demands expressed or implied by a changing environment. It is a notion of accounting history in which references to the metaphor of evolution are not infrequent (American Accounting Association, 1970; Chatfield, 1977; Littleton & Zimmerman, 1962; Lee & Parker, 1979; Kaplan, 1984). What is here required of

accounting history, it would seem, is that (purely aesthetic consideration apart) it should seek to elucidate:

the evolution in accounting thought, practices and institutions in response to changes in the environment and societal needs. It also (should consider) . . . the effect that this evolution has worked on the environment (American Accounting Association, 1970, p. 53).

The utility of accounting history, its potential in relation to current theoretical and practical concerns, is that through elucidating the resolution of past incongruities of accounting with its environment, it could facilitate the more effective resolution of such issues in the present. The image to be gained is that accounting can enmesh with its context in ways that are inevitable, given some overwhelming environmental shift, and that may even be socially desirable. We do not find such an interpretation of accounting's history to be persuasive. In particular, the functional tone of the very language in which accounting history is defined significantly obliterates the possibility of accounting's location, along with a range of other social practices, in relation to modes of operation of power.

One way of countering such an approach is to invert the perspective. Accounting would then no longer be viewed as becoming, or as having capacity to become, an increasingly refined technical apparatus. It would also no longer be viewed as neutral but rather seen, once the veils of current misperception have been drawn back, to clearly reflect and to serve certain economic or political interests. Such an approach has achieved considerable currency when applied to disciplines other than accounting (see, e.g. Baritz, 1960; Scull, 1979; Stedman-Jones, 1971).

We are not persuaded by this line of argument either. Central to it is a notion that there is a more or less direct and unproblematic relation between economic and/or political interests, and the knowledges and techniques which are held to represent such interests. The terms and categories through which such interests are represented are seen to have no effects. Whether it is a thesis centered on a notion of knowledge as a "servant of power" (Baritz, 1960) or know-

ledge viewed as representing class interests, the difficulties remain. The notion of control in such a view comes to substitute for notions of progress or evolution in standard histories. Whereas the latter see accounting as progressing in terms of an unproblematic social utility, the former see history as the elaboration of better and more subtle forms of control.

It seems to us that there is a very real need to develop an understanding of accounting and its past which is distinct from these two approaches. This is the thrust of our attempt in this paper, undertaken through a discussion of the emergence of standard costing and budgeting within the accounting literature, and the relation between these and a number of other related social and organisational practices. Our concern is with a particular episode in the history of accounting which we see as crucial, and its relevance and implications for understanding contemporary accounting.

If our concern in this paper can be called historical, it entails an understanding of historical processes which is unfamiliar in the accounting literature. It may be useful to refer to one or two landmarks in relation to which the concerns of this paper may be identified.

The interpretation of historical processes we have utilized takes much of its inspiration from the work of Michel Foucault and his associates (Castel *et al.*, 1982; Donzelot, 1979; Foucault, 1973, 1977, 1981). In no sense would we wish to suggest that such studies offer a panacea for thinking about accounting. In any case they do not directly address accounting or for that matter economic processes. But despite the difference in the field of study we feel that there is something distinctive in such an approach which is useful in an attempt to understand accounting as a social and organisational practice. Clearly we can do no more here than point to what we see to be some important themes. A number of recent studies address these issues in much greater depth (Sheridan, 1980; Cousins & Hussain, 1984; Burchell *et al.*, forthcoming; Miller, forthcoming).

Over a period of some twenty years Michel Foucault has worked on what can be called a

series of histories of the emergence of the human sciences. His studies have covered medicine (Foucault, 1973), the emergence of psychiatry (Foucault, 1967), and the prison (Foucault, 1977) to name just some of the more important. The historical focus for these has generally been on the period around 1800 which he sees as a crucial point in the formation of the modern era. Other writers in a similar vein have explored the period closer to the present day (Donzelot, 1979; Castel *et al.*, 1982). Alongside the historical studies a number of methodological issues concerning the understanding of historical processes have been addressed (Foucault, 1972, 1981). In the more recent studies an explicit concern with the issue of power has emerged.

There are three issues we would like to single out for our purposes here from this vast and still growing body of material. These concern what can be called a "genealogical" question concerning the role of historical investigation; an "archaeological" question concerning the way one goes about doing history; and a thesis concerning the interdependence of bodies of knowledge and relations of power.

The notion of genealogy is deceptively simple. It concerns centrally a questioning of our temporarily received notions by a demonstration of their historical emergence. The point of history in this sense is to make intelligible the way in which we think today by reminding us of its conditions of formation. Whether the terms be efficiency, rationality or motivation, genealogical analysis helps us to appreciate their ephemeral character. But genealogy is not just a matter of de-bunking, a valuable enough enterprise in its own right. It concerns also a particular approach to the tracing of the emergence of our frequently unquestioned contemporary rationales. This is one which does not entail looking for a single point in history which would be the point of origin of our current practices. The emergence of our contemporary beliefs is viewed rather by reference to a complex of dispersed events. Genealogy does not lead us to solid foundations; rather, it fragments and disturbs what we might like to see as the basis of our

current ideas and practices. Applied to accounting it means questioning a search for the origins of accounting in the invention of techniques, whether in recent centuries or in antiquity. Other types of events, such as the political objectives of states, but also historical contingency, particular national conditions and the development of related disciplines, all enter into the explanation. Genealogy opens out into a much less certain field than the standard histories of accounting would lead us to believe.

The archaeological question is historical also. Its focus is on our most legitimated forms of contemporary discourse, and the real historical conditions which have led to their emergence. It concerns the more sociological aspects of the emergence and functioning of discourses as well as their internal conceptual features. The status of our most legitimated forms of discourse (law and medicine, for example, but also economics and accounting) are seen to depend, amongst other things, on institutional and legal criteria as well as on pedagogical norms for their functioning. Archaeology directs our attention to these features of discourse. It also has an epistemological aspect. This concerns the relationship between discourses and the objects to which they refer. Again there is an element of de-bunking. Applied to our concerns in this paper one could for instance say that there is no obvious reason why we should have come to talk in terms of efficiency and standards. Such notions do not exist in the object itself or in limbo waiting to be discovered. They are seen rather to have been formed in a complex of relations established between a heterogeneous range of discourses and practices. This is why we talk below of the standard costing and budgeting complex, and relate it to a range of other discourses and practices which share a common vocabulary and set of objectives. Standard costing is, we suggest, intertwined with other attempts within the enterprise and outside it to embark on a vast project of standardisation and normalisation of the lives of individuals. It is, we argue, to this web of relations established between, for example, basic technical requirements and adjustments, and elaborate forms of philosophical discourse,

that one should look in trying to understand redefinitions of the practice of accounting. It is the positive conditions of a complex group of relations within which accounting exists that we should address.

The third aspect of Foucault's work of relevance to this paper concerns the relationship between knowledge and power. Foucault's arguments on this question are distinctive. He suggests that we can understand the development of modern societies in terms of power, and the shift in its mode of exercise. The broadest shift he refers to is one which he suggests took place around 1800 and is from what he calls sovereign power to disciplinary power. Sovereign power is identified as a diminished form of power. Its ultimate recourse is seizure — of things, of bodies and ultimately of life. Disciplinary power is much richer and entails penetrating into the very web of social life through a vast series of regulations and tools for the administration of entire populations and of the minutiae of people's lives. The calculated management of social life is one way of designating the form of operation of disciplinary power. It can be witnessed, Foucault suggests, in the fields of public health, housing, concerns with longevity, but also in the schools, workshops, barracks and prisons.

Foucault's arguments concerning power are closely linked to his investigation of the emergence of the human sciences (Foucault, 1970). The shift he identifies from sovereign to disciplinary power is intimately connected with changes in our forms of knowledge. His argument is expressed in the formula "power/knowledge" and the constitutive interdependence of the two terms of the equation — the operation of the human sciences should be understood in relation to the elaboration of a range of techniques for the supervision, administration and disciplining of populations of human individuals. This is seen to take place in particular institutions and in social relations in a wider sense. This is not to suggest that all institutions are homogeneous and coterminous with the type of administration which occurs in society at large. Viewed in terms of power and at the level

of certain general principles for its operation there is nonetheless held to be an important inter-relation between a diverse range of practices.

Our attempt in this paper to understand one particular important period in accounting's history has been influenced by these three broad themes. However the historical period Foucault's researches address, the institutions they concern, and the absence of a clearly identifiable "method" mean that we cannot claim to be testing a method by transposing its field of application. We have studied a different period, namely that around the year 1900, and a different discipline, namely accounting. In our preliminary investigations we were led to formulate a number of working propositions, and it is these which directly inform the paper. These concern general methodological principles, an attempt to locate accounting within a wider set of calculative techniques, and some reflections on the level of our analysis and what we see to be its significance. It may be useful to briefly comment on the most important of these concerns.

A first and general methodological postulate can be called "constructivist". By this we mean that we have been concerned with the way accounting, in conjunction with other practices, serves to construct a particular field of visibility. Rather than view accounting as a neutral tool of observation we have attempted to examine how accounting assists in rendering visible certain crucial aspects of the functioning of the enterprise. Questions of wastage and efficiency are examples which we address in the paper.

A second point which emerged in our reading of the literature was that this process of rendering visible alighted on the individual person. More particularly it did so by surrounding the individual at work by a series of norms and standards. Through such norms and standards the inefficiencies of the person were rendered clearly visible. This was a novel step for accounting. It is significant also in relation to the issue of power identified above. At the risk of being misunderstood we shall be highly schematic to register what we see to be the significant change brought about by the emergence of standard

costing and budgeting and their alliance with scientific management, topics which we address in detail below. In the nineteenth century discipline within the enterprise took the form of direct confrontations between the worker and the boss. In the early twentieth century, and through the changes we will be referring to, the employee comes to be surrounded by calculative norms and standards, interposing between him and the boss a whole range of intermediary mechanisms. With this shift discipline comes to be seen to reside not in the will of the boss but in the economic machine itself, in the norms and standards from which the worker can be seen to depart. Accounting is, we argue, an important aspect of this development of a range of calculative programmes and techniques which come to regulate the lives of individuals at work in the early twentieth century. It is for this reason that we talk of standard costing as being located within a significant reorientation of the exercise of power within the enterprise.

A third issue we wanted to address is the wider framework within which changes in accounting took place. Our concern in the paper is with the enterprise and the nation, viewing these as distinct levels for the elaboration of a range of techniques of supervision and administration of individual lives. Extending our view beyond the enterprise and beyond accounting it became clear to us that an important redefinition of the tasks and objectives of government took place around the early years of this century. Central to this redefinition was the emergence of the social sciences, in particular psychology and sociology. In conjunction with a changed conception of the role of the state, the social sciences were able to enter an alliance with the state and to undertake a quite novel form of administration and surveillance of individual lives. Central to this project was the possibility of comparing the capacities of individuals (health, intelligence, longevity) against specific standards. It is our contention that one can understand the emergence of standard costing and budgeting in the early years of the twentieth century by situating it within this more general shift in the form of administration of social life

which occurs around the turn of the century.

A fourth and final issue concerns the level of analysis we have undertaken here. We have placed greatest emphasis on what we might call programmatic discourses as opposed to accounting as it was practised in particular firms. This is not because we regard the latter as unimportant. Nor is it because we view our concerns as entirely independent from this more technical level of analysis. To clarify our views it may help to identify what we see to be two distinct orders of events and the interrelation between them. The one we have concentrated on in this paper can be called the discursive programmes for the administration and calculation of activities within the enterprise and in society as a whole. The other we would call technological and concerns the actual operation of accounting practices, their elaboration through particular procedures and techniques. Our point is that these two levels are distinct, yet crucially interdependent. A discursive programme (for the calculation of individual inefficiencies, say) only fulfils its vocation when it has as its counterpart an adequate technology. What the programme contributes to the technology is a more general rendering of reality in a form such that it can be known, a rendering visible of certain activities in a way which is intelligible by virtue of certain general categories. A programme is also the space for the articulation of problems, negotiation and conflict over interests. There is, of course, considerable play in the mechanism which links the programmatic level with the technological. Yet it is precisely the looseness of the linkage which makes it important to recall its existence.

These are the principle themes which inform our thinking in this paper. If they have validity for the understanding of accounting as an organisational and social practice the implications are significant. Accounting can no longer be regarded as a neutral and objective process. It comes rather to be viewed as an important part of a network of power relations which are built into the very fabric of organisational and social life. It is a constitutive element in a form of normalising socio-political management whose

concern is with rendering visible all forms of activity of the individual in view of their contribution to the efficient operation of the enterprise and of society.

STANDARD COSTING AND BUDGETING

Between 1900 and 1930 there appears in the accounting literature an initial delineation of theories of standard costing and budgeting. This is a novel event within accounting. At a purely technical level the innovation brought about was nothing less than an entire re-casting of the definition of cost accounting. Its primary concern would henceforth no longer be the ascertainment of only the actual costs (Nicholson, 1913; Church, 1917; Epstein, 1978, pp. 90–120), of production or of activities. There would be an expansion of domain to permit a concern for the future as well as for the past.

The virtue of these novel practices lay in their capacity to routinely raise questions of waste and efficiency in the employment of resources, whether human, financial or material, at as many levels of analysis as required. One could, for example, routinely point to, and analyse, variances of actual from standard or plan at the level of the profit of the total firm, or at the level of material or labour use in production or, indeed, at the level of every accountable person within the firm.

The existing histories note the importance of the introduction of standard costing. For Sowell (1973) standard costing entailed the development of a set of techniques and a theoretical rationale for the "scientific" predetermination of the costs of raw material, labour and overhead, as well as for the analysis of the variance of such costs from the actual or historical costs. Solomons (1968) identifies similar themes across a range of writers, in particular Harrington Emerson (1919) and Charter Harrison (1930).

What interests us here is the way the existing histories construe the development of standard costing. They tend to narrate the emergence of standard costing and budgeting according to

two distinct criteria. One of these consists in a careful and detailed exposition of the ideas and techniques in the terms of those who, at the time, had developed or articulated them. Such an approach is taken by Sowell (1973) who declares his task as that of presenting "in chronological succession, those related events, forces, individuals, and ideas that have contributed to and/or have developed into" (p. 2) a theoretical and technical complex called standard costing. That achieved, through an immense wealth of source material consulted and described, Sowell ends his work. A second approach, which Solomons (1968) adopts, is to construe these novel practices through the lens of progress, to outline the difficult and often error-prone paths whereby costing has progressed to its current level of sophistication. Thus, for example, he points to "weaknesses" in one of the early outlines of a standard costing, that of Emerson, indicating its failures in analytic power and in clarity of thought relative to writing which follows it in time.

We wish in this paper to place a different interpretation on the emergence of standard costing. We do not view the development of standard costing and budgeting as part of the unfolding of a socially useful theoretical-technical complex, whose underlying logic is one of progress. We wish to locate it rather as an important contribution to a complex of practices which consist in a form of socio-political management whose concern is with individual persons and their efficient functioning.

Standard costing and budgeting provided quite novel theorisation and technique which served to render visible the inefficiencies of the individual person within the enterprise. In routinely raising questions of waste and inefficiency in the employment of human, financial and material resources, they supplemented the traditional concerns of accounting with the fidelity or honesty of the person. Cost accounting could now embrace also the individual person and make them accountable by reference to prescribed standards of performance. With this step accounting significantly extended its domain, enmeshing the person within a web of

calculative practices aimed not only at stewardship but efficiency also.

We can identify the shift entailed in the emergence of standard costing during the period 1900 and 1930 across a number of central texts of that period. Garcke & Fells (1911) make the following statement concerning the role of systematic cost accounts and their relevance for managerial action:

it is only by means of systematic records that leakage, waste, and fraud can be prevented, and that employers can know the cost of any article of their manufacture, and be able to determine accurately and scientifically, not merely approximately and by hap-hazard, the actual profit they make or loss they sustain, not only on the aggregate transactions during a given period, but also upon each individual transaction (Garcke & Fells, 1911, pp. 3–5).

In a similar manner A. L. Dickinson (1908, cited in Garcke & Fells, 1911, pp. 7–8), states the principal objects of a modern cost system. They should comprise:

- (1) Ascertaining the cost of the same product at different periods in the same mill, or at the same period in different mills, and so to remedy inequalities in cost by reducing all to the results shown by the best.
- (2) The provision of an accurate, running book of inventories on hand, so facilitating reduction in stocks and capital invested to the lowest state consistent with efficiency.
- (3) The preparation of statistical information as to costs of parts, quantity, and variety of output, relative efficiency of different classes of labour, and relative costs of labour and material, between different mills and periods.
- (4) The preparation of periodical statements of profit and loss in a condensed form, readily giving directors all material information as to the results of the business.

These statements are admirable in their rigour. It is, however, what is missing from them which is significant for our purposes here. Missing from both is a clear statement of the purposes that might be fulfilled by standard or predetermined costs. Missing, as a consequence, are materials dealing with how a routine technology of standard or predetermined costs might operate.

By 1930 there had been a clear establishment, in texts on both sides of the Atlantic, of several

new prominent additions to the vocabulary of costs accounts keeping. These are "the standard cost", "the variance analysis", "the budget", "budgetary control". This is the rupture with which we are concerned and its implications. One way of designating the change would be from the "registration of costs of production" to "the rendering of all activities capable of suspicion as to their costliness".

Charter Harrison (1930) expresses most clearly the dissatisfaction with the old system and the promise of the new:

The most serious defect of the job-order cost plan was that it failed, most utterly and dismally to achieve what should be the primary purpose of any cost system, namely, to bring promptly to the attention of the management the existence of preventable inefficiencies so that steps could be taken to eliminate these at the earliest possible moment (Harrison, 1930, p. 8).

And again:

one of the primary advantages of standard costs . . . is that the clerical work involved in the operating of a properly designed standard cost system is very much less than that required to operate any complete job-order cost plan. That this is so is evident when it is considered that *with standard costs we are dealing with the principle of exceptions, that is to say with variations from the standards* (Harrison, 1930, p. 12, emphasis added).

For our concerns in this paper there is one crucial dimension to this innovation. The principle of standard costs made it possible to attach to every individual within the firm norms and standards of behaviour. Everyone, in relation to all activities which they directly carried out or directed, could be rendered susceptible to a continual process of judgment. This implanting of norms moreover concerned not just norms of physiological behavior for the worker at the bench, but also the mental activity on the part of the executive. Witness Charter Harrison again:

We have increased the efficiency of the average man because we have applied the principles of scientific management to his work — instead of letting him proceed haphazardly we have set before him carefully determined standards of accomplishment rendered possible by standardization of conditions, and have given him scientific training supplemented by an efficiency reward. We have

combined mechanical sciences and psychology, with the result that today every man, woman, and child in this country is reaping the harvest (Harrison, 1930, pp. 27–28).

With this step the possibility of a knowledge of every individual within the enterprise was established. A visibility and an allocation of responsibility could be attached to the individual. The person's activities were at last rendered knowable according to prescribed standards and deviations from the norm. Standard costing and budgeting made possible a pinpointing of responsibilities for preventable inefficiencies at the level of the very individual from whom they derived. The human element in production, and most importantly the individual person, could now be known according to their contribution to the efficiency of the enterprise.

The significance of standard costing and budgeting as an innovation, however, is not only internal to accounting and the organisation and management of the enterprise. We suggest that it should be located alongside the emergence of a range of discourses and practices which, in both Britain and the U.S.A. in the early years of this century, concerned themselves with the physical and mental health of the population. In their concern with efficiency these practices have a macro- and a micro-level concern. They took as their object both the health and efficiency of the nations as a whole, and detailed questions concerning the habits, life-styles and activities of the individual. The underlying preoccupation was with ways in which modifications in the latter might enrich the former, an overtly political concern in which the health and output of the individual was related to that of the collectivity. Standard costing can, we argue, be regarded as an important aspect of this broader concern with establishing norms and standards for the activities of individuals and their implications for efficiency. At the level of the enterprise standard costing and budgeting contributed, we suggest, a facilitative technology which enabled a whole range of activities of the person to be rendered visible and accountable. Within the enterprise, one could at last literally make all individuals accountable.

The vagueness as to whether the notion of standard in the initial formulations of standard costing meant an ideal or an attainable standard, and the question of the possibility of actually locating the source of wastes (Solomons, 1968, p. 41) are not crucial for our purposes. For it is neither the truth-value of standard costing nor its practical utility which we are seeking to evaluate. Rather, we are concerned to locate such a practice as a form of social power, an important element of which is an ability to subject the individual to an increasingly detailed form of observation and scrutiny. In its purest form, such a type of power consists in the individual attending to his or her own deficiencies. It is a form of power in which the individual becomes an auto-regulated entity, but one for whom the standards according to which they judge their lives have been established for them. Standard costing and budgeting is, we suggest, central to such a process.

THE EFFICIENT NATION AND THE EFFICIENT INDIVIDUAL

Standard costing and budgeting provided a way of expressing in money terms the contribution of individuals to the collective efficiency of the enterprise. This allowed deviations from the norm to be located at the level of the individual. The collective efficiency of the nation during this period was expressed in different terms and with different objectives in mind. Nonetheless surprising parallels emerge in the attribution of a visibility to the individual (his health, intelligence) through which their contribution to collective efficiency could be detected. There is a similarity also in the manner in which such detection was to be achieved. Statistical deviations from a norm were central to this task of the individualisation of difference. And a plethora of techniques of socio-political management were developed which allowed observation to penetrate to the minutiae of the everyday lives of individuals (Armstrong, 1983) in an attempt to correct departures from the norm.

We want to identify here what seem to us to

be the more important of these concerns and practices. These can be located at a number of distinct levels. One of these is what we call, following others (Searle, 1970; Hays, 1959; Haber, 1964), a discourse of national efficiency. This had an existence through popular political vocabulary, journalistic writings, as well as the state and governmental apparatuses. A second concerns philosophical and sociological writings, and the emergence in them of a notion that one could actively intervene within society and within the lives of individuals. The general aim to which such writings saw this as contributing was the rational administration of the social and the active promotion of progress. The state was to play a central role in such a programme. A third level is that of the actual practices of socio-political management (eugenics, mental hygiene, mental testing) in relation to which such schemes operated. As noted above we do not view such practices as the simple implementation of the first two levels identified. It seems to us, however, that they can be viewed in terms of and as related to these more general sets of concerns.

The discourse of national efficiency

A number of writers have argued forcefully (Searle, 1970; Hays, 1959; Haber, 1964), that the notion of efficiency emerges in the early years of this century as a "convenient label" under which could be grouped a range of assumptions, beliefs and demands concerning government, industry and social organisation. Whilst being careful not to think that this notion of efficiency is used in the same way by all commentators, nor that it presupposes agreement on matters of social or industrial policy, it does seem to be a very common theme in the early years of this century. Of course, it is a notion which varies not just from one field of application to another, but from one national context to another.

One can begin to substantiate the existence of a discourse of national efficiency through journalistic writings, the arguments of politicians, as well as medical and para-medical writings. Thus the British writer Arnold White (1901) in his rather demagogic book *Efficiency and Empire*,

most of the material of which had first appeared in newspaper articles the previous year, proclaimed the need for a thoroughgoing reappraisal of the nation's political and moral values. White was a polemicist, yet in a Britain which was stumbling through the successive revelations and disasters of the Boer War such arguments were not out of place.

Inefficiency was considered by White to derive from both physical and moral deterioration. The middle classes had, he argued, become largely "a class of pleasure-seekers" whilst the working classes "artificially restrict their labour" (p.310). Meanwhile drink exercised its despotism over all social groups. The result was a softening of the fibre of the ruled and the rulers alike. But the first element of efficiency, according to White, was health (p.95). Here the problem was seen to be most acute. "Our species", he proclaimed dramatically, "is being propagated and continued increasingly from undersized, street-bred people". (p.100). White was referring here to "Spectacled school-children, hungry, strumous, and epileptic" who "grow into consumptive bridegrooms and scrofulous brides..." (pp. 101-102). Outside certain institutions such as the Army, the Navy and the police, the population was seen to consist mainly in "hospital out-patients, enfeebled with bad air, sedentary lives, drink, and disease." (pp. 107-108). In short, the nation was rapidly deteriorating and the State was doing virtually nothing to prevent this deterioration.

White was only one of many journalists to suggest the need for a new political alignment, which would give expression to a programme of "national efficiency". Such themes, moreover, were not absent from the arguments and statements of politicians. Whilst an astute politician such as Roseberry shied away from White's journalistic excesses, he admitted, however, to being in "substantial agreement" with White's opinions (Searle, 1970, p.54). The question of national efficiency was, at heart, one which concerned social organisation. Central here was the utilisation of Germany and Japan as models or exemplars of a form of social organisation which promoted efficiency through the incorporation

of science in the art of politics.

The improvement of the national physique was one element of a programme of efficiency. The need for this was seen to be highlighted by the physical unfitness of those who came forward for recruitment for the Boer War. Thus in Manchester in 1900, 8000 out of 11,000 would-be volunteers had to be turned away on grounds of ill-health, and of the remainder 2000 were declared fit only for the militia (Searle, 1970; Winter, 1980).

The mood that developed around the question of physical health was one of pessimism which at times shifted to hysteria. The concern was that Britain was breeding a race of degenerates, and that this became more acute the further one went down the social scale. White had suggested restrictions on marriage to alleviate the problem (1901, p.111). The eugenic movement was the more extreme version of such arguments with demands for "the sterilization of the unfit" gaining ground and appearing in political debate. This was, moreover, not a matter of party politics, eugenics appealing to Fabian socialists and Conservatives alike. The sick had to be taken in hand both for their own good and for the efficient functioning of society.

Efficiency was a key-word also in relation to the machinery of government, education, and the role of the scientific expert in government. The purpose of the State was to promote the "good life" of its citizens and to develop the moral nature of man (Dyson, 1980, p.192). To achieve this the application of scientific knowledge and training was deemed necessary. It is not altogether clear whether this meant leaving key decisions in the hands of experts, or making politics and public administration itself a science. Both lines of argument clearly existed, the latter finding its institutional form in the founding of the London School of Economics by the Webbs at the very end of the nineteenth century. The principle at work here was that "social reconstructions require as much specialized training and sustained study as the building of bridges and railways, the interpretation of the law, or technical improvements in machinery and mechanical processes" (quoted in Searle,

1970, p.85). Again this was a theme which cut across party politics. Roseberry, the leader of the "Liberal Imperialists" called for government by "scientific methods". Asquith, for his part, suggested that social reform should be carried out "not as a moral question. . . but as a question of social and imperial efficiency" (quoted in Collini, 1979, pp. 83–84).

This of course is no more than a suggestive glance at the literature which would enable one to substantiate the existence and depth of a discourse of national efficiency in Britain in the early years of this century. We feel it is enough, however, to support our arguments that the term efficiency provided a degree of coherence to the identification and expression of a diverse range of national concerns. If it is the case that this entitles us to talk of an ideology of efficiency in Britain during this period was this true also of the United States? It would appear that this can be answered in the affirmative, as long as one bears in mind the different socio-political context of American society. The progressive era, as one author has expressed it, "is almost made to order for the study of Americans in love with efficiency" (Haber, 1964, p.ix; Hays, 1959). The "efficiency craze" of the progressive era consisted in "an outpouring of ideas and emotions in which a gospel of efficiency was preached without embarrassment to businessmen, workers, doctors, housewives and teachers . . ." (Haber, 1964, p.ix). Efficiency in this sense referred to a personal attribute, to a mechanical principle of the output–input ratio of a machine, to a commercial efficiency in the form of profit, and to efficiency conceived as a relationship between men. In this last, and possibly for our purposes here most important sense, efficiency meant social efficiency, which in turn meant social organisation.

If one can speak here of a "politics of efficiency", it was around the issues of democracy and expertise that this politics centred. Scientific wisdom was to be used to advance the cause of "good government", whether at the level of the municipality or the factory. "Democracy" was to mean government for the people based increasingly on questions of fact, a partnership

between the expert and the citizen which was essential to good government (Haber, 1964, p.110). Efficient government was to be achieved through expert government officials acting in the interests of citizens, since the latter could no longer realistically achieve the level of expertise required:

Citizens of larger cities must frankly recognize the need for professional service on behalf of citizen interests . . . Even efficient private citizens cannot deal helpfully with expert governmental questions. Efficient citizens will evidence their efficiency by supporting constructive efforts for governmental betterment (quoted in Haber, 1964, p.112).

The utilisation of notions of efficiency in relation to the business of government can be seen in such bodies as the Presidential Commission on Economy and Efficiency which was replaced by a Bureau of Efficiency when the Wilson administration took office (Haber, 1964, p. 113–114). This was not simply federal concern, the states soon setting up their own efficiency commissions. Wisconsin began in 1911, and by 1917 at least sixteen states had formed such commissions. The achievements of such commissions seem to have consisted principally in consolidating state agencies, improving cost accounting techniques, and in granting more power to the governor (Haber, 1964, p.115).

The great merit of the notion of efficiency was, however, its pliability, or at least its ability to supply a point of focus for arguments covering a vast range of issues. It was not only *social* efficiency that was of concern in the early years of this century. The efficient utilisation of natural resources around the principle of conservation was central also. The notion of conservation, to be achieved through planned and efficient utilisation of natural resources, applied to such issues as water resource management and the conservation of forests (Hays, 1959). And the elasticity of the term "conservation" allowed it to extend back to the question of the conservation of human health. The National Conservation Congress of 1910 had organized a standing committee on "vital resources" which concerned itself with public health as well as having units

on forests, lands, waters and minerals. Two years later, the Congress devoted the entirety of its annual session to "the conservation of human life" (Hays, 1959, p.176). And in 1909 the National Conservation Congress had included speeches on the conservation of the morals of youth, the conservation of children's lives through the elimination of child labour, the conservation of civic beauty, the elimination of waste in education and war, the conservation of manhood, and the conservation of the Anglo-Saxon race.

Philosophical and sociological conceptions of a rationally administered social

These were the most forceful and readily identifiable forms in which the notion of national efficiency appeared in the U.S. Again we feel they provide support to our argument that the term efficiency was a significant one in the sociopolitical debates of the time. We would like now to shift the perspective to the philosophical and sociological debates of the same period. At this level we argue that the emergence in the early decades of the twentieth century of a particular sociological and philosophical form of argument added legitimacy to, and provided a broad rationale for, the project of national efficiency. In particular it contributed a theoretical principle for an art of government founded on two central notions. The first of these was the affirmation of the possibility of a rationally administered and managed social order, something which was to be undertaken with the aid of a neutral and objective knowledge. The second was a specific conception of the nature of the social relations which linked the individual to society. The image here was of the individual as a part of a social machine conceived as an organism.

The sociologist Spencer (1878) had proposed a scientific study of society whose purpose would be "not to guide the conscious control of societal evolution, but rather to show that such control is an absolute impossibility, and that the best that organized knowledge can do is to teach men to submit more readily to the dynamic factors in progress" (Hofstadter, 1955,

pp.43–44). In the period we have been addressing here such a resigned submission to social laws was being repudiated in sociological and philosophical debates. The literature of pragmatism was central to this repudiation. As one author has expressed it:

Spencer's outlook had been the congenial expression of a period that looked to automatic progress and laissez faire for its salvation; pragmatism was absorbed into the national culture when men were thinking of manipulation and control. Spencerianism had been the philosophy of inevitability; pragmatism became the philosophy of possibility (Hofstadter, 1955, p.123).

Pragmatism offered philosophical legitimacy to a period that was becoming increasingly concerned with the rational, purposeful direction and control of social affairs. Particularly in the writings of James pragmatism sought to assert:

... the fundamental idea of an open universe in which uncertainty, choice, hypotheses, novelties and possibilities are naturalized ... (John Dewey, cited in Hofstadter, 1955, p.123).

In seeking to naturalize these concepts, the hope was permitted that there was a space within which human rationality could actively shape and reform the social organization.

Pragmatism was primarily an American phenomenon. In Britain a similar theme emerged through philosophers of what would become the New Liberalism in politics (Freedman, 1978). Here, one finds Hobhouse arguing that the human mind must itself be seen to lie within the overall process of evolution. In so far as mind has evolved to a complex rationality, then it is only fitting that this consequence of the evolutionary process should influence further evolution. Human rationality, in its distinctively scientific form, had provided humanity with: "the vastly increased power of controlling the conditions, external and internal, of life co. . ." (Hobhouse, 1911, p.156). For Hobhouse:

the turning-point in the evolution of thought ... is reached when the conception of the development of humanity enters into explicit consciousness as the

directing principle of human endeavour . . . (Hobhouse, 1911, p.155).

Social science conceived in this manner could become an instrument which would contribute to the better control and directing of human progress. Social science could serve human needs as natural science does, through being consciously adapted and harnessed to the purposeful achievement of ends. According to the American sociologist, Lester Ward:

It is only through the artificial control of natural phenomena that science is made to minister to human needs; and if social laws are really analogous to physical laws, there is no reason why social science may not receive practical applications such as have been given to physical science (Ward, 1918, p.352; cited in Hofstadter, 1955).

The introduction of a space for rational choice entailed the possibility for an applied social science. Knowledge could localise. Its function could become that of following human rationality, in order to improve its effectiveness, through a multiplicity of arenas or sites of action. Social scientific knowledges and practice could, as it were, form partnership with the state, assisting the latter in the purposeful, deliberate improvement of both the social organization, and the life and behaviour of the individual within it.

This changed conception of the nature of the social and the possibility of its rational administration was expressed in the conception of the social machine and the organic relations which were seen to link individuals to it. In Britain, for example, the Fabian socialist Sidney Webb would proclaim that:

. . . we must take even more care to improve the social organism of which we form part, than to perfect our own individual developments. Or rather the perfect and fitting development of each individual is not necessarily the utmost and highest cultivation of his own personality, but the filling, in the best possible way, of his humble function in the great social machine (Webb, 1899, p.58; cited in Freedon, 1978).

And the working-out of a philosophy for what would become the New Liberalism of British politics took, as one of its important strands, the

dilemma of how the more traditional liberal ideal of the freedom of the individual was to be rendered compatible with an organic conception of the social (Freedon, 1978, pp.25–75). For Hobhouse (1911), society consisted of:

. . . individual persons and nothing but individual persons, just as the body consists of cells and the product of cells . . . (p.30).

But in the same way that one would fail to understand the life of a body by examining its separate cells, so one would also fail to understand society in terms only of individual persons.

We must equally take into account that organic interconnection whereby the living processes of each separate cell cooperate together to maintain the health of the organism which contains them all. So, again, to understand the social order we have to take into account, not only the individuals with their capabilities and achievements, but the social organization in virtue of which these individuals act upon one another and jointly produce what we call social results . . . (Hobhouse, 1911, p.29).

An important task facing the social reformer was the redesign of the social organization so that the cooperation of individuals to produce social results could work in the least wasteful way. But unlike Webb's mechanistic imagery, in which the freedom of the individual seemed to disappear in the filling of a social role, Hobhouse argued that:

. . . the life of the body is not perfected by suppressing the life of the cells, but by maintaining it at its highest point of efficiency. Nor is the organism developed by reducing the cells to a uniform type, but rather by allowing each type to vary on its own lines, provided always that the several variations are in the end mutually compatible. These things are applicable to society, from the widest to the narrowest form thereof (pp.90–91).

These two dimensions to the sociological and philosophical debates of the time combined well. A rationally administered social was one in which a concern with the individual could be formulated in terms of the collective goals of society. A concern with individual behaviours was a concern with society because the two were

organically interdependent. Social reform could be conceived in a manner analogous to the reform of the enterprise. Both required the elimination of inefficiencies. Poverty and destitution represented losses for the entire social body. Issues of social reform might now be pressed not only upon moral grounds, but upon intensely practical ones as well (Freeden, 1978, pp.117–169). It was a matter of enhancing the efficiency of individuals, and of seeking to reconstruct the bases of their interactions so as to achieve a minimization of vital wastes (Ritchie, 1891; Hobson, 1914; Ward, 1881).

Some actual practices of socio-political management

Active intervention in the lives of individuals was a way of enhancing the resources of the nation. Such views were not just abstract theoretical formulations but had a real existence at the level of practices. Eugenics is one example of such practices. Eugenics was concerned with the deterioration of the nation's physical stock and its effect on the efficiency of the human component of the nation's resources. Eugenics provided what might be termed a strategic link between a certain theory of social administration and a certain conception of human abilities (Rose, 1979). Arguments concerning the deterioration of the national physique posed the question of the most appropriate mode of intervention in the organisation of the population. In Britain the principal contribution of the eugenics movement (Mackenzie, 1976), was, perhaps, that it provided a principle of legitimization for a series of operations on those individuals suspected of sapping the nation's vigour through their own defects, whether in the field of intelligence testing (Sutherland, 1972; Rose, 1979) or social administration. In the United States eugenics developed further as a "practical" movement. (cf. Haller, 1963; Pickens, 1968; Castel *et al.*, 1982). In 1907, after a number of attempts in the preceding decade or so, (cf. Kamin, 1974, p.10) legislation was passed in Indiana and Michigan providing for the sterilization of "confirmed criminals, idiots, imbeciles and rapists" (Castel *et al.*, 1982, p.47). Many

states followed suit during the following two decades. Much debate followed such legislation, but the eugenic principle was upheld in 1927 by the United States Supreme Court, when it was held that sterilization fell within the police power of the state:

It would be strange if it could not call upon those who already sap the strength of the State for those lesser sacrifices, often not felt to be such by those concerned, in order to prevent our being swamped with incompetence. It is better for all the world, if instead of waiting for their imbecility, society can prevent those who are manifestly unfit from continuing their kind. The principle that sustains compulsory vaccination is broad enough to cover cutting the Fallopian tubes (cited in Haller, 1963, p.139).

In a famous aphorism the judgement concluded by stating "Three generations of imbeciles are enough" (ibid). Eugenic principles continued to spread during the first three decades of this century, so that by 1931 some thirty states had passed a sterilization law at one time or another. It should be added, however, that by 1944 only 42,000 official sterilisations had actually been performed.

But it is not eugenics in and of itself that concerns us here. Eugenics is interesting, rather, as the most extreme example of a form of social management whose concern is the efficiency of the individual. Eugenics ultimately failed as a distinct strand of social management (Rose, 1979). Yet alongside eugenics, initially deriving support from it and ultimately supplanting it as a form of social management, we can see develop in the first three decades of this century a vast range of social interventions which take as their target the inefficient individual. Mental hygiene is an important example of such developments. In the United States in 1909 the National Committee for Mental Hygiene is founded with its aim being:

To work for the protection of the mental health of the public; to help raise the standard of care for those in danger of developing mental disorder or actually insane; to promote the study of mental disorders in all their forms and relations, and to disseminate knowledge concerning their causes, treatment, and prevention; to

obtain from every source reliable data regarding conditions and methods of dealing with mental disorders; to enlist the aid of the Federal Government so far as may seem desirable; to coordinate existing agencies and help organize in each State in the Union an allied, but independent, Society for Mental Hygiene, similar to the existing Connecticut Society for Mental Hygiene (cited in Castel *et al.*, 1982, p.34).

Rapidly obtaining financial support, the results of its first study carried out in a Baltimore school in 1913 are held to show that 10% of the school children were in need of psychiatric assistance. The war was to add considerable force to such developments, the "war neuroses" providing new material for observation and highlighting the relationship between psychic disorders and everyday living conditions. In this respect the greatest contribution of the mental hygiene movement lay in the treatment of the problems of soldiers returning home.

The mental hygiene movement in America was particularly concerned with children's problems, and played a leading role in the child guidance movement which first flourished in the 'twenties. The importance of such developments lay in the new form of social management which they permitted. In the words of one official of the child guidance movement:

the (children's) clinic treats these problems by treating not only the child through whom they become manifest, but as well the family, schools, recreational and other involved factors and persons which contribute to the problem, and whose disorder the problem may reflect (cited in Castel *et al.*, 1982, p.35).

It was now possible to intervene in the whole range of behaviours of these individuals whose performance fell below the norm. The guiding principle was not the curing of disease and the eradication of defects, but the *improvement* of the health of the individual, the optimisation of their functioning. William White was to state this principle clearly in his inaugural address to the First International Congress of Mental Hygiene:

Mental hygiene is on this account alone more important than ever before, and its significance can be seen to be gradually changing from one of the simple prevention of mental disease, which is a negative program, to the posi-

tive attitude of finding ways and means for people to live their lives at their best. Medicine has long enough maintained as ideals freedom from disease and the putting off of death. It is time that these were replaced by ideals of living, of actual creative accomplishment. The art of living must replace the avoidance of death as a prime objective, and if it ever does succeed in replacing it in any marked degree, it will be found that it has succeeded better in avoiding death than the old methods that had that particular objective as their principal goal. Health is a positive, not a negative concept (cited in Castel *et al.*, 1982, p.37).

The advantages were evident. One was now fully entitled, even required, to do something to individuals manifesting minor deviations from a statistical norm which two decades earlier might have passed unnoticed. One could now claim to be able to do something, for instance, to children who manifested such behaviours as "tantrums, stealing, seclusiveness, truancy, cruelty, sensitiveness, restlessness, and fears" (Castel *et al.*, 1982, p.38). At least in principle, there was henceforth no limit to those spheres of personal life which, once rendered visible, could now be regarded as potentially disruptive of the efficient functioning of the individual.

The focus for all these new forms of social intervention was the individual. What they achieved was to bring to the surface all those aspects of an individual's personal life which might be detrimental to their physical and mental health, and thereby to their efficiency, and to open these up to the possibility of a wide range of forms of social management. Intelligence testing provided a further and important dimension to this overall strategy of rendering visible the level of functioning of the individual. The advantage of intelligence tests was that they supplied an elaborate and supposedly objective means whereby one could differentiate one individual from another. It did so with the aid of statistics which served to show the extent of the individual's deviation from the norm (Hacking, 1975; Rose, 1979). Intelligence tests were first developed in France by Alfred Binet in 1905, although as early as 1895 the principles were stated clearly:

we must search with the present knowledge and

methods at hand for a series of tests to apply to an individual in order to distinguish him from others and to enable us to deduce general conclusions relative to certain of his habits and faculties . . . (Binet & Henri, trans quoted from Rose, 1979, p.8).

Intelligence tests were imported to the United States by Terman at Stanford, Goddard at the Vineland Training School in New Jersey, and Yerkes at Harvard. Mental testing at that time had close connections with the eugenics movement. The problems were seen to be those of criminality, pauperism, indigence and inefficiency, all of these being a threat to a well-ordered social body. The difficulty, however, lay in detecting such insidious characteristics. For whilst a lay-person could detect the most extreme and manifest forms, how was one to identify the high-grade defectives? The inexperienced observer could easily mistake such individuals as entirely normal. Mental testing produced a "solution" in its provision of a means of systematically identifying the fine differentiation between individuals across huge masses of individuals. Statistics and the normal curve supplied another important ingredient in the form of a mechanism for identifying deviation from the norm (Galton, 1883; Hacking, 1975; Rose, 1979; Sutherland, 1972).

In the United States the question of immigration control offered a suitable experimental ground for mental testing. The testing of "the great mass of average immigrants" in 1912 had revealed that 83% of the Jews, 80% of the Hungarians, 79% of the Italians, and 87% of the Russians were "feeble-minded". It is well to recall that feeble-mindedness was a way of qualifying for deportation, and it appears that mental testing significantly increased the number of deportations for this reason (Kamin, 1974, p.16).

The first world war was a further powerful factor in encouraging the spread of mental testing. The testing programme, the Alpha and Beta tests, was applied to some two million men, public interest in such tests being given a stimulus when it was revealed that the "mental age" of the average white draftee was only 13 (Yerkes, 1921). Extrapolating such results to the entire population of the United States yielded a figure of some 50 million mentally defective citizens!

(cited in Castel *et al.*, 1982, p.45). Although it appears that such figures were rapidly revised downward, they provided an important impetus for the spread of mental testing to other areas of social life.

In Britain the war also was significant for the development of psychological testing. The influence of the work of C.S. Myers is crucial here. Questions such as fitness in relation to length of working time, the selection and training of industrial workers, the estimation of "accident proneness" as a personal attribute, all showed the value in being able to identify the personal psychological characteristics of the individual. Myers devised and applied selection tests for men using listening devices for locating enemy submarines, and worked on problems of the "war neuroses". Myers insisted on the psychological nature of what was called "shell shock" and proposed and practiced psychotherapeutic methods of treatment. His position was emphatic:

The physiological factors involved in purely muscular fatigue are now fast becoming negligible, compared with the effects of mental and nervous fatigue, monotony, want of interest, suspicion, hostility, etc. The psychological factor must therefore be the main consideration of industry and commerce in the future (Myers, 1920, pp.V-VI).

The psychological attributes of the person were, indeed, to provide the most fruitful ground for the expression of concerns to implicate the individual within the objectives of the enterprise and society.

THE FIRM AS A SITE IN THE CONSTRUCTION OF THE GOVERNABLE PERSON

The ambiguities of the word efficiency enabled it to operate across a series of dispersed strategies concerned with managing the life of the person. These ranged from broad political platforms to psychological and sociological concerns with individuals who deviated from specified norms in a variety of ways. We have argued that the standard costing-budgeting com-

plex can be viewed in terms of such a preoccupation. Standard costing and budgeting, however, were intended to operate within a particular site — that of the firm. Our concern now is to identify the way in which standard costing and budgeting, in conjunction with scientific management and industrial psychology, came to define the firm as a very particular kind of space. It should be one in which efficiency and rationality would prevail. Such objectives would be stated not just in terms of the overall objectives of the enterprise, but at the level of the activities and ultimately motivations of the individual employee. Initially the worker on the factory floor, and finally every employee, would come to be identified in terms of their contribution to such ends. This was to require a process of continual monitoring and observation. The standard costing and budgeting complex was, we argue, a central element in such a process.

The creation of a standard costing within the accounting literature, accounting historians have acknowledged, owes a considerable debt to that movement which, originating in the U.S.A., became known as “scientific management”. According to Solomons (1968, p. 37), for example, one cannot read F. W. Taylor’s paper of 1903 on Shop Management without noticing that it contains many of the essential elements of what would later become standard costing. Accounting historians have drawn our attention, also, to another leading proponent of scientific management ideas, Harrington Emerson (see, e.g. Sowell, 1973, pp. 206–19; Epstein, 1978, pp. 90–120). Not only did his work on efficiency explicitly envisage a requirement for something akin to a standard costing (Emerson, 1919, pp. 149–172), but apparently he exercised a strong influence on the writings of G. Charter Harrison, whose 1930 book has been taken as an early exemplar of a fully-integrated and rationalised standard-costing and budgeting system (Sowell, 1973, pp. 220–70).

Taking scientific management and cost accounting as an interlinked complex, we wish to suggest an explanation as to the kind of project to which it contributed. This was one in which notions of efficiency identified at the level

of the individual could come to be expressed in money terms and related to expected standards and norms.

Undoubtedly, the body of thought and practice that became known as scientific management was enmeshed within that American quest for national efficiency to which we have referred in the preceding section (Haber, 1964; Hays, 1959). According to F. W. Taylor (1913, pp. 5–7), in the introductory pages of his celebrated *Principles of Scientific Management*, the task was to advance national efficiency through remediation of those vast wastes which, going far beyond the poor use and inadequate conservation of natural resources, secreted themselves within the daily actions of everyone. Roosevelt had been prophetic, says Taylor, in regarding the conservation of natural resources as no more than preliminary to such a wider question of the efficiency of the person and, thereby, of the nation.

For Taylor the core of the issue was that, whereas wastes of natural resources have an easy visibility, wastes of human resources are hidden:

We can see our forests vanishing, our water-powers going to waste, our soil being carried by floods into the sea. We can see and feel the waste of material things. Awkward, inefficient, or ill-directed movements of men, however, leave nothing visible or tangible behind them. Their appreciation calls for an act of memory, an effort of the imagination. And for this reason, even though our daily loss from this source is greater than from our waste of material things, the one has stirred us deeply, while the other has moved us but little (Taylor, 1913, pp. 5–6).

Scientific management would take upon itself the project of replacing that vagueness and other acts of the imagination with exact scientific knowledge of the extent of the wastes caused through inadequate human action and social organisation. And, it would also set itself the task of their systematic elimination.

We are not concerned here to contest Taylor’s claims to scientificity. It is, rather, with the way in which such claims functioned that we are interested. Lay knowledges and practices of all kinds, such as trades, crafts and traditional practices, were to be placed under suspicion as to the wastefulness of their modes of operation. As the

above quote shows, Taylor was in little doubt that such wastes were vast. Gilbreth also would illustrate the shocking waste through awkward and blundering movements in a trade as old as bricklaying (Drury, 1915, pp. 108–113). Taylor himself would point to the need for a science of such mundane tasks as shovelling and pig-iron handling, urgently to replace haphazard modes of work.

This rendering suspicious of the inadequacy of lay knowledges and practices is important. It helped to legitimate the attempt of scientific management to appropriate the work-life of the individual with a view to intervening in it in order to optimise its efficiency. Around the pillars of efficiency, the need to eliminate wastes, and the assuredness of science over and above informal knowledges, scientific management sought to establish for itself a right to interfere in people's lives. This right was eventually to be taken over by an army of technicians of the social and economic life of the enterprise.

Scientific management reflects the almost messianic role for the engineering profession envisaged by some of its leaders in the U.S.A.:

To attain the high efficiency of the atomic energy of the fish, the high mechanical efficiency of the bird, the high lighting efficiency of the firefly, is not an ethical or financial or social problem, but an engineering problem; and to the engineering profession, rather than to any other, must we look for salvation from our distinctly human ills, so grievously and pathetically great (Emerson, 1919, p. 5).

Coupled with its rejection of the merit of lay knowledge and practices, the scientific management literature also reveals a belief in the possibility of actually improving the efficiency of the person. It reflects a philosophy which refuses to accept that greatness and success are solely accidents of birth. "In the future", says Taylor (1913, pp. 6–7),

it will be appreciated that our leaders must be trained right as well as born right, and that no great man can (with the old system of personal management) hope to compete with a number of ordinary men who have been properly organized so as efficiently to cooperate.

In the later years of his career Taylor envis-

aged that scientific management would conquer the entire social space. While his proposals originated in the factory:

It is hoped, however, that it will be clear . . . that the same principles can be applied with equal force to all social activities: to the management of our homes; the management of our farms; the management of the business of our tradesmen, large and small; of our churches, our philanthropic institutions, our universities, and our governmental departments (Taylor, 1913, p. 8).

To achieve such an objective within the enterprise meant constructing norms or standards of what efficiency might mean. Implanted within the task performance of the worker these were to provide a basis for observing deviations from expectations. It is in this context that we can appreciate the intersection of scientific management and cost accounting. For it seems that from an early date, scientific management writers had recognised the potential of an efficiency measure grounded in money, in costs saved and profits earned. As early as 1886, for example, H. R. Towne, then president of the American Society of Mechanical Engineers and a mentor of Taylor's, had wanted to construe the engineer as an economist (Towne, 1886). For Towne, the true significance of an engineer's efforts to promote efficiency, some special cases of vital national security apart, ought ultimately to be judged in terms of economics. Efficiencies were deemed true only if they could ultimately be shown to be so in terms of costs saved. One finds Harrington Emerson (1919) echoing these sentiments later, arguing a need for engineers and accountants to collaborate towards the meaningful exposition of inefficiencies. It is hardly surprising, then, that engineers associated with scientific management should have come to occupy such a central role in the construction of standard costing.

The work of G. Charter Harrison provides a way of identifying this bridge which was established between engineering and accounting. Harrison's claims to title span the professional bodies of industrial engineering, chartered accountancy and costs accountancy. To him has been attributed the writing of one of the earliest

full articulations of standard costing, a work of which Solomons would say in 1968 that it was still part of the current literature. Harrison takes from Emerson (1919) his concept of the fundamental defect of existing cost accounting practices. Prior to its intersection with scientific management, cost accounting's prime defect was that it had:

Failed most utterly and dismally to achieve what should be the primary purpose of any cost system, namely, to bring promptly to the attention of the management the existence of preventable inefficiencies so that steps could be taken to eliminate these at the earliest possible moment (Harrison, 1930, p. 8).

In rectifying this deficiency cost accounting would expand its domain. It would supply the engineers and their scientific management with a facilitative technology for expressing their norms and standards in terms of money. The earlier concern of cost accounting with the registration of the movements of workers and materials as they "attached" themselves to production (Epstein, 1978, pp. 90–120) would be augmented. This expansion would reflect a concept of the worker as almost certainly inefficient, needing to be enmeshed within a routinely-applicable calculative apparatus which standard costing would provide.

This alliance of cost accounting with the engineers was important in the construction of norms of efficiency. It provided a way for making the individual worker routinely knowable and accountable in terms of wasted actions. And scientific management was such an individualising endeavour *par excellence*. It was a matter of ceasing to treat of workers only in the anonymous terms of groups, classified by trade or skill. Attention was to be paid instead to the performance of each individual worker. Taylorism would insist that each worker be singled out, to be rewarded or punished on the basis of his or her individual performance (Taylor, 1913, p. 121; Haber, 1964, p. 23). When one ceases to deal with men in large gangs or groups, says Taylor (1913),

and proceeds to study each workman as an individual, if

the workman fails to do his task, some competent teacher should be sent to show him exactly how his work can best be done, to guide, help, and encourage him, and, at the same time, to study his possibilities as a workman (pp. 69–70).

But over whom was this individualisation to be exercised? It is clear that leaders of the scientific management movement had envisaged that their principles could embrace everyone, with no task at all too lowly or important to escape. Both physiological and mental work were to be embraced. But despite that hope, scientific management would remain entrapped at the level of fairly mundane, physiological tasks (Drury, 1915). Its first-hand technologies for constructing norms, such as the time and motion study, were hardly equipped for anything more.

This is precisely where standard costing again becomes significant. Together with budgeting it would seem to have provided an important escape route, allowing the principles of standardising and normalising to move away from the factory floor. At least in principle they could now embrace everyone within the firm. Harrison's (1930) standard costing text offers, in the terms of scientific management, a rationale for such an endeavour:

We have increased the efficiency of the average man because we have applied the principles of scientific management to his work . . .

Our accounting methods today are the best evidence of our failure to apply scientific management principles to the development of our executives. For the five-dollar-a-day man our accounting records clearly set up the objective and the accomplishment in comparison therewith. But when we come to our records for executives what do we find? . . . Of accomplishment, it is true that our profit and loss account tells the story of the ultimate result, but of executive objectives shown in relation to the accomplishment, our records are silent . . . (p. 27–28).

Standard costing had already enmeshed the factory worker within a calculus of efficiency. It should now move on, by means of the budget or profit plan, to do the same for executives.

No man can realize his fullest possibilities, whether he be a five-dollar-a-day trucker in the factory or a five-

thousand-dollar-a-year executive, unless he has before him at all times (1) a carefully determined objective, (2) records showing the relationship between accomplishment and this objective, and (3) if he has failed to realise the objective, information as to the causes of such failure. Standard costs furnish the factory superintendent with this information as regard factory costs, and standard profit or budget systems give the executive this information as regards profits (Harrison, 1930, pp. 27–28).

The engineers (e.g. Emerson, 1919) had envisaged that standard costing would be no more than an appendage to their principles of scientific management. It would be a convenient calculative apparatus in respect of the core data the engineer would supply. But accounting's facility to operate in terms of money effected a surprising metamorphosis. By concentrating upon an end-result of money, accounting could standardise efficiency for a much larger group. In the case of more "mental" type of work, it could simply express expectations in terms of a money outcome, leaving uncertain the question of the means.

A line of continuity can, we suggest, be established from scientific management to standard costing to budgeting. It is a continuity which centres on the norm, on surrounding the person with expectations of behaviour. While scientific management might seem to have faded into extinction, it has not done so without leaving a significant residue, in standard costing and budgeting. If Taylorism and scientific management more generally had envisaged the enterprise as machine-like, cost accounting, through the budget and budgetary control, would provide a means for rendering that image operational. Money would, as it were, become the common currency with which to integrate and aggregate the activities of individuals as components. For both brain-work and physical-work, indeed for every accountable person within the firm, standards and deviations therefrom reckoned in money could record the individual's contributions, and also their failure to contribute, to the ends of the machine as a whole. At hand was a calculative apparatus through which deep questions of responsibility could routinely be pressed upon individuals.

But the scientific management–cost accounting complex was not the only one in the early decades of the century to concern itself with the efficiency of the person and their contribution to collective efficiency. While standard costing and budgeting provided the lens through which engineers and managers might gaze at workers and managers and their inefficiencies, others were also interested to join in the process of observation. Specifically, these were the early industrial psychologists. A central figure here was Hugo Munsterberg. He formulated the task of industrial psychology as follows:

Our aim is to sketch the outlines of a new science which is to intermediate between the modern laboratory psychology and the problems of economics: the psychological experiment is systematically to be placed at the service of commerce and industry (Munsterberg, 1913, p. 3).

What was now being addressed was how the psyche of the worker might be known and managed, so as to serve efficiency on an even grander scale than the promise of the engineers and the cost accountants. The industrial psychologists can be seen as a further group that would invade the firm, generating and applying a knowledge of the individual. With this development concerns of the mind as well as of the body would be introduced into the project of enmeshing the individual within norms of economic performance.

There seems little doubt that the early industrial psychology literature shares much in orientation with the scientific management–cost accounting complex we have just looked at. Industrial psychology would also lay claim to scientific status. And it would do so in a more careful manner than Taylorism. Relative to the "helpless psychological dilettantism" of others who would seek to motivate the worker, (Munsterberg, 1913, p. 56), it would thereby seek to establish for itself a privileged position. Now that it had moved beyond philosophical or theological speculation, psychology could offer a practical contribution to the goals of civilisation (Munsterberg, 1913). It would establish a laboratory within which to place the person as a subject upon whom experiments could be con-

ducted. This would place it alongside the natural sciences. Its peripatetic laboratory would be the factory, industrial psychologists moving freely from the one to the other with great ease (Myers, 1920).

Industrial psychology would share with scientific management a concentration upon the individual. Indeed as Munsterberg (1913) points out, the entire project of an applied psychology, within which industrial psychology can be sited, had become possible only when psychologists came to recognise the importance of individual differences. The quest for universal laws of the mind, for all of its importance, had denied psychologists the possibility of bringing their skills to bear upon the practical world of affairs:

In practical life we never have to do with what is common to all human beings, even when we are to influence large masses; we have to deal with personalities whose mental life is characterised by particular traits of nationality, or race, or vocation, or sex, or age, or special interests, or other features by which they differ from the average mind which the theoretical psychologist may construct as a type (Munsterberg, 1913, p. 9).

It is the individual whom the psychologist is to help. His or her particular aptitudes or skills are to be expertly ascertained, so that the psychologist can recommend a person–task fit that is congruent with individual well-being and the exigencies of efficiency (see e.g. Myers, 1920). And motivational difficulties in task performance are to be seen as stemming from mental traits which the non-expert cannot effectively diagnose. Only by such interventions of the psychologist will there be avoided that which

social statistics show with an appalling clearness, what a burden and what a danger to the social body is growing from the masses of those who do not succeed and who by their lack of success become discouraged and embittered (Munsterberg, 1913, p. 35).

Finally, the early industrial psychologists share with Taylorism an appeal to efficiency as a transcendent purpose. They too, it seems, want their endeavour placed beyond the reach of politics:

psychotechnics does not stand in the services of a party, but exclusively in the service of civilisation (Munsterberg, 1913, p. 20).

To any project of enmeshing the individual within norms of efficiency, an expert psychological selection process, as well as psychological intervention in interpreting task performance variables, is declared indispensable. Later, as we shall see, the body of psychological literature which would emerge in altered form from these beginnings would significantly intersect with budgeting and standard costing. In so doing, it would help to bring into particular relief the complex individuality of the person within the firm. This construct has, we shall suggest, reinforced a rationale for “behavioural scientists” to intensify their attention to managing the organisationally dysfunctional properties of the person.

A GESTURE TOWARDS THE PRESENT

In so far as the concern of this paper is historical we would like it to be read as a “history of the present”. By this we mean an attempt to identify the dispersed events which intersect to establish our contemporary, and often unquestioned, rationales. This far, however, we have been pointing largely to notions and practices which have been supplanted or significantly redefined. We would like now to try schematically to identify some of the relocations and shifts which have occurred in more recent times. We cannot hope in any way to do justice to the richness of the intervening period. It is simply some of the lines which emerge out of and following the period 1900–1930 to which we wish to refer. This is undertaken with a view to locating the continuities between the present and the period we have addressed above. It also entails registering the effect and implications of the shifts which have occurred in the accounting literature.

One issue which interests us particularly in this continuity of concerns, coupled with a redefinition of terms and objectives, is the introduc-

tion of the notion of the "behavioural" into accounting (Devine, 1960; Bedford and Dopuch, 1961; Ashton, 1983). Our suggestion is that this produced a modernisation of the accounting complex, but one which entailed a significant continuity with the concern to enmesh the individual within a complex web of calculative practices. It is not that accounting simply expands its domain through the introduction of the behavioural within its sphere. It is rather a redefinition of the terms according to which the accounting complex is understood that is at issue. This is achieved through incorporating within the domain of accounting a changed notion of the person. The change concerns the attribution to the individual of a complex set of motives and frustrations, a potential hostility to the budget, for example. The individual is viewed as a member of informal groups outside, from which can be drawn considerable support and into which there is always the danger that he or she may withdraw. In recognition of such a danger accounting comes, we argue, to redefine its territory by including within its legitimate sphere of operation precisely these concerns.

A second issue, and one we have referred to already, concerns the level at which the redefinition takes place. Stated baldly, and as a question, the issue is this: is our concern here simply with discourses? The answer is clear. The redefinition of accounting through the introduction of the behavioural was carried out in relation to very real practical problems. One of the pioneering studies in this field (Argyris, 1952) was indeed undertaken as a report to the Controllershship Foundation itself. Concerned with "the point at which men and budgets meet" the foreword declared clearly the aims of the report:

we hope the report sheds light on one of the most basic "Control" questions faced by management — how to gain acceptance — the real acceptance of standards and goals (Argyris, 1952, foreword).

The starting point for the rethinking of accounting through the introduction of the behavioural was a concrete problem. The formulation of the terms of such an issue was effected, however,

within discourse. It could not be otherwise. The point we would draw from this is that important practical issues produce the conditions under which certain problems come to be expressed. They do not, however, determine the terms according to which they are expressed. Our concern here is with the latter.

A third point relates to the notions of rationality and efficiency, and the extent to which the changes we point to represent a continuation of such a concern. Our answer would be emphatically affirmative. Yet we would again wish to draw attention to the redefinitions which occur. Rationality itself comes to be problematised. All individuals come to be viewed as decision-makers, albeit in different respects. Rationality remains as an issue of the relation between personal and collective efficiency, yet it is constructed according to a different conception of the person and a revised notion of the organisation.

Our interpretation of the introduction of the behavioural into accounting entails a slight detour. This is through the psychological and sociological formulation of an interest in the human relations aspect of organisations during the second quarter of the twentieth century. Central here are the Hawthorne investigations which extended for five years from 1927 until 1932 (Mayo, 1933; Whitehead, 1938; Roethlisberger & Dickson, 1939). The familiarity of the various commentaries on the Hawthorne researches entails the possible danger that we become inured to the novelty of their invention of an art of government for the enterprise. This would be unfortunate because the reformulation they produced in such a project was profound. The effect of the Hawthorne researches was to enable a concern to develop with the life of the person in all its dimensions as a problem for the collective ends of the total organisation. Roethlisberger & Dickson express this ambition clearly:

In terms of the concept of an industrial organization as a social system many of the human problems of management can be reformulated. A traditional statement of these problems frequently distorts the actual human situation in the industrial plant. The workers, supervisors, or

executives are often considered apart from their social setting and personal history and are treated as essentially "economic men". Simple cause and effect analysis of their behaviour is substituted for the richer situational context in which their lives are lived and in which the relation of mutual interdependence obtains (Roethlisberger & Dickson, 1939, p. 569).

The emphasis which emerges is on collective goals and mutual interdependence of the various component parts of the enterprise. This was to entail a reconceptualisation of what one could expect from budgets and other forms of standardisation of managerial expectations. One could no longer base budgets and performance standards solely on an assumption of rational economic personal motivations. To do so risked producing severe unintended consequences and resistances. In place of such limited views must be put the person characterised by sentiments, to whom managerial policies must be addressed in terms of their meanings to that person in their particular personal and social circumstances. The concern with efficiency and rationalisation must be articulated with an understanding of the possibilities of securing cooperation and acceptance of managerial goals. A negotiative conception of management should be substituted for one based on the crude imposition of standards. The concept of managerial control would have to be redefined so as to implicate individuals within the collective objectives of the enterprise. To achieve this one would have to attend to a quite different dimension of the enterprise to that previously:

A great deal of attention has been given to the economic function of industrial organization. Scientific controls have been introduced to further the economic purposes of the concern and of the individuals within it. Much of this advance has gone on in the name of efficiency or rationalization. Nothing comparable to this advance has gone on in the development of skills and techniques for securing cooperation, that is, for getting individuals and groups of individuals working together effectively and with satisfaction to themselves (Roethlisberger & Dickson, 1939, pp. 552–553).

Economic ends are mediated through personal and social sentiments. One cannot hope to achieve the former if the latter are ignored. One

must construct a work situation which is also a social situation. Through this one will be able to implicate the personal dimensions of the life of the worker within the economic objective of the organisation:

Where the work situation is such that it does not allow the worker's preoccupations or attention to be socially expressed or directed by conversation or by other activities, an ideal setting is created for the development of morbid preoccupations. He is likely to spend his time brooding about his personal problems or his relations with his co-workers and supervisors. Where the social situation is such that it does allow for the social expression of preoccupation, much brooding about factors incidental to the worker's personal history can be alleviated (Roethlisberger & Dickson, 1939, pp. 573–574).

Now of course the concern with the personal dimension of the life of the worker was a much more complex issue than these brief remarks suggest. Their relevance for our concerns here, however, are in terms of the way such themes provided a basis for the redefinition of accounting which was to occur in the third quarter of this century. Put simply, the redefinition took place through the incorporation (within the domain of accounting) of just these personal and human relations concerns.

Argyris (1952) is the clearest early formulation of such a concern. The Foreword to Argyris' study reminds us of the defects of accounting techniques as previously conceived. Some of these, it is argued:

have reached the ultimate state of dwelling within an electronic tube and emerging only to shake a mechanical finger at erring human beings (Argyris, 1952, foreword).

The point of Argyris' study was that this conception of accounting must be drastically revised. He drew attention to "what people think of budgets", distinguishing between "budget people", "factory supervisors" and "employees" or "factory people". The point of this categorisation was to demonstrate that different groups of people had different views on budgets, on how they were used and why they often were not met. The negative consequences of budgets which were simply imposed on people were identified clearly by Argyris. Pressure to meet

targets laid down in budgets risked increasing tension, resentment, and suspicion. This would often lead to the formation of groups as a way of combatting management pressure. The real danger, however, lay in the longer term. In the short term management may recognise the dangers and reduce the pressure. In principle the group should disappear. However the conclusion to which Argyris came was that there was a tendency for the group to remain. If it remained, it would continue to cause problems well after the initial irritant had been removed.

The remedy proposed was the introduction of a negotiative politics for the government of the enterprise. A number of terms came to operate within this broad space — cooperation, bargaining, communication. Of course as a negotiative politics it was weighted heavily in the favour of one side. The point however was clear. As far as budgets were concerned one should seek to gain acceptance of budgets by all those whom they affected. Accounting should be reformulated so as to take account of such factors. The worker as a complex person and as a member of an informal group should be incorporated within accounting's domain.

This shift to a behavioural conception of accounting can be indicated across a range of writings which have appeared over the past two decades and more (Caplan, 1966; Hofstede, 1968; Hopwood, 1974; Schiff & Lewin, 1974; Harrison *et al.*, 1981). Devine (1960) would argue that the behavioural assumptions of accounting needed drastic revision:

Let us . . . turn to that part of accounting which is related directly to the psychological reactions of those who consume accounting output or are caught in its threads of control. On balance it seems fair to conclude that accountants seem to have waded through their relationships to the intricate psychological network of human activity with a heavy-handed crudity that is beyond belief. Some degree of crudity may be excused in a new discipline, but failure to recognise that much of what passes as accounting theory is hopelessly entwined with unsupported behaviour assumptions is unforgivable (Devine, 1960, p. 394).

Another writer (Caplan, 1966) would argue that accounting as a management tool needed to take

account of the complexity of the individual's motivations, their diverse needs and desires:

It is possible that the failure of management accountants to consider the more complex motivating forces which organisation theory recognizes in the individual contributes to the use of accounting systems and procedures which produce "side-effects" in the form of a variety of unanticipated and undesired responses from participants. For example, many management accounting techniques intended to control costs, such as budgeting and standard costing, may virtually defeat themselves because they help to create feelings of confusion, frustration, suspicion and hostility. These techniques may not motivate effectively because they fail to consider the broad spectrum of needs and drives of the participants (Caplan, 1966, p. 506).

The clear lesson was that accountants should accept as relevant those bodies of knowledge which hitherto they had overlooked. What might have seemed to Harrison (1930) as no more than commonsense, namely that budgets ought to be set so as to encourage their achievement, was coming to be seen as itself rather a large territory for investigation, requiring the mediation of other and unfamiliar theories and concepts. Indeed, one might say, the whole meaning of cost accounting's effectiveness was being challenged. Instead of depending just upon the technical sophistication of the accounting system, effectiveness was coming to be seen as crucially dependent upon whether the system would actually impel people to achieve desired purposes (Benston, 1963; Caplan, 1966; Hopwood, 1973). The encircling of the person with calculative practices which would routinely construct or monitor his or her contributions to efficiency, as traditionally effected by budgeting, was seen to be dependent upon an inadequate psychology.

Other studies were to refine the issues at stake here (e.g. Likert & Seashore, 1963; Becker & Green, 1962). The encounter between the person and the budget was to lead accountants to observe the organizational life of the person at first hand. Questions would be asked as to the extent of the relevant psychological, sociological and organization theories which accountants ought to know, and the options which existed

for collaborations with the more established "behavioural scientists" (Devine, 1960; Hofstede *et al.*, 1970). And some substantive empirical studies would be carried out. Tending to take budgeting and standard costing as points of departure, such studies would explore the impact, both upon the psychological well-being of the person and upon his or her propensities to meet organizational efficiency or goals, of those "unintended consequences" produced by such calculative practices (see e.g. Hofstede, 1968; Hopwood, 1973). More knowledge was needed, in order that the systems and their methods of use might be redesigned, so as to enhance the well-being of person and organization. One might say that the discovery of the motivational complexity of the person revealed the inadequacy of such as budgets in procuring individual efficiency. A space was opened for fresh approaches to that endeavour. And in addition to empirical field studies, accountants would come not only to join the psychologist in laboratory observations of the organizational subject, but even to make some significant attempts to construct similar laboratories of their own (see e.g. Libby, 1981 for a review). Accountancy would enter alliances with the other behavioural sciences to gaze upon and to direct the organizational life of the person.

One particular expression of the shift we are referring to here was the re-casting of organisation theory through a notion of the person viewed as a decision-maker. For our concerns here this is an important development. It had the effect of significantly redefining the project of management and the attempt to establish mechanisms for the implication of the individual within organisational objectives. Or rather it rendered problematic the nature of the social bond within the enterprise.

The introduction of the notion of the person as a decision-maker rendered obsolete the image of the individual as a machine and substituted one of an individual capable of choice. This element of choice entailed in the notion of the decision-making individual placed the personal dimension of individual behaviour at the margins of the possibility of control. The individual,

and the project of organisational management, would have to enter a perpetual series of moves and counter-moves. The project of management viewed in these terms could never terminate because the person was always seen to possess the possibilities of choice which could be organisationally dysfunctional. The decision-making person is seen to have an ineradicable element of freedom. The task of organisational management would come to be understood as the supervision and definition of this freedom, something which could always be subverted. An expanded group of "behavioural scientists", including at least some accountants, would set itself the task of attending to such questions.

One can locate such a shift through the writings of Barnard (1938), Simon (1957), March & Simon (1958) and Cyert & March (1963). These works were to be seen as having enriched the concerns of accountants with human motivation, and they achieved rapid recognition within the academic accounting literature (Devine, 1960; Benston, 1963). As early as 1937 Barnard was lecturing on the distinction between personal ends and organizational ends. He was to suggest the existence of "a sort of dual personality", one which was organisational and one which was personal. An important issue this raised was that of their congruence on matters of authority. The latter was seen to depend crucially on personal acceptance and not on purely formal criteria:

If a directive communication is accepted by one to whom it is addressed, its authority for him is confirmed or established. It is admitted as the basis of action. Disobedience of such a communication is a denial of its authority for him. Therefore, under this definition the decision as to whether an order has authority or not lies with the persons to whom it is addressed, and does not reside in "persons of authority" or those who issue these orders (Barnard, 1938, p. 163).

Authority is interpersonal. The individual is seen to be free to decide for or against acceptance of norms, instructions and standards; at the very least they are no longer viewed as unproblematically internalised. The reactions of subordinates is seen to be mediated by varying degrees of conviction. Whereas for an organisation:

decision is in its important aspects a social process . . . the process of decision in individuals . . . is a psychological process socially conditioned (Barnard, 1938, cited in Sofer, 1972, p. 165).

March & Simon (1958), Simon (1957) and Cyert & March (1963) were to develop this notion of the decision-making organisation. "Deciding" came to be viewed not as a momentary act but as a process which pervaded the entire organisation:

Although any practical activity involves both "deciding" and "doing", it has not commonly been recognised that a theory of administration should be concerned with the processes of decision as well as with the processes of action. This neglect perhaps stems from the notion that decision-making is confined to the formulation of over-all policy. On the contrary, the process of decision does not come to an end when the general purpose of an organization has been determined. The task of "deciding" pervades the entire administrative organization quite as much as does the task of "doing" — indeed, it is integrally tied up with the latter. A general theory of administration must include principles of organization that will insure correct decision-making, just as it must include principles that will insure effective action (Simon, 1957, p. 1).

A drastic revision of the concept of "economic man" was seen to be needed. The revision meant incorporating the environment and the psychological attributes of individuals within a new conception of the individual human being. Cyert & March (1963) were to formulate this shift in a "behavioural theory of the firm" within which such a notion of the person and of decisions were central. The budget and its ability to define organisational objectives was central to understanding the firm in such a manner. The issue was expressed simply. Individuals have goals; collectivities do not. A means of generating collective goals so that they are congruent with personal goals was seen to be required.

The elaboration of organisational goals came to be defined in a way which saw them as inherently conflictual. The organisation was, after all, only a "coalition" of individuals, some of them organized into subcoalitions (Cyert & March, 1963, pp. 27–29). Cooperation was a process of negotiation, of bargaining. But human beings have limited capacities. Control-systems are needed to identify the considerations relevant to

members of the coalition. One such control-system is the budget:

The budget in a modern, large-scale corporation plays two basic roles. On the one hand, it is used as a management control device to implement policies on which executives have decided and to check achievement against established criteria. On the other hand, a budget is a device to determine feasible programs. In either case, it tends to define — in advance — a set of fixed commitments and (perhaps more important) fixed expectations. Although budgets can be flexible, they cannot help but result in the specification of a framework within which the firm will operate, evaluate its success, and alter its program (Cyert & March, 1963, pp. 110–111).

The budget may set organisational objectives. But it is nonetheless constrained by the more general constraints of the motivational complexity of individuals. What is interesting for our purposes here is the proposed resolution to this difficulty. One no longer seeks only to force people into the structures of the budget. Rather one redefines the accounting side of the equation through the incorporation of a concept of the person as motivationally complex. The budget and standard costing come to be displaced in favour of a task of seeking to engineer the rationality of the person. The implication and normalisation of the individual within calculative practices is no longer to be achieved through single-minded pursuit of budget requirements (Hopwood, 1973).

Let us try and express what we see to be at issue here, for it is not simply a matter of definitions. What we see to be occurring in the texts we have cited is a reconceptualisation of the boundaries of the accounting complex through an inclusion within it of a revised notion of the person and the firm. With this shift accounting comes to function as an interdependent element in a range of operations whose concern is with the implication of the individual within organisational objectives. What we are suggesting, admittedly by merely gesturing towards some relevant examples, is that an important reformulation of the objectives of accounting occurs through the introduction of the notion of the behavioural within its terms of reference. It is not just a broadening of the concerns of accounting. It is a

significant redefinition of the terms and objectives of accounting as a social practice. Accounting would seek to work more closely with psychology within a complex of human sciences whose object was defined as the person and his or her life within the organisation. The redefinition which takes place, however, does not obliterate the concerns of accounting we have identified above as emerging in the early decades of this century. To adapt March's (1978) useful analogy, accounting continues to be concerned with the active engineering of the organisationally useful person. It comes to possess, however, a much more promising set of concepts, techniques and mechanisms with which to achieve such an objective.

IMPLICATIONS AND CONCLUSIONS

We have pointed in this paper to a number of events occurring roughly within the first three decades of this century which we see to be significant for the understanding of accounting as a social and organisational practice. These events have been the conspicuous emergence of different bodies of expert knowledge and practice, as well as political, journalistic and philosophical discourses, all of which share as a point of convergence the active management of the life of the person in its varied facets. Clustering around the word efficiency, we have suggested, one can witness within this period a diverse group, including engineers, psychologists, accountants, medical practitioners, proponents of eugenics, journalists and politicians, propose various projects for improving the life of the person and, thereby, of the nation. At stake, it seems, is an urgent felt need to identify and to eliminate shortcomings in such matters as people's mental and physical health, and the quality of their offspring, as well as their contribution to the economy, the protection of the empire, and public life generally. A theme running through all the discourses and practices we have looked at is a positive concern to take and to improve the life of the person. Quite literally, the person was to be worked upon, to be managed through a series

of interventions into an enhanced state of life.

We have suggested that the firm can be seen as one of the sites in society towards which such projects would address themselves. Specifically, we have looked at scientific management, at the birth of industrial psychology and of modern cost accounting.

Viewed in terms of a concern with national efficiency, the project of scientific management helped to render apparent and remediable the waste lying deep within the every move of the worker. Norms or standards were to be constructed for the doing of work of every kind. Those norms, reflecting as they would an increased level of efficiency, were expected to yield that extra output and prosperity which would render class conflict obsolete. Such a congruence of self-interest of worker, employer and the social body alike, joined to the assurance of science, was to render the worker acquiescent in this "taking hold" of his or her physiology, in order to experiment with it and to improve its productive capabilities.

We have noted the alliance of scientific management and costing. From its earliest beginnings, it seems, the scientific management literature had recognised the power of an efficiency measurement grounded in costs and profits. And we have noted the influence of scientific management on the construction of standard costing, which itself merges into budgeting. The resultant calculative apparatus was to entail the possibility for going beyond a routine rendering visible of only the factory-floor worker's efficiency. We have viewed the superimposition of a notion of standardized magnitudes upon the traditional accounting statements of income and financial position as facilitating the normalization (in terms of economic accomplishment) of everyone within the firm. Budgeting, one might say, would serve as an escape-route by which standards could leave the factory floor and enmesh, potentially, everyone in the firm. Without effacing the notion of the person as potential thief, that longer-standing stewardship concern of accounting, standard costing and budgeting would render accessible to various expert and authoritative interventions the individual as "al-

most certainly inefficient". Cost accounting would expand its domain, to enmesh the person in a calculus of expectations. In thus constructing a notion of the person we have argued that standard costing and budgeting provided a facilitative technology whereby, in time, various interventions to improve the person's performance would become possible. For the whole project of enmeshing the person within norms of efficiency, once begun, came quickly enough to be seen as a complex, sophisticated endeavour.

Important in bringing about such a sense of complexity was industrial psychology, to whose birth we have briefly attested. More or less simultaneously with the emergence of scientific management and standard costing, psychologists began to argue the inadequacy of such endeavours' concept of the person. Wastes and inefficiencies, for their detection and elimination, were now argued to require the expertise of those who can know the person's mind. A project would be initiated which establishes the individual's psyche as the key mediating force in matching person and task and in interpreting task performance variables. And we have pointed out, albeit too sketchily and briefly, how a redefined industrial psychology comes, later in the century, to significantly intersect with accounting. By the 1950s, we have suggested, the person as machine has been replaced by the motivationally-complex decision-maker. This adds greatly to the complexity of rendering efficient his or her economic performance, and produces a redefinition of what we have called the accounting complex.

In looking at such processes in this manner we have wanted to suggest a way of viewing accounting as having contributed to a more general project of socio-political management. This is one which operates through a variety of expert knowledges and practices. The efficiency of individual persons and their contribution to collective efficiency is central to such processes. But the efficiency of the person in the firm, as we have seen Taylor point out, is not something which can be observed with the naked eye. Indeed, one might say, it cannot exist until what

is to be regarded as normal or standard has first been constructed. But once a norm is to hand, and especially when it gains expression within a routinely applicable calculative apparatus like standard costing or budgeting, the person can become a subject for various human sciences. The deviations of the person from a norm, with all of their possible causes and consequences, become available for investigation and for remedial action. And, we would suggest, one distinctive contribution of standard costing, hitherto apparently ignored, is its contribution to a much wider process, whereby the life of the person comes to be viewed in relation to standards and norms of behaviour.

Now of course the processes which we have been referring to here are of a greater complexity than we have been able to indicate. But what we wanted to do was to at least make a start in untangling some of the strands of the contribution of accounting to a mode of operation of power in our societies which, we argue, emerges in its distinctive form at the beginning of this century. This is one which, we feel, cannot be explained adequately by over-zealous adherence either to a notion of economic determination and interests, or to an explanation which hinges on a desire on behalf of the professions to continually extend their field of operations. Of course this is not to imply that economic pressures and professional influences are unimportant. It is, rather, to suggest what we see to be a different line of investigation for the understanding of accounting in relation to power in our societies. This is one which locates it as an important part of that complex of interventions which can be given the name the human sciences. We have outlined briefly how our thinking on these matters has been significantly influenced by the work of Michel Foucault and his associates.

We do not feel that our concerns in this paper can be adequately captured by referring to a general process of rationalisation of Western industrial societies (Weber, 1978). In talking of projects for social and organisational management we have wanted to give weight to the actual construction of such projects, and to the terms in which they are constructed. We have sought

tentatively to explain how accounting supplies an important contribution to a complex of interventions directed at providing mechanisms for the implication of individuals within the life of the organization and of society. The general principle operative here has been well expressed by Rexford Tugwell, government advisor, economics professor, and staunch advocate of the applications of scientific management to the wider society:

Is it possible that, instead of appealing to sets of emotions of an immediate and piecemeal sort, the problem of motivation might be resolved by fixing in each individual mind a rationale of ends to be tried for, and of the means available? For if this cannot be done, it seems very little use to hope that group action will ever become coherent and cooperative in a larger, a genuinely social sense; . . . (Tugwell, 1933).

In defining our concern as with the "construction of the governable person" we would not want to imply an image of a totally obedient individual. We wanted rather to examine the prog-

rammatic frameworks and power relations in terms of which the lives of individuals are viewed, measured and supervised. In gesturing towards recent developments within accounting we wanted to suggest ways of interpreting the construction of the notion of the complex person as a rationale for a series of practical interventions. To put this rather provocatively, one could say that what is at issue in these more recent developments is a form of power which operates through freedom: a freedom for the individual to have an informal life within the organization, to deviate from criteria of rationality, to brood on personal problems, and to be influenced by the environment outside the firm. In its more recent development accounting has provided for such a freedom in its attempt to incorporate the behavioural and the decisiontaker within its sphere. In so doing we would suggest that accounting today can be viewed as in continuity with, albeit in a considerably modified form, a mode of exercise of power which was installed in the early decades of this century.

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