Structuration and middle-range theory—A case study of accounting during organizational change from different theoretical perspectives

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Abstract

This paper demonstrates the usefulness of theoretical triangulation in exploring a case study of accounting and organizational change at the Electricity Trust of South Australia (ETSA). Two theories are used, structuration as developed by Giddens and Laughlin's framework developed as a middle-range theory based on Habermas. These two theories complement each other but have significant differences. In accounting, Laughlin has been an advocate of middle range theory, and although his framework may appear dominant in exploring accounting and organizational change [Broadbent J, Laughlin R. Organisational and accounting change: theoretical and empirical reflections and thoughts on a future research agenda. Journal of Accounting and Organisational Change, 2005;1(1):7–26.], alternative theoretical perspectives may draw out richer insights about the way accounting is involved in organizational change.

Using the middle-range theory of organizational change, the accounting system at ETSA is perceived as enabling change but viewed in a favourable way; an outcome which is different to most of the previous research using this model and hence an important contribution to the literature. The counting that was viewed negatively was the counting of people, not dollars. This theory enables the exploration of the change process and how accounting is implicated. The second theoretical perspective, Gidden's concept of structuration, provides richer insights from the dimensions of domination and legitimation. Domination brings to the fore the role of accounting in control as a power device, which is not explicit using the Laughlin framework. Legitimation clarifies what is

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"moral" as organization's change. I demonstrate how a different theoretical lens enables different insights, not achievable by using a single approach.

1. Introduction

The relationship between organizational change and accounting has demonstrated a concern about the role of accounting—especially its, at times, unexpected deleterious impact, as well as the deliberate (ab)use of accounting to create change. Concerned with changes in the way organizations are managed in Western countries, Ezzamel et al. (1997) interviewed British workers and managers about organizational change and concluded that 'accounting measures are being harnessed to implement the "new" ways of management' (p. 461).

While Broadbent and Laughlin (2005) suggest that the literature on accounting and organizational change is relatively limited, they cite around 10 papers in this area. Much prior research is in the setting of the U.K. public sector which is unsurprising given the dramatic changes to service provision, accountability and 'accountingisation' in this environment. This paper links to this literature by reporting on accounting during change in a government-owned utility in South Australia.

The purpose of this paper is to use two different theories to explore the role of accounting during change using two different theories. Therefore, the paper commences with an argument for using multiple theoretical perspectives, followed by an introduction to two particular theories. The next section explores the research method. This is followed by a brief description of the case site; its brevity necessitated by the inextricable intertwining of observation and interpretation (Chua, 2004). Giddens and Turner (1987, p. 2) argued that: "the idea that there can be theory-neutral observations is repudiated". There are then two sections which each analyse the case using the two different theoretical perspectives showing the definite advantages of using more than one perspective. The discussion section then draws out the different insights which are then followed by the conclusion.

2. Theoretical perspectives

This study of accounting and organizational change uses two different theoretical perspectives in an ex post interpretation of the case. There is a problem in using a particular research framework to inasmuch as researchers from different epistemological and ontological positions tend to talk over the top of each other, not usually willing or sometimes apparently even able to share their perspectives and findings in the same area of research. Hence the argument of Hoque and Hopper (1998) that theoretical triangulation will enable researchers to take advantage of the complementariness of different theories and gain alternative interpretations of the same phenomena. They cite five studies where the researchers

have used up to four different theoretical frameworks in the one management accounting study. This paper is less ambitious, using only two.

Any attempt at theoretical eclecticism will concern researchers who rightly assert that each theoretical domain may include a range of assumptions about oneself that cannot rightly be suspended while one engages in viewing research from another perspective. Unlike Hassard (1991) who used different theoretical perspectives from the start of the research, they are used here as sensitising perspectives to reflect on the research setting.

The most common theoretical framework used in studies of accounting during organizational change is the middle range approach developed by Laughlin (1991). This approach is based on using theory in a skeletal way and fleshing out the theory during observation of accounting in the setting. This assumes that the skeleton is appropriate to the understanding the setting and is not the wrong size or missing a limb. I argue here that the Laughlin's framework, drawn from Habermas, is insufficient to explain the use and impact of accounting during change. I shall not explore Chua's (2004) concern that Habermas should have led Laughlin down a critical path and not to middle range thinking.

A range of different theories used in alternative management accounting research are noted by Baxter and Chua (2003) with Chua (2004) in particular suggesting the value of Latour's science in action. The possibility of using multiple theories is suggested by Hoque and Hopper but is difficult within a single paper. As an alternative theory, I have chosen Giddens' theory of structuration which has been used to explore accounting during organizational change, most recently by Conrad (2005). Conrad's case has some connections as it traces change in a British public sector utility over more than a decade after privatisation (1986–1998); while the case in this paper is about an Australian utility in the period leading up to privatisation.

Macintosh was a particular advocate of Giddens' structuration and devoted two chapters in his 1994 book; giving it a special prominence amongst other theories and models used in management accounting (Macintosh, 1994). While Giddens' theory is far less used than the middle range theory it has some definite advantages in understanding the role of accounting during change even though, unlike Laughlin, it does not explicitly consider accounting.

There are similarities between these models, as noted by Livesay (1985). He claims that they both critique and build from other theories, but transcend them in order to build a more complete new one. Both theories, Livesay (1985, p. 73) believes, have a practical aim of "collectively regulated social transformation through the dereification of contemporary views of society". Third, they have a mutual recognition of the possibility of self-reflection of human activity as found in discourse compared with less reflective behaviour. However both Giddens (e.g. 1977, 1989) and Habermas (as cited Callinicos, 1985) themselves recognise substantive differences between their theoretical viewpoints.

Livesay (1985) identifies three points of difference between Habermas and Giddens. First, Giddens explicitly rejects Habermas' dichotomy between instrumental action and communicative action and focuses on the "production and reproduction of interaction as contingent accomplishments of human actors... Power, symbolic meanings and normative sanctions emerge as integral to interaction rather than analytically separate from it" (Giddens, 1977, p. 153). The implication of this leads to Livesay's second point, which is particularly germane to the use of these theories in this paper—that Giddens believes that Habermas effectively marginalises power. As Giddens (1977, p. 152) puts it:

> "Power enters into interaction only through the ideological slanting of the conditions of communication, not as fundamental to the relations between actors whereby interaction is constituted as an ongoing activity".

Livesay's third point relates to the Gidden's concern that Habermas has sought for a normative foundation for his critical theory. The idea of praxis has fallen out of his sights.

The next two parts provide a brief analysis of how these theories have been used in accounting.

2.1. A review of the middle range framework of organizational change in the accounting literature

There are now several papers in the accounting literature which have explained Laughlin's middle range framework. There have clearly been problems with this framework, which subsequent researchers have endeavoured to overcome. The first issue has been the difficulty of defining the interpretive schemes, design archetypes and sub-systems in practice (Soin, 1996). '...Recognition must be given to the amorphous nature of the categories... They may be seen as strata of different coloured sands, slipping and sliding together, undulating and mixing in places, yet retaining their integrity in others' (Broadbent, 1992, p. 346).

Second, there is a possibility of fragmentation with different members of the organization holding different interpretive schemes (Broadbent, 1992). Broadbent suggested that this can happen because of different levels within the interpretive schemes. Agreement at the higher levels of interpretive schemes can allow for differences at the lower levels (e.g. the cultural level).

Third, the point at which first-level change becomes second-order change can be unclear if organizational members have different interpretive schemes at least at the cultural level (Broadbent, 1992). This introduces the possibility of a schizoid organization. Fourth, change may take place before the design archetype changes. This may come about through the different interpretations of the design archetype. For example an accounting system may not change but the use of the information may change:

> 'It was the attitudes of the different members... and their differing interpretations of the information which are an indication of change... The same design archetype is flexible enough to link to different cultures and this allows 'schizoid' organizations to continue without a need for change of the more tangible elements. Given that tangible elements such as an accounting system cannot be changed instantaneously... the existence of this flexibility is important. It allows for change of the design archetype to be phased in on a more evolutionary basis' (Broadbent, 1992, p. 364).

The tracks are therefore much more complicated than the four delineated by Laughlin (1991).

Fourth, Soin (1996) suggested that the framework does not take on directly the issue of power relationships which was so crucial in her analysis in understanding organizational change. I have already argued that this deficiency may be met by Gidden's structuration theory.

Despite these issues, researchers, such as Broadbent (1992) and Soin (1996), have found this framework to be a useful mechanism for understanding organizational change and particularly the role of accounting.

At least four major issues emerge when applying this theory in the accounting arena are:

1. First-order change is a likely outcome of a change programme. Organizational participants will protect the core of the organization by making changes at the periphery.
2. Critical to the protection of the core will be the role of absorbing groups. There are likely to be some who see the changes as reform and push to colonise the changes.
3. Colonisation can happen with pressure from the top of the organization. The very nature of the reforms may make it difficult for absorbing groups to resist. Soin (1996) saw an activity-based costing system as assisting this process.
4. Accounting systems form, as one element of the design archetype, the potential to be an enabler of change. Managers may pick up accounting systems as one tool to change the way the organization functions and bring about a cost or profit culture from a professional culture. For example Jacobs (1995) saw accounting, budgets and performance measurement as the steering media by which the external changes of public sector reforms permeated the internal structures of health care providers.

2.2. Structuration

Structuration theory is not a theory of organizational change—but it does provide a framework for thinking about how social structures are maintained, reproduced, and changed. The concepts of structuration theory have been well expounded in the accounting literature, drawn together in two chapters of Macintosh (1994) as a summary of the previously published work in the accounting literature (Macintosh and Scapens, 1990, 1991).

In summary the two key concepts are

1. The duality of structure—'by duality of structure I mean that social structures are both produced by human agency, and yet at the same time are the very medium of this constitution' (Giddens, 1979). Structures provide stability of the social order, reproducing and maintaining. Agents, from Gidden's perspective are knowledgeable, reflexive, and purposive and can alter the structures in which they live. Structures are the outcome of human interaction as well as the medium—this is the duality of structure.
2. Social structures – Giddens suggests three forms of social structure – signification (meaning), legitimation (morality) and domination (power). Signification or the theory of coding relates to the intepretive schemes that agents draw upon to interpret their social world. Legitimation relates to the moral consensus of the social order and the norms of actions that are acceptable. Domination is the third element, by which power is exercised.

There are at lease five particular examples of structuration and management control systems in the accounting literature, four of which have clear connotations of organizational change—General Motors, University of Wisconsin, the Church of England and British Gas.

Each of these organizations was going through a period of organizational change and accounting was implicated in the change of structures. General Motors, in 1920, faced a crisis and Sloan came in to bring in a new strategy, re-organise the structure and bring in

new financial control systems. In crisis, the University of Wisconsin officials took action to change the budget discourse. British Gas was privatised and the environment provided on-going tensions for managers in meeting the expectations of shareholders and regulators. The Church of England went through periods of change but not perhaps what Giddens might see as crisis. There were periods of change as the central and diocesan units became more dependent on parish funding with a consequent change in the accountability relationships.

At General Motors (Macintosh, 1994), the arrival of Sloan brought about a change in the signification structure from an engineering-technical discourse to an accounting-finance meaning. Discussion then proceeded in terms of accounting and finance—standard volumes, return on investment and standard cost variances. In the University of Wisconsin study, the budgeting discussion relied on a signification structure that related to the rationality and neutrality of the budget. The use of an enrolment funding formula (EFF) made it appear that a perfectly rational model of financial management existed. However this rationality did not permeate the University. The change by the University to Decision Narrative Items was an attempt to change the signification structure and force the state into a highly political decision. Not only did the state defeat this attempt but turned it to their own advantage. Laughlin's analysis revolves around the sacred or the secular as a signification system. It is the sacred that is seen as the signification structure although there are functional areas such as the Church Commissioners that take on a purely secular signification, which allows other areas to protect the sacred. Laughlin connects this with other studies of organizational change where the organization wishes to preserve its 'sacrisity'.

In relation to legitimation, accounting can be used to establish a moral consensus. In the General Motor's case the "moral underpinnings" became profit seeking and capital growth rather than technical excellence of making automobiles. At the University of Wisconsin it was the budget which provided "a norm in terms of which legitimacy of particular actions could be assessed. . ." (Macintosh and Scapens, 1990, p. 465). The management accounting system came to be the means of legitimising the political process of resource allocation. In the Church of England, Laughlin (1996) saw the legitimation in terms of the predominance of the sacred. Only in the case of the Church Commissioners was a just allocation of financial resources the principal form of legitimation.

In relation to domination; Sloan at General Motors had "power in the broadest sense of command over resources to facilitate the transformative capacity of action" (Macintosh and Scapens, 1991). In the University of Wisconsin case, the state exercised its allocation and authorisation power while the University exercised power in trying to change the signification scheme to force the state to make hard decisions. Laughlin, using Giddens, shows how the power relationships differed between the various parties within the Church of England and the conflicting power relationships with one party holding allocative resources and the other authorisation power. So Laughlin was able to explain power using Giddens. This gives weight to the argument that structuration is a superior theoretical lens for exploring power than the middle range framework he developed.

Conrad's (2005) case demonstrates how structuration can be used to understand phases of change as a result of privatization. Accounting was used in different ways for signification, legitimation and domination at different phases of the change process. Conrad has well argued that structuration was a useful sensitising framework for understanding management

control and organizational change; and therefore provides support for future research using structuration.

3. The organizational context of change: a case study of an electricity supply company

The research focuses on the Electricity Trust of South Australia (ETSA), which used to be the monopoly generator and distributor of electrical power in South Australia. It was originally nationalised by a conservative government. This was a longitudinal study with data collection from late 1993 through to 1998. The main focus of the research was the implementation of a strategic cost management system (an activity based costing (ABC) system) in a specific section of the organization; denoted throughout this paper as "the Department". Sources of information included internal records and memos, observation of meetings, telephone contact, and conversations. Two periods of semi-structured interviews occurred in 1994 and again in 1997. Eighteen staff were interviewed in 1994 in a range of positions from the manager of the Department to "shop floor" employees. Other data collection included observation of meetings, collecting memos and internal correspondence relating to ABC as well as to management policies in general.

ETSA was a large employer with strong community and employee obligations. In 1988 the organization employed its first external CEO who came from the private sector and came in with the intention of reducing the workforce and making ETSA more efficient. "At the core of Robin Marrett's approach was the sense of convincing ETSA's staff to move from its engineering-based, bureaucratic structure to a business approach*" (Linn, 1996, p. 217). Eventually Robin Marrett, the General Manager, moved to be chairman of the board and was succeeded by Clive Armour who came into the organization from a privately owned utility.

Following the Hilmer (1993) report into national competition policy, the Australian electricity industry was targeted by the Australian Federal government for reform in terms of improving cost efficiency. At the same time the South Australian economy received both a psychological and economic set back of losses in 1992 of approximately $A3 billion from the State Bank of South Australia. The government-guaranteed bank had heavily invested in property and had lent to highly geared companies. The high interest regime of 1990–1991 brought rapid asset price inflation to an end, and the bank was left holding many overvalued assets owned by illiquid developers. The Bank's subsequent collapse resulted in a change of government. The new South Australian government engaged in public asset sell-offs and tight fiscal constraint to reduce the resultant debt. These losses were also at the time of recessed activity in the local economy with consequent reductions in government revenues. The combination of the Hilmer report and the South Australian circumstances resulted in a climate of privatisation of government assets, a period of continuous calls for increases in efficiency by all government service providers, and reduction in services. ETSA management responded, and the reduction in staff and increased productivity are shown in Table 1.

The Department was a service provider to other parts of the organization. It was formed through re-organization in 1992 and by 1993 employed over 600 people, with a divisional

Table 1
Productivity of ETSA

	1982	1985	1987	1990	1991	1995
Employees	5354	5571	5965	5696	5186	2768
Output (GWh)	6244	6737	6892	8030	8186	9000
Productivity	1.17	1.21	1.15	1.41	1.58	3.25

manager and eight branch managers. At the end of June 1994 a substantial number of employees left the organization having obtained Voluntary Separation Packages (VSP's). In the case of the Department this included five of the eight branch managers; in addition to which another branch manager was transferred to head office. By July 1997 the organization was down to 140 employees, a dramatic reduction in the skill base.

The role of accounting was significant during this period of change. Prior to 1991, ETSA had run fairly traditional line item reporting every month, but there was not much concern about costs and reducing spending. In late 1991 one Division of ETSA which contained the Department initiated a strategic cost management (activity-based costing (ABC)) project. The initiative appears to have come from consultants already working in ETSA who built their expertise by 'practising' on ETSA. The managers in the Department had some confidence that the new information would help in an orderly change process by supplying information about which segments of the Department's activities should be outsourced or made more efficient. The use of transfer pricing enabled the development of profit and loss statements for each segment.

In 1995, a new General Manager of ETSA, Clive Armour, moved back to a more public sector approach using line item accountability and project cost control. The ABC system was defunct.

4. Analysis using the middle range framework

The most appropriate way to use the middle range framework to the ETSA case is at the macro-level model of ETSA as a whole. The Department which is the primary focus did not exist for a long enough period to make it the primary unit of analysis. It had not had time to develop an independent interpretive scheme before it started to be wound down. The references to the Department are justified because it was the site of data collection and therefore the only part for which there is sufficient information to draw credible conclusions. Although the focus is on the Department, I have for the period before its formation looked at the position of the whole entity. The Department initially took on the systems and processes from ETSA as a whole from which it was formed. There was some divergence later.

The first step in applying the framework was to ETSA as it was in the late 1980s (Fig. 1), just before the first kick. The data to develop the model is drawn from academic sources (Birkett, 1992; Macintosh, 1996; Patrickson, 1995), Linn's history, and the interviews and data collected in this research. Soin's (1996) difficulty became clear. It is difficult to split the interpretive scheme into meta-rules, mission, and beliefs and therefore in Fig. 1 they are merged them into an overall view of the interpretive scheme.

INTERPRETIVE SCHEME

- Excellence in service delivery through excellent engineering
- A belief in the value of staff
- Building the electricity network
- Money doesn't matter

DESIGN ARCHETYPES

- **Organisational Structure** – hierarchical, geographical dispersion
- **Human resources** – develop a highly educated workforce with career progression, close working relationship with the unions, high levels of supervision
- **Accounting** – loose budgetary control systems, incremental budgets, loose capital budgeting with projects approved if support engineering excellence
- **Communication System** – the "network"
- **Decision Processes** – long lines of approvals but inter-departmental committees and the "network" help alleviate this

SUB-SYSTEMS

- Engineering specialisation
- Large holdings of property
- High levels of equipment
- Many depots so that all breakdowns could be handled quickly
- High inventory of parts based on zero stock-outs and bulk buying
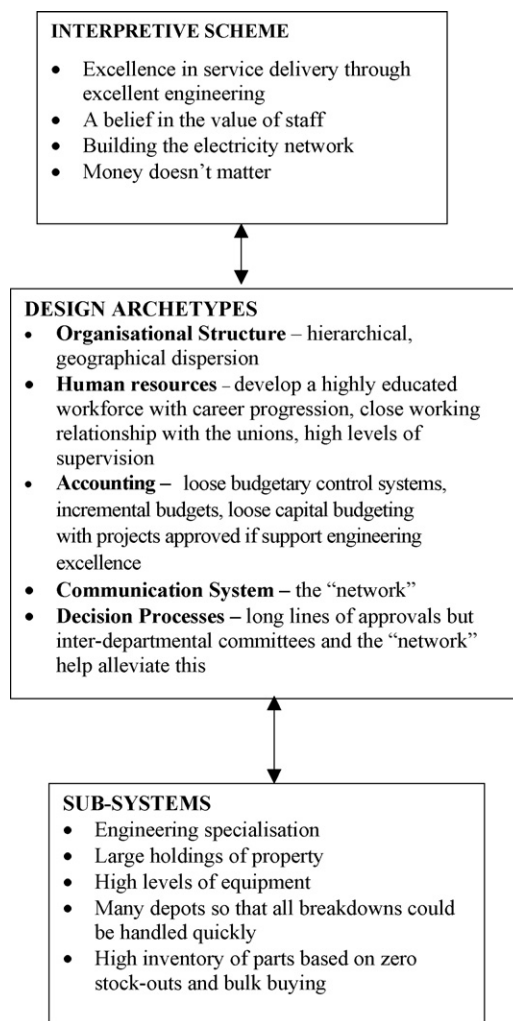
Fig. 1. A model of the organization pre-Marrett.

As Broadbent (1992) suggests, it is difficult to divide the design archetype from the interpretive scheme. To provide useful analysis, particular focus needs to be given to specific aspects of the design archetype. In the ETSA case, the communication approach through the network was very important to the maintenance of the organization through lateral relationships. Accounting was not a critical part of the design archetype. The interpretive scheme focused on growth, engineering excellence, and people, not accounting.

ETSA in the mid-1980s appears to have had "archetype coherence" (Hinings and Greenwood, 1988), between the interpretive scheme, the design archetype and the sub-systems. However, there was clearly pressure for change. 'There was a belief, among some at the upper level of ETSA, that a change of large proportions was required' (Linn, 1996, p.

216). The existing situation was not tenable, especially once the state government believed in change: 'In early 1988, it was the Government's view, also, that the time had come for a change in direction' (Linn, 1996, p. 216). In fact the Chairman in 1990 saw the change as overdue. 'One of the pressures on ETSA now is that this past degree of insulation from change is no longer, permissible, practical or just, and the call to greater accountability is coming concurrently from all parts of the community including government, business, and academic analysis' (as cited by Linn, p. 225). The Marrett Kick was the response.

4.1. The Marrett "Kick"

The kick which brought about the first stage of change at ETSA was the appointment of Robin Marrett, the result of a series of issues identified by Patrickson (1995). The kick resulted in some major changes to the interpretive scheme as seen in Fig. 2. The focus switched from a model based around engineering excellence and reliability of supply to profitability. In the past there had been a perspective on the customer, but now there was increased focus on the customer,[1] and the concept of the internal customer came into play.

There were also clear changes in the design archetype. The decision-making structure that was based on a close working relationship between management and unions broke down. A union based culture was seen as in conflict with the role of profit-making. It is claimed that a senior manager of ETSA encouraged his subordinates to go out and 'have a fight with the union every day'. This was a significant change from the days when the unions and management would sit down and assess workers' career paths. Working conditions were seen as too generous and incompatible with the new culture.

There were changes in the accounting systems which were part of the design archetype. The shift to budgetary control was a clear change in an organization that was moving to financial calculation as a means of control. The end of the bottomless bucket of money had arrived. Marrett initiated local accountability with section profit and loss statements using a transfer pricing system. Accounting was used as part of organizational change. Unlike the previous studies using the Laughlin framework, the participants in the change process saw this as positive. The previous conclusion that employees may inadvertently use the new accounting system, and hence colonise almost by accident, does not appear valid from the perspective of those in the Department. The staff of the Department above shop-floor level, mainly engineers and technical people, were generally positive about the role of the accounting system change.

They had come to accept a need for more concentration on profitability[2] if the organization was to survive. Even those who were most supportive of the role and rights of labour, a supervisor who became a senior union official, was pleased about this change. Rental expense was notionally charged to each area and this gave an incentive to rationalise floor space. This heightened understanding of cost provided motivation for the Department to become more efficient and therefore more likely to survive. The control of costs such as floor space made it more likely that jobs could be retained, as capital resources were shed

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[1] The development of the Blue Ribbon customer service training was a sign that there was perceptual change to an even more externally focused organization.

[2] This meant for the Department a reduction in operating costs, given that output was likely to continue to fall.

INTERPRETIVE SCHEMES
- Meeting customer needs efficiently became the goal of the organisation
- Produce a profit for the government.
- Be nationally competitive.
- Uneconomic activities should be eliminated.
- Cut prices especially for commercial customers because of future competition

DESIGN ARCHETYPES

Organisational Structure – flattening of structures but still hierarchical, team-based, geographical dispersion but with less centres.

Human resources – minimise the workforce, out-source non-core activities, staff career progression but progression based on individual flair especially entrepreneurial capacity, unions not central to human resource management.

Accounting – budgetary control matters, budgets for each area, managers accountable for the profitability of their area with a transfer pricing system, new projects need to be justified more rigorously – engineering excellence insufficient

Communication – the "network" declines – ETSA Telegraph, more formal communication methods

Decision Processes – more decentralisation, managers make their own decisions. Still long lines of approvals but inter-departmental committees and the "network" help alleviate this

SUB-SYSTEMS
- Training and career progression
- Departmental profit and loss
- Property "charges" to reduce holdings
- High levels of equipment
- Depots consolidated to save costs with slowness in fixing breakdowns
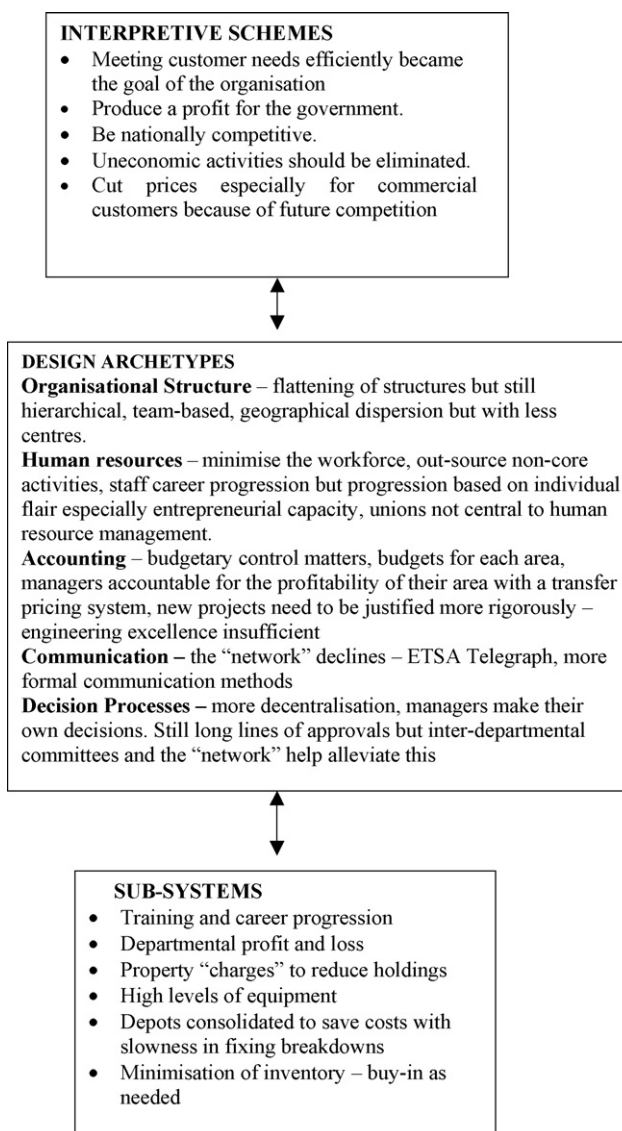- Minimisation of inventory – buy-in as needed

Fig. 2. ETSA after the Marrett changes.

rather than labour. This process was supportive of workers rather than against them. Again this perception may have been unique to the Department, which was a service provider.

The development of an ABC system in the Department was a change in a local design archetype which was consistent with changes to the interpretive scheme of ETSA as a whole. The push for the elimination of inefficient sections of the organization meant that the role of accounting in "making visible" was important. Activities that were uneconomic

were exposed. Using the rates that came out of the ABC system it was clear that meter repair could no longer be justified. It was far cheaper to throw meters out and buy new ones. ABC data was also used in benchmarking of performance against external providers of services, hence establishing the long-term viability of ETSA internal service providers. The ABC system was, therefore, not viewed negatively as forcing change and hence had few of the negative views identified by previous researchers using the Laughlin framework. This result is more consistent with the research performed in private sector organizations during change (Richardson et al., 1996; Soin, 1996) than it is of the public sector organizations (e.g. Broadbent, 1992).

The change of the design archetype and the interpretive scheme suggests second order change; but was this colonisation or evolution (Laughlin, 1991)? Although there were concerns about some of the changes to the interpretive schemes, most staff appeared to support the change as necessary for the future of the business. Some comments from supervisors demonstrate this:

> "…we would have to be competitive and that is when strategic cost management reared up".

Although unhappy with aspects of change the employees saw the need to change and looked back at the previous culture nostalgically rather than feeling any bitterness towards the new interpretive scheme. There was some dissent including one who saw it as just more bureaucracy:

> "…If we were really competitive, I wonder if we would be doing it [ABC]…. The heat's really on and we're really in survival mode would we be doing performance review and development, job evaluation, job design strategic cost management [ABC] all of those sort of things, none of which are earning dollars…."

In this respect the views obtained in the Department may seem on the surface to contradict the views of Linn (1996) who reflected on impressions of the Marrett changes: 'people believed that the restructuring was not handled as compassionately as it might have been' (Linn, p. 221). However, Linn (1996) does suggest that Marrett did his best to manage change, and did bring about profound change.

One of the problems in delineating colonisation versus evolution was the schizoid culture. The differences were evident in the Department between levels in the organization. Base grade manual workers or trades people were more hostile to the cultural change. While the managers and supervisors showed considerable agreement with the change in the interpretive scheme and the design archetype, and changed the sub-systems to match, there was incomplete buy-in from workers at the 'coal face' who were not really won over to the new culture and belief system. The throwaway line after a meeting at which the manager of the Department delivered the corporate planning document was 'b… economists'—a conception that the organization was driven by the economic rather than the interests of the customers or the employees. Linn (1996) reflected on the uncertainty and perplexity that workers experienced.

Another area in which the employees really did not 'buy in' was the idea of employee empowerment and team based operations. The supervisors and managers in the Department were still concerned about the 'leave your brain at the gates' approach, whereby workers

wanted managers to take the lead in planning and directing work and just wanted to get on with doing it.

It is therefore difficult to establish whether there was colonisation or evolution. Staff at the top six levels of the organization including many of the technical and administrative staff might perceive it as evolution. Colonisation is the best explanation of the view of the 'labourers' and semi-skilled workers. This interpretation is supported by the ABC experience. The managers, supervisors and technical staff saw ABC as almost an automatic development of where they were going in terms of the objectives and culture of the organization, as one supervisor put it:

> "so down the track we would have to be competitive and that is when strategic cost management [ABC] reared up as well. . . for us to get [a] feel for how competitive we may or may not be. It was never an issue for us before say '91, so that's an issue that's been around for 3 years. It is becoming increasingly critical for us as the true open competition time gets closer and its only 9 months away at the moment. . . trying to make sure the place is heading towards a commercial basis. We've got a long way to go with management systems and profit and loss statements and a true commercial outlook."

The design archetype followed the interpretive scheme without resistance as expected in evolution. These same managers and supervisors saw ABC as useful for changing the culture, thus using a design archetype to change the interpretive scheme—consistent with colonisation.

4.2. The "Government/Armour" kick

The next jolt in the organization was connected with the election of a new conservative state government and the subsequent appointment of Clive Armour. It is very difficult to establish a model of ETSA after this time because the organization started to be broken up. Fig. 3 represents a best attempt. From the standpoint of the research in the Department there appeared to be a complete lack of coherence between interpretive schemes, the design archetype, and the sub-systems.

At the design archetype level, the reduction in staff meant that the old communication networks started to break up. Without this 'fabric' of the organization there was no clear way to co-ordinate operations from the Department's view. This break-up was partially the result in the massive departures from the organization, which meant that many of the experienced people who were part of the network were simply not there any more.

The change in the accounting systems left staff perplexed as to how they were to manage. How would they know whether they were meeting financial targets? The system of divisional accountabilities was consistent with the new interpretive scheme developed by Marrett. The abandonment of that approach, and the shift back to tight budgetary control as the sole form of financial accountability was inconsistent with an organization that was moving towards profitability and customer service as a corporate entity. The decision structures based around hierarchies and long lines of approval were also inconsistent with the interpretive scheme. Human resource practices theoretically continued to be based around job description and
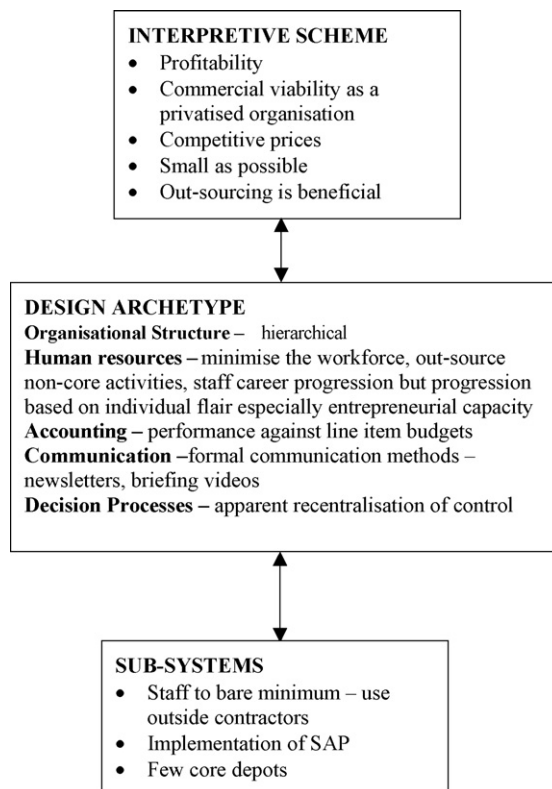
INTERPRETIVE SCHEME
- Profitability
- Commercial viability as a privatised organisation
- Competitive prices
- Small as possible
- Out-sourcing is beneficial

DESIGN ARCHETYPE
Organisational Structure – hierarchical
Human resources – minimise the workforce, out-source non-core activities, staff career progression but progression based on individual flair especially entrepreneurial capacity
Accounting – performance against line item budgets
Communication – formal communication methods – newsletters, briefing videos
Decision Processes – apparent recentralisation of control

SUB-SYSTEMS
- Staff to bare minimum – use outside contractors
- Implementation of SAP
- Few core depots

Fig. 3. ETSA after the conservative government.

person specification, whereas people went on doing the jobs they thought they should do irrespective of any formal job title or description of duties. The design archetype was not matched by the sub-systems.

Accountability to parliament in relation to spending on credit cards was also inconsistent with the business view of the organization. In general, there were a number of managerial systems that were inconsistent with the general view of the interpretive scheme.

The dominant message that workers appeared to be hearing was that ETSA needed to become smaller in terms of staff numbers. Superficially this may appear to be consistent with the new interpretive scheme following Marrett, but now it seemed to some workers as if it was small for smallness sake. This was inconsistent with an interpretive scheme that focused on profitability and customer service. The policy of gearing up to handle only the basic business meant that in times of peak demand for repair crews or support staff there must be insufficient capacity and hence a degradation in service. Sub-systems appeared to be inconsistent with the understood design archetype. The mass departures from the organization in June 1994 brought about such a lack of resources that the previously held interpretive scheme could not work. Those who could see this coming decided to leave anyway.

> "Yes, that's the biggest problem - lack of resources. See everybody left but the work didn't go away. So what you do now is out-source your work. But who can say you can do it cheaper with a contractor. That hasn't been proved yet has it but they forced us into that position or they forced ETSA into that position by getting rid of your numbers. Work hasn't gone away. . . still there but there's no resources to do it".

In addition, decisions to out-source did not appear logical. There was a clear belief in the minds of some that ETSA placed a priority on outside firms. This resulted in dissonance, as it was clearly contrary to the historic interpretive scheme and the new interpretive scheme that had been developed under the direction of Marrett. Some staff were particularly angry over the award of a construction project for a new sub-station at Keswick giving internal staff an opportunity to bid for the contract. 'Keswick' became notable as a symbol of change in the organization.

The sub-systems reflected some of the continuing changes in the interpretive scheme and design archetype. The implementation of SAP consumed significant resources, involving up to 70 staff over 6 months. The move to a large enterprise resource package was consistent with a move to centralised control and away from the previous decentralised accountabilities where managers were given the opportunity to manage the resources they needed.

There was confusion in the minds of managers at all levels as to what the interpretive schemes were and what design archetypes were. This problem was also a result of the potential break-up of the organization, and hints at privatisation. Both became an eventuality in subsequent years.

4.3. The absorbing group

The role of an absorbing group has been a feature of the previous research. The Marrett "kick" resulted in a "micro-restructuring" process, which involved an inter-disciplinary team looking at proposed new structures. This was a colonising group not an absorbing group. The managers, who received the recommendations, generally accepted the changes and also played the part of a colonising group. The Liberal Government/Armour kick brought about the formation of absorbing group within the Department especially to stop the continual reductions in activity. They resisted the moves for the Department to become smaller and allow its functions to be out-sourced when it was more economical to keep the function in-house. However when packages were offered in 1994 most of these people took them. This group which could have offered resistance left the organization. Although the manager continued to fight on he misjudged the political situation and was removed himself. At that stage all of the absorbing group were gone.

The next manager of the Department was perceived by workers as a 'lackey' of senior management—he had no credibility to form an absorbing group against the changes. Others who viewed him more kindly believed that he did not have the strength to resist. He was in turn moved on to other projects and an acting manager put in place. Throughout this time the continual down-sizing and destruction of the technical base of the Department continued. There was no group who could act as an absorbing group to resist the level of change. Just surviving was seen as a goal as one manager put it:

". . .We're down to 4 people on the workshop floor now from 110. We've survived all the way through but that's been a plus for the firm because they could have shut us down. That's a good thing that we've been kept alive".

5. Analysis from structuration

5.1. Domination

Giddens (1984) suggests that the resources which provide for structures of domination are of two types (Giddens, 1984)—resource authorisation and resources allocation. Resource allocation relates to the control of material resources whereas resource authorisation is the 'transformative capacity generating command over persons or actors' (Giddens, 1984, p. 33). While most stress may be put on control over the material, Giddens argues that authorisation may be more important. As an institution moves from political to economic there is a shift in domination from authorisation to allocation.

Under Marrett there was decentralisation of decisions relating to resource allocation. The establishment of quasi-markets through the creation of transfer pricing gave apparently more power to the supervisors to buy the resources they wanted. Resource use became more transparent. As with Macintosh and Scapens' analysis of General Motors, this decentralisation cannot be seen necessarily in a lessening of domination—but a change in domination structures. Centralised power over resources was increased by profit and loss reports in each section. The ABC system was an important way in which the Department replicated this approach. It increased the ability to more effectively understand resource use and performance in their sections, while providing a centralised control over resource allocation.

In relation to resource authorisation, this was still quite tight due to the continuing demands of the bureaucracy as well as supposed accountability requirements of the South Australian parliament. This seemed contradictory to supervisors and managers, who ostensibly had more power over resource allocation.

Under Armour, allocation of resources became more centralised again. Resource allocation did become more powerful as resources were reduced, although managers may have felt bewildered by moving back to control against budgetary targets. This system which existed before Marrett was revitalised in a much more powerful form. The previous budgetary control system was ignored because it did not exert any influence over organizational life as there were still plenty of resources. Under Armour the budgetary control system became a central part of resource allocation.

The importance of human agency rather than stable structures is again critical here. One manager outside of the Department was devastated by the ability of a single individual to overthrow the set of policies and practices that Marrett had set in place. Apart from the potential for human agency to dominate, the reality was that the Marrett changes had not become routine. They were still being embedded in organizational routine. There appeared to be support outside of the Department for the abandoning of the transfer-pricing system because they felt it was a nuisance and added nothing to their understanding of the processes in ETSA.

5.2. Signification

There was clearly a change in signification. Giddens (1984) identified the interpretive scheme as the modality of signification, and I have shown the changes in interpretive scheme as ETSA moved from an engineering based supplier to an organization focused on achieving increasing profit by looking after customers and increasing efficiency. The language changed from engineering language to business language. Staff et al. levels became used to the ideas of customer service and profit. The internal customer was brought into the language. External customer service became more important. This is consistent with the analysis of Sloan at GM (Macintosh, 1994). The Sloan role at ETSA was played primarily by Marrett who changed the language by bringing in a broader language including cost, customer, and efficiency. Armour brought in the language of electricity prices for the external customer as a key aspect of communication. Price became a key determinant of the future of ETSA and hence of the language system.

The interaction of signification works through communication. Both the communication channels and the message changed. As the communication networks across the organization broke down, more formal communications replaced it. The new focus on ETSA as a business was communicated in internal publications.

5.3. Legitimation

In respect to legitimation, accounting can be used to establish a moral consensus. As with the General Motor's case, the 'moral underpinnings' became profit seeking rather than technical excellence. The accounting approaches under Marrett helped support a transition to a new mode of morality. As at the University of Wisconsin financial systems provided 'a norm in terms of which legitimacy of particular actions could be assessed. . .' (Macintosh and Scapens, 1990, p. 465). The shift to financial outcomes as a way of legitimising behaviour was the subject of some resistance at ETSA. The impact on employees, the people in the organization, had been such a central feature of the moral order that it was hard to overturn.

Two levels of morality in the pre-Marrett can be identified. They related to morality to the community and moral obligations to employees. In relation to the previous community obligations, many were abandoned including ETSA's role as a training provider for South Australians and as a supporter of failing regional communities. The morality of profit had a possibility of overwhelming the previous morality of care for the disadvantaged groups—especially pensioners. Political visibility reduced the impact of more freedom in relation to pricing, and so, although the organization may have preferred a completely market oriented approach, this was not possible.

In relation to workers, the previous moral order of care from the time of employment, often as teenagers, through to retirement was passed over for a concern for the efficiency of the organization. Workers moved from a confidence of a job for life to considerable uncertainty. Only safety remained a significant issue for the morality of care. Under Armour, concentration on accidents was increased. Workers could cynically see this as a care for the profits, because of workers compensation claims, more than care for them as individuals. As previously noted, the Department Manager in the early 1990s was renown for a fundamental attitude of care.

6. Discussion

The model of an organization with interpretive schemes, design archetype and sub-systems with tracks of change provides a useful heuristic to understand organizational change. However, the practical difficulties commented on by Broadbent (1992) and Soin (1996) became clear when I came to use the model at ETSA. The explanations given here are limited in that they come from the perspective of the members of the Department and those of other researchers. In addition there is a problem of seeing the organization as a whole—the Department may have had a unique interpretive scheme and some parts of the design archetype may have been unique.

It is important to compare and contrast what happened at ETSA, specifically the changes in the Department, to the four conclusions noted from the prior research using the middle range framework. The first conclusion relating to first-order change is partially replicated. However the changes in ETSA went further. Many organizational participants were unwilling to protect the core because they saw it as unsustainable in the face of the national and international changes. The second conclusion in relation to absorbing groups does not appear to have held at ETSA, because at ETSA, and specifically in the Department, there appears not to have been an absorbing group. When the Department was under critical pressure to give up its core as an efficient service provider, the managers who could have acted as an absorbing group left. Those who remained were likely to be those who see the changes as reform and push to colonise the changes.

A third conclusion from prior research using the framework appears to be replicated. Colonisation can happen with pressure from the top of the organization. The very nature of the reforms may be such as to make it difficult for absorbing groups to resist the changes. Both Marrett and Armour were appointed with a mandate for change. Whereas Marrett found many senior managers saw this as necessary, Armour made internal appointments and especially brought in "outsiders" to colonise the changes.

Fourth, prior research suggested that financial accounting systems can enable change; for example bringing about a cost or profit culture from a professional culture. This is mildly supported in the "Marrett" kick, although it is hard to be certain whether the change in culture at most levels of the organization did not precede the change in the accounting system. Accounting succeeded in some ways to change the culture at the lowest level of the organization, although there was no prevailing sentiment that cost mattered. The changes by Armour disrupted any ability to bring change through accounting measurement as there was no longer any clear idea of which financial accounting metrics they were being asked to achieve. The dominating accountability became numbers of staff and not dollars.

The involuntary imposition of a new design archetype in the form of financial accounting systems was to some extent achieved, as all employees of the Department had to use the hourly rates generated by the ABC system to transfer price their services. They in turn were being made conscious of the cost of their time and forced to think about the cost of their services compared with outside suppliers.

The overall conclusion is that accounting is not infused with the negative connotations which it received in prior research using the framework. Accounting was either viewed

as a positive contributor to change or was seen as not relevant to the changes going on. Accounting generally responded to the interpretive scheme rather than being a driver of it. In circumstances where accounting has a predominantly positive role there is not likely to be an absorbing group.

An important issue arises here as to forms of accounting. As has been shown, the dominant accounting was not dollars but in numbers of people. This feature of the interpretive scheme of being "as small as possible" was seen in the design archetype of constant down-sizing. No absorbing group formed against this change. The middle range framework is useful because it clearly explores the role of accounting in organizations under change; it does provide a skeleton for researchers to put flesh on the bones. However, I have already argued that its parentage back to Habermas also provides limitations that an alternative theory might overcome.

Giddens' structuration helps connect research into change by providing a common sensitising device. The importance of human agency in reproducing routine or in times of crisis in creating change is significant in ETSA. Through its long history the routines of organizational life were reproduced. Whereas GM was more obviously in crisis than ETSA, there was still the opportunity for a human agent to bring about profound change. The continuing crisis under Armour and the authorisation power given to him by the board of ETSA and the State Government gave him continuing power to bring about change. Structuration brings power into view as a critical issue in change and not as a secondary consideration.

The dimension of legitimation is useful in the ETSA research as there was a change in what was moral. I have particularly highlighted the changes to the moral order in relation to employees and community.

The problem in relation to the use of structuration in the analysis of ETSA and the Department is that the time frame is too short to reflect on the routines and changes. At the end of the research in 1997 employees did not perceive any clear routines that could operate at the level of practical consciousness. This confusion will only be resolved when these employees become established in the new companies that have been set up, out of ETSA which will develop new routines with their own interpretive schemes, facility and norms. Giddens theory needs a larger canvas to be sketched rather than this short time frame in one segment of an organization.

7. Conclusions

I have demonstrated that the use of multiple perspectives produces different insights in exploring the role of accounting during change. The middle range framework of kicks and tracks has been useful in understanding the impact of change. Accounting as an important part of the design archetype has been a focus. The ETSA research adds to the literature that sees accounting not always as problematic but sometimes as enabling. This is a significant departure from the existing literature and provides a basis to continue the study of the connections between accounting and organizations during change. There may be new patterns that emerge in different institutional and social contexts. Rather than accounting by financial numbers being problematic, other forms of accounting such as counting of heads

were much more serious in ETSA. In the Department there was no absorbing group that could reduce the impact of change because the desire to reduce staff meant that many of them left. With them went years of technical expertise, but also the political expertise to negotiate and resist change. Others were shifted to other parts of the restructured enterprise. There was no possibility of an absorbing group.

The strength of the middle range theory is that the "skeleton" allows the researcher to understand the shape of the processes of organizational change, and the interaction between the accounting system and the less tangible aspects of the interpretive scheme as well as the more concrete parts of the sub-systems. It does enable the exploration of how kicks to an organization are absorbed or changes made.

However, the limitations of Habermas, as previously discussed apply. In particular, I previously identified its lack of attention to power, a deficiency which is rectified by using Giddens. Livesay also commented on its lack of grounding in praxis, another deficiency overcome by using a second theoretical perspective in Giddens.

Structuration therefore provides different insights into the role of accounting during organizational change drawing on signification, legitimation and domination. The perspective of domination brings to the fore accounting as a power device. While Soin (1996) showed concern in not being able to explicitly bring power into the middle range framework, it is central to Giddens understanding of social change. This is not to say that power is unimportant but, as Giddens argues, structuration makes power central to the reproduction of social life. The dimension of legitimation helps identify changes in what was considered "moral" with the changes in the organization. As with previous research, accounting and profit can become the means of legitimising. Structuration is also useful because it explains periods of relative organizational stability punctuated by periods of change. In this way it perhaps explains why changes in the Laughlin framework are difficult to accomplish. Gidden's structuration also highlights the role of individual agency which is not explicitly acknowledged in the other two. This is particularly important in the ETSA case where much change seemed to have been triggered by powerful General Managers with the political backing of the Government of the day.

This research has used two different theoretical lenses to demonstrate different insights that can be gained by using theoretical triangulation. It does not seem possible to coalesce the commonalities into a cohesive whole because of the differences between Habermas and Giddens. What I have re-enforced is the claim by Hoque and Hopper (1998) that there is value in using theoretical triangulation, particularly in relation to the issue of organizational change. There is no all encompassing theory that enables the researcher to explore all of the processes and implications of change and the role of accounting during change. Different lenses enhance our understanding of the role of accounting.

Acknowledgements

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