PART THREE
STUDIES IN THE SOCIAL ORGANISATION OF CALCULATION

Introduction

The studies which make up Part Two are little more than sketches of the possibilities of analysis. They were designed to point to a phenomenon or, rather, a collection of phenomena which might be thematised as the separation of the organisational and the calculative aspects of entrepreneurial decision making. In part, what makes these studies preliminary is their dependence upon ethnographic and anecdotal materials and evidence. Without our iterven-tion to tell the story, collect the details, lay out the background, the sociological points being made would float, so to speak, above the surface of the materials. There need not be any systematic and necessary relation between them. This dis-articulation between evidence, resources, materials which were presented and the sociological points which they are said to instantiate is fairly typical of much ethnographic research reporting. It does not make such research weak, let alone poor, merely preliminary. Indeed, we would argue that some of the very best sociological work to-day is preliminary in precisely this sense.

It is now time, though, to attempt to step beyond preliminaries. To bring this about, two things have to happen. First and most important, the analytic focus of our studies has to sharpen. At the same time, the depth to which analysis aspires has to increase. Sharper, deeper analyses are the mark of progress. Second, and only marginally less important, to attain this sharpening and deepening, we will have to concentrate more and more on the detail of examples and instances, and hence on the materials which provide them. Instead of a reliance upon excerpts of fieldnotes, recalled moments and stories, our analysis will now begin from data of the actual events themselves and will seek to locate any observations or findings which are made in those data. This data will comprise transcripts of tape recorded meetings, sheets of notes and calculations, and the like. The activities and modes of reasoning which we will discuss are found to be displayed in the social organisation exhibited by such materials.

The general theme for this Part is the social organisation of calculation. We will draw this out in a number of ways. First we will look at calculation and calculability as a member's problem. We mean by this phrase that the achievement and display of 'proper calculation' is something which often concerns those involved in business life on a daily basis. We will explore this (a) through an analysis of the notions of 'profitability' and 'loss' in the context of the viability of projects and particular sites; and (b) through the examination of the routine work which goes into making a system of calculability operate. Second, we will look at calculability in relation to the fixing of prices and the variety of ways that calculative rationalities interweave with other rationalities in the context of negotiations over prices. Third, and finally, we turn to calculation within a division of labour. Here we explore the nature of information systems and their rationales and the ways in which daily life and competent work within a division of labour requires the management of the requirements of each. In all three aspects, we shall see that in the lifeworld of business, calculation and organisation are not so much segregated as harmonised in and through the motifs of competent practical action.

6. On calculability

Introduction

From all that we have said so far, it ought to be clear that profits and profitability are important in entrepreneurial firms, but not in quite the way that is usually suggested. The profit motive is present alright, but so too is the work of making a profit. It is the latter which is often given scant regard in the literature both on entrepreneurs and on other kinds of business activities. In a later chapter, we will examine aspects of the work of making profits in relation to the formulation and negotiation of contracts. In this chapter, we focus a little more closely on two features which have cropped up more than once already in our discussion, namely the exercise of cost control and the rooting out and evaluation of viable opportunities. Making profits consists both in the routine management of costs, and the assessment of opportunities. In that sense, these two compose another crucial element in entrepreneurial work.

By way of introduction to this aspect of our general theme, consider the following statement by Herbert Simon. It was offered as a deliberate oversimplification of the nature of economic decision making.

> In the theory of the business firm as it appears in elementary textbooks, a firm managed by an "entrepreneur" aims at maximising its profit, but in such simple circumstances that its computational capacities are not in question. Faced with a cost curve relating dollar expenditures to numbers of widgets produced and a revenue curve relating dollar receipts to numbers of widgets sold, a widget company can control how much it produces (and sells).....We readily deduce

> that the rational entrepreneurpreneur will select the total output quantity that yields the greatest possible difference between total revenue and total cost. Given the cost and revenue curves, anyone schooled in the elements of differential calculus can find this optimal quantity by taking a simple derivative, setting it equal to zero, and solving for the quantity as the dependent variable. (Simon 1981, p. 32)

But, while Simon may well have known that this substantively rational procedure simply could not be adopted in the complex situations in which most real world businessmen find themselves, it appears that many of his colleagues did not. Once when he expressed doubt about the 'veridicality' of the classical theory, a colleague responded, "Well, if they don't act this way now, they will after they have graduated from our school."

For Simon, of course, the point of marking the disjuncture is to enable the substitution of an appropriate procedural rationality (what he calls 'bounded rationality') for the substantive rationality of the classical model. Such a procedural rationality would be oriented towards optimising rather than maximising through a strategy of satisficing (Simon 1945, 1979). As can be seen quite clearly, though, while this might be a more "realistic" account of what actually businessmen are up to, it does not, of itself, tells us very much more about the actual processes by which businessmen reason their way to optimising, satisficing solutions.

In this chapter, we will take up two aspects of these processes as they are revealed by the use of rational calculation in entrepreneurial decision making. These aspects, in fact, strain against one another since they compose the elements of the ambiguity which we found the classical conception of the entrepreur to contain. These elements are, on the one hand, the stress laid on the primacy of capital accounting, the methods and measures by which levels of profitability are estimated; and on the other, the essential and irreducible role ascribed to 'the entrepreneurial eye'; the ineffable, personalised talent successful entrepreneurs have. In our discussion of entrepreneurial work, this duality will be found to be seen and recognised as part and parcel of routine economic reasoning.

In a later chapter, we use a comparison with artistic creativity to bring out the social organisation of entrepreneurial activities. From the point of view being adopted here, artistic creativity can treated as located in a workaday division of labour and thus as someone's routine occupation. In that sense, it will incorporate all sorts of rules of thumb, knacks, short-cuts, local knowledge and skill which enable it to be successful. Exactly the same goes for the entrepreneur. Part of this local knowledge and skill for the businessman is something which we will call "the lore of the numbers".[1] As we shall see, an essential part of this skill and knowledge is the capacity to play off the requirements for representing a set of activities through a system of calculation against the practicalities and obligations involved in performing those activities effectively and efficiently.

The following observation is taken from Ludwig von Mises. It provides a good place to start this discussion.

> Every single step of entrepreneurial activities is subject to scrutiny by monetary calculation. The premeditation of planned action becomes commercial calculation of expected costs and expected proceeds.

> The retrospective establishment of the outcome of past action becomes accounting of profit and loss.....Monetary calculation reaches its full perfection in capital accounting. It establishes money process of the available means and confronts this total with the changes brought about by action and by the operation of other factors. This confrontation shows what changes occured in the state of the acting men's affairs and the magnitude of those changes; it makes success and failure, profit and loss ascertainable. (von Mises. 1963, pp. 229 - 30.)

There can be little doubting, at least in von Mises eyes, the importance of monetary calculation for economic and business life. Without it, economic activity would be impossible. Given this importance, we might imagine that the elements used in these calculations, the algorithms and quantities manipulated, would be carefully considered, evaluated and worked out. If we can use an image which is familiarly used in this context, we should suppose that the tools used to fashion successful monetary calculation would be clean, sharp and precisely applied. As we will see, at least in the context of the working business' day to day decison making, this is usually far from the case. Unlike the scenarios set up in the classroom at the business school, here things are much more unpredictable, haphazard and subject to rule of thumb. The most that can be hoped for, and really all that is needed, are a few 'quick and dirty' figures on which to make a judgement. What those figures might be and how they are arrived at is to be the topic of this Chapter.

The disjuncture which we are pointing to is a very familiar one. In a discussion of quantitative practices in ordinary life, Lindsey Churchill (No Date) recounts the following story about the Vietnam war. As we all know, the Vietnam war was the first to be fought in front of the cameras. There was continuous and almost exhaustive coverage of nearly every phase. The army authorities slowly came to realise the importance of television and the mass media more generally as a means of conveying the information which they wanted to give to the US population. Part of this meant that the official figures for dead and wounded had to be at least plausibly related to the pictures which were being sent home by the camera crews. As a consequence, the army authorities issued the instruction that commanders of field battalions should organise body counts of the dead on both sides while the fighting was still in progress. On one occasion, the Information Office announced that a count of 869 enemy bodies had been made, while it was perfectly clear to those in and near the battle zone that many more than that had died. In response to the demand for body counts which could not realistically be carried out, soldiers began to joke about Saigon's request for a WEG or 'wild eyed guess'. The need for 'wild eyed guessing' was a response to the fact that it simply was not possible in the midst of a battle to produce accurate measures or estimates of the figures required. Guessing was all that could be done.

In many ways, the advocacy of monetary calculation as the basis of economic decision making to which von Mises alludes and which Simon suggests is thought to be taught in the Business Schools, presumes the precise computability of values for variables such as possible risk, market share, on costs, levels of demand, pricing, market share, and so on, when in fact the interval and ordinal scales which businessmen use to determine such values perforce permit only wild eyed guestimation.

Saying this, of course, is not to deride the efforts of businessmen to place values upon the variables they seek to assess and control. Rather, we want to point out that placing all the emphasis on the premiss of calculability, of the applicability of systems of accounting and thus of the use of accountant's processes, underplays or even disregards the work which businessmen do to make their activities fit within accountants' terms. This work involves grappling with the sheer practical difficulties of determining which figures are wanted, pulling them out, and then knowing how to manipulate them and assess their product. It is this struggle which we have come to think of as **quotidian computability** and which underpins economic reasoning in daily business life.

What's in a loss?

To indicate the general nature of the phenomenon we have in mind, we will look at the broad features of a very straight forward case. Having picked out the major themes, we will then turn to the specifics of rather more complex cases to locate them in the details of actual decision making. The first example consists of a discussion whether to terminate a contract for a site because it was unprofitable. The extract from the fieldnotes should help understanding the detail of the discussion. At points where we discuss specific components, extracts of a transcript of the meeting will be cited.

> *Swale Dale is the name of a development area in the North East of England. As with a number of development schemes in "depressed regions", it has attracted Central Government and EEC money by putting together an 'integrated package' of industrial and leisure developments. The Recreational and Leisure Officer for the Swale Dale is an old friend of Colin Dunbar's and he invited LTC in to run the units. LTC has two units in the area, the swimming pool at Catterick, which is a relatively small operation, and the Spectrum Centre at Richmond which is a larger leisure and entertainment centre. In the year to date, that is over 3 or 4 accounting periods, Catterick had made £328 profit overall on sales of £6123 while Richmond was runninga loss of £2261 on sales of £19537. The projected profit for Spectrum was £2000, or thereabouts.*
>
> *There are one or two things to keep in mind. The Spectrum Trust is a separate but related body to the Development Authority. The Chairman of the Trust in an influential member of the Authority. The Trust had been running the centre as a potential money earner, providing a cafeteria service and bar. They had, however, found it difficult to operate at a profit and so sought a commercial caterer. Colin had gone in on a 1 year trial basis. This year was to run out next month. During the year, the centre had consistently failed to achieve the level of profits sets and now was actually losing money. There were several reasons for this, or so it was thought. The original managerial staff was weak, consisting of a woman who had been deputy manageress under the previous management. She was promoted to manageress and proved extremely popular locally but operationally inefficient. When she was eventually sacked, there was a hue and cry in the area. Finally Lawrence took her back on in her old job of deputy manageress. The problem was that food costs and labour costs*

> *were out of control. The day time food operation, which was required by the Trust was simply unprofitable. In addition, the bar prices were artificially low (as they are elsewhere in the region), meaning that bar profits could not offset the losses on food. Two lines had been explored. The first was to cut back on the rent payments to be made to Spectrum Trust, effectively reducing overheads. Colin had been back to re-negotiate the possible contract several times. Each time the Trust had reluctantly agreed. Second, Lawrence had tried to get an experienced manager in place. For a short while (about a week) he had one , but since he had insisted on a management contract , effectively making the manager carry the overheads, this had soon failed. Eventually, a trainee area manager , Claire, was brought in from Head Office. She was living locally during the week and commuting back to Telford when required. She had very little actual experience of "hands on management". Ros Howarth who had become Area Manager when Giles had taken over Concessions was having to supervise her very closely.*

What was at issue was relatively clear. Spectrum had been making a large and increasing loss. In addition, it had always been a difficult site. If we think in purely calculative terms, then the decision should have been reasonably easy. The unit by unit system of accounting within LTC will not allow the circulation of profits or the distribution of losses across units. Each unit must make a contribution or face closure. That is a policy which Lawrence has always insisted on no matter which site is under discussion. Given the philosphy, why did it take so long for them to decide to pull out? And why was even that decision not a firm one? On the other hand, there is the apparently brisk, not to say brusque, way that the decision was eventually made. Once they had to come to some determination, there was very little toing and froing. They came right down to it and decided to get out.

LTC Tape 22a Side B

33.	Giles	How much notice would we have to give them to pull out
34.	Colin	3 months
		(4 sec)
35.	Lawrence	What now?
36.	Colin	Yes
37.	Lawrence	Yeah
38.	Colin	That's why I said 3 months.
39.	Lawrence	When the year's up in March
40.	Colin	That's right
		(5 sec)
41.	Giles	End of March. So that's April, May, June. March April May. That's right
42.	Sandy	That is 1st June
43.	Colin	1st June yes
44.	Lawrence	What it doesn't say actually here is that the er the rental for the

vending machines ceases straight away does it? Actually doen't even mention the rental

45. Colin — Yes it does
46. Sandy — Yes it does but as part of that
47. Colin — //Part of that agreement
48. Sandy — Part of this. This is what I was gonna ask Colin. I mean would they
49. Lawrence — No that has to be from 1st January, has to be from 1st January
50. Sandy — But will they agree to that without all of this? That they take over all the vending?
51. Giles — Also they want us to consider a contribution to the vending in the event of their being (liable for the) cost of the Centre Manager
52. Lawrence — That's Johnson will have put that in
53. Colin — Johnson put that in I mean that's quite good
54. Lawrence — That will have to come straight out along with the bars manager
55. Colin — Mmmm
56. Sandy — We don't know this man Johnson
57. Colin — Actually we've got to sit and make this decision now
58. Sandy — Now
59. Colin: — 'cos we took over on 2nd March
60. Lawrence — Did we?
61. Colin — So we've got to make the decision now.
62. Lawrence — Right. I vote we give three month's notice

(5 secs)

63. Giles: — Seconded
64. Sandy: — Thirded
65. Colin: — Right

What is at the root of all this , of course, is the complex character of loss making. It is not simply a question of seeing what is 'in the figures' and then working out what should be done. 'What is in the figures' is itself something which has to be worked out. Working that out involves teasing out both the operational complexities of a particular site and the organisational contingencies, the likely knock-on effects within LTC, of the case in hand.

The most obvious feature of the whole of this discussion of Spectrum is the seeming reluctance to take the step of closing the unit. Actually, it would not have been closing the unit. It would really have been not taking up the option of negotiating a contract for the further period. This reluctance is an expression of several features which underlie the decision making in this case.

LTC Tape 22B

1. Colin. — I mean I only see the one way forward with the contract is that we

find some way of generating sales.

(3 sec)

We're retrenching er We're saying well we've got the bar and we've got the vending so if we can get anything else that'll be good enough. If we don't, the hell with it. That really isn't what the client wants. We'd only give ourselves a bad name and give us hassle an the minute we signed a 5 year contract we're into a contractual situation. At this present moment we're not in a contractual situation mmm

(4 sec)

I think you'd be happy to pull out. I mean I'm err I'm giving a vote to go to come out now I mean I can see me having the same conversation with you every bloody month. I didn't mean I didn't mean to swear abusively I just meant it in ( )

2. Lawrence — Why not? Swear abusively. Make the most of it.
3. Colin — Errm
4. Giles — ( )
5. Colin — Seriously Giles, don't you?
6. Giles — I think it's it's very marginal, I've said that already. Now whether Carol is capable of doing it I don't know. Whether anybody else being paid £85 per week is is capable of doing it errm. What I do know is that if it is going to run profitably at all I don't accept that we've got to develop sales because that's what apparently everybody's been trying to do for the last year and they haven't done it and that's where we're losing money
7. Sandy — ( ) and that's where we've lost money on every sale ( )
8. Giles — We've got to pull in our costs. And it's the costs we have got to try and curtail. Now we can do it with labour costs. Ros can do it with food. I'm sure she can. I'm sure Ros has total capability (of getting the right food costs) on function foods. But I go along with what your saying in terms of that there will be very very weak on site management and therefore there will be an awful lot of Ros' time involved and her time // is better used
9. Colin — And it's not handy. It's not handy. I mean if its a Shrewsbury you know only three quarter of an hour down the road but I mean a two and a half hour journey
10. Giles: — I mean maybe the answer is is er we turn it round to them. We
11. Colin: — No I was thinking about that one but who do we turn it round to

Everyone round the table is well aware Giles' feelings. Colin voices them during the discussion and Lawrence sums them up afterwards by saying that Giles "got what he wanted". Similarly, Sandy made it quite clear she thought "too much time had been wasted on Swale Dale". It is Colin and Lawrence who have to be convinced that the "paper losses" at Spectrum really are real losses and that there is nothing left to do but pull out. The £2000 debit does not "speak for itself". What it means organisationally has to be worked out in the course of making a decision in the meeting.

The debit figure of £2000 on the year to date is what we can call an **accountant's object**.

It is the product, artefact even, of a series of accounting procedures.[2] These procedures make up a system of calculation and are designed to give a picture, a representation, of how each of the units is doing.[3] But the picture, the representation, which they give is by no means clear and unambiguous. Its implications are even less so. It is the latter, of course, to which considerable attention wass given. Colin and Giles, as is to be expected, differ over what the underlying reasons are. Colin felt that sales had been sacrificed - there was a turnover of £65,000 which was whittled away, in his view by a combination of poor on site management and central purchasing policy. The latter is a theme which as we have mentioned before, he often returns to. Because of the need to raise profitability, LTC tends to buy lines of stock which are 'down market versions' of branded lines. Thus instead of selling Smirnov vodka or Kit Kat, LTC will allow its units to sell only Popov vodka or Champs, both of which are, in Colin's view, "rubbish". In the arguments he has had over this, he has been unable to pursuade Lawrence that the loss of image outweighs what marginal profit might be made. Ultimately, as we shall see in the next section, the whole issue turns around whether one is prepared to accept that LTC's concessions provide them with a 'a captive market'. Lawrence thinks they do; Colin does not.

Giles, on the other hand, felt that the site should probably never have been taken on in the first place. It was always likely to be impossible to run. Second, in his view the problem could not have been that they were failing to pick up potential sales because they have been trying to promote them the whole time they have been there and have so far failed dismally. The root of the losses must be labour costs. Now, a decision or a settlement of the issue ought to have been easy , given the fact that each unit's labour, food and bar percentages are always provided in any run of figures supplied for a unit. It is what they are supposed to mean which causes the difficulty. These percentages are ratios of costs to sales, and so naturally they increase relatively as sales decline. In Colin's view, if you try to reduce the costs in the face of loss of sales, you only make matters worse. Reducing labour, for instance, is bound to reduce sales since a lower level of service is provided. Reducing food costs means selling products no one wants to buy. In the end, what we have here is a difference of opinion about what to do about the loss. Giles wanted to shrink sales right down to a level which was minimal but at which costs were controlled and profits made. Some expansion might then be possible. Colin wanted to recoup what he saw as lost opportunities.

Both agreed that the unit was making losses and were trying to find ways out of that situtaion. A number of were floated but not taken on board because of the organisational and operational constraints within which the Company operates.

These constraints are located at several different levels. First of all, there was the intractability of the site itself. In everyone's eyes, Lawrence is something close to an operational magician. He could make money out of anything. But even he has had trouble in Swale Dale. Second, there is the local impact of whatever they do. If they retrench and slim down, they will offend both the Trust and the users. If they pull out, there will be a loss of face and they will lose any credibility they might have once had. Third there are the organisational aspects to be borne in mind. If they continue with Swale Dale, in all likelihood it will occupy increasing amounts of executive time and resources. These contingencies are probably more visible for this group than the simple operational, accounting or public relations aspects. Working out a way of satisfying all these constraints was necessary before

they could determine what the loss at Spectrum really amounted to.

In the discussion, the Directors had a number of very specfic conditions in mind. These conditions have a direct effect upon the weight to be given to any of the contraints we have just listed. They are, therefore, the local contingencies of calculative representation and interpretation. We will summarise them under a number of heads.

The distribution of control.

No matter how the discussion goes, in the end Lawrence will decide what happens. Everyone else will have a say, and a vote even but if Lawrence decides not to be swayed by them, his will prevails. This autocratic reality is meliorated by the fact that Lawrence finds it very difficult to come to final decisions and rests very heavily on others. As we indicated, even when the final decision is made, Lawrence does not see it as final. Nothing is ever final to him.

LTC Tape 22b

25.	Lawrence	It is exactly the same sort of thing. And actually I'm not sure whether if you are going to go back and do that no guarantee bit
26.	Giles	No No reduce rent by eight grand
27.	Lawrence	Well no rent then // yes no rent
28.	Giles	Yes yes
29.	Lawrence	If you go back and do the no rent bit erm should we not cease the day time cooking operation first?
30.	Colin	Well I'm running out of time and the fact that you're into we're alright I think we've got to the 1st June for actual // contractual terms
31.	Lawrence	No. But we haven't as far as our finances are concerned erm.
32.	Colin	No I meant for. If you want any change. You can do all the changes you like how dramatic you can do them 'cos they're still in this first year plus 3 months of initial contract. Right errm. Test the market all you like and all hell breaks loose. But the minute we agree to 1st June a new contract then we're into the terms we've come to agree

The site's organisational history.

The failure at Spectrum is, ultimately, Lawrence's responsibility. Or, to put is more carefully, it is generally held that his style of management has contributed to things getting the way they have. He has had direct control over Spectrum through Mike Santo the Area Manager. It was Lawrence who selected the General Manager and insisted on the management contract. It was Lawrence who put the trainee in. In addition, there is also the feeling that if he had been able to give his full attention to the site, he would have been able to pull it around. In the post mortem that immediately followed the decision, Colin was very clear that the failure was a management one and not a faulty sales choice.

LTC 22b

13.	Colin:	Now that brings them back to square one. I mean that's the last I mean they'll stand for that I mean I can get them to stand for that but we have to stand up and be counted.

(3 sec)

Mmm we can't go back and say oh we're still achieving fifty one percent food costs and we're losing. Nothing, that's your damn problem. Sorry, I'm putting it in the middle of the table that our damn problem. We're not paying them nothing. They're paying all the bloody overheads. Aah Christ I mean you know we call ourselves caterers and operators we need burning don't we? ( ) sixty five grand worth of

14. Lawrence It's just when you give them your expenses for coming up after the meeting

(General laughter)

15. Colin Yeah. I mean they give us £65,000 worth of business and we can't turn a shilling out of it so

(6 sec)

And I mean you know we achieve it everywhere else why do we make mistakes there.And I'm now putting this in the middle of the table again. Why do we why don't we there wha when where are we going wrong? What's the where's our philosophy wrong?

The place of this decision in a web of decisions.

The recent changes in structure have meant that Giles has taken on Spectrum, which he feels is a white elephant. It will be a blemish on his record as a successful operations manager if it continues as it is. Apart from this, it is understandable that he should not be too keen to have to sort out other people's mistakes.

LTC 22b

6. Giles I think it's it's very marginal, I've said that already. Now whether Carol is capable of doing it I don't know. Whether anybody else being paid £85 per week is is capable of doing it errm. What I do know is that if it is going to run profitably at all I don't accept that we've got to develop sales because that's what apparently everybody's been trying to do for the last year and they haven't done it and that's where we're losing money

7. Sandy ( ) and that's where we've lost money on every sale ( )

8. Giles We've got to pull in our costs. And it's the costs we have got to try and curtail. Now we can do it with labour costs. Ros can do it with food. I'm sure she can. I'm sure Ros has total capability (of getting the right food costs) on function foods. But I go along with what your saying in terms of that there will be very very weak on site management and therefore there will be an awful lot of Ros' time involved and her time // is better used

9. Colin And it's not handy. It's not handy. I mean if its a Shrewsbury you know only 3/4 hour down the road but I mean a 21/2 hour journey

10. Giles: I mean maybe the answer is is er we turn it round to them. We

11. Colin: No I was thinking about that one but who do we turn it round to

12. Giles: No what I mean is we say to them look the fact of the matter is we're gonna have to pull out aah to make anything of these two sites we've

gotta keep a good quality manager in there and it isn't going to work. We can't make money with it um a good quality manager is going to cost us seven and a half thousand a year and we've gotta look to you for that. So we've gotta reduce our costs by seven and a half to eight thousand. If you want us to stay we'll do that we'll be only too happy ( ) seven and a half or eight grand off the rent which just happens to be ( ) then we'll put somebody in knowing full well that it's over the top in terms of labour costs'

The facts of life in the business.

While Colin remains committed to the concept, as he would put it, he is slowly being pushed into an impossible bargaining position with the Trust. He cannot keep going back to re-negotiate. Certainly once the contracts are signed, any re-negotiation will be impossible. Colin sees the likely problem to be Giles' attitude, who will not be happy until the matter is resolved, ie they are out. Because he has less influence with Lawrence than the others (and hence less power) he cannot oppose Giles directly. He would rather suffer the pain of pulling out now than a slow, lingering crucifixion being caught between the Trust on the one hand and Giles on the other.

LTC 22b

30. Colin Well I'm running out of time and the fact that you're into we're alright I think we've got to the 1st June for actual // contractual terms

31. Lawrence No. But we haven't as far as our finances are concerned erm.

32. Colin No I meant for. If you want any change. You can do all the changes you like how dramatic you can do them 'cos they're still in this first year plus 3 months of initial contract. Right errm. Test the market all you like and all hell breaks loose. But the minute we agree to 1st June a new contract then we're into the terms we've come to agree

The accountant's object, the £2000 loss, is, then, a great deal more than a 'bottom line', a mere calculative outcome of a set of procedures. But what exactly it is has to be worked out in the details of specific cases. The figure lies, so to speak, amid a nest of interactional, organisational and operational contingencies and gets its meaning from them. As an object, the loss of £2000 is a collaborative social product. It is arrived at in and through a course of joint business reasoning. In the next section, we will look at the detail of this reasoning and the way that it is shaped by contingencies .

Can I make a living from £80,000?

We have said that the primary difficulty for LTC is to decide which contracts are worth going for. The reason for this is one of the prevailing "facts" of the market place in which they operate. Generally contracts run for 5 years, with the occasional one of 7 or 10 years. This being the case, the Company is nearly always beginning a round of re-negotiations over contracts which are coming to the end of their lives. The proportion of contracts which are renewed is significantly less than 100%, which being pragmatic people, the Directors of LTC take as another fact of life. In some cases, they are only too happy to lose contracts. In others, they are outbid by competitors seeking to break into a market. In others still, the experience of having LTC as the concessionaires may have been somewhat disillusioning for the Local

Authority. Finally, there is the straightforward 'change for change's sake' factor. Some Authorities feel that they ought to try someone else, if only to see what another concessionaire would be like. The same thing, of course, applies to all the other operators. In addition, there is, or was until quite recently, a Local Authority policy of expanding leisure provision and thus creating sites in which LTC could operate. Consequently, there is a constant supply of contracts being offered to tender. These are generally advertised in the trade magazine, *The Caterer*.

The problem appeared, then, as one of fixing priorities. Colin had to rank the contracts which he knew to be available and decide which he really wished to push for. The complicating factor was that none of the contracts he had pursued recently had come to fruition. In addition, some of the existing sites, such as Spectrum at Richmond, were proving to be difficult to run profitably. In the light of this, a special Board Meeting was held to discuss sales strategy. At it were Sandy, Giles, Lawrence at, of course, Colin. The following excerpt from the fieldnotes summarises the outcome.

> *Of the list of other possibilities, Colin selected four which he thought were runners. However, it was not altogether clear why he thought these should be sought in preference to others. Here his overall strategy came under scrutiny. Lawrence proposed that a system of prioritization should be adopted and requested that everyone read Colin's report which had been circulated. This report indicated the outline sales strategy Colin was presently conducting and how it could be expanded. In essence, it proposes a modular approach. They should concentrate on geographical areas in which they already have a strong presence rather than spreading themselves thinly across GB as a whole.....*
>
> *.....After some discussion of various measures, they opted for a throughput figure of £80,000 and £15,000 profitability. Since £7,500 of the profit of any site was reserved for "Head Office Overheads", this means that unless a site generates a 'bottom line' of £7,500, they are not interested in trying to tender for it.*

Eventually, then, Colin got himself a formula. The trouble came in actually putting it to use. The figure "£80,000" turover per annum appears to be avery precise base level, even if we allow it to mean "around £80,000", in line with everyday quantificational practices (Churchill, op. cit.). Just what does "around £80,000" actually mean, and how much around does "around" have to be. In other words, how is the formula to be applied in specific cases? What are the determinants of its applicability? And what are the requirements of making it work?

The figure of £80,000 emerged because the Directors had decided upon a prior figure of £15,000 as the minimum first net profit which a site should yield. This figure was arrived at in two ways. First of all, it was large enough to carry Head Office overheads, the £7,500 which it costs on average to administer any site from Telford. Up until that meeting, the notional first net profit had been £10,000, which, of course, yields a second net profit of only £2,500. This was approximately the figure which, had it worked, Spectrum might have been expected to make. However, as Lawrence put it, it simply wasn't worth all the effort of running places like Spectrum for just £2,500. That level of profitability was below their effort threshold. Second, a general minimum of £7,500 second net profit, would yield at least £187,500 as the overall profit for the Division, a much improved figure on that which was currently being

made. Simply by rasing the base line of the contracts they were prepared to take on, profitability could be improved.

However, it is not just a question of profits. It is also to do with what sort of business one wants. In general terms, the very small sites are less easy to administer and so require more Head Office time, more supervision, proportionately more visits etc. than is marked by the figure of £7,500. As a consequence, a large number of contracts just above the cut-off might actually mean that it was much harder to make the £187,500 target. Thus it was not only a question of which £80,000 sites were "real" £80,000 sites, i.e. would earn £15,000 profit, but also how easily they would earn it.

Alongside these purely calculative or scaling considerations has to be put another set of complicating contingencies. Some sites are good for the image of the business. Others may not yet be very profitable but could well have potential. Still others have been with LTC right from the start, are well under control, have good managers and while not being spectacular, are worth keeping. Such considerations as these have to be placed alongside the purely calculative balance sheet estimations.

The problem to be solved, then, is to find a formula which can be made to work, which satisfies the requirements both for profitability and for the operational concerns just mentioned, and which, at the same time, spreads the risks which LTC runs.[4] Such risk can never be completely eradicated since, as has been been made clear, LTC operates in an environment of largely unknown and unmeasurable variables. This minimalist strategy has one further facet. The materials on which it has to work must be more or less public. Colin has to know which contracts he wants to go for before he allocates a lot of time and energy to chasing them. However, and this is where the practical difficulties in the operation of the formula come to the fore, it is extremely unlikely that Colin will have the detailed kind of operational information he requires to do the computation for sites that LTC does not currently hold. All he can do is use his experience, the general layout, and one or two leading indicators, to "best guess" what the throughput of users will be and thus what the profit level might be like. The figures which are fed into the formula and on which crucial decisions with regard to contract tendering rely, have, then, a lot in common with the "wild eyed guestimations" we spoke of earlier.

There are several methods availble to Colin for this calculation. Various public documents, such as Local Authority accounts, Sports Council publications and so forth, feature "throughput figures". This measure is one which he is used to interpreting. He has a rule of thumb derived from LTC's current operations which he can apply . If the cafeteria/bar are 'back to back' and in the centre of the facility then multiplying throughput by 0.27p gives a measure of likely turnover. If they are separate, and/or peripheral, then the figure has to be adjusted down. Thus, if a centre has 360,000 users per year and because of the layout of the facility we assume spend per head to be 20p, then we can project a £72,000 turnover, which is below the required rate. On the basis of that projection, Colin could decide not to pursue the contract. The formula seems to make the decision relatively straight forward.

The difficulty is that both elements in this computation are uncertain. Colin can only tell what scalar to use by going to see the facilities themselves. And even then it is a guess based on his experience. Second, the throughput figures are collected by the Centre's staff and are

likely to be even wilder eyed guesses than the body counts in Vietnam. They are produced by the Centre staff as a measure of their own effectiveness. As a consequence, they are often inflated by the inclusion of total membership figures for clubs and societies using the facilities rather than actual usage.

A second approach is to use the figures for catering turnover which are published with the tender documents. This does not involve Colin in any work since it is LTC's policy to send for all tender documents before making a decision on whether to proceed. The figure for catering turnover can then be transformed to produce a measure of profit. From its experience in this business, the Company has a series of "target averages" for the costs of various elements. These are: food 32% of sales; liquor 42%; labour 25%; overheads 8%; and rent 12%. 18% of sales is the "target average profit". If it is assumed that the site in question will a site which conforms to the target averages, then a figure for profit can be derived. Providing the 18% of turnover is larger than £15,000, then the contract is worth pursuing. Again a rule of thumb is available. If turnover is greater than £83,000 then it is worth considering making a tender.

The drawback to both formulae can be summarised in the question we asked at the begining of this section. When is £83,000 a real £83,000? How is Colin to determine how close to the notional target average any site is? Here he has to address the operational constraints which make any site unique. Using the global figure we have been discussing, would mean not pursuing Havant, a centre which at present contributes £15,000 on a turnover of £58,000. It would mean accepting Staines which contributes only £14,000 on a turnover of £128,000. The difficulty is in trying to determine what in any specific context £83,000 can be taken to mean and thus when £128,000 is less than £83,000 and when £58,000 is more. This can only be done by treating each site as a 'one off' effectively determined by local considerations. It is these which make the difference. Are the cafeteria and bar back to back, requiring less labour and making shared storage possible? What financial arrangements will the Local Authority want? What utility payments will they cover. But most of all, where is it? Labour and other on costs vary across the country, significantly affecting how close to the average any site might be. Lewes and Telford yield more than £17,000 on turnovers of £90,000 and £74,000 respectively. Swale Dale, as we know, makes a loss on approximately £40,000.

Even with all this in the front of one's mind, there are further complications. As we have mentioned before, the Company's experience has been that where they have been most successful, measured in profitability terms, they have tended to decrease catering turnover not increase it. More efficient management, lower labour costs, restricted menus and so forth mean that they take less money but they hang on to a higher proportion of it. How far away from £83,000 one would have to go before this cost effectiveness failed to yield £15,000, can only be ascertained on a case by case basis, since the variables are strongly responsive to such factors as local facilities and demands, quality of management, and commitment of the Local Authority. At the same time, there is size of the potential market available in each outlet. Both Giles and Colin feel that this market cannot be taken for granted or treated as 'captive' in some sense. Lawrence tends to disagree. Certainly, he is averse to accepting lower than target profitability in the hope of generating sales and thus enlarging throughput through what would be LTC's version of "loss leaders".

The precision of the formula " pursue only contracts with a throughput of £83,000" is, then,

misleading. It does not allow realistic choices to be made simply because it is insensitive to the particular features of individual sites. To begin with, it disregards future possibilities. In the case of Spectrum, for example, part of the attraction was the possibility of expanding into Swale Dale. Outliers could be run as subtended operations from the Spectrum Centre and hence contribute to its profitability. Such "contract packages" render the calculations even less precise and make it more difficult to set out criteria for prioritization. How, for instance, do you measure a multi-site operation like, say, Swale Dale against one where £154,000 can be taken in one building?

It is the context of this complex estimation that Colin's question "Can I make a living from £83,000?" begins to make sense. It directs us immediately towards the search for comparable cases where the required level of profit (a living) can be made. The catering turnover is £83,000. Can a living be made from £83,000? The unit at Margate shows that it can. Is the site similar to Margate? Are the bar and cafeteria back to back? What are the opening hours? Who pays the utilities? What are the labour costs? Here the use of target averages can be positively misleading. Purley, for instance, turns over £84,500 but yields a paltry £8,600. The average figure for wages in all units is £15,000. In Purley that would just about cover the Manager's salary. The assessment of profitability has to be carried out, then, on the basis of a notional actual figure, a guess as to how much it will actually take and actually cost to run a site. The trouble is that it is only when a site is on the books and running that you find out just how notional the notional actual figure really was!

The lengthy, tortuous and sometimes heated discussion which the Directors had over the sales strategy reflects the difficulty of finding simple solutions to complicated problems. Raw economic calculation, if we might put it that way, is never merely a matter of running through the computations. It is permeated through and through by qualitative judgements of comparability, normality and possibility which have their logic not in a mathematical model of profitability, no matter how rudimentary, but in the lineaments of experience and judgement. It is more a matter of feeling things out than it is of working them out. Keen has put the whole thing rather neatly.[4]

> .....by focussing on small deviations from the status quo, the decision maker can avoid the need for formal evaluation. By apprehending, trusting his internal, sometimes intuitive sense of things, he can act where he does not comprehend. In general, his conscious strategies and unconscious habits are functional, reducing risk and strain. (Keen 1977, p. 46)

Nonetheless, decisons have to be taken with reference to formal criteria such as measures of profitability, if only as a context of justification rather than decision making. This context of justification is a representation and evaluation of activities, which in this case is couched in the terms set out in the procedures and logic of capital accounting. In the next section, we will look in detail at one case where this justification is deployed. The next chapter will examine the grounds of that justification, the procedures themselves.

Pencil and paper forecasting

Given the emphasis on the interplay between formal and informal aspects of decision making

practices and business reasoning, one possible sub-title for this chapter might have been "flying the business by the seat of your pants". No doubt many, and Lawrence would certainly include himself among them, would want to claim that that is the only way in which it can be done. The disjuncture between computability in business practice and formal accounts of computability in Economic theory is one which he recognises and disparages. For Lawrence, estimating costs of supply and levels of demand, and hence profits, is riven with guestimation. And yet, in as much as he makes final decisions at all, he has no qualms at all about about making them on the basis of such guestimates. Here is a snippet from our fieldnotes which makes this very plain. It refers to an informal meeting between Sandy, Giles and Lawrence.

As soon as the meeting got underway, Lawrence reported on his negotiations with the Concession's Manager at Swell Belle. She had wanted a presentation at which Lawrence should submit a set of financial summaries and forecasts. To provide this, Lawrence simply ad hoced a set of figures based on what he already had to hand, namely his experience of the business and the figures for Brambles (the restaurant in the shop at the moment) which Swell Belle had given him. In addition to these, Sandy and he had conducted a market research survey by going up and down Oxford Street asking people about the restaurant in Swell Belle. It was not quite clear how the results of this were used. Here is a copy of the handwritten summary.

P & L PROJNS

Gross Turnover					
2000	*3000*	*4000*	*5000*	*6000*	
90434	*135652*	*180869*	*226086*	*271304*	
25	*25*	*24*	*23*	*22*	
33	*33*	*32*	*31*	*30*	
37,982	*56,973*	*79582*	*103999*	*130225*	
\——————*50,0000*——————\				*51548*	*rent*
£ 4,000	*4*	*4*	*4*	*4*	*elect*
8	*10*	*12*	*14*	*16*	*R&R*
62	*64*	*66*	*68*	*71548*	
(-24,018)	*(-7027)*	*13,582*	*35,999*	*58,677*	

3400

This summary became the centre of the discussion and the basis for the decision which emerged. It was treated as equivalent, at least for the purposes of this decision, to the measures of profit and the target cost percentages discussed in the previous section. In that sense, it too is an accountant's object. The question we wish to ask concerns not its veridicality,

soundness, relationship to the procedures taught in Business Schools and the standard texts, but its organisational grounding and logic. That it is not a formal procedure as, say, a management scientist defines that term is irrelevant just now. It is by means of devices such as these that this entrepreneur in this business makes the decisions he does.

What Lawrence has produced has a given format. It follows the overall shape of a standard profit and loss account. It might be thought of, then, as a heuristic balance sheet. But this balance sheet is put together for a clear purpose. Its format, the left to right, top - down structure is an organisation designed as a calculus. It enables to comparisons of a variety of different possibilities. The difficulty for us, and we may say for those around the table with him, was in seeing how the calculus was used to provide the outcomes it did. How did the device work?. This is an important point, for while it is a readily recognisable format, the actual outcome, its meaning, is determined by the context in which it was put together. If we think of the summary as a schedule for thinking, as a way of finding out what to do using means which are contextually justifiable, and not as a post hoc rationalisation of what has already been decided upon (and certainly not as a representation of how things might really turn out), then we may get a clearer idea of how this mode of reasoning is appled in practise.

In putting the heuristic balance sheet together, Lawrence followed the following steps.

1. Each column represents a level of turnover defined by gross turnover per week.
2. These are transformed into annual turnover exclusive of VAT by being multiplied by 52 x 100/115.
3. From this turnover figure are deducted for labour costs (varying from 25% to 22%) and food (from 33% to 30%). This gives an estimate of first net profit.
4. From first net profit are deducted factors for rent, electricity, repairs and renewals, and sundries. These are then aggregated to give a sub-total for overheads.
5. Taking other overheads from first net profit gives an estimate of second net profit.
6. The "break-even point is interpolated by approximation to be £3400.

This, then, is the overall logic of the format. But what is the 'situational logic', to use another phrase of Melinda Baccus (1986), at work in arriving at these particular elements in the calculus?

The procedure for discounting for VAT is a standardised one and is used throughout LTC. It is, therefore, independent of the particularities of this case. Each of the other computations, though, display an orientation to what we might think of as stepwise interpretation of contingencies. To arrive at the first net profit, Lawrence simply appropriated and transformed a set of notional averages currently being achieved in the rest of the Company's outlets. Obviously this presumption is one which could be challenged, as it was by Giles in the discussion of the figures. Two further interpretive features are at work here. First, in arriving at the relative weightings of food and labour, Lawrence made the assumption that this outlet would be predominantly a beverage concern. Because it was going to sell Cola as its main line (the name for it was to be COLA PLUS) which is sold through bar top dispensers, labour costs would be lower than elsewhere. If it were to turn out to be mainly a food operation, then

this would upset the projections. Given the general level of "play" in these figures, though, such a mistake might not be disastrous. Second, Lawrence took £4000 as the 'threshold' at which marginal economies of scale for labour and food would appear and adjusted down the percentages a single percentage point for each level of turnover above this. Once again these are guesses based upon experience and upon what they imagine the outlet will operate like. Since they do not run any other comparable units, there are no direct comparisons to be had.

This procedure of interpretive calculation continues in the estimation of second net profit. The figure for rent was taken to be given since, at the moment at least, Swell Belle are saying it is non-negotiable. Lawrence, however, was fairly certain that if he can sell them the idea for COLA PLUS, then he would be able to whittle that down a little. The figures for repairs and renewals and rent are simply informed guesses, estimations based upon what he knows about the business and expects the unit to be like. That for electricity is particularly interesting since it is a doubling of the average cost for a 'normal' Leisure Centre. Lawrence's justification for this was simply that the outlet would be open to the public almost as long as a Leisure Centre and have more lighting. It was, at best, a "conservative guess", he thought.

The outcome of this interpretive calculation was a "break-even" figure of £3400. At that level, though, it would not make enough profit to make it worthwhile taking on . The tender documentation indicated that the existing unit turned over £3000 per week which if it were taken as a guide , as would be the case in the decision making formula which Colin uses, would mean that the unit was likely to be a loss maker. However, Lawrence refused to use comparisons with the existing unit simply because COLA PLUS was going to be an entirely different concept, aiming at an entirely different market. It is here that the interpretation and application of the figures became crucial. Lawrence was convinced that COLA PLUS is such a different concept that direct comparisons with what was already in place, or with what they are already doing were of little value except for heuristic purposes.

Having done the exercise and worked out the level of throughput needed, Lawrence had to decide whether the product of the calculus was so far away from what was already being achieved that he had little hope of attaining the targets. That is to say, he had to weight the influence of the interpretive factors in the calculus. Given Lawrence's commitment to the project, the conclusion was obvious. He was convinced that with this idea, scond net profit would easily surpass £3400. The context of justification of these projected figures is that of a demonstration of what Lawrence already knows. [5] He knows he can make it work . The heuristic balance sheet P & L PROJNS show why.

Conclusion

What then can we say about calculability at LTC? From the cases which we have examined, it seems that the formal requirements of computability and precision are inextricably bound up with those of interpretation and meaning. This does not mean that everything is haphazard, loose, or 'unbusiness like'. Far from it. Rather precision and computability are contextually defined notions. The requirements for calculation may be relaxed in the light of the importance of local knowledge of interactional, operational and organisational constraints and the sheer impossibility of satisfying any but the least stringent criteria. The use of interpretive calculation relies upon figures for profits, turnover, labour costs and the like, each

of which is itself the product of accounting procedures. The use of judgement in the operation of whatever calculi are available is part of the work which successful entrepreneurs engage in. In that sense, LTC's entrepreneurial success depends upon managing the interplay between precision and interpretation in calculation. In the next chapter, we will see how the same duality can be seen in the practical requirements of making the system of calculability, the accounting procedures at LTC, work.

NOTES

[1] To borrow a phrase from Melinda Baccus' (1986) paper.

[2] C.f. Chapter 8.

[3] These are discussed in detail the next Chapter.

[4] C.f. Chapter 6.

[5] For a discussion of the use of a similar strategy in decision making, cf. H. Garfinkel. 'Some rules of correct decision making that jurors respect.' in his (1967)

7. Creative accountancy

In this chapter, we turn to the system of calculability itself.* We will address, not how its products are put to use within an entrepreneurial business but how the products themselves are constructed. The procedures employed make up what we will call **accountants' work**.

The primary reasons for taking up this topic are two-fold. First and foremost, calculability, and in particular calculability of profit, is a recurring theme of business discussions at LTC. What a set of calculations show and how they have been arrived at are prominent and recurring themes in decision making deliberations at every level of LTC's operations. A range of measures and a whole infrastructure of methods for estimating them have been instituted for internal monitoring and as a means of arriving at guides for future action. The salience of LTC's accounting systems for its own organisational culture cannot be ignored. Second is the position which has been ascribed to systems of capital accounting in the sociology of capitalistic enterprises. These procedures are treated as the epitome of instrumental rationalism and hence forming the structure of legitimation by which value is expropriated and distributed within the capitalist and post capitalist mode of production. But, while a great deal has been made of 'capital accounting' as a system of ideas, as far as we are aware very little has been made of it as an environment for activity. In that sense, somewhat surprisingly the ideology of capitalism has received far more attention than its praxis.

But it is the praxis of entrepreneurial capitalism which this book is attempting to identify and bring out. By this we mean that we are pre-eminently concerned with the relationship between theory and practice as this is made visible in the activities of Lawrence Hunt's daily business life. We have taken up and explored a number of associated features in the previous chapters. The heart of that praxis, though, is the system of calculability itself. It is the reliance on and permeation of this system in all spheres which gives capital accounting its distinctive

cast. We will suggest , as have many other investigators, first that what is sociologically interesting about capital accounting is that it consists in a system of rules and their application in contexts, the system of calculability. Second, we will propose to analyse the application of these rules as a socio-technical production system (Trist 1971). The products of this production process are the accountants' objects to which we refered both above and in the previous chapter. The work which goes into producing them, that is applying the rules in contexts to produce calculable measures, is creative accountancy.

But what precisely do we mean by 'capital accounting' and how can we see it as constituting a socio-technical production system? Perhaps the only place to begin is with Weber, since it is his writing which largely introduced the term to Sociology and which still defines its use. In his discussion of types of profit making, Weber has the following to say about 'capital accounting'.

> There is a form of monetary accounting which is peculiar to rational economic profit-making; namely , 'capital accounting'. Capital accounting is the valuation and verification of opportunities for profit and of the success of profit-making activity. It involves the valuation of the total assets of the enterprise, whether these consist in goods in kind or in money, at the beginning of a period of activity; and the comparison of this with a similar valuation of the assets still present, or newly acquired at the end of the process.....A profit making 'enterprise' is a system of action capable of autonomous orientation to capital accounting. This orientation takes place by means of calculation. On the one hand, there is calculation prior to actual action, of the probable risks and chances of profit; on the other hand, at the conclusion of a measure, verification of the actual profit or loss resulting. (Weber 1978, pp. 191-1.)

Without some system of capital accounting, or its equivalent, estimations of profitability on a systematic and consistent basis are impossible. It is precisely these estimations which are the sine qua non of business management and hence of capitalism itself. They enable running balances to be kept, profit forecasts to be made and accounts to be compiled. In that this is their purpose, such balances, forecasts and accounts can be treated as outcomes, the products of the socio-technical system of capital accounting. But it is a socio-technical system with a difference. Like all such bureaucratic structures, it has a knowledge rather than a material base. Although it could be said that what is created and circulated is materialised knowledge in the form of documents, memos, summaries and the like, this is really just punning. The basis of the system, what makes it work and what it works upon, is the knowledge brought to it by those who make it work as a system of calculability. This knowledge is technical knowledge of standardised accounting practices, the local routines that these practices fall into at, in this case LTC, the requirements, both operational and organisational which the system is designed to fulfill, and the well known contingencies with which it has to deal.

Our suggestion is that this technical knowledge is socially organised. The materials which are to hand and to which it is applied, the files, data sheets, accounts and so forth, are all themselves the products of socially organised accounting work. As such, they are "accountable" in two senses.

(1) The documents, findings, materials , and so on are widely used within the business in all its workings. They are available to Directors, administrators and managers as objects for debate, discussion, argument, defence, interrogation. Most, but not all, of LTC's business talk is talk about these objects.

(2) They are, to use a term of Lynch's (1985), "displays" of the methods used to produce them. What anyone can find them to say or to mean will depend on interpretation of the displays. Running your eye down the print-out, whizzing through the file returns, tells you very little unless you know what to look for and where.

The "technicality" of this particular socio-technical system is defined, then, by the interplay of accounting practices, operational procedures, organisational routines and commonsense methods of interpretation. It is this interplay which locates but does not explicate the phenomenon of applying the (accounting) rules in (this) context.

The point of any system of capital accounting is, of course, to arrive at some efficient and reasonable estimation of 'how things stand' in the business; the infamous 'bottom line'. The critical terms here are 'efficient and reasonable'. No-one is interested in just any estimation, but rather in arriving at the estimation which results from the correct application of the rules to the set of activities in view. The first thing to be sensitive towards, then, is the set of criteria for correctness and what is required for their satisfaction. Any description of the work of making a system of calculability work will have to address what, for some specific occasion, , constitutes correctness, allowable error, the margins of probability and calculability. In short, what can be asked of a system and what it can be expected to provide. Central to all of this , certainly at LTC, is the ubiquitous notion of the "one off"[1], or what Rubin (1987) calls "exceptioning". In a discussion of decision making in the context of land zoning, he says:

> .....decisions were reached through a series of bargaining exchanges. Key to these exchanges was the procedure of "exceptioning', that is, stating and reinforcing a general principle but then invoking specific circumstances that permitted limited "departures' from or "exceptions' to that principle. (Rubin. 1987 pp. 290-1)

Finding what the rules are for this case and how they apply is precisely what it takes to make a system of calculability work.[2]

If we set aside the generalised glosses and try to look, instead, at capital accounting as an empirically observable set of activities, the operation of a system of calculability, what sorts of features might we expect it to have? First of all, the knowledge which anyone working within the system possesses and uses is a locally organised corpus (Pollner 1987). That is to say, it is a body of knowledge which makes itself available to hand and within reach (to use Schutz's terms (Schutz and Luckmann 1974)) to those in the setting. It is knowledge of how to do these calculations with these materials in this company. While the procedures may be adaptations or variations upon practices used in all accounting systems, they have been customised to suit the local needs and organisational characteristics of this Company. Second, and equally importantly, as a corpus it is systematically unavailable to analytic reconstruction as a collection of abstracted cases and idealised procedures. No one could put together a complete list of what they know about sites and their peculiarities, nor when this

knowledge is to be relevantly applied as a set of general guidelines. Each one has to be treated as, potentially at least, a "one off". Instead knowledge is "touched off", available only in and through the working out of estimations for specific purposes. The primary orientation of such estimations is that the system of calculation should be applied as consistently as possible to all like cases. The knowledge is put to work In achieving, first the match of like with like, and then the consistency between them. Third, and this is a massively important feature of the working milieu, the use of this knowledge is designed to be followed. Given the wide circulation of the products of the system , any application of the system muct allow others to follow it to see how the product was arrived at, why the figures 'came out' as they did, and hence how far, if at all, they need to be taken into account, relied upon, ignored or taken as definitive. Fourth, and this is closely related to the last, the products have a non-definitive character. Others can take them away for their own use, check them over, reconcile them with alternatives, make inferences on their basis, fit their procedures into other procedures, calculate them all over again, and so on. These uses are not and cannot be constrained by the procedures by which the objects themselves were produced, and yet a variety of possibilities must be allowed for.

Obviously, it would be part of our argument that any of the paperwork procedures at LTC would lend itself to analysis along the lines we have just sketched. We will focus on just two, namely the documentary co-ordination and condensation which Janice, the Senior Accounts Processor, produces as part and parcel of her routine work , and the financial summation which Deborah, the deputy accountant, uses to work out the rents which are owed to the Authorities which own the CONCESSIONS outlets. What we will bring out is documentary co-ordination and financial summary as the outcome, the product, of the socio-technical knowledge based system of calculability within which both Janice and Deborah work.

To do this, we have to attend to the detail of procedures. Praxis only becomes available for analytic description in the detail. It is possible, of course, to provide generalised accounts of the work which Janice and Deborah do but these leave unexplicated the procedures by which the generalised features are themselves found and made available. And yet, as with all technically complex activities, for us to plunge directly into analysis is to run the risk of either incomprehension or trivialisation. To try to prevent either, we will preface each discussion with a short introduction to the place and general functions which the work performs within LTC's accounting systems.

The Management of Factuality

The financial year at LTC is broken into 13 "financial periods", each of which, in turn, is subdivided into 2 "stock-taking fortnights". At the end of each financial period, ie approximately once every 4 to 6 weeks, the Board of Directors meets to assess progress, and to decide on future courses of action, policy changes , and perform other general administrative and monitoring tasks. Among the materials available to the Board is a set of Management Accounts for the period just ended and the year to date. These accounts depict the profitability of the Divisions and their units both on a period and cumulative basis. The work of the Accounts Processor is a contribution to the compilation of the Management Accounts. Her task is to build a summary paperwork picture of the financial state of each of the Company's retail outlets. She does this by taking a paperwork version of the trading activities which the

Company engages in and transforming it so that it is amenable for the instant analysis, diagnosis, discussion, inference, projection, investigation, arbitration, argument and decision-making which the Directors carry out. In her work, she contributes towards making the Company available for its Directors by turning the visible economic activities of buying and selling of food and drinkinto a series of accountants' objects which can then be subjected to accountants' work.

So much for the generalised gloss. The task we face is how to describe in actual cases precisely what her work tasks consist in and how the co-ordination and sequentiality of her work is achieved. Saying that she is an accounts processor really tells us very little at all. Neither does describing her place in the organisational setting. The problem is one of researchability.[3] What materials are there which we could use to capture and preserve the displayed organisational unity of her work? Taping her own account of what she does simply gives us back the problem. She does not tell us how to do it for ourselves; how to compile the documents, find the missing invoices, transfer the necessary numbers, and so on. She gives us, instead, a description of the organisational rationale to what she does. In asking her to take us through her work, what we get is a description of how everything she does is fitted together. What is done first, second, and so on, and how once the base figures have been "picked up" the rest can be derived. What she gives us is the organisation's organisational account, premissed in the fact of its inherent co-ordination and sequential unity. But what we want to do is to step back beyond that to the primeordial feature of her occupational life, the achievement of that sequentiality. Where are the materials which document these?

That, of course, is a rhetorial question since we all know that her work consists in producing records of what she does, namely the summary sheets from which the Management Accounts are built. But what sort of records are they, and what specifically do they record? Again we need a toe-hold. To get it we will step through the overall collection before we return to look at some of its features.

(1) The Originals:

Every stock-taking fortnight, each of the unit managers is required to fill out two sheets. One is a stockcheck sheet; the other is a stock purchase sheet. Both are broken down into separate columns which the manager fills out.

The stockcheck sheet is a computer print-out listing all the items bought centrally for the units. The manager adds any items not included on the list. The opening stock is provided from the computer file for the unit. The manager fills in all purchases, transfers, present stock and usage. This set of figures is keyed into the file update at Head Office.

The stock purchase sheet is a similar list of items arrayed by day. The manager lists supplies against the days on which they arrive. The Accounts Processor checks these figures against the delivery notes sent on by unit managers. Where there are discrepancies, she amends the sheets in accordance with the delivery notes. At the same time, she keeps a check on prices of items in two large areas, fresh meat and vegetables. Other prices are standardised and checked by the purchasing section when invoices arrive. This whole procedure takes one week. It is carrried out while the figures on the stockcheck sheet are being keyed in.

(2) The Transformations

When the files have been updated, a printout for each unit is extracted from the computer. This is the processing sheet which the Accounts Processor works on. The columns on this sheet are checked row by row against the documents already processed. Where differences occur, then amendments, and recalculations may be required. For instance, in one case the manager at Edinburgh Airport reported that 18 tins of apples were bought, whereas the delivery note said only 12. His stocksheet was amended to 12 and as was the processing sheet. This means that his usage was only 4. He also claimed that no baked beans had been bought, although a delivery note for 6 has been sent in. Again the usage was be altered.[4]

When mistakes of this kind occur, the Processor usually just makes the alterations. If, however, it involves an item which is expensive, say above £5 each, she will send for the invoices and check the back history of the unit to see if such usage is likely. She is not concerned to determine what the actual stock really is but simply whether they are likely to have used what they say they have. When she is dubious, she "accepts the physical stock but allows no credit" meaning that the unit cannot carry credit for the stock used forward and the manager should investigate.

(3) The Collation

The figures for each period are summarised on a stock-taking results sheet. . These compare food costs and liquor costs against the notional targets of 30% and 40% of sales. Variations from these targets are the subject of decision-making at the Board meetings. A similar set of data is available for each Division as a whole.

(4) The Summary

All of the information concerning the profit and loss of each unit is summarised on one unit profit statement showing sales, labour costs and food costs. Labour costs are fed in directly from the computer. The unit profit statement allows progress against budget to be assessed.

This, then, is the overall structure into which the work of the Accounts Processor fits. What from the documents in hand can we say about how those tasks are organised?

The essence of Janice's work is modal transformation . Figures are "picked up" from one set of sheets and transfered to others. In achieving this transformation, she takes someone else's output (the manager's fortnightly sheets) and turns them into another's inputs (the Management Accounts and summary sheets). One set of materials is turned into another set so that others can work upon them. Intrinsic to this transfomative work, though, is its essentially unprescribed nature. She has no particular set of targets to achieve, no results she has to come up with. Whatever the figures turn out to be is what she produces.

Janice's work provides the connection between 'over the counter economic activities' and 'managerial decision-making' through a series of transformations. Sets of figures, reports, documents, statements and so on are turned into a coherent, formatted, systematic, easily desribed, read, summarised, visible at a glance depiction of how things are going. What this involves, first and foremost, is the physical co-ordination of documentation. She works down the columns looking from one sheet to another, backwards and forwards, checking off the numbers as she goes. The delivery notes are prepared in day by day sequence so that so that when she goes through the purchase sheet she will have a bundle that is physically

manipulable. This aspect of physical manipulation, of being able to hold all the relevant materials in front of one's eyes at once, can also be seen with the format of the files. The stockcheck sheets are all filed together unit by unit, as are the stock purchase sheets, the processing sheets, and so on. When invoices are required from purchasing, these are pinned to the delivery note to which they apply. The co-ordination of these physical objects on her desk is achievable only by keeping those things together which go together.[5] Each stands for a particular way of characterising the objects which she has to produce. Her transformation of them involves not a synthesis, not a selection, but amalgamation.

Although this transformation takes time to produce, it is treated as atemporal. That is to say, the figures and accounts refer to how things were at least 2 weeks ago, but are treated as represenations of how things are. They exist in what Stan Raffel (1979), talking about clinic records, calls the permanent present. Thay have a fortnightly sense of now, a sense which is seen but unremarked, known but irrelevant for the purposes for which they are constructed. The fact that things will have changed, that purchases will have been made, prices changed, and so on is deemed to have no pertinence to statements about how the units are doing now (ie in the lagged, fortnightly sense of now).

For some, this may raise a question concerning the accuracy of the representation which Janice is producing. This is not an analytically relevant matter. Given the nature of the operational and organisational contingencies within which the business operates, this measure of how things are is all that can practicably be asked for. It is not the factual status of the measures which is interesting but the production processes by which that status is achieved. We are concerned with the social production of factuality, and this lagged sense of 'now' is a production requirement of the format of the Management Accounts. Kyburg (1984) talks about the attractiveness of what we think of as the obvious and natural ways of measuring things indirectly. In seeing a recording procedure as obvious and natural, we disregard the work necessary to discover and determine that such a technique was possible and reliable. Such engineering instrumentalities are the contingencies of physical measurement. To those engaged in measuring the Company's profitability, there seems no other sensible way of dealing with their operational and organisational contingencies than freezing activities in fortnightly blocs. It is only by doing this that 'realistic' measures of sales, purchases, labour costs, overheads, and so on can be obtained.

This brings us to the question of the production requirements for modal transformation. What does she have to work on? What must she produce? Two important and over-riding features become visible here. One is the formatted character of the Management Accounts. Whatever she produces will be fitted within that format, appear alongside and be used in conjunction with other equally formatted depictions. Second, there is the perceived priority placed upon only some of the possible measures which could be derived from the products she comes up with. Profitability is measured by closeness to the notional target proportions of sales set for food, liquor and labour costs. As a consequence, not just any set of figures can be used and not just any procedures for amalgamating them can be invoked. The logic she applies, and the steps she works her way through are fixed by the conceptualisation of the Company's activities already built into the system of calculability. It is for this reason that we called the figures and sheets she produces accountants' objects. A third immediate feature of her work is that it is product guaranteed. The managers fill the sheets in as a requirement

of their jobs; the delivery notes are assembled with the invoices as a requirement of invoice payment. In consequence, she will always have enough resources to "get the figures out" and hence provide some account of how things are going. Whatever hiccoughs, hold-ups and delays there might be, the physical presence of the sheets and invoices in the office provides her with enough to bring the projected course of action to a successful conclusion. Even though everyone knows that for this reason or that, some of the figures may be shakey on an individual unit, nonetheless, for the time being and for the purposes for which they are used, they will always do. A fourth feature of the work she undertakes is that the assembly and transformation is assembly in an order. We will talk about the character of this order in a moment. Given that the output is of a fixed form and that it is production guaranteed, then what she has to work on is minimally sufficient resource base. She does not need to look beyond the documents she gets to produce the depictions she does. If and when there is a query concerning the figures, it is from the paperwork alone that it is resolved. It is part of her work task to go to look at what is actually held in stock, to compare the menus offered with the usages claimed, and so on. That is all someone else's business. What we have here is paperwork modal transformation.

We can now look at the specific character of the sequence of tasks which she carries out. Each of the sheets is laid out in a similar column by column, top-to-bottom, left to right format. Reading left to right gives an arithmetic logic for computation. The sequencing she follows in checking through the sheets is organised around a different logic, that of documentary clustering. She works through the column by taking up the documents in the order in which they become available.

The documentation falls into three generally recognisable categories. There are those that pass across her desk, the delivery notes, stockcheck sheets and stock purchase sheets. There are those which she can call for; the invoices, price lists, previous files. Finally, there are those she is working on; the summary sheets. The order in which the work is processed is by going through, first, the documents on the desk which have to be dealt with anyway; second by referring to those which can be "got out" or "called up" easily; and finally by "picking up" the figures for the summary sheets. Going through each sheet checking column by column and row by row follows pragmatic policy and not an arithmetically determined one. It is only at the last stage that, as she works out the cost of usage from the previous figures, that she has any idea how things are turning out.

So far we have been drawing out some of the characteristics of Janice's work as modal transformation. From what we have said, it is fairly apparent that her work tasks are organised around a principle of opportuneness (Sharrock and Anderson 1987a). The whole monitoring system is possible because of the centralisation of accounting and purchasing. The purchasing section has to be able to check invoices against delivery notes before it can authorise payment. The availability of these documents allows them to be used as a check upon the managers' stockcheck and purchase sheets. The processing of the stockcheck sheets takes time. This provides an opportunity to check through the the purchase sheets so that amendments can be made to the file update once it has been prepared. The same goes for the checks on the prices of meat and vegetables. These prices vary from delivery to delivery. To give any kind of realistic costing, the prices are averaged out over the financial period. To do this, delivery notes will have to be assembled and the necessary figures taken from them. This provides the Processor with an opportunity to run a first check on prices prior to the

invoices being submitted. She can see whether they are "in line" with what she would expect and whether the normal discounts have been given. She does this by refering to what she as an ordinary shopper knows about meat and vegetable prices and the order of discounts she would expect the Company to be able to obtain. The co-ordination of these activities is achievable simply because she is "going through the paperwork" at the same time.

Once one set of co-ordinated activities is completed for each unit, she moves on to the next column. Transfers in and out follow the check on physical stock, and if queried, documentation will have to be called up from elsewhere in the office. Similarly, once this is finished, opening stock will be amended by "running down" the previous period sheet to see if any alterations were made. It is possible to track how far the sequence has been gone through and what tasks are left to be completed simply by looking at the columns and the check-marks. The corrections, strikings out, amendments and ticks indicate how far she has progressed through the order of things to be done.

The work of the Accounts Processor is, then, a sheet by sheet, column by column, row by row, modal transformation of one set of accountants' objects into another. This is managed by the physical co-ordination of bundles of documents, documents in files, and documents being worked upon. As she works her way through the lists she leaves a trail of markings so that anyone who knows her routine can come to the files and see where she has got to. The records and documents she produces are a permanent account of the sequential organisation of the tasks comprising account processing in this Company. The ones we have shown are just samples, instances which show just how, this time through, things were being done. The begining to end trajectory of the whole sequence is achieved stage by stage, one step at a time, by managing the primeordial features of making sure everything is to hand that you need, getting the documents if you need them, checking the files when necessary. It is in the her orientation to these things as seen but unremarked, necessary features of her work tasks that the ordinary orderliness of Janice's working life consists.

What has to be done to make a system of calculability work is, first and foremost, the production of sets of calculables, objects to be manipulated in calculations. LTC's paperwork system is designed to produce calculables as part and parcel of the other functions (paying invoices and wages, controlling costs, monitoring cash flow etc) performed. The production of calculables is, therefore, just one of the outcomes of the socio-technical system of capital accounting. But it is an outcome which can be incorporated into the essential feature of all capitalistic endeavours, namely the determination of profitability and decision making based upon that criterion. The modal transformation achieved by Janice's work of documentary co-ordination and summary facillitates the processes of interpretive calculation without which such decision making would not have the character it has.

Customised accounting and its troubles

The purpose of Janice's work is to provide a comparative base for management review of the relative "state of the Company" at any point. She is concerned, then, to achieve a consistent set of documentary representations so that any comparisons will be meaningful and useful for those that have to make them. The general system she applies is, by and large, uniform across the Company. Her work consists in fitting cases into the system through the processes of

condensation and co-ordination which we have described. The point of the activities we are about to describe is somewhat different. Deborah is not concerned to produce an overall picture of how things stand but is, rather, deriving a measure for each unit to represent to an outside body how things stand for it. The measure is the rent which LTC pays for the sites which it runs. The management of LTC take little day to day interest in the level of rent that is paid on any unit. That such rent will be computed and paid is a given parameter of their activities. In contradistinction to the summaries which Janice produces, they do not treat the rent as a measure of their achievement. The process of rent calculation is of direct interest to us since it exemplifies in a straightforward way how the knowledge base of the system of calculability is called into use and deployed.

First, what is Deborah calculating? Part of every contract for a concession outlet will be an agreement with regard to the rent for the concession. Usually this is set as a percentage of turnover. 12.5% is a fairly typical figure, although it can be as low as 10% and as high as 18%. Now, while the global percentage may be fairly constant across outlets, this does not mean that the procedure is an easy one to apply. Each contract is a unique document as are the operational details of each unit. Thus, local variations in working practices (for instance whether there are outlier sites) are taken into account in the contractually specified rental. It is only by customising general accounting procedures to reflect local variation that Deborah arrives at "the correct figure" for each unit.

To achieve this customising, Deborah draws upon three distinct sets of resources:

(a) Knowledge of the organisationally given accounting arrangements at LTC for collating and processing relevant information.

(b) Knowledge of the contractual obligations with regard to individual outlets.

(c) Knowledge of how (a) and (b) are to be deployed.

This knowledge is the basis of this element in the system of calculability. Her use of it is what enables her to make the system work. As such, Deborah's work clearly shows how the system of capital accounting at LTC can be thought of as a knowledhe based socio-technical system. She brings this knowledge to bear upon the statements of income set out in the Company's General Ledger. The General Ledger is a print out of all the units and their transactions for the accounting period.

The procedure Deborah adopts looks to be quite straight forward. From the Ledger items she extracts categories of income. These are "vending wet", "vending dry", "cafeteria sales, and "bar sales". This first sum is then discounted for VAT and the appropriate percentage taken. This sum is the rent. Deborah compiles a journal of these rents (a rent book) for keying in to the computer. The rent payments are then made automatically to the authorities concerned and the sums paid set out in the accounts.

What is hidden in the brief description we have just given is, of course, the work of classifying income headings appropriately and determining how sums under such headings shall be used. This is what we mean by customised accounting. Such customising provides both the difficulty of achieving consistency across cases and the methods by which such consistency is achieved. In this sense, then, the systematicity of the procedures used is both Deborah's (and Janice's) achievement and her resource. The requirement of consistency is

one which is both organisationally and legally determined. The Directors of LTC want consistency of application of methods for fixing rents and other measures so they can compare sites. While making these comparisons, they are not directly interested in rents themselves. Rather, they are interested in ensuring the methods by which the rents are calculated are consistent. Consistency is also a legal requirement. The Company has its accounts audited every year. Central to the Auditors acceptance of a set of accounts is the clear and consistent use of sets of procedures. The problem with the organisational and legal requirements for consistency which we have just outlined is that they are not and cannot be specified to cover in every case. They consist of statements of general principle and numbers of exemplar cases. It is Deborah's task (and Janice's, and the other people who run the paperwork) to ensure satisfaction of the requirements in individual instances. They have to be able to apply the principle to the case to see what is 'really wanted' as opposed to what is asked for, set out in the rules, or whatever. This divination of the intention behind the sets of rules and requirements is another aspect of the interpretive character of the system of calculability.

Part of the task of customising the system involves managing the natural troubles of calculability which arise whatever the case in hand. For example, part of Deborah's cross checking of her calculations is a mini "reconciliation" to ensure she has not made an error. Having decomposed the global sums of income by extracting the VAT, and working out the rent on the residual, she now checks her work by adding the VAT "back in". If she "gets back to the original" then her calculations are correct. However, time and time again she does not. The rule of reckoning which is used to discount for VAT is to divide by 7.667. This is a rounding of the irrational 115/15, since the VAT rate is 15%. Given the size of the sums involved (ie thousands of pounds) this rounding produces noticeable "errors" when the VAT is added back in. More often than not, the recalculation differs by several pence or more, sometime positively and sometimes negatively. Deborah simply ignores this difference and "adjusts" the figures. Why? Well, to begin with , this is a normal error for which the adjustment "works". It is a difference which she expects to find all the time. Second, it is an error she cannot eradicate. It is built in to the system she uses. The desk top calculators which she uses are all set to 2 decimal places and so Deborah could not work out the VAT at any greater level of precision. The calculators will always round and so will always produce "errors". Further, the rounding is either "up" or "down". Deborah presumes as a matter of commonsense probabilities that the roundings cancel each other out in the long run. She has no way of telling and no way of dealing with it if she could. So she adopts the pragmatic stance that it makes no practical difference. The VAT which she takes off from the throughput is, then, correct in as far as her calculative procedures allow. This is, for Deborah, what correctness means.

"Vending wet", "Vending dry", etc. are categories. They are titles for classes of transactions. What Deborah has to do is produce is a consistent use of the system of categories. Not only has the use to be consistent, such consistency has to be both visible and followable. The consistency is displayed in the accounts which she produces. This will involve (a) determining what is a case of what - finding the category to fit the case; and (b) bringing that case under the rubric which covers the category. Sometimes this is simply a matter of mechanical application, or of simple sorting. At other times it is not. She is, therefore, reasoning with the system, not simply running through its operations. This reasoning involves Deborah in dealing with the inevitable difficulties which such a system

of categories generates. She has to make and mark distinctions between contrasting cases which are to be treated differently and those which are equivalent and so can be treated as the same. What are exceptions and what are not. Where a rule applies and where it does not. What she knows about LTC, about the contracts, and about the outlets is what allows her to make these judgements and by solving these problems achieve organisational and legal consistency.

We suggest this judgemental work in calculating the rents is the outcome of a whole set of orientations to the differences between the operational equivalence of units whereby units can be treated as it they operated in the same way, and a series of other equivalences by which outlets are grouped together and marked off. Here is a list of some of the latter:

(a) procedural equivalence: units are the treated in the same way;

(b) organisational equivalence: units are defined as the same;

(c) legal equivalence: units are reported in the same way to the Revenue;

(d) virtual equivalence: non-essential differences between units are discounted;

(e) effective equivalence: the procedures for dealing with units are seen as having the same outcomes;

(f) transformed equivalence: once the unit's accounts have been purified of irrelevant inconsistencies they can be treated as procedurally equivalent.

The character of equivalence and the modes for achieving it depend upon the local circumstances of each unit. Each throws up its own peculiar difficulties which Deborah has to know about and cope with. Take, for example Kingsway Hall, Bedford, and the problem set by the income from staging the Mayor's Ball. Kingsway Hall is a function suite. It consists of a main hall for conferences, concerts, dinner dances and the like, several smaller rooms which can be hired and a number of bars. In addition, it is open as a restaurant during the day. Normally, for a function like the Mayor's Ball, the cost of hiring the hall is accounted entirely separately from the cost of the meal. The former goes to the Kingsway Hall account; the latter to Bedford Catering Account. In the case of the Mayor's Ball, Deborah had to create this separation since only part of the price of the ticket was a contribution to the room hire. The tickets had been bought direct from Kingsway Hall, and not sold off by the hirer. The rest was the price of the meal. The device used to enable procedural equivalence of this income for other incomes to Kingsway Hall and Bedford catering was a transformation through over- and under-banking. In this instance, Bedford Catering were instructed to report banking less than they actually did, the difference being the proportion of the value of ticket sales due to room hire. Kingsway Hall reported banking more, the amount being identical to the under-banking for Bedford Catering. Deborah knew about the problem because she knew about the operation and "picked up the figures" from the filed returns of banked money and cash (the 001/2/3 sheets returned every fortnight along with the Processors' sheets discussed earlier) which the unit sends in each accounting period. The point is that exactly the same people who are doing the banking for both accounts while both accounts refer to 'the same' activities. The accounting fiction by which the incomes are transformed allows procedural equivalence to be achieved between income from the Mayor's Ball and all other incomes to these two accounts. Deborah called this "just moving numbers around". But it is crucial to the con-

sistency of the system as a system of calculability that such movements are not merely possible but are, indeed, required. By their use, the income in each account is made consistent.

The separation of the two sources of income was for contractual purposes. Within the terms of the contract with County Council, both incomes are defined as income to Kingsway Hall. However, different proportions of rent are due for room hire alone, for hire of room and kitchen facilities, etc. Normally, payments for rent are allocated to a Rent Suspense Account until they are paid. In the case of Bedford Catering , a special suspense account has been set up (Kingsway Hall Catering Rent Account). This involves treating income from one subsidiary operation as income to another merely for the purposes of paying the rent. This is only possible because of the operational features of the outlet. Most of the room hirings at Kingsway Hall do not involve food or drink sales. This operational difference is processed out in the payment of rents. What are operationally very different types of transaction and activity are treated as organisationally equivalent for the purposes of paying rents.

The procedure for coping with "dual siting" which we have just described does not apply in what appear to be similar circumstances at Luton Airport. Here a kiosk is maintained at an outlying site. This kiosk is run on very different lines to the main airport outlet because of the accounting and control problems associated with 'outliers'. Food is inventoried in and out: tills are tallied continually: labour costed separately and so on. These operational differences which are similar in scope if not in type to those applicable at Kingsway Hall do not lead to the same organisational solution. Instead, because the contract specifies a lower level of rental for the kiosk, this is accounted for separately. It is treated as effectively equivalent to the airport cafeteria. To achieve this, Deborah again consults the filed 001/2/3 returns since records of the takings and stocks in the kiosk will be available from them.

When it comes to COUNTRY KITCHENS, an entirely different set of considerations apply. Here, the problem is given because of the sale of drink. The tilling system in COUNTRY KITCHENS does not allow a separate record of alcoholic drinks to be kept. Neither can separate tills be installed since the sale of alcohol (predominantly wine) takes place from the same point as the food. This is not the case in leisure centres, for example. Second, the proportion of turnover going to alcohol in COUNTRY KITCHENS is minimal. As a consequence, it is not worth the time it would take to try and separate out the two incomes. For the purposes of this calculation they are treated as virtually equivalent.

An example of what is, for LTC, an operationally equivalent transaction being redefined as legally different is the small amount of in-flight catering that is provided at Bournemouth Airport. This does not appear as a separate ledger item but has to be "picked up" from the stock returns made by the unit. An invoice is made out to the airlines which does not include VAT since from the Inland Revenue's point of view, food eaten during a flight is not eaten in the UK and so is non-VATable. Computer payments, of course, have VAT addition programmed in. In taking out this slice of income, Deborah is able to prevent LTC from (a) paying VAT they did not have to and (b) discounting the turnover of VAT for the purposes of calculating the rent. For book-keeping consistency, for comparing like with like, the in-flight food is "pulled out".

All of this detailed knowledge is accounting know-how and know-what. It is "in her head", but also summarised on what she calls her "crib sheets" as the detail of cases and how to deal

with them. These are annotated lists of the pecularities of individual units and how to deal with the troubles which they cause. But these lists are no more than pointers. To be able to use them, you have first to know your way around LTC's accounting systems and second to know how the operational equivalence of units can vary according to local conditions and contractual arrangements. With a knowledge of what is on the lists and how it is to be used, it is possible to follow Deborah's tracks as she computes her way through the rent book producing consistent accounts of the rentals due and marking what she is doing by standardised procedures such as double underlining (for reconciled accounts) and red asterisks (for exceptions)and journal entries.

The Empirical Observability of Capital Accounting

The notion of a socio-technical system is meant to capture something of the multifaceted character of a working environment. It defines both the social and the technical aspects of a production process as interacting sub-systems. But it does so at a cost. It tends to treat the elements making up the system in an over-determined, over-proceduralised and over-formalised way. For the individual working within the system, the social and technical processes which define production are not so easily disentangled. To seek to separate them out as discriminable elements is to idealise out the essential feature of most occupational cultures. This is the finding that work practices are socially organised, a finding which, if not quite set out in these terms, is none the less the central to innumerable studies of occupations and occupational cultures. What is distinctive, we would claim, about our analysis of this aspect of the paperwork at LTC is not that we have shown that it is inextricably tied to the practicalities of making capital accounting workable as a structure of reasoning. This is a feature of all activities. It is rather that it allows the possibility of making the praxis of capital accounting empirically observable. The disjuncture between the requirements of formality and those of substantive applicability to which we pointed in the previous chapter are wholly to be expected, as is the use of methods for resolving the difficulties that disjuncture provides; the "exceptioning" and the achieving of equivalence discussed above. What our materials testify to to is the routine work of deploying and displaying a system of rational calculability; that is, what it takes to make the system work. The methods of documentary interrogation, interpretation and production which Janice and Deborah use are on all fours with procedures identified and analysed in other studies of the activities of practical reasoning. Studies of the work of coroners and caseworkers in determing "what happened", "where things stand", and "what can be done, now" (Garfinkel 1967, Zimmerman 1969), those of scientists making discoveries, getting observations (Lynch, Livingston and Garfinkel 1983), all invite us to re-think the nature of the activities under discussion. Just like these other species of practical reasoning, the rationality of capital accounting as a system of calculation is not best thought of as a set of normative constraints to which Deborah and Janice orient to. Rather its sociological interest resides in seeing it as the outcome of their work. Capital accounting on this view is itself an accountant's object. Putting it another way, one might say that the methods and procedures we have just been discussing enable us to see how the system of activities and orientations we designate 'modern capitalism' both maintains and reproduces and is maintained and reproduced in and through the achievement of its essential feature, namely the production of capital accounting as a system of calculability.

NOTES

* A version of part of this chapter was read at the Boston Institute for Conversation Analysis and Ethnomethodology, August 1985. We would like to thank the participants for their helpful comments.

1] The importance of 'one offs' for this business has been mentioned only in passing in previous chapters. In Lawrence's eyes, especially, every site is a 'one off' since its own peculiar operational features and profit possibilities have to be taken into account when making any sort of judgement on it. It is precisely these concerns which allow him now to disregard the generally applicable criteria (food costs, labour costs, profitability) when they fly in the face of his judgement of what a site can do.

[2] In a paper on 'exceptioning' by administrators, Brady (1987) indicates the need for studies of the principles under which decisions to make exceptions are arrived at. He suggests two general criteria which are weighed: (a) a principle of benefaction which is essentially utilitarian; and (b) a principle of membership which, he says, is Kantian in origin. In actual cases, he suggests, the grounds for exceptionning will be given as the inability to determine which principle is most appropriate.

[3] There is a deep methodological issue here. The analytic attitude of sociological description is at variance with but dependent upon the 'natural attitude' which Janice brings to her work. Thus sociology cannot be aiming to reproduce her analysis of what she does, or anything like it. This is attested to by the fact that when presented with our account of her activities Janice found the whole thing deeply mystifying. Recognisability to those who perform the activity is not and cannot be a primary requirement. As Fred Kersten pointed out to us (personal communication), the relationship between the natural attitude and the naturalistic attitude in Social Science and elsewhere remains largely unanalysed.

[4] Knowing what has to be done and what can usually go wrong with it is visible here as the simple rationalisation that 18 apple tins were counted instead of the 12 apple and 6 baked beans.

[5] The co-ordination of objects in a physical space as part of an activity's praxis is very much understudied. Gurwitsch's (1964) insights and Merleau Ponty (1962) apart, there are only one or two places where it is discussed eg. Lynch, Livingston and Garfinkel (1983).