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THE EFFECT OF THE PROVISION^{OF} FINANCIAL INFORMATION
UPON THE CONSTRUING OF EMPLOYEES

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ABSTRACT

**The Effect of the Provision of Financial Information upon the
Construing of Employees**
by Derek Ernest Purdy.

The research problem was to ascertain the effect of providing financial information to employees. After reviewing the different literatures concerned with financial information, industrial democracy, influence, power and social psychology, a model of the various types of financial information and contexts for its presentation was constructed. The model posited that over time an employee, with suitable opportunities for involvement in decisions and training to understand the financial information, would desire to become involved at a higher level in the organization with its concomitant increase in financial information. As the intention was to find out what employees made of financial information, it was considered logical to investigate their construing of the information. This together with the difficulties of making the model operational and testable lead to an approach involving the psychology of personal constructs thus reformulating the problem in terms of personal constructs.

Previous research was of orthodox experimental design and took an organizational or social view and rarely the view of the individual. Longitudinal field studies were conducted in three different organizations. These field studies were not orthodox in design for the approach was to focus on the individual and it was considered, in the main, more appropriate to use an idiographic analysis rather than the straight-jacket of orthodox (nomothetic) experimental design.

It was found that the construing of employees generally altered after financial information had been provided. The alterations were more profound in situations where some training relating to financial information was provided. There are indications that in suitable conditions, employees do begin to understand the financial information which becomes more integrated into the construing of employees, simultaneously some employees construe more power, actual and desired influence, and wanted more financial information. Future research could well pursue this rich area with studies of larger numbers in similar situations receiving more comprehensive training.

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Chapter One

The Issue of Providing Financial Information to Employees

1.1

Introduction to the Research

The notion for this research arose from the findings of previous piece of work. During the 1970's there was the emergence amongst many public companies of some form of financial report to employees, often called an employee report. These employee reports were analagous to the annual report that company law required to be provided to the shareholders. What had caused this apparently sudden interest in providing financial information to employees? Several notions were put forward. Two notions were the call for a statutory requirement that companies should provide financial information to employees by the Labour Party (1968), who were in government for most of the 1970's, and the progress in industrial relations and place of financial information in that, for example the Industrial Relations Act 1971. Other notions included the issue of industrial democracy which was under discussion (Department of Trade, 1977). One professional view, that the primary purpose of annual accounts was to present information to proprietors showing how their funds had been utilized and profits derived (Institute of Chartered Accountants in England and Wales, 1952), was criticised by another professional view. This felt that this was incomplete and unsympathetic to modern needs because annual accounts should be useful and attempt to satisfy the information needs of users (Accounting Standards Steering Committee, 1975). There was also the fact that there were similar movements in Europe, (Purdy, 1981). Other authors in the accounting domain suggested that such information provision would give greater co-operation from a more rational workforce (Maunders and Foley, 1974), that it would reduce the lack of trust between the employee and the company (Jones, 1975) and that it could be a key factor in the industrial harmony in Britain (Arthur Young Management Services, 1976). Such was the interest in this area at that time that in 1976 the weekly paper Accountancy Age started a competition to find 'the best' employee report (Hilton, 1977).

What did companies consider had brought about the production of employee reports? In order to answer the last question this researcher mounted a project to investigate what some of the large public companies had done and were doing in this respect. In this project the researcher interviewed some directors and senior managers in most of the forty largest public companies in the United Kingdom. The

findings from this work are in Purdy (1977) and Purdy (1981). Briefly the project found that management were under various pressures and that one of the responses to these pressures was the production of employee reports. Company management considered that these reports had originated from themselves (Purdy, 1981).

The issue which company management did not seem to have any appreciation of was 'what did the employees do with this information?', what did employees think about these reports? could they understand the reports? could they use the reports? Although a couple of the companies had engaged in public (that is to employees) relations questioning about the credibility of the company's management, such companies, and indeed the others, did not appear to be concerned about these issues. From the researcher's ten years experience in teaching financial and management accounting to various types of accounting students it was likely that there was no untrained student who could have understood much from such an employee report. Consequently it was difficult to see how employee reports could be understood and have much meaning for employees. If financial information was being provided to employees but not understood, or had no meaning, then the purpose of management providing this financial information for it to be understood or to have meaning was apparently unlikely to be working.

1.2

The Research Question

The research question which was being addressed was what happened to employees when they were provided with financial information? This open-ended question did not easily fit in with the studies which had been conducted into this area, especially studies which originated in the domain of accounting. Accordingly it was necessary to move beyond the accounting domain and to consider some of the contexts in which financial information has and could occur. It was necessary to examine the literature concerned with notions of control in organizations, participation and industrial democracy. These literatures provided some formats of the mechanics of information provision but did not concern themselves much with what happened to individuals. Most of the previous literature concerned itself with groups and organizational behaviour which, by definition, was unable to tease out the influence of information on individuals. The researcher thought it would be more profitable to start from the other end by asking the question "what does the individual make of the financial information"? Perhaps by directing the question at employees, they might just provide a sensible answer. A model was constructed which

dealt with the provision of different levels of financial information to an individual in different contexts of influence. There were no obvious theoretical frameworks which could underpin a methodology to deal with the problem of getting at the individual's processing of financial information. Most information processing theories fell into the classic experimental psychology paradigm and something which took notice of the individual's psychology was needed. Such a theory was available contained within the psychology of personal constructs (Kelly, 1955). Through utilizing the psychology of personal constructs it was now possible to address the research issues in the terms of the psychology of personal constructs and to deal with the issues in these terms.

The rest of this chapter deals with information and employees.

1.3 Other Studies Concerned with Employees and Financial Information

1.31 Employee Reports

Earlier research had found that two public companies, since the end of the 1940's, had provided some financial details from the shareholder's reports in their employee journals (Purdy, 1977), and in the 1950's, Woodward noted one company put a lot of effort into communicating with employees and produced a newspaper containing financial information (Woodward, 1970). So the provision of financial information was not a recent event for all companies.

An accountancy firm sponsored research into employee reports and its researcher found that as many as 44% of the employees questioned about the importance of the information to their own job considered that it was either quite or very important (Hussey, 1976). These findings seemed to be at variance with the observations of others. Others found the role of the employee was as a passive recipient of information, because amongst other things the employee lacked familiarity and understanding of the nature of company financial information which obscured its relevance (Mitchell, Sams and White 1981a), and the financial information provided did not help the employee to understand the significance of his own particular job or change the frame of reference within which he did it (Woodward, 1970).

These differences in findings continued into the area of understanding, which was not defined by any of the researchers. Hussey (1976) reported that 77% of employees found their employee report either quite or very interesting, and 79% found

it either quite or very easy to understand. Again these findings seemed to be at variance with the observations of others. Mitchell et al reported that the ability of the employee to understand and interpret the accounting information varied considerably but was generally poor, that the accounting terminology was a barrier to comprehension where even basic accounting statements were too difficult for employees to make any meaningful performance assessment (Mitchell, Sams and White 1981b). They also noted that the readership of the employee reports was a major determinant of the manner in which reports were presented, with their emphasis on the visual aspects of presentation (Mitchell, Sams and White 1981a). Earlier Woodward considered that management had given less thought and attention to the provision of information to make work meaningful, than to the communication techniques, so that the projection of an attractive and benevolent company image is an inadequate substitute through work experience (Woodward, 1970).

This was also the situation found by the researcher but the analysis was taken further. There were two types of companies in the sample who produced an employee report.. Those companies with an 'open' management philosophy had a reasonably open commitment to provide financial information to any employee. This 'open' philosophy appeared to have been provoked by perhaps the actions of trades unions, but one result was the employee report. The other type, those companies who did not consider themselves to have an 'open' management philosophy, were producing an employee report in order to foster in the employee the notion that they were an 'open' management company, and that the employees were being treated fairly (Purdy, 1981).

Even currently this communications approach persists. Commenting on the recent employee reports competition, Hussey, one of the judges, noted the difficulty for companies to provide financial information in an understandable and visually attractive way, whilst placing it in a useful context. He considered that often the financial results seemed more like a separate function than a description of the company's economic activity (Hussey, 1987). The researcher's experience suggests that the observations of Woodward (1970) and Mitchell, Sams and White (1981) are more likely to reflect the inability of employees to come to terms with financial information. The researcher has no reason to consider that a visually attractive way of presenting financial information in an employee report, is the means by which individuals can come to understand financial information. There is also the evidence

that shareholders have only a meagre understanding of their annual report (Lee and Tweedie, 1975). It could be argued that the non-corporate shareholder and the employee do not come from so very different situations with respect to financial information.

1.32 Functional Understanding

It may be argued that there is no need for employees to have a formal understanding of an employee report because a functional understanding, that is how it affects their job, is sufficient. This line of thought follows from the work of Shimmin who found that on the introduction of a new and quite complex bonus scheme, the employees could not carry out the formal calculation to ascertain their bonus, but that after the scheme had been in operation the employees were able to 'know' from the quantity of output what their bonus should be (Shimmin, 1959).

In an analogous situation with respect to financial information it might be expected that if, for example, the cost of an input component increased then the selling price might need to be raised to maintain the same absolute level of profit, which in turn might mean that fewer products would be ordered and therefore perhaps less made. The involvement with these facts and inter-relationships would allow the employees to acquire a functional understanding of the situation without the need for them to understand the terminology of either economics or accounting and the formal mechanisms involved by both disciplines. This situation is not that situation which is commonly found with employee reports. It is very difficult to see how an employee report, following the lines of an annual report which presents the global view and financial information of the company, could be related or understood by an employee in terms of their job. Thus for an employee to have functional understanding of financial information the information must relate to their job. At the same time an earlier study found that employees want financial information which is of more direct relevance to themselves and the site at which they work (Purdy, 1977).

1.33 Functional Financial Information

Functional financial information is financial information which is in some way directly related or connected to the employee's job. There is a lack of evidence detailing what kinds of functional financial information organizations provide to their employees. There is evidence that some companies say their employees receive

financial information as a routine pattern of life, and evidence that employees do not receive financial information regularly (Purdy, 1981). It seems to be the case that the majority of published work connected with the provision of financial information to employees relates to employee reports, but there are two pieces of work concerned with functional financial information.

In one study Goodlad took the view that employees could be involved in the preparation of budgets (Goodlad, 1982). His notion was to assess the extent to which it would be viable to develop and monitor budgets prepared by both management and non-management employees, and he found six companies who were prepared to provide case study material about this. Goodlad's attempts to conduct any studies were thwarted by the management of the companies who reported inter-management and inter-union conflict and were concerned with self-protection (Goodlad, 1982). He found that none of the companies had any non-management employee involvement in the preparation of budgets, although it had been considered by one company. He did find that the union representatives in three companies had access to their company's budgets and performance. In these three companies there was no comment that employees or their representatives could not acquire the ability to work in budget preparation but such comment was received from two of companies where representatives did not have access to information (Goodlad, 1982). So it would appear that companies with first-hand experience of employee representatives handling financial information did not make disparaging remarks about their ability. In another publication, apparently now detailing the same study, he noted that one company considered that the commitment of non-managerial staff would be limited and not justify the management effort required (Goodlad, 1984).

The Tavistock Institute's Centre for Decision-Making Studies conducted some work in connection with industrial democracy, which focussed upon the conditions which facilitate or restrain the positive consequences of company information in ten companies. The information areas covered were:

Company finance; Plant finance; Company policies; Plant policies;
Future plans and prospects for the plant; Wage issues; Pensions;
Health and safety; Manpower; Industrial relations; Training.

The Centre's work included an attitude questionnaire with shopfloor workers, which did not include information, and in-depth interviews with thirty six key people which included a questionnaire about information. The information areas were assessed on a

five point scale from 'very little information' to 'very much information'. The responses were scored and a mean score found. The companies with a score above the mean were 'high' information companies (Centre for Decision-Making Studies, 1979).

The extent of the information provision was assessed for its comprehensiveness by looking at information flows in three ways. One of these ways was information direct to the shopfloor from management and would include an employee report. The 'high' information companies restricted their direct information in the areas of future plans and prospects for the plant and training. In general more information was provided to the supervisors and representatives (Centre for Decision-Making Studies, 1979).

The key people were asked about the clarity of the information. If the information was considered to be clear then this was taken to mean that the information was easily understood by the employees. On another five-point scale the 'high' companies had overall clarity levels of four, fairly clear. The work found that there was a better management-worker relationship and understanding of information (here understanding means clarity of information), where the information was easily understood (Centre for Decision-Making Studies, 1979). One would expect better understanding of information where the information was understood.

From the employee attitude survey it was found that 'high' information companies had the better management-worker relations, with a feeling that management looked after workers and there was less conflict between management and workers. There was no strong association between the information provided and job satisfaction in any company, but there was an association between satisfaction with the company and the information provided which was higher in the 'high' companies (Centre for Decision-Making Studies, 1979).

The employees were asked to rate on a six-point scale how much involvement they actually had and wanted over sixteen decisions. Marginal differences were found in the overall level of involvement of employees in the decisions according to the level of information supplied. When the decisions were grouped into the areas of personal, goal and policy the respondents had declining involvement over these. No major differences were found in the overall level of desired involvement between the

companies (Centre for Decision-Making Studies, 1979). It would appear that the provision of information had not noticeably affected the desired level of involvement, or the instruments were not fine enough to pick this up.

The employees were more positive towards the consequences of direct involvement where they had a greater knowledge of plant activities, a greater improvement in the quality of decisions and better representation of their interests in the 'high' information companies. There was a limited impact of employee involvement on the activities in the plants, but twice as many employees in the 'high' information companies perceived involvement in plant activities than those in the 'low' information companies (Centre for Decision-Making Studies, 1979).

1.4

Summary

In recent years there has been a movement for companies to provide their employees with financial information based upon the shareholders' report. There does not appear to have been the same amount of movement in terms of extending help to employees to enable them to understand this information. Of course the earlier research found that there are some briefing groups (Purdy, 1981), which have been promoted a great deal by The Industrial Society (Stuart and Davenport, 1976), and have been used as a vehicle for explaining the financial facts to the employees, but overall this seems small.

The Tavistock work seems to have found companies in which there is a restriction of information to the general body of employees, and that which is supplied is through the communication media, like an employee report, rather than through either representatives, or supervisors, which is the route for the least amount of information. Since there is more information via communications media or representatives, rather than supervisors, this would suggest that the information is not primarily provided to employees in order for them to do their job. Also the information supplied is not likely to foster direct employee participation, but could be towards indirect representative participation.

There is less use of job-related communication channels than media such as an employee report. If management is only providing information similar to the annual report then perhaps there is no reason why it should come via a supervisor, because there is no reason to consider that a supervisor would be able to understand

the report any more than other employees. There is little evidence that companies are providing functional, job-related financial information to their employees which would allow them to take part in company decision-making. There is an unwillingness on the part of management to involve employees with local decision-making. There is little evidence of training to allow employees to understand financial information. The question asked then is " can employees construe financial information? " or " can the construing of employees be educated in relation to financial information? ".

Chapter Two
Participation from Industrial Democracy

2.1

Introduction

One of the major concepts which has taken increasing prominence in developed societies is the desire of, and for, the workers to be more involved at their work-place than just the physical parameters of the work task. There are many schools of thought about the constitution of this involvement and what follows serves to illustrate these diversities. Touraine has argued that the study of the attitudes of workers to change is inseparable from management, representation, social forces and industrial democracy. Furthermore that workers' attitudes are not only determined by satisfaction or dissatisfaction, adjustment or maladjustment, integration or anomie, but also by an effort towards to a demand for freedom (Touraine, 1965). The demand for freedom is facilitated by or through industrial democracy. Those favouring industrial democracy argue for its extension by worker involvement in work-place decision-making, and often through this into the broader economy and society (IDE, 1980).

Democracy could be said to be a form of governance that allows various groups to strive after the joint-optimization of their own interests and the common-weal (IDE, 1980). However, the distinction must be made between economic democracy, which is associated with social economy or the economy of the society, and industrial democracy which is a narrower concept associated with the work-place (Emery and Thorsrud, 1969). It has been observed that in the long-run society cannot cherish democracy as a leading principle and at the same time deny the introduction of this principle into industry (Anker-Ording, 1969). The concept of industrial democracy is diffuse, but an equable definition is:

" a distribution of the social power in industry so that it tends to be shared out among all who are engaged in the work rather than concentrated in the hands of a minority " (page 4. Emery and Thorsrud, 1969).

Industrial democracy has been seen as essential and desirable in modern society (1972 Industry Group, 1977), that it contributes to the quality of work-life (Lupton, 1977) and that employees have a right to a say in the decisions that management take (Burns and Doyle, 1981). A Norwegian study has found that employees have a desire for democracy even if it is vague, diffuse and almost unarticulated

(Holter, 1965), whilst some British experiments aim to give the worker more scope for making decisions (Klein, 1976).

Others "believe a major part of behaviour indicating dissent and disillusionment with aspects of life in society today lies in the work-place, in the way it is organized and in the way people are managed there" (page 4. Pace and Hunter, 1978). It is claimed that there is evidence of a growing interest in industrial democracy to improve industrial relations (IDE, 1980).

The accumulating evidence suggests that employees are alienated, dissatisfied and hostile. Some observers believe that the central problem is that management have not kept pace with the changes in the wider society (Daniel and McIntosh, 1978), and that the undemocratic state of industry is contingent upon its bureaucratic and hierarchical organizational form which gives few opportunities for decision-making (IDE, 1981).

There are those who believe that there is little or no interest for industrial democracy from amongst employees (Rus, 1970), and it has been observed that in all of the studies which have asked employees if they want more participation there is a substantial minority who do not (Wall and Lischeron, 1977). Even so on the evidence of Lischeron and Wall (1975), who found that industrial democracy in an experiment improved the relationship between workers and managers, it would appear to provide a more acceptable environment than is normally found.

2.2 Towards Definitions of Industrial Democracy

Although the general argument being advanced is that there is a need for industrial democracy so that there is worker involvement in work-place decisions, there is no agreement as to what constitutes industrial democracy. Those interested in industrial democracy appear to want employees and management brought together so that some management decisions are susceptible to the influence of employees (Purdy, 1981). However, writers with different perspectives use the term industrial democracy for their work. The term industrial democracy can be used to cover three particular notions when moving from the position of where employees are ordered what to do. These three notions are Communication, Consultation and Participation. These notions carry with them different degrees of influence for the employee, the least with Communication, the most with Participation.

The three notions are now briefly examined and some definition given to each for the purpose of this research and the organizational studies.

2.21 Communication

The early organizational theorists recognized the need for communication. Barnard considered that organization occurs only when the constituents are willing to contribute action to accomplish a common purpose and communicate with each other, so that the possibility of constituents accomplishing a common purpose are made dynamic by communication and the inducements to people (Barnard, 1938). Communication aids the cohesion of organizations, and it has been found that the greater the number of communication channels the lower the incidence of strikes (Turner, Roberts and Roberts, 1977). Communication does not connote that management decisions have been influenced by workers, so that in this research Communication is the position where the employee receives the result of a decision, with or without the opportunity to express an opinion about that decision.

2.22 Consultation

Consultation is not new. It has been suggested that seventy five percent of work-places in this country have some form of consultation committee (Burns and Doyle, 1981), with a range of names for such committees subsuming the nature of consultation. It has been found that where joint-consultation procedures operate there is a lower incidence of strikes (Turner, Roberts and Roberts, 1977). The European Economic Community have been formulating legislation on the subject for some time. An initial draft was produced in 1975 (European Communities Commission, 1975), then more detailed proposals advanced in 1980 (European Communities Commission, 1980), but the issue now seems to be indefinitely delayed as the Community tries to formulate final policies (Purdy, 1987). The notion varies with country, but there is the connotation that management decisions have been influenced by the workers. In this research Consultation is the position where an employee receives information about a situation and can discuss the possible outcomes with the management before the management make the decision.

2.23 Participation

The assumptions about the Theory Y management of human resources, include employees exercising self-direction and self-control in the service of objectives to which they are committed (McGregor, 1960). Participation allows the creation of

relationships which provide a balance of freedom for employees to co-operate (Pace and Hunter, 1978) and in such conditions commitment occurs.

Trying to define participation is very difficult, and some have concluded that it is impossible to define because it is interpreted differently by different people and by different countries (International Labour Office, 1981). There is ample evidence of national differences. The differences in America, Britain and Sweden are found in Foy and Gadon (1976), whilst a study of twelve countries found more national differences than similarities (I.D.E., 1980).

Previous definitions of participation include:

" a process in which two or more parties influence each other in making plans, policies or decisions. It is restricted to decisions that have future effects on all those making the decisions and on those represented by them " (p.6, French, Israel and As, 1960).

" any process whereby workers have a share in the reaching of managerial decisions in the enterprise " (p.2, International Institute for Labour Studies, 1972). Participation is concerned with the influence of employees on the preparation, making and follow-up of decisions (International Labour Office, 1981), or for others, a re-distribution of power (IDE, 1980), or even an interaction between people in which a person may exercise power or influence (Heller, 1971).

In this research Participation is the position where an employee receives information about a situation and discusses the likely outcomes with management and then they jointly make a decision. This definition encompasses the generation of information and ideas by employees, also the possibility of an agreement being reached whereby one party will take the decision in a particular situation, that is delegation. The definition includes direct participation by each individual, or indirect participation through a representative. The definition does not include either pseudo-participation, that is where greater involvement does not produce greater influence (Willener, 1965), or manipulative participation where there is employee involvement in a discussion in relation to a decision that has already been taken or over which the employee has no influence (Heller, 1971), or the process of manipulation which changes the state of mind so that it decreases the autonomy of the individual, as opposed to influence which changes the state of mind but increases or maintains the autonomy of the individual (Abell, 1977).

2.3

The Facets of Participation

A little of the complexity of the notion of participation has been demonstrated in the previous section. The rest of this chapter very briefly sketches participation and it is illustrated by results from some of the research in this area. The review of this literature established that most research has been from either an academic (1) or managerial perspective (2). There is very little work which has sought the views of employees and nothing which has elaborated participation from the stance of the individual employee.

There are a variety of concepts associated with participation, and these concepts have many dimensions which are generally closely linked so that these dimensions are not discrete. For convenience the dimensions of participation have been classified in five ways: Ethical, Social, Political, Economic and Psychological. Each dimension is reviewed before examining the Psychological in more depth.

2.31 The Ethical Dimension

There is the concept that if workers participate in their work organizations then this will promote individual development and fulfilment. This process accords with the Universal Declaration of Human Rights that

" everyone as a member of society...is entitled to realization..of the economic, social and cultural rights indispensable for his dignity and the free development of his personality " (Article 22, United Nations, 1948). When workers in subordinate positions spend most of their time at the work-place organization they want the values inside to be consistent with those outside (Daniel and McIntosh, 1972), and being dependent on these organizations are morally entitled to have their view considered with regard to its operation (International Labour Office, 1981).

(1) When the I.D.E. (1980) team started to introduce their project to employees, they found that they had to revise their ideas because what the academics were concerned with was not recognized by the employees.

(2) After working with participative management Pace and Hunter (1978) feel that the theory tends to be idealistic and that participation is an outward manifestation of a philosophy about how people ought to behave towards each other in an ideal state. I.D.E. (1981) report that previous research has only been appropriate for management behaviour.

2.32 The Social Dimension

The disturbance to social organization can have profound effects on social relationships (Trist and Bamforth, 1951), for groups can provide a cohesiveness to tasks, and require both co-operation and participation (Tannenbaum, 1966). A participative environment is conducive to social relationships and cohesiveness, and some believe that friendships at work contribute to a high quality work-life (Lupton, 1977). McLuhan (1972) has observed that individuals participate via television in a variety of events so that the current environment compels commitment and participation.

2.33 The Political Dimension

It is possible to distinguish between political structures in organizations and national political postures. Pettigrew argues that there will be claims made for the scarce resources possessed by organizations so the success of a claim will depend upon the support of the claimant, the situation and the power and ability of the individual (Pettigrew, 1973). In this country the Conservative Party does not appear to have an interest in participation, although a Group of Conservative MPs (1981) believed that there should be a code of practice on participation, others consider legislation in this area unsupportable (Wellens, 1975). Others have envisaged joint-regulation of companies by management and unions (Trades Union Congress, 1974), and a Labour government seemed interested in the idea of representative participation on the board of directors (The Prime Minister, 1978), whilst the Liberal Party advocated employee representatives at both the board and works council (Abell, 1981).

2.34 The Economic Dimension

One version of the economic dimension anticipates that by associating workers with the decisions the efficiency of the organization will increase, and improve the quantity and quality of output and the utilization of workers material and equipment (International Labour Office, 1981). This prevailing view of the economic dimension clearly has managerial connections. However, the economic dimension can be broken down into five areas: management style, organizational culture, change, productivity and the work task.

2.341 Management Style

Simon suggested that only the administrative and supervisory staff accomplish the objectives of an organization to the extent that they influence the decisions of workers at the lowest level (Simon, 1957). McGregor's assumptions about Theory Y expects employees to exercise self-direction and self-control to achieve their committed objectives (McGregor, 1960), and of Likert's four management systems the most preferred has a participative group style (Likert, 1967). In these last two approaches there is a recognition of the satisfaction of needs and realized talents of the employees (Lupton, 1970).

2.342 Organizational Culture

The environs and culture of an organization are crucial to participation. The comparative lack of pressure accounts for the progressive employee policies associated with the process technologies (Woodward, 1970). The participative organic system is pervasive and able to combine with others to serve the general aims of the organization (Burns and Stalker, 1961), although IDE (1981) did not find a strong relationship between organizational structure and environment.

It would appear to be important for an organization which is moving towards participation to ensure that the whole culture changes if it is to be successful. Two examples demonstrate this. When middle management were expected to adopt a participative attitude towards their subordinates, they limited this as they felt cogs in the system of higher management and in danger of losing their existence (Levie, 1977).

Secondly a field experiment was conducted on the introduction of participative management and there was at least the general finding, from questionnaires, that in the experimental departments communication had improved and management interviews indicated improved lateral communications. The management interviews also indicated that individuals in the experimental departments were more involved in decisions, which were more considered at lower levels and based on more information, whilst a questionnaire showed more total control in these departments. However, the employees only perceived a small change in control (Smith and Jones, 1968). These results indicated that the employees were only consulted whilst middle management were now participating in decisions so that the employees perceived that more decisions were made by management. It was suggested

that the change agents spent more time with management than with the employees, and that there was a boundary restraining the degree of delegation of power to employees (Smith and Jones, 1968). It would appear that a change in management's culture has affected management's participation, and not much else.

2.343 Change

The role of participation in relation to change is that participation promotes democratic ideals and involvement so that if employees are involved in the change process they will accept it more willingly than if they had not been involved. The early study by Coch and French (1948) concluded that the direct participation introduced into the company modified group resistance to change. This study has been criticized for its lack of controls, the narrowness of the participation 'how to carry out the plan', accordingly their findings have been interpreted to mean that the employees perceived the fairness of their new pay rates and this was responsible for the positive results and not participation (Bartlem and Locke, 1981).

2.344 Productivity

The prospective increases in productivity give rise to great interest in participation. Managers in the British steel industry were prepared to give participation to employees in return for greater efficiency (Brannen, Batstone, Fatchett and White (1976). Coch and French (1948) found with direct participation production increased by fourteen percent. Vroom (1964) found that more influence which the employee has over decisions which the employee is later expected to carry out, leads to greater production, whilst Morse and Reimer (1974) found an increase in the decision-making role lead to an increase in productivity.

2.345 Work task

Employee participation is thought to contribute to the way employees feel about their work task. Employee participation in designing a pay plan was thought to have contributed to reduced employee turnover, increased satisfaction with pay, administration and job (Lawler, 1976), and generally more satisfaction (Wall and Lisher, 1977).

2.35 The Psychological Dimension

This dimension reviews previous work in the context of the individual. It is reported that if an individual's environment is changed the individual's reaction

changes, for a variety of reasons (Herzberg, 1968). Psychological growth is important to individuals and this can be considered in six factors. Grouped around the cognitive is learning, knowledge and creativity, and around the motivational is effectiveness, individuation and real growth (Herzberg, 1968). This is a convenient classification through which to consider participation.

2.351 Learning

Individuals can always add more information to their existing knowledge although success does not always accompany growth (Herzberg, 1968), and a group of managers learned to become participative amongst themselves (Smith and Jones, 1968). In traditional organizational cultures employees at the higher levels have more opportunity to use their own ideas and learn new things (Tannenbaum, 1974). There was an increase, from 70% to 90%, in the number of employees attending planning meetings, an unfamiliar area for employees which allowed them to run and take part in these small group meetings (Wall and Lisher, 1977).

2.352 Knowledge

With knowledge the individual can create more relationships, and although isolated pieces of information can be acquired, the growing individual tries to place new information into an existing context (Herzberg, 1968). It has been found that when information was provided, it was apparently understood, the employees accepted the unilateral decisions of management (Wall and Lisher, 1977).

2.353 Creativity

Not only can the individual take in new information, he can also produce new knowledge (Herzberg, 1968). Employees felt they had a lot of knowledge to contribute to the running of their organizations, and much could be achieved if management would listen and provide information (Wall and Lisher, 1977).

2.354 Effectiveness

Throughout life the individual deals with change. As children, individuals are often protected by adults taking decisions, and some adult individuals retain these childish actions by allowing an authority figure to make decisions (Herzberg, 1968). When employees participated in the introduction of pay schemes, the participation contributed to, the amount of information employees had about the

organization, and their feelings of control over and commitment about the decisions (Lawler, 1976).

2.355 Individuation

Although each individual is alone, coming together with others provides companionship and reduces fears (Herzberg, 1968), comfort from associating with others facing similar problems (Tannenbaum, 1966) and personal enhancement from achieving a common goal (Herzberg, 1968).

2.356 Real Growth

Real psychological growth is indicated in individuals who are mentally healthy, and such growth occurs through motivators or satisfiers (Herzberg, 1968). Herzberg considers that there are five factors contributing to employee satisfaction or satisfiers, and five factors to the counterpart no satisfaction (Herzberg, 1968). Participation may be intrinsically satisfying through discussing interesting topics and making important decisions (Tannenbaum, 1966). It may this which accounts for the finding that superiors are more satisfied with their jobs than subordinates, and that members of the participative organizations, Kibutzim, were the only individuals in their study who did not exhibit depression, alienation and lack of self-esteem (Tannenbaum, Kavcic, Rosner, Vianello and Wieser, 1974). In an experiment the employees' perception of participation increased as did their satisfaction with their immediate superior, but their job satisfaction did not (Lischeron and Wall, 1975)

2.4

Summary

Participation can be viewed in terms of interpersonal relationship where there is interaction and influence (Likert, 1967). It would appear that employees can be effective individuals being creative, receiving information and knowledge, learning and bringing forth new knowledge, in fact can grow. These opportunities for growth do not occur when employees do not participate. Most studies have been conducted from a managerial and or academic perspective, but individuals appear to want participation, although the examination of individual desires has always been secondary in these studies (Wall and Lischeron, 1977). It would appear that employees could use financial information in a participative situation.

Chapter Three
Control, Influence and Power

3.1 Introduction

Chapter One discussed the general issue of providing financial information to employees, and from Chapter Two it would appear that any financial information can only be of significance to employees if it is understood and the knowledge gained can be applied within the organization as in a participative situation. Generally information is used to make decisions and employees would need to take part in these decisions. This chapter briefly reviews studies, in terms of control, influence and power, which have examined some of the dynamic in organizations when decisions are being taken. The studies cover a number of countries including Britain, and it is found that the research and methodologies used have not examined the situation from the position of the individual.

3.2 The Early American Studies

In an early study concerned with the process by which employees determine or influence how things get done in organizations, Tannenbaum (1968) develops a conceptual framework of control. He considers that control brought about conformance to organizational objectives, and is synonymous with notions of influence and power, and can be defined as:

" any process in which a person or group of persons or organization of persons determines, that is intentionally affects, the behavior of another person, group or organization " (page 5, Tannenbaum, 1968)

Unlike the traditional analyses of power which have assumed that the total amount of power in a social system is fixed, Tannenbaum considers that there is a variable amount of control in organizations, so that with a variable amount of control it is possible for both an employee and a manager to increase their influence such that the total control of the organization increases. Total control can increase through the organization promoting interaction and influence amongst the employees (Tannenbaum, 1968).

Perceived organizational control is measured from averaged judgements of organizational members responding to a questionnaire dealing with the amount of influence or control exercised by various groups in the organization. Measures of control are difficult to obtain but Tannenbaum considers that his method produces data corresponding with observations, and it shows who exercises control in the

organization, and how much control is exercised. The results of studies of American organizations have consistently shown, that there is more control at the top of organizations, indicating that there is more influence at the top than the bottom, and that there is a discrepancy between ideal and actual influence for employees at the bottom (Tannenbaum, 1968). The same methods have produced similar results in a comparative five country study (Tannenbaum et al, 1974). The same study found that individuals at higher levels have more opportunity to use their own ideas and learn new things and are more satisfied with their jobs, than those at lower levels, and that managers attribute more influence to employees than the employees attribute to themselves (Tannenbaum et al, 1974). For Tannenbaum control is really influence.

3.3

Studies in Britain

At the forefront of the British studies is the work of Wall and Lischeron. Their work has concentrated on the demand amongst non-managerial employees for involvement in organizational decisions and the relationship between participation and individual well-being. They consider that participation is composed of interrelated elements, the most central of which are interaction, influence and information-sharing. The most important is influence, because if a decision-making process reaches the point of equal balance, there is equal influence and participation is at its highest (Wall and Lischeron, 1977).

Wall and Lischeron identify three types of participation decision, local, medium and distant; local being decisions at the lowest level, for example an employee's work schedule; medium decisions affect a large number of employees, typically a whole department, whilst distant decisions are those taken at the highest level in the organization and are dominated by top managers. These types of participation decision were examined with respect to influence, using questionnaires, in three studies. The first study, working with three grades of non-managerial nurses, found that there was most desire to influence local decisions above the level of actual influence amongst all grades. There was slightly less desire for medium decisions, and for distant decisions one grade did not desire any influence: the two other grades desired some influence. Actual influence was considered to be weakly correlated with satisfaction (Wall and Lischeron, 1977).

The second study, with skilled and unskilled steel factory workers, found many respondents perceived considerable influence over work with local decisions and small differences between actual and desired influence. With the medium decisions all employees indicated they had little or no influence, but skilled employees desired as much influence as management and on some decisions more than management, whilst the unskilled had a weak desire for influence. With the distant decisions over 90% perceived no influence and 30% skilled and 40% unskilled did not want any, but 47% skilled and 30% unskilled did want influence. Those with greater influence had greater satisfaction, and was generally with the skilled (Wall and Lischeron, 1977).

The third study, with male blue collar employees in a local authority's outdoor recreation department, found with local decisions a very strong desire for influence which they did not have and for information which they did not receive. At medium and distant levels they perceived no influence but desired an equal basis with management, and again more information should be provided. The perceived information received was slightly more strongly related to satisfaction than perceived influence (Wall and Lischeron, 1977).

After the last study the authors and local authority started an experiment trying to implement the expressed preferences of employees and managers for a system of participation. The system generated a series of meetings with at least one researcher present. During the experiment meetings were attended by 100% of supervisors, 70% rising to 90% of employees. The principal topics at meetings were medium decisions, and the information requested was provided. As a result of the meetings some distant decisions were made or altered and employees accepted these more readily with the downward flow of information. After five months further questionnaires were completed and the experimental group showed greater influence in some of the medium areas and minor increases at the local and distant levels. The only satisfaction measure to alter was an increase in the relationship between employees and immediate superiors (Wall and Lischeron, 1977).

3.31 Discussion

The approach to influence of Wall and Lischeron (1977) is different to that of Tannenbaum (1968) in that they have not used general cross-organizational questions about influence but have, from interviews in each organization, established examples of the types of decisions which specifically relate to the organization.

This enabled both researchers and respondents to focus on specific different levels of decisions. Accordingly Wall and Lischeron believe that the stronger desire for participation from their respondents reflects their approach because respondents are aware of what type of decisions they are being asked to consider and are able to respond more confidently (Wall and Lischeron, 1977).

The participation experiment found that with the increase in participation there was only an increase in satisfaction with immediate superiors. It would appear that the relevant significant interaction was between worker and immediate superior, even though there was worker attendance at meetings with other superiors. Does this limited change indicate that there has not been a full interaction perhaps because of worker or management resistance? The researchers noted that they were instrumental in some of the interactions, but there is no evidence of the respondents feelings about this and how the researchers have affected the interaction.

Although their model emphasises influence there are no results about desired influence or even information from the final questionnaire. Although the downward flow of information enabled employees to appreciate and accept decisions, did employees understand the information?, did employees concur with the decision, or simply accept it? It would have been illuminating to know.

3.4

A European Study

3.41 Introduction

Some of the issues relating to participation were examined in a twelve nation study co-ordinated by a coalition of academics from each participating country in the form of the Industrial Democracy in Europe (IDE) International Research Group. There were differences of opinion about participation which some saw as a redistribution of power and others an increase in the effectiveness of communications, and about industrial democracy which was considered to relate to a range of models (IDE, 1981).

Amongst other things the group studied de facto participation which encompasses actual participation in terms of influence and involvement. Power was left definitionally open, but the control of resources approach was not used because of measurement problems. The Tannenbaum (1968) approach was not used because it assumed that individuals could estimate their own or others power yet lack knowledge

of the situation, and it was unclear if power or participation was being measured. Accordingly the group adopted a decision approach of revealed preferences and power

" was the degree to which a group (or individual) can determine decisions (of a specified scope) which generate conflict " (page 29, IDE, 1981).

De facto participation, being separated into influence and involvement, is considered to be variable sum power. Power is exercised by participating in decisions, so power is measured from influence and involvement (IDE, 1981).

3.42 Research Methods and Instruments

The work is a cross-sectional study in banking, insurance and metal engineering organizations in different countries without experimental controls or planned manipulation of variables. A pilot study, found that the phrasing of sentences and terminology did not always fit the social reality of the employees, and revealed a need for group interviews as well as the questionnaires when studying participation. Key types of decision were selected from interviews, rated by 'well-informed' respondents and tested (IDE, 1981).

The measurement of influence was considered a group effect, rated by 'experts' who had knowledge of the distribution of power and influence in the organization, but the researcher's rating was used when the researcher felt that the experts presented a biased picture. Involvement in decisions and desired involvement was rated by individuals. It was assumed that when an individual indicated involvement it implied that the respondent was provided with information. Individuals also completed a personal information form and their perceptions of the outcome of participation (IDE, 1981).

3.43 De facto Participation

The group found, the organizational climate less positively rated by workers than by supervisors, a strong correlation between workers' ratings of climate and participation, and the lower levels had less education, a less favourable climate and less participative supervision, so that the kind of job held is important for participation and individual's attitudes (IDE, 1981).

3.431 Influence

The group members held different opinions about whether greater involvement causes greater influence or vice versa. Influence was defined negatively in that it does not coincide with involvement or decision-making, and the relationship between influence and power was undefined because the research instruments could not discriminate between them. The negative definition of influence enabled the data to be interpreted at the organizational level and not individual or group level. The group found, that workers possess least influence and exercised this on issues with strong legislative norms, for example holidays, that top managers had most influence and this was exercised over economic questions and personnel policy (IDE, 1981).

The group found, that top management creates specific coalitions over very limited issues with both middle management and supervisors for long-term decisions and with workers' representatives over short-term decisions, so to influence long-term decisions workers would appear to need coalitions with middle managers and supervisors. Although higher education was a necessary condition for influence, the membership of a representative body had the greatest effect on influence, the higher the level of automation the more influence representatives possessed. The better the organization's market position the more influence possessed by workers and their representatives (IDE, 1981).

3.432 Actual and Desired Involvement

An individual's perceived involvement was the sum of responses to sixteen general decisions, and the amount increased moving from workers to supervisors and middle managers. The main difference between influence and involvement was in the sharper division of involvement, for example middle managers perceived less involvement in long term-decisions than their reported influence (IDE, 1981).

The response to desired involvement indicated that employees wanted only slightly more than actual. The same pattern of items of involvement emerged for desired as for actual involvement, suggesting employees want more of the same thing and not structural change. Employees did not want direct involvement in long-term decisions but wanted more representative involvement in these decisions (IDE, 1981).

There were very strong inter-correlations between actual and desired involvement which were suggested to be the outcome of mutually dependent activities.

so that actual involvement might increase desired involvement or vice versa. This inter-dependence was considered to be the main internal source of participative dynamic which could be inhibited or promoted by external circumstances. It was found that the involvement, in medium and long-term decisions appear to be determined more by the institutional and broader social-political framework, and in short-term decisions by organizational contingencies (IDE, 1981).

The educational level of employees did not increase their own involvement but limited the involvement of superiors. Employees appear to use knowledge as negative power for resistance, whilst they do not have the opportunity to use knowledge for greater co-operation. The high correlations between influence and involvement suggested that something in common was being measured, and that involvement was perhaps measuring attempted influence (IDE, 1981).

3.4.3.3 Perception and Evaluation of Direct Participation

Where there was direct participation it lead to an easier acceptance of decisions, and better representation of employees' interests. Direct participation reflects the management style in a department or group and is not necessarily an organizational phenomenon, so there were differences in the perception of direct participation. Employees who rated themselves more involved in decisions also perceived their superiors to be participative, and it was suggested that direct involvement affected employees' attitudes to their job, so that participation does not change job content but the relationship with the superiors (IDE, 1981).

The group found that employees who desired more involvement were less satisfied with the organization, and supervisors and managers were more positive about participation, work and the organization, so that those who perceive themselves as more involved in decisions are also generally more satisfied (IDE, 1981).

Amongst the twelve countries Britain occupied a middle position, low on institutional rules for participation, but high on involvement. There was a relatively low score for direct participation but relatively high for representative participation through shop stewards (IDE, 1981).

3.434 Discussion

Due to resource constraints the study was cross-sectional, whilst a longitudinal study might have provided more insight into issues such as the relationship between interaction and influence and the operation of participation.

The group criticized the Tannenbaum (1968) approach to control for involving individuals in estimating their own power and the power of others with a bias due to lack of knowledge of the objective situation and ideological bias due to normative evaluations and stereotyping. The group then used supposed 'experts' from each organization, experts with a knowledge of the distribution of power and influence in the organization, but their cognitive and ideological biases were unchallenged. The group criticized the open-ended approach of Tannenbaum (1968) which left respondents free to choose the decisions to which their perception applied, and then used generalized decisions, although they were divided into short, medium and long term, which must mean that respondents are still free to choose the decision topic.

The group collected data for involvement at the level of the individual, and for influence at quasi group level. It has not analysed the data solely at these levels but at organizational level. The group consider that this approach is only really appropriate for managerial behaviour. Because industrial democracy is voluntaristic in character the group consider there is a need to develop a more voluntaristic theory of industrial democracy (IDE, 1981). This implies more concentration on individual inter-personal relations than in previous studies. This approach would also seem beneficial for examining involvement and influence where the group consider involvement is measuring attempted influence.

The group were aware that the provision of information might be a crucial issue but found it impractical to include. The participation scale used included involvement and an indication of involvement was assumed by the group to indicate the receipt of information. It is felt that this may be the situation with respect to information, but it may also not be the situation. It would appear to be impossible to participate in decisions without information but again the issue has been too complex to confront in the group's research.

3.5

Summary

The previous research reviewed in this chapter has demonstrated a bias towards academic and management-oriented studies of participation. The distinction between influence and power has been confronted as directly as possible when using questionnaires, but very little distinction seems to emerge from the data or the researchers. All of the work has been conducted with very large samples of employees. The work of Lischeron and Wall (1977) contain exceptions to this pattern, but even their concern with employees has not lead them to consider collecting data and analysing it at the individual level, though now IDE (1981) recognise a need for this. From all of the studies Lischeron and Wall (1977) are the closest to examining the issue of information, but only IDE (1981) admit the difficulty of trying to work with information and measure its effect.

Chapter Four
Pertinent Social Psychology of the Individual

4.1 Introduction

The previous chapters have shown that the research problem is located with individuals and their reception of financial information, which could be useful in the context of employees' participation. Previous research into the area of participation has neither involved information nor been conducted at the level of the individual. In order to move in these directions it was considered necessary to review the literature concerned with the social psychology of the individual and to have some perspective on the social forces and social system in operation.

The individual is in society along with his own knowledge, influence and power, his needs and wants for these items, all of which are closely bound up with order within society. Part of an individual's personality are attitudes which are reflective of the individual and relate to participation, information and control. The chapter seeks to examine briefly some of the issues which shape the individual's behaviour.

There are many theories which deal with these surrounding issues, none are comprehensive and may never be. One observer notes that all social science theories are preceded by normative propositions about the nature of man, of society and the relation between the two (Israel, 1972). So it has been necessary to choose to discuss and then to select those theories which provide an appropriate framework to help resolve the research problem.

4.2 Society

The way in which people act appears to depend upon the circumstances under which they act, and the circumstances will have been moulded by the societal environment, amongst other things, and most social-psychological approaches have conceptions of social structure based on voluntaristic or idealist assumptions (Archibald, 1978). In examining change in society it is possible to distinguish between the Utopian view - a society based on a consensus of values amongst its members- the Rationalist view - a society which is the product of constraint and domination (Dahrendorf, 1959).

A Utopian view is the pluralist model of American society composed of homogenous, isolated individuals manipulated by well-organized elites (de Tocqueville, 1961). In the same vein are the Exchange theorists who consider society is the best possible reflection of the interest and intentions of individual members, use the general model of market capitalism (Archibald, 1978). The behaviour of this model can be explained by the equation:

$$\text{behaviour} = f(\text{profit}) = \text{rewards} - \text{costs. (Homans, 1974).}$$

The Exchange theorists consider, that relationships will persist so long as individuals get benefit from them (Archibald, 1978), and there are alternatives which are outside the immediate arena (Ng, 1980), however these alternatives to challenge the social system may not be available to many individuals, especially the disadvantaged (Apfelbaum, 1979).

A Rationalist view is that of Marx which considers productive activity the mediating link between humanity and nature, that individuals express, realise and develop through spontaneous creative labour. The objectification of feelings and ideas through labour produces material objects and social institutions which satisfy some needs and permit a concern with many others, many of which themselves have been created by the emergence of these same products. The two-way dialectical relationship between subject and object brings about the resolution of contradictions between the two ingredients and changes both of them. This is the basis for the historical development of society (Archibald, 1978).

In this constructivist epistemology Marx sees the process of acquiring knowledge as an active one in which the sensing, perceiving and cognizing subject creates objects of reality in two ways. One by conferring meaning on the object in the process of cognition and in another way through his own work which is part of the basic process of production. In this process he creates objects, which become part of the environment, by transforming nature, and creates social conditions in which the production process occurs (Israel, 1972).

Marx considered that productive activity is undertaken consciously and co-operatively with others, and human nature lies as much in the collection of social relationships as in the biological individual. Thus human individuality is considered impossible without sociality, and sociality presupposes individuality. An individual coming into contact with the productive process becomes alienated from

himself, and unless the individual changes the material conditions the alienation makes the individual more frustrated (Archibald, 1978).

There are three other broad schools of thought that model capitalist society in alternative ways to the Exchange theorist and Marxists (Archibald, 1978). The Structural Functionalism of the Conservative Idealists school reflects a desire for law and order, distains power, distrusts the motives and ability of the majority, and holds a pessimistic view of human nature. Comte, an early member of this school, offered positivism - an uncritical optimism about society coupled with an adherence to the facts of a situation [scientism] - and suggested that capital should retain its material power over labour because in the past capital had demonstrated that it was superior to labour. The positivist approach claims to be neutral in relation to the existing social conditions, yet its 'neutrality' helps to maintain the existing conditions and clearly has a conservative effect (Archibald, 1978).

One school of the Moderate Idealists Revision has the Weberians considering the profit motive responsible for efficient capitalist production, competition breaking down classes, considering in bureaucracies individuals have increasingly less influence and class conflict has changed, as struggles centre on the price of labour and have less concern with control of the means of production (Archibald, 1978). The second school of the Moderate Idealists Revision has a consensus that rationality is rare, its passive exchange theory embraces the psychology of behaviourism, one being attribution theory - the inference of personality from behaviour -. The actor and the act are perceived as a causal unit, a fundamental gestalt (Jones, 1979) which causes circularity of reasoning of attribution theory and rejected as no explanation of behaviour merely a collection of observations about naive causal inference (Cook, 1979).

All of these views ignore the interaction between the observer and the observed so that a model is needed which encompasses ourselves as participant observers (Glouberman, 1973).

4.3

Power

4.31 Philosophical Views

Power operates in most individual's lives, and it is obvious in society when there is conflict and change, not co-operation and stability. The Philosophers' views

on power vary. Machiavelli considered it a skill limited only by the creativity of the individual wielding it. Hobbes considered it as the present means to secure some future apparent good, a competition between individuals, in fact a power struggle. Russell considered that the fundamental concept in social science is power and the laws of social dynamics can only be stated in terms of power, but he distinguished between power as a means, and as an end in itself. Nietzsche considered power as an elastic concept, the essential thing in the life process as a form-creating force working from within which utilizes and exploits external circumstances, the will to grow, overcome and self-transcend. The will to power is the driving force to freedom (Ng, 1980).

4.32 Sociological Views

At the societal level, power is of primary importance to the Rationalists as it is considered to serve sectional interests, but for the Utopians power is secondary to the primary position of values and norms. Power can be considered to accommodate the integrational view of society, so the subjected class of factory workers incline to a Rationalist view, whilst the middle class incline to a Utopian view. This basic difference in emphasis leads to a divergence in the concepts of power in three main areas. Ideologically, Utopians accept the power of men over men whilst Rationalists consider power should be used for communal goals. Social conflict is considered to be determined by the economic infrastructure's influence on the ideological superstructure by Rational-Marxists but Utopians content power must be pyramidal and not under democratic control for long. In social stratification, where social inequality becomes institutionalized, Utopians do not consider the role of power. Weber's concept of power is amorphous and the probability that one actor within a relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests (Ng, 1980).

Ng distinguishes between power over something and power to bring about an intended effect, and mentions that Mills sees power vested in a few individuals and removed from the majority, where this loss of power is alienation or depression, so that such individuals are underprivileged economically, socially and psychologically with the habits of submission and lack information about the functioning of society. Mills considers the accumulation of power depends on will, knowledge, opportunity and opportunity and can be a zero-sum concept. On the other hand Parsons considers power as a set of common norms regulating and shaping social order, implying a

subordinate, superordinate relationship so that power over something is scarce in supply relative to demand, so it is also has zero-sum qualities. Ng considers that power cannot be conceptualized as a personal attribute but only in social organizations where it is unequally distributed, so that Simmel suggests that individuals want to be liberated from subordination to achieve equality (Ng, 1980). The individual wants equality with the immediate superior (Festinger, 1954) for Simmel considers the proletariat resents the bourgeois not the highest class, so that a subordinate improves his position step by step (Ng, 1980).

4.33 Political Views

Bachrach and Baratz (1962) consider there are two facets to power, decision-making and non-decision-making, but Ng adds a third in which there is no resistance to be overcome as it has been removed by manipulation in such a way that the desires and wants of the community are shaped so that no issue arises and therefore no need to resort to decision-making (Ng, 1980). Within the same culture the rich and powerful speak a different language from the poor and powerless (Lind and O'Barr, 1979) so the powerless do not have easy access to the forum of power. Archibald notes that workers, appear to find their conditions of life pre-determined, their personal development assigned to them by their class, acting with less self-confidence, less self-reflective intelligence, less concern for the future consequences of their action and less likely to initiate actions, a pattern of alienation and powerlessness accompanied by feelings of misery low self-esteem and mental illness. Workers are prevented from being secure or free to express themselves and control their desires or abilities at work, then told they are lazy and irresponsible (Archibald, 1978).

4.34 Psychological Views

Ng suggests that psychology has retreated from analysing the social processes of power but the area involves two main schools of thought, Field theories and Social Exchange Theories. In Field theory Power is an important construct, dynamically related to Position and Locomotion, and is induced force according to Lewin, but Cartwright and Zander consider power as the difference between induced force and resistance. Influence is intimately related to power so power is potential influence, and influence is power in action. Interpersonal power originates from the act performed by the influencing agent (Ng, 1980). Five types of power, Reward, Coercive, Legitimate and Expert, emanated from French and Raven (1959) who did not

consider information to be a type of power. Later information was added, being different to other types of power as it induced change in individuals as information is internalized and continues independent of the agent, whilst other types of power require the agent to continue (French, 1965). Ng, suggests that in conformity, a change induced by a majority on a minority towards the majority's position, the minority depend upon the majority for their information. Then Ng cites Moscovici who found that a minority of two can influence a majority if they present their arguments with an aura of autonomy, investment and fairness, so that behavioural styles can replace power in bringing influence to bear. Moscovici considers that power must be the result of influence and that influence is inherent in the dialectical relation the individual and society, so that in Field theory influence and power have a one to one correspondence (Ng, 1980).

The Social Exchange theorists consider social influence integral to social interaction, that is the continuing social exchange in which the behaviours of the participants are interdependent, so that the outcome is a joint product of the participants' behaviour. The control of the outcome is power and the participants are rational utilitarians whose behaviour is governed by reinforcement. Social Exchange theories emphasise the role of alternatives outside of the power relation, yet such alternatives are not available to the disadvantaged and the theories too simplistic for the study of power (Ng, 1980).

4.35 Summary

There are different views about the nature of power and its relationship to influence. The Exchange theories ignore the disadvantaged, whilst the Field theories consider power and influence to be the same thing.

4.4 The Needs and Behaviour of the Individual

The earlier sections have examined the individual in terms of social order and power but now the focus moves towards the needs. Bay found that most individuals want to live free, healthy lives. He considers a want is a predisposition to desire or prefer something, and is a fact, whilst a need is a hypothetical construct not measurable and cannot be proven to exist. Bay refers to Marcuse who considers that the needs felt or seen by most individuals are determined primarily by predominant interests in society, consequently there are true needs being those which are vital, clothing and nourishment, and false needs those which

are superimposed on the individual. Bay suggests the more control individuals exercise upon their lives the more correspondence between wants and needs (Bay, 1972).

In this vein Kelvin notes that behaviour is a function of beliefs, feelings and the situation's actual demands, and the demands may over-ride feelings and beliefs so that observed behaviour is an inadequate source of information about the whole attitude system (Kelvin, 1970). In persuasive situations individuals may change in a manner consistent with our theoretical perspectives, but their self-reports are at variance with that observed (Roloff, 1980). Thus the way an individual orders his environment is a function of intelligence, education, feelings and emotional stability, whilst his behaviour is determined by his role and the norms and expectancies associated with the position (Kelvin, 1970). Zimbardo and Ebbesen consider the most effective change in attitudes is brought about through interpersonal communication between individuals known to each other, however, one can only expect attitude-action links on issues important to the individual (Warr, 1978). Where an employee's freedom of choice is limited there are low associations between attitude and behaviour, so an increase in participation may be viewed as an increase in personal choice and so there is more consistency between attitudes and actions, however, Warr observes that most psychologists explaining individuals in terms of their decision-making have ignored the impact of social structures (Warr, 1978)

The evidence suggests that individuals aspire to be free but has behaviour circumscribed by external factors. Since Freud did not discuss or label power psychologists have tended to ignore it, however, Adler suggests a unitary theory of personality with a prepotent force ceaselessly striving for superiority self-enhancement and self-esteem directed at social co-operation. This is similar to Maslow's democratic character who does not need power but when he has it uses it over problems not things. Maslow found that thwarting self-esteem produced feelings of inferiority, weakness and helplessness leading to neurotic behaviour, whilst fulfilling self-esteem leads to self-actualization, becoming what one can become, the result of the dialectic between growth-fostering and growth-discouraging forces. Maslow developed a system of hierarchical needs, as more basic needs are satisfied 'newer' and 'higher' goals emerge towards self-actualization (Ng, 1980). Maslow's self-esteem and self-actualization are not compatible with powerlessness (Fitzgerald, 1972). McClelland considers power has two dimensions, the source of

power and the object of power, both of which can be either the self or outside of the self, whilst the need for power is expressed in different behaviour and experience dependent upon the individual's maturity and psycho-sexual development (McClelland, 1975).

4.5

The Attitudes and Behaviour of the Individual

Whether individuals act on their attitudes appears to depend upon the circumstances in which they act (Archibald, 1978), for example many university students agreed with a questionnaire statements about the practice of birth control but did not use birth control (Zimbardo and Ebbesen, 1970). There is reasonable consistency about what constitutes an attitude, it is an opinion that includes an evaluative and emotional component (Aronson, 1980), or mental readiness or implicit predispositions which exert a general and consistent influence on a fairly large class of evaluative responses so that an attitude is learned rather than innate and is susceptible to change (Zimbardo and Ebbesen, 1970), or a set of internal processes which affect behaviour but are not directly open for inspection (Kelvin, 1970). An attitude can be divided into three components; affective, cognitive and behavioural towards an object or individual, whilst attitudes are affected by everyday life and are largely unconscious (Kelvin, 1970). Attitude change is private and relatively long lasting, whilst conformity is likely to be temporary (Collins, 1970).

Triandis suggests that attitudes help an individual to adjust to the environment by providing a certain amount of predictability and meaning to behaviour. He observes the controversy about whether the three components are highly interrelated measures of the same thing or independent, and asserts that direct experience normally changes all three components, but indirect experience, which is normally informational, generally changes the cognitive or behavioural. Attitude change occurs through information or experience which an individual will more readily accept when it helps him to better structure his universe (Triandis, 1971). Communication affects attitude change by modifying the cognitive component (Kelvin, 1970). As a result of his work with attitude change, Nuttin considers that attitude responses are no different to other forms of behaviour, although it is concerned with past behaviour on new behaviour and social psychologists have taken attitudes as a single measure of behaviour, so that there will be more understanding of this area as study of the fundamental laws of behaviour progresses. He found that subjects stressed behavioral freedom when they

were least free, but noted that these observations occurred in studies using artificial environments designed to ensure that environmental stimuli did not effect the response, yet these experimental conditions could be misleading since any behavioural response is concerned with complex situational determinants. Nutting is sceptical about the theoretical and practical uses of attitude responses because the attitude does not offer a valid basis for predicting behaviour (Nutting, 1974).

4.6 The Individual in Relationship to the Research Problem

In trying to provide a model of what happens when financial information is provided to employees it was necessary to examine the contexts and dynamics for this, and this accounts for the first four chapters this far. This section brings together the threads of the different literatures of earlier chapters and ties them into the individual's social psychology before the next chapter sets out the model.

4.61 Communication

The most effective change in attitudes is through interpersonal communication between people known to each other (Zimbardo and Ebbesen, 1970). Archibald cites the work of Deusch who found that communication increased co-operation amongst individuals and groups, who co-operated, rather than competed, to produce more and better recommendations and solutions to problems in a friendly atmosphere (Archibald, 1978).

4.62 Participation

Varr considers an increase in participation may be an increase in personal choice so there is likely to be more consistency between attitudes and actions in such circumstances (Varr, 1978). Ng cites Mulder who found that individuals with a small power distance, as opposed to a large distance, from a powerful person, showed liking and favourable attitude to that person, indicative of reducing the power distance. He pointed out that for workers to be motivated to participate the participation needs to lead to power equalization and not simply to expose the less powerful to the more powerful, because if there is not an equality in relevant knowledge, ability and motivation strength before, then when participation occurs all that will happen is that the power difference will get larger (Ng, 1980). Participation when it is futile increases alienation (Archibald, 1978).

4.63 Information

Information is important to the individual as it alters behaviour. We are dependent upon other individuals as sources of information and the perceived source of information will effect attitudes, so a high ethos source can change attitudes with influencing the amount of information learned. The high ethos source often states a conclusion without presenting arguments or information in support (Collins, 1970). A lack of information is one characteristic of the underprivileged (Ng, 1980).

4.64 Influence

Raven considers information as the most stable form of influence, and is most effective when the object of change is ambiguous, however, information influence may require the influencee to acquire an appropriate body of knowledge (Raven, 1965). Control of important resources is a source of social influence (Collins, 1970).

4.65 Control

The control of important resources produces interpersonal attraction (Collins, 1970). When an individual perceives lack of control over the outcome of a situation he becomes disoriented and anxious (Ng, 1980). When an individual has control he generally performs better, feels satisfied, optimistic and an increase sense of self-worth (Renshon, 1979), and the more individuals take control of their lives the more closely will wants correspond with needs (Bay, 1972).

4.7 Observations on Previous Research Methods

At this point it is necessary to comment briefly upon research methods, because although it was considered possible to construct a model relating to the research problem it was not obvious from previous research how this model could be sensibly tested. Nuttin did not consider that the laboratory approach to attitudes was the correct environment in which to test such changes (Nuttin, 1974). Archibald is uncertain about the efficacy of the research methods of social psychologists since they may not understand the standpoint of their subjects. This is because questionnaires may be useful to get at attitudes, but are poor at analysing social situations and pressures (Archibald, 1978). The efficacy of questionnaires is doubtful and Roloff cites Missett and Wilson who found individuals experience attitude change according to questionnaires, but who self-report no attitude change. This suggests that individuals may change in a manner consistent with theoretical

perspectives, but self-report are contrary to these observations (Roloff, 1980). Collins observed that there are four self-report methods used in attitude measurement and they all contain difficulties (Collins, 1970).

Varr, in discussing motivation, observed how models have advanced from the simple scientific management of Taylor emphasising financial rewards and rational individuals maximising these, through the human relations school emphasising satisfaction, social groups and participative management, through Maslow's hierarchy of needs towards self-actualization and onto Herzberg's two factor theory (Varr, 1978). It has been difficult to test Maslow's notions (Varr, 1978) some think there is no evidence of Maslow's higher needs (Fitzgerald, 1972) and subsequent studies of Herzberg's extrinsic factors have not held up (Varr, 1978). Varr notes that newer models incorporate many factors with interactions between factors and the data required is substantial to include both personal and environmental features, so that the traditional study of discrete variables will not penetrate uncertain areas. he anticipates that future research will focus on one area of activity and follow through each individual, recording his actions, seeking his interpretation of these actions as well as introducing the social and environmental factors, so that psychologists will start to do justice to the complexity of reasons for individual actions (Varr, 1978).

Because of the possibility of the artificial environments producing 'artificial' results it seems necessary to conduct field studies in the daily environment in which individuals work. It is difficult to know what attitude questionnaires are measuring, and questionnaires omit the environmental dynamic. The issue of information has been left by most researchers as an independent variable partly, no doubt, because it is dependent on the individual, and partly because it is difficult to measure in an individual. This research lies squarely in the complex domain of many variables so that traditional research methods seem inappropriate, and also do not seem to be in tune with the spirit of individuals. Partly for these reasons the researcher looked elsewhere for a more sympathetic and personal approach to the individual, and used the psychology of personal constructs (Kelly, 1955). Although the next chapter sets out the initial model constructed from the literature survey included in the first four chapters, the approach to the individual is taken further in Chapter Six where the psychology of personal constructs (Kelly, 1955) is introduced and one of its attendant methodologies utilized as the main research tool.

Chapter Five

A Model of Financial Information Provision to Employees

5.1

Introduction

The previous four chapters have reviewed a number of different bodies of literature, Chapter One examined the issue of financial information, Chapter Two examined the issue of industrial democracy and participation, Chapter Three examined the notions of control, influence and power, whilst Chapter Four examined the social psychology of the individual and started to weave together the various findings relative to the research problem. These findings are elaborated here to provide a framework for this research. When an individual receives financial information for the information to be of use it needs to be understood by and to have meaning for the individual, so that if an individual receives financial information about the organization in which he works then the information needs to be acceptable in that context. There is a lot of evidence which suggests that an individual needs a healthy time for the benefit of his psychological growth. Contributing to this health and growth is the opportunity for the individual to participate in decision-making, because through participating in decision-making the individual perceives a changed world through changes in influence and power exercised by the individual and others. As the research problem is concerned with change this requires longitudinal study, which contrasts with almost the entire body of previously reported work.

5.2

Five Issues Common to both Individuals and Organizations

With an individual participating in an organization there are certain issues which impinge on both the individual and the organization and so provide the context. For participation to occur various conditions must be present. Five issues have been identified, Interaction, Involvement, Information, Cognition/Knowledge and Education/Training, and now discussed.

5.2.1

Interaction

A prerequisite for participation is some interaction between the employee and some member of management, so that there must be a certain willingness on the part of both the manager and the employee. The willingness to participate does not mean that participation will occur, for as Wall and Lischeron (1977) found, although both employees and management were willing there was a learning process to launch.

5.22 Involvement

If an employee is willing to participate then he must become involved and influence the decision-making. Although IDE (1981) were unable to agree about the ordering of influence and involvement and suggested that it might depend on the circumstances, it is intuitively felt that an employee cannot influence unless involved.

5.23 Information

Information is necessary for successful interaction and participation. Wall and Lischeron (1977) found employees who wanted information and when they received the information they observed that the employees learned of the management's constraints, discussions ensued through which both employees and management changed their initial positions. Smith and Brown (1968) observed that where there was an adequate flow of information to control centres and where the information was used adequately in formulating and implementing decisions there was higher organizational effectiveness. It also appears that participation generates its own information, for example the opinions of the participants, so that information provision in the participation process should not always be from management to employees, nor the information always be structured by management. As Klein has commented information systems need to be more inter-active with the users to evolve (Klein, 1976). Thus in a participative situation it can be anticipated that more information will be generated both by employees and management.

5.24 Cognition/Knowledge

For an employee to participate he must acquire more knowledge. There is nothing new in the rubric that 'knowledge is power', but it may be a factor which restrains management from sharing their knowledge with employees, for, as Goodlad (1982) found, managers were concerned about their jobs and protecting them. A manager must also acquire more knowledge from participation through the inter-action with employees. It seems that the existing level of knowledge or experience will affect the perception of the employee about his desire to be involved (Wall and Lischeron, 1977).

5.25 Education/Training

For an employee to become involved and inter-act means that competence will have to be acquired or developed, and Tannenbaum (1974) observed that the educational level of the workforce is one constraint to participation. Formal education is not necessary for employees to be involved, and IDE (1981) found that higher education was only one condition for influence, but that the higher the level of education was not a promoter of involvement, although higher education could limit the involvement of superiors. Wall and Lischeron (1977) found the act of trying to participate is in itself a learning process, that in non-participative situations there are no opportunities for employees to learn on the job, but in participative situations employees can learn. There is every reason to believe that employees can acquire knowledge about financial information and utilize this in their involvement at work.

5.3 Information and the Needs of the Employee

It is possible to place the need for an employee to participate in the context of Maslow's Hierarchy of Needs in the striving for self-actualization. Maslow includes amongst the prerequisite conditions for the satisfaction of basic needs is the freedom for an individual to investigate and seek information. He notes that intelligent individuals have a strong desire to know and understand, basic desires which are not separate from basic needs, they have a striving nature and are as much personality needs as the basic needs (Maslow, 1974). It is not suggested that in applying Maslow's scheme here all individuals will have the same information needs or that individuals will move up and down the hierarchy in unison, but the scheme will have individual application.

5.4 The Financial Information Needs of the Employee

An employee involved in decision-making will require various types of information. This research is concerned with financial information but at times the distinction between this and other types of information are not clear (Purdy, 1977), however either type of information can be accommodated in this framework.

The financial information required by employees will vary with circumstances, for convenience financial information, apart from no information, is placed into three categories which can be applied to any organization from the perspective of the employee. These categories are not mutually exclusive and are;

information about the other counters in the same department, and other departments in the same division. A department's financial statement could be Structural information to one of its employees.

5.43 Contextual Information

This is financial information about the company, which because of the company's organizational boundaries is not directly related to the employee's task, that is to say all financial information not included in the Functional and Structural categories. Contextual information will include Functional and Structural financial information from other divisions, their departments and Functional information units, for example Divisions B, C and D in Diagram 5.1. This can be aggregated to the whole company, so that for the store it could be the annual balance sheet and profit and loss account.

5.44 No Information

No financial information is likely to be perceived by those employees who still have basic needs according to Maslow's scheme. Such perception could come also from employees who are alienated from the company and feel that their receipt of financial information is of no use to them because they have no influence or it causes dissonance in them.

5.45 Using Data and Information

It is accepted that knowledge means understanding, understanding 'how' as well as understanding 'that', comprehending the mechanism as well as the facts. Knowledge is exhibited when an individual can transfer information in one situation and use it in another. The acquisition of facts can help to generate knowledge, but knowledge is obtained through sifting information. Data or facts may freely surround a potential recipient but unless it is perceived and utilized the data does not become information. Information is the channelling of certain facts or data from one point to another with the intention of providing new evidence.

Information can be defined in terms of the intentions of the transmitter marshalling data towards the potential recipient and the potential recipient may perceive, receive and internalize the information. However, the channelled data may not be perceived or may be perceived in a form different from that intended by the transmitter.

5.5

Forms of Employee Influence

An employee working in his organization would be placed in a particular context with respect to exercising his influence. The type of influence available to the employee will vary with the organization, for convenience influence, apart from no influence, is placed into three categories from the perspective of the employee. These categories are not mutually exclusive and are; Communication, Consultation and Participation.

5.51 No Influence

This is the position where an employee, irrespective of the amount of information that he has access to and the opinions then held, has no opportunity to influence the situation through discussion with management, and does not have the opportunity of making known his views to any member of management.

5.52 Communication

Communication, as considered in Chapter Two Section 2.21, is the position where the employee receives the result of a decision, information, with or without the opportunity to express an opinion about that decision.

5.53 Consultation

Consultation, as considered in Chapter Two Section 2.22, is the position where an employee receives information about a situation and can discuss the possible outcomes with the management before the management make the decision. This encompasses the possibility of the generation of ideas and information by employees.

5.54 Participation

Participation, as considered in Chapter Two Section 2.23, is the position where an employee receives information about a situation and discusses the likely outcomes with management and then they jointly make a decision. This encompasses the possibility of the generation of ideas and information by employees, also the possibility of an agreement being reached whereby one party will take the decision in a particular situation.

Diagram 5.2 The Information-Influence Matrix

Categories of financial information ↑↑↑	Types of employee influence →→→			
	NO INFLUENCE	COMMUNICATION	CONSULTATION	PARTICIPATION
CONTEXTUAL	Employees reaction is outside the formal structure	Employees express an opinion about the policy	Employees and management discuss before management make policy	Employees and management formulate policy
STRUCTURAL	Employees reaction is outside the formal structure	Employees express an opinion about the policy	Employees and management discuss before management make policy	Employees and management formulate policy
FUNCTIONAL	Employees reaction is outside the formal structure	Employees express an opinion about the policy	Employees and management discuss before management make policy	Employees and management formulate policy
NO INFORMATION	Employees reaction is outside the formal structure and is without formal company information			

5.6

The Information - Influence Matrix

It is considered that the context in which financial information is provided will affect the way the information is handled by the employee. To aid conceptualization an Information - Influence Matrix has been constructed. The various categories of financial information form one axis of the matrix, and the various categories of influence form the other axis. Diagram 5.2 is an example of an Information - Influence Matrix which has the categories of information on the vertical axis and the categories of influence on the horizontal axis.

Each cell of the matrix contains a summary of the possible activity of the employee at that location of information and influence. From Diagram 5.2 the employee has no formal information or influence in the bottom left-hand box and has the most information and influence in the top right-hand box. Any activity occurs

through interaction between the employee and management so that the employee is involved and can exert influence. The issue of involvement is one of growth, and it is considered that the employee will acquire more knowledge from education, training and experience in using financial information.

5.61 Some Anticipations of the Effect of Information and Influence

It is anticipated that an individual employee can be located initially at a point on the Information-Influence Matrix. It is anticipated that the receipt of financial information by an employee which is not understood, or is perceived by the employee to lack meaning, will not materially affect his position on the Matrix. It could well exacerbate any dissonance initially felt by the employee and caused by either the lack of financial information or the lack of opportunity to be involved in decisions. If financial information is not understood or is meaningless then education, training or experience could alter this. If the employee comes to understand the information then it is anticipated that he will become involved and use the information, any initial dissonance will disappear and growth have occurred.

From these premises the following kinds of reactions are also anticipated. An employee perceives dissonance, is located in the no information-no influence box of the Matrix. The Functional information required by the employee is provided, and the information eventually is understood and has meaning. It is anticipated that the employee will then require an organizational culture which will allow him to have more influence. In this case an employee might want to move from the functional information-communication box to the functional information-consultation box.

It is anticipated that in time the employee will want to move along the influence axis towards participation in decisions around his immediate work environment and functional information. In the longer term it is anticipated that an employee will require Structural information, have more growth and desire more influence at that level, again moving in the direction of participation.

It is anticipated, that given the suitable conditions of the opportunity to understand financial information and to influence decisions, in general an employee will tend to want to move upwards and to the right on the Matrix.

Chapter Six

The Construing of Individuals:

An Elaboration of the Psychology of Personal Constructs

The Need to Use Personal Constructs

6.0

From the literature which has been examined in the earlier chapters it is apparent that there is a need for a more personal and idiographic approach to the individual. There are three areas in particular which lead to this. The first is the complexity of the individual and relations with information. The previous chapters have shown that the issue of information, and more specifically financial information, has been a problem for earlier researchers to handle. Accordingly earlier researchers have left the issue of financial information open because of the difficulties surrounding information and its role in relation to the individual, as well as the difficulties of trying to operationalize an examination of its role. When an individual is viewed, from any particular stance, there are problems about the interrelationships which exist both across disciplines and within disciplines. For example, if an examination is conducted into the needs of an individual then this could involve interrelationships concerned with attitudes, control, communication, information, participation and so on. In this respect Warr (1978) has remarked that in psychology the models have become increasingly complex.

The second area is that of power. Amongst different disciplines there appears to be a wide amount of agreement about the essence of power. Philosophers regard a version of power to be the mainspring of life, so that for Nietzsche (Ng, 1980) life is the will to freedom, the will to power, and thus the individual can successfully overcome and order his universe. Some sociologists have observed that the social condition of the individual is strongly related to the amount of power that the individual perceives that he can exercise over his universe. This has led, for example, Mills (Ng, 1980) to observe that when the individual is powerless he is alienated and depressed. Amongst psychologists are those who argue that for an individual to be healthy it is of paramount importance for the individual to have the power to order his universe. Maslow (Ng, 1980) found that the thwarting of the individual's need for self-esteem led to neurotic behaviour. It appears that the ability to exercise power is integral to the individual who is psychologically healthy.

The third area is that of research method in the domain of psychology. There has been a traditional approach to research which has concentrated on one variable, using independent and dependent variables, at a time, trying to screen out all other variables. Frequently this has led to the use of controlled environments in the laboratory, and the use of individuals, such as students, who may not be representative of the population. In addition these subjects have been expected to perform within the paradigm of the investigator and to report using tools designed by the investigator. There is very often little opportunity for the individual to express himself in his own terms, yet this is required in an investigation such as the one undertaken here.

It is construed that there is a need for a more personal and individual approach to this investigation. There is a need for an approach which accepts both the dynamism of the individual and of the environment in which he operates, and at the same time allows the individual to report the effects of any investigation in his own terms. There is the need for an approach which allows the individual to construe what is happening but also enables the investigator to construe what has happened from the constructions of the individual. Such an approach is offered by the psychology of personal constructs.

6.1

Personal Constructs

The psychology of personal constructs as propounded by Kelly (1955) is a theory about the way in which man sees his universe. Two simple notions underpin this theory; first that man might be better understood if he were viewed in the perspective of the centuries rather than in the flicker of passing moments; and second, that each individual has his own perspective on life. These notions interplay. Man is seen as a scientist where his ultimate aim is to predict and control the course of the events in which he is involved. The universe is presumed to exist and is integral and can be measured along a dimension of time. Life emphasises the creative capacity for the living thing to represent the environment and not merely to respond to it. It is because of this that it is possible for man to place alternative constructions upon life and to amend these. This includes the possibility of what the individual perceives, may not in fact exist for others, yet the individual's perception of it does exist (Kelly, 1963).

Kelly considers that the individual looks at his world through templates which he creates to fit over the realities of his world in order to make sense of it. These templates are called constructs and the individual has a number or repertory of these. There are ranges of convenience within which these constructs operate so that the same event can be construed simultaneously and usefully in more than one disciplinary system. Each system has a focus or foci of convenience which are points where events show the system, or theory, to work best. Kelly considers that the focus of convenience for personal constructs is in the area of human readjustment to anxiety. The constructs are tested against the reality of subsequent events for their predictive efficiency, although the outcomes can be tested at a different level of construction from that which it was originally made (Kelly, 1963).

In stating the philosophical position of the theory Kelly notes that there are various ways in which to construe the world. Some ways are better than others and successive approximations are tested for their predictive efficiency, so that if the individual is persistent and keeps on learning from his mistakes then various interpretations of the universe are scientifically evaluated. Because present interpretations of the universe are subject to revision or replacement, and because there are alternative constructions available to handle the world, personal constructs have the philosophical position of constructive alternativism, which embraces elements of positivism, empiricism and rationalism (Kelly, 1963).

The psychology of personal constructs is a self-contained theory. As such it does not utilize the theories built up around the notions of needs, or of stimuli, which are traditionally accorded to the inert man by some psychologists. This is because the psychology of personal constructs considers that the individual possesses movement from the moment of his conception and is, therefore, part of a process. Earlier psychologists when examining the psychology of individual differences found that this was the psychology of group differences (Kelly, 1963). However, Kelly (1963, p.40) states that "by conceiving the individual person as himself operating under a construct system, the psychologist can lift his data from the individual case at higher levels of abstraction".

6.2

The Psychology of Personal Constructs

The psychology of personal constructs is laid out in a fundamental postulate which is elaborated by eleven corollaries. Each of these is briefly introduced and those which are particularly pertinent to this investigation will be elaborated later.

6.2.01 The Fundamental Postulate

A person's processes are psychologically channelized by the ways in which he anticipates events (Kelly, 1963).

This admits that man is a form of motion and his processes operate through a network of pathways. The theory underlying the psychology of personal constructs covers psychology, the group of systems that deal with the explanation of the behaviour of man. The psychology of personal constructs operates at the level of the individual. The individual has devices through which his ends are achieved by anticipating the real events of the future. This anticipation is analogous to the stimuli and needs met elsewhere. The fundamental postulate aims at a theory which is self-contained, yet encompasses notions encountered elsewhere (Kelly, 1963). For example, motivation can be viewed as the movement of an individual from conception to death: similarly the anticipation of events suggests direction.

6.2.02 Construction Corollary

A person anticipates events by construing their replications (Kelly, 1963).

Construing an event means placing an interpretation upon an event. A person has a structure in which events are placed and interpreted so that they come to have a meaning. In construing, the person notes features in a series of elements which characterize some elements and are uncharacteristic of others, so that similarity and contrast are inherent in the same construct. Construing can have a narrow or wide range of convenience, so that construing can transcend disciplinary boundaries. Life is a process of which a person is a part. When similar events occur a person handles them both as discrete events and replications of events (Kelly, 1963). Construing accompanies the individual through life, at work and play, and their construing changes in line with their experience.

6.2.03 Individuality Corollary

Persons differ from each other in their construction of events (Kelly, 1963).

There are differences between individuals because they are different elements in the process of life and they anticipate events and have anticipated events with different approaches (Kelly, 1963).

6.2.04 Organization Corollary

Each person characteristically evolves, for his convenience of anticipating events, a construction system embracing ordinal relationships between constructs (Kelly, 1963).

Persons differ in the ways in which they organize their constructions of events. Not only are the constructs personal to each individual but so is the hierarchical system of arrangement. This arrangement is not static and groups the elements in ways which minimize the incompatibilities and inconsistencies. It is possible for one construct to subsume another (Kelly, 1963).

6.2.05 Dichotomy Corollary

A person's construction system is composed of a finite number of dichotomous constructs (Kelly, 1963).

The system is composed entirely of constructs. " The construct denotes an aspect of the elements lying within its range of convenience, on the basis of which some of the elements are similar to others and some are in contrast. In its minimum context a construct is a way in which at least two elements are similar and contrast with a third. There must therefore be at least three elements in the context " (Kelly, 1963, p.61). Since a person's thinking is channelized and structured by the constructs, these limit the access to the ideas of others (Kelly, 1963).

6.2.06 Choice Corollary

A person chooses for himself that alternative in a dichotomized construct through which he anticipates the greater possibility for extension and definition of his system (Kelly, 1963).

A person has a construction system composed of dichotomous constructs and those which he chooses to shape his life are on one or other of the alternatives represented in each dichotomy. Some values are transient whilst others are quite stable. The person's construction system is for the anticipation of events and he elaborates his system to that end (Kelly, 1963).

6.2.07 Range Corollary

A construct is convenient for the anticipation of a finite range of events only (Kelly, 1963).

Both the system of personal constructs and the individual constructs have ranges of convenience, for there are few, if any personal constructs which can be considered relevant to everything. Relevant similarity and contrast are essential and complementary features of the same construct, and both exist within the range of convenience of the construct. That which is outside of the range of convenience of the construct is not part of the contrasting field but an area of irrelevancy (Kelly, 1963).

6.2.08 Experience Corollary

A person's construction system varies as he successively construes the replication of events (Kelly, 1963).

Construing is a type of refinement process so that, in the successive construing and reconstruing of what happens in life, a person enriches the experience of his life. Experience is composed of the successive construing of events. Through the successive construing of events a person discovers recurrent themes, and it is when he begins to see the orderliness in a sequence of events that he begins to experience them (Kelly, 1963). Thus in the process of life "learning is not a special class of psychological processes; it is synonymous with any and all psychological processes. It is not something that happens to a person on occasion; it is what makes him a person in the first place" (Kelly, 1963, p.75).

6.2.09 Modulation Corollary

The variation in a person's construction system is limited by the permeability of the constructs within whose range of convenience the variants lie (Kelly, 1963).

A construct is permeable if it will admit to its range of convenience new elements which are not yet construed within its framework (Kelly, 1963). Constructs which replace other constructs are considered to be variants, so that a construct may be permeable and subsume a new construct into its context (Kelly, 1963).

6.2.10 Fragmentation Corollary

A person may successively employ a variety of construction subsystems which are inferentially incompatible with each other (Kelly, 1963).

Even though the construction system fluctuates within a superordinate system, a person's successive formulations may not be derivable from each other, so that new constructs are not necessarily direct derivatives of, or special cases within, the old constructs. The changes that occur from old to new constructs take place within a larger system, and that larger system may have been altered by the impact of the old construct. The old and new constructs may be inferentially incompatible with each other and it is necessary to seek out the regnant construct system in order to explain the behaviour of men. A person's construct system cannot be logic-tight and wholly internally consistent, and consistency is not an easy concept to handle in a meaningful fashion, but it can be considered in terms of the way events are anticipated. The Fragmentation Corollary is partly derived from the Modulation Corollary and it assumes that in the more permeable aspects of a person's system, consistency is the law (Kelly, 1963).

6.2.11 Commonality Corollary

To the extent that one person employs a construction of experience which is similar to that employed by another, his psychological processes are similar to those of the other person (Kelly, 1963).

This corollary moves the Fundamental Postulate into interpersonal relations. It recognizes that there are certain aspects where the constructions of successive construing of events by two people may be construed as similar (Kelly, 1963).

6.2.12 Sociality Corollary

To the extent that one person construes the construction processes of another, he may play a role in a social process involving the other person (Kelly, 1963).

The person who is to play a constructive role in a social process with another person, need not so much construe things as the other person does, but rather he must construe the other person's outlook. This is analagous to social psychology, but the psychology of personal constructs is concerned with interpersonal understandings not merely common understandings. In this way the construction system of a person subsumes the construction systems of other people (Kelly, 1963).

6.30

The Psychology of Personal Constructs and its Relationship to this Research Problem

Kelly (1955, p.200) noted that "for any of us, the sharing of personal experience is a matter of construing the other person's experience and not merely a matter of having him hand it to us intact across the desk. The psychology of personal constructs therefore lends itself quite conveniently to the handling of the theoretical problem of gaining access to private worlds".

The research problem is a desire to understand what happens to individuals in their employment setting when they are provided with financial information. Further desires are to understand if such 'information is power' and whether the provision of training alters these relationships. So that the approach to the problem is construed, in accordance with the Sociality Corollary, to be in the same manner as Kelly's theoretical position and, as Bannister (1965, p.xi) has observed, "particularly its concern with human freedom and understanding".

In the Fundamental Postulate is the concern with the individual as a scientist anticipating events to predict and control. Mancuso and Adams-Webber (1982), noted that these anticipations are schemata assembled to incorporate, integrate or assimilate incoming information. Furthermore, all input only becomes input by its integration to an individual's construction system, and his processes channelized by his anticipation of events (Mancuso and Adams-Webber, 1982). In other words the provision of financial information to an individual may or may not be taken into his construing. What is taken in will depend upon the individual's Range of Convenience.

Thus, it is construed that, an individual, who is naive with respect to the financial information which is provided, may construe this information using perhaps the written construct 'figures'. On the other hand, an individual who is less naive, may construe this information with the written construct 'positive cash flow is good for liquidity'. In all cases then, it is construed that the individual will place his interpretation upon the financial information in accord with the Construction Corollary, and that there will be differences between individuals in their construction of events, the Individuality Corollary.

However, in accord with the Experience Corollary, it is possible for the individual's constructs to alter, so that the naive individual may subsequently reconstrue events with the written construct 'financial information'. It may be that with a naive individual these two different written constructs apply to the same elements, or it may be that the individual has invoked the Modulation Corollary, and, if the construct is permeable has admitted new elements.

It may be that the Organization Corollary is involved. Under such circumstances the individual may construe in a super-ordinate fashion that all numbers are 'figures' and that subordinate to this, and subsumed as an element in the super-ordinate construct 'figures', is the construct 'financial information'. However, it may be that there is no direct inference between these two constructs in the way in which it has been suggested, and thus the Fragmentation Corollary is involved.

It is anticipated that amongst similar individuals, for example naive individuals, their construing of financial information will be similar, thus invoking the Commonality Corollary. Through the field studies, which invite individuals to construe a number of elements including labels of financial information, individuals are able to exercise both the Dichotomy Corollary and the Choice Corollary.

6.31

An Replication of Personal Constructs in the Construing of Financial Information

It is considered that when an individual construes financial information elements, these elements may lie within his range of convenience. If they do, then the individual has a system of constructs which enables him to understand these financial information elements. The degree of understanding is dependent upon the way in which he construes the financial information elements. That is the degree of understanding depends upon the individual's constructs and his elaboration of his construct system. So an individual who is naive with respect to financial information may construe financial information with the construct 'figures', (and, just as in the experience corollary and the choice corollary, could possibly use the same construct for weight and height too). In this limited way it is possible for an individual to understand the labels of financial information through employing the construct, which is perhaps superordinate or regnant, 'figures'.

It has to be accepted that the individuals taking part in this study will have different construct systems. Each construct system has been elaborated through, at least, the experience corollary. It is possible for each construct system to continue its elaboration with respect to financial information, but the amount of elaboration must depend upon the individual and the opportunities available to him to extend his system. Thus the initial construing of an individual, who has perhaps previously not seen the labels of financial information presented to him, is likely to be naive, as in the example above. The construing, i.e. the constructs and the construct system, of this individual will be different to the initial construing of a qualified accountant.

Although it is possible for the accountant, perhaps, to have the superordinate construct 'figures', it would be anticipated that his construing would be far more elaborate, with complex constructs, both in breadth and depth with respect to the financial information elements, and that there would be many subordinate constructs related to the superordinate construct 'figures'. For example, the accountant may have the subordinate constructs 'car hire rental' and 'car depreciation'. So, if at this stage the number of 'financial' constructs of each individual are counted and compared, the accountant will have the most 'financial' constructs, and this is one indication of the more complex and elaborated construct system of the accountant towards financial information.

The anticipations of this study are that the provision, or the successive provision, of financial information to an individual, who does not already have an elaborated construct system with respect to financial information, is unlikely to allow the individual to elaborate his construct system with respect to this financial information. This is to say that when the financial information element 'car hire rental' is provided to both the naive construer and the accountant, it is going to be perceived and construed differently by each of them. Each individual could say that they understand this element, the naive construer through the construct 'figures', and the accountant through the constructs 'figures' and 'car hire rental'. The provision of the financial information element 'car hire rental', then has not allowed the naive construer to elaborate his construct system and have a construct 'car hire rental'.

It is anticipated that it is possible, however, for the naive construer to elaborate his construct system to include a construct such as 'car hire rental' through being placed in an organization and in a situation which will allow the elaboration of his construct system. This means that information provision occurs in a context which allows the naive construer to revise his construct system in some way.

In such a context, through the choice corollary, the naive construer will anticipate events and elaborate his construct system towards these events (Kelly, 1963). He will choose that alternative in a dichotomized construct through which he anticipates the greater possibility for the extension and definition of his construct system (Kelly, 1963). A naive construer can only elaborate his construct system through a permeable construct, such as a comprehensive construct. The construct 'figures' may be such a comprehensive construct, and it may subsume the construct 'car hire rental' into it through the modulation corollary. This the naive construer has elaborated his construct system and is less naive. His understanding has changed through his revision of his construct system.

The revision of the construct system just described, is likely to have occurred through the loosening of the constructs in the construct system, so that the construct 'figures' could be a loose construct. As constructs loosen to admit new constructs there is more variation between them in the construct system. When a construct system is being revised in a particular direction then there will be more variation between the constructs. The variation is likely to increase when new constructs are being admitted and there are varying predictions, but as these constructs are validated, through successive constrictings, so the constructs lead to unvarying predictions and more consistency. There is then less variation between the constructs, and the constricting is tighter.

With respect to constricting financial information, it is likely that, if a naive individual is to revise his construct system then loosening will occur, though at some stage it is anticipated that the construct system will tighten. It will be impossible to know in advance at what stage the individual is in this process, because this process is subject to individual differences. If the context allows the individual to revise his construct system then some tightening and loosening will be observed through the variation between the principal components of the constructs.

It is anticipated that an individual with more experience of financial information will have less variation between constructs and will be construing more tightly. The loosening and tightening of the construct system is an individual characteristic.

If the main constructs contributing to a principal component are examined, it is anticipated that a naive construer will not have financial constructs in the first three principal components. With a more experienced individual, financial constructs will be found in these principal components. As a naive construer becomes less naive, so it is anticipated that more financial constructs will occur in the principal components.

For an individual, information can be considered to be an event which alters his thinking or construing.

When information is provided an individual can construe this in various ways, so there are intraindividual differences, and amongst several individuals there are interindividual differences. For example, one individual may tend to use tight constructions on some occasions and loose constructions on others, as there are shifts in the construction process (Kelly, 1955).

Kelly noted that there are typical shifts in the sequence of construction which individuals employ in daily situations (Kelly, 1955). One such sequence is the Circumspection-Pre-emption-Control cycle, the C-P-C cycle. The C-P-C cycle is a sequence of construction involving in succession, circumspection, pre-emption and control, and leading to a choice which precipitates the individual into a particular situation (Kelly, 1955).

When an individual construes with circumspection he employs propositional constructs. Propositional constructs question and sift the events and elements at hand. For example, the construct these are 'figures', could be propositional construct, in that it is used in construing in a way which suggests a multi-dimensional manner (Kelly, 1955) and that amongst other things these could be 'figures'. Simultaneously it is possible to construe the construct, these are 'figures', in a pre-emptive manner, as a pre-emptive construct which implies that these are nothing but figures and no other construct may embrace it. It is through pre-emptive constructs that the individual has control, but it does not imply that

the individual will always construe in this way, and it may be only one cycle in his re-construing.

When an individual is making a decision and choosing amongst alternatives the pre-emption sets up a reference point or choice point. Control is that side of a construct which better permits elaboration of the system. So, an individual with both more complex financial constructs and a greater number of financial constructs which are pre-emptive, is in a better position to use financial information and make decisions, than an individual who is naive with respect to financial information, that is a naive construer.

In this connection all grids contain the supplied constructs, the pre-emptive constructs 'As I influence' and 'I have power over'. It is anticipated that if individuals can use information to make decisions then this will be construed in terms of influence and or power.

Understanding occurs through the elaboration of the construct system, but understanding is different to meaning. Expanding upon the earlier example, it can now be assumed that the naive construer is less naive as he now has two constructs - 'figures' and 'car hire rental', and that he uses and pays for car hire. The accountant has the constructs 'figures', 'car hire rental' and 'car depreciation', and uses his own car. When both individuals are presented with the financial information element 'car hire rental', they understand it with some commonality, in a similar manner, as they both have similar constructs. For the less naive construer the two constructs now occur in his first two principal components, so that when he construes the financial information element 'car hire rental' he construes it along these main lines of his construing and thinking, and for him it has meaning as it is salient with respect to these first two principal components.

For the accountant the financial information element 'car hire rental' has less meaning than for the naive individual. This is because in his first two principal components are the constructs 'figures' and 'car depreciation', so that although the element 'car hire rental' is salient with respect to the construct 'figures' it is not salient with respect to the construct 'car depreciation', consequently the construct 'car hire rental' does not come into his main ways of thinking or construing. If he alters his thinking, revises his construing, then the

element will be more meaningful, when the constructs in his first two principal components are 'figures' and 'car hire rental'.

A notion has both understanding and meaning at the same time, when the individual can construe the notion both as an element and as a construct in the same circumstances.

6.4

The Hypotheses to be Tested

The notions which are being addressed are initially stated, but then are elaborated as a series of hypotheses in the terminology of personal constructs.

Notion 1 : An individual who is provided with financial information does not necessarily understand this information or find it meaningful. The information is not integrated into the individual's thinking.

Notion 2 : Successive provisions of financial information to an individual, over a period, will not necessarily allow the information to be understood or to be more meaningful for the individual. The information will not be more integrated into the individual's thinking.

Notion 3 : The provision of training, together with the provision of financial information, will allow the information to be understood and to be more meaningful for the individual. The information will become more integrated into the individual's thinking.

Notion 4 : Where an individual understands financial information in a context which is meaningful to the individual, then it is expected that the individual will want to move upwards to the right of the Information - Influence Matrix. Once able to deal with the existing information and influence, the individual will want more information and more influence.

Hypothesis 1 : An individual, who is presented with a set of elements, which includes elements which are labels of financial information, will not necessarily find these elements of financial information within his range of convenience.

Hypothesis 2 : An individual, who construes the provision of financial information, will construe that financial information and so revise the construing of the same set of elements which was originally presented.

Hypothesis 3 : An individual, who construes the use of the financial information provided, will further revise the construing of that same set of elements.

Hypothesis 4 : An individual, who is trained to use and does use the financial information provided, will revise, even further, the construing of that same set of elements.

Hypothesis 5 : An individual, who construes the provision of financial information in the context of communication (as defined for the Information-Influence Matrix), will revise the construing to;

- a. not construe more influence.
- b. not construe more desired influence.
- c. not construe more power.
- d. not construe more financial information elements to be ticked in completing the grid.
- e. not construe the desire for more or different types of financial information
- f. not increase the understanding of financial information elements.

Hypothesis 6 : An individual, who construes the provision of financial information in the context of consultation and who is not trained, will revise the construing to;

- a. construe more influence.
- b. construe more desired influence.
- c. not construe more power.
- d. not construe more financial information elements to be ticked in completing the grid.
- e. not construe the desire for more or different types of financial information
- f. not increase the understanding of financial information elements.

Hypothesis 7 : An individual, who construes the provision of financial information in the context of consultation and who is trained, will revise the construing to;

- a. construe more influence.
- b. construe more desired influence.
- c. not construe more power.
- d. construe more financial information elements to be ticked in completing the grid.
- e. construe the desire for more or different types of financial information
- f. increase the understanding of financial information elements.

Hypothesis 8 : An individual, who construes the provision of financial information in the context of participation and who is not trained, will revise the construing to;

- a. construe more influence.
- b. construe more desired influence.
- c. construe more power.
- d. not construe more financial information elements to be ticked in completing the grid.
- e. not construe the desire for more or different types of financial information
- f. not increase the understanding of financial information elements.

Hypothesis 9 : An individual, who construes the provision of financial information in the context of participation who is trained, will revise the construing to;

- a. construe more influence.
- b. construe more desired influence.
- c. construe more power.
- d. construe more financial information elements to be ticked in completing the grid.
- e. construe the desire for more or different types of financial information
- f. increase the understanding of financial information elements.

6.5.1

The Repertory Grid

The theory of personal constructs is fortunate to have with it the attendant methodology of the repertory grid. This obviates some of the problems connected with research instruments, especially that the assumptions underlying the research instrument may well contradict the assumptions implicit in the idea being examined. Kelly devised the repertory grid as a method for exploring personal construct systems, and as an attempt to stand in others' shoes, to see their world and to understand their situation (Fransella and Bannister, 1977).

The presentation of a grid to an individual is an invitation to that individual to construe a number of elements in accordance with the theory of personal constructs. Perhaps the most obvious areas of the theory used here are the corollaries of construction, dichotomy and choice. The individual is invited to think about the elements presented, and then, to choose a way in which for him some of these elements are similar and thereby different from the rest. The individual indicates on the first line of the grid which elements go together for him, and then is invited to write down the way in which he is thinking about the similarity, so providing a written construct. Thus through a succession of these construing the grid is completed by the individual.

The repertory grid, then, is about constructs. As Fransella and Bannister (1977) point out, Kelly offers several definitions of constructs. The one which is directly obvious as one of the procedures for the elicitation of constructs, is that a construct is "a way in which two or more things are alike and thereby different from a third or more things" (Fransella and Bannister, 1977, p.5). Again this mixture of choice and dichotomy is involved. Although the grid is a method for construct elicitation, there are still the problems that are involved in designing any experiment. In the case of the grid some of these problems involve the nature of the elements to be presented, the form of construct elicitation, or even presenting the individual with supplied constructs, and the format of the construct response, for example ranking or bipolar allotment (Fransella and Bannister).

6.5.21 The Nature of the Elements

Kelly was concerned with interpersonal relationships and suggested a list of twenty four role titles for which the individual could supply their own names. The elements of the grid need to meet the requirements of the particular situation, and can be anything, and have been known to include brightly coloured stand up models (Salmon, 1976), coloured photographs of living-rooms (Honikman, 1976) and classes of spirit in Ganda mythology (Orley, 1976). It became obvious from a pilot study conducted with graduate students attending a day-release course in accounting, that the nature of the titles of the elements was very important. They were invited, initially, to construe a number of elements which included financial information related to their employment and personal acquaintances. From their self-reports it was difficult for them to consistently construe all of these elements sensibly, because the personal acquaintances did not fit in with the elements concerned with work. When the elements were solely work-related this difficulty did not occur. It was decided to interview as many individuals as possible, in each organization, in order to construe sufficient commonality amongst contextual issues, and so provide elements adequate of the organizational context to be construed along with the financial information elements.

One of two considerations which was to the forefront in the design of the grid was the desire to keep the grids of different organizations as similar as possible. This is to say that the design of the grids for each organization would not be identical, but could contain the same number, as well as, similar types and proportions of elements, and so allow the opportunity for as much commonality as possible. The second consideration was the individuals who would be using the elements to construe. It was anticipated that they would be shopfloor workers. Because there was the possibility of such individuals finding the financial information elements outside of their range of convenience, and because Morris (1977) found that people handle "self" notions better as elements than as constructs, so it was decided to include 'myself' as one of the elements, in order to make the construing of the elements as smooth as possible. It was noted that Lischeron and Wall (1975) had found that in a participative situation a perceived increase in participation was accompanied by a perceived improvement in relations between the

employee and the immediate superior. It was therefore decided to include ' my immediate boss ' as an element.

The remaining elements for each grid were arrived at in two ways. The financial information which was to be provided would be at the discretion of each organization. Accordingly the labels for items of financial information to comprise the elements were either taken from all of the financial information that was to be made available, and/or it was ascertained which items my contact in the organization considered to be most salient, and/or saliency ascertained from the individuals involved. The non-financial information elements were considered to be those items from the culture of the organization which were construed by individuals in the organization. These items were determined by means of a questionnaire which was drawn up for the first organization (see Appendix II) and only varied to accord with the composition of the other organizations. The material obtained from these interviews was then subjected to a content analysis by noting how frequently an item arose amongst different individuals, or where items were construed at a subordinate level these were re-construed and at a more superordinate level and used. Thus those items which occurred with the most frequency were used.

Some consideration was given to the possibility of altering the elements in the grid before successive construing, in order, perhaps, to provide the individual with a more up-to-date set of issues, and allow for the admission of new elements into the individual's construing. In the event it was decided that not only was this impracticable, but also it would not allow for the direct comparison of successive grids. The notion coming from the modulation corollary is that " a construct is permeable if it will admit to its range of convenience new elements which are not yet construed within its framework " Kelly (1963, p.79). This is construed here to mean, that a construct is permeable if it admits other elements from the elements which constitute the first and subsequent grids.

6.5.22 The Elicitation of Constructs

Fransella and Bannister (1977) note that there are six assumptions which underlie Kelly's original repertory test, and which are applicable to construct elicitation in general. These are briefly:

1. The constructs elicited should be permeable.
2. Pre-existing constructs should be elicited.

3. The verbal labels attached to the constructs should be communicable.
4. The constructs elicited should represent the individual's understanding.
5. The individual should not dissociate himself entirely from the elements or from the constructs elicited.
6. The constructs elicited should be bipolar.

These assumptions were followed in the elicitation of constructs, and individuals requested to think about the elements and to provide a written construct.

It is possible to supply constructs for the grid, in terms of a written construct, and then to require individuals to construe the elements using those supplied constructs. To provide the individual with a grid together with all of the constructs supplied was considered inappropriate. This is because one of the points of interest is to consider how individuals construe financial information, and whether their construing changes through time. Thus if constructs were all supplied this could not be observed. However, three constructs are supplied on each grid and these are common constructs used across each organization. These supplied constructs are: 'As I influence', 'As I would like to influence' and 'I have power over'. These constructs are supplied in order to follow the individual's construing of influence and power, together with financial information, and so provide evidence of the permeability of these constructs. It was decided to allow the number of constructs to equal the number of elements on the grid. However, in order to ensure that individuals have ample opportunity to provide their own constructions, the supplied construct 'As I would like to influence' does not form part of the grid which is subjected to the INGRID 72 analysis (Slater, 1975) of each individual's grid. The two supplied constructs concerned with influence were placed approximately one third of the way down the grid, whilst the power construct was placed last.

6.5.23 The Format of the Construct Response

There are a number of ways in which constructs have been elicited from individuals (Fransella and Bannister, 1977). The method used here tries to make the process simple and efficient for a workplace elicitation. The elements used are written across the top of the grid sheet, and also on a set of cards. The Minimum Context Card Form is the basic procedure, in that individuals are presented with three elements, that is to say three cards, and asked to specify some way in which two of these elements are alike and thereby different from the third. The individual is then asked to tick the two emergent elements on the line of the grid, and then to

write at the end of that line the construct, that is the way in which the individual is thinking about the two similar elements. The individual is then asked to keep thinking about this construct and to consider all of the elements, other than the three presented, and to tick on the grid those elements also included by this construct. The individuals are also asked to think about their contrast to the emergent construct and to write this on to the grid. The individual then moves on to the next triad of elements until the grid is complete.

Each triad of elements had been pre-selected and the elements forming each triad shown as circles on each line. The selection of elements was completed in such a manner as successively to involve all of the elements, yet to provide triads which all individuals could construe. For an example of these triads see Appendix II. In this way it was anticipated that no matter how hard it may be for an individual to construe a triad of elements, the individual was not left construing an obvious failure to construe the elements on a grid in the presence of a stranger. Individuals are neither required to rank the elements, nor to indicate which of the elements remaining on the grid, after those involved in the emergent construct have been ticked, relate to the contrast of the emergent construct. This was because of the nature of the subject, the individuals involved, and the constraints of the organizations. It is possible that individuals may not be able to provide contrasts, or construe the elements remaining in this way.

6.5.24 The Presentation of the Grid

The individuals involved from each organization were selected by the organization and were invited to participate in the research or, freely to decline. On each occasion individuals were seen separately. At the first meeting with each individual, which was generally to administer the questionnaire, they were told about the research from a standard prepared introduction. The introduction informed individuals that the study was research for a Ph.D. concerned with the provision of financial information to people in their workplace. Furthermore, all which passed between us would be treated confidentially, and that there were no right or wrong answers. The individuals were encouraged to ask any questions at this stage, as well as at the conclusion of each meeting. Immediately after the completion of each grid the individuals were asked for any comments which they wished to make about the grid which they had just completed. This was carried out because, like Kelly (1969), the investigator considers that every person is a scientist by disposition, every subject an incipient experimenter and every person by daily necessity a fellow

psychologist. Furthermore, humanistic research means that each person participating in the research should be appraised about what the investigator thinks he is doing, and given an opportunity to comment (Kelly, 1969).

The grid for each organization was compiled in accordance with the methods outlined in the preceding paragraphs. On the first occasion, and on subsequent occasions where necessary, the grid was presented and the individual was given a standard explanation of the grid and its elements as well as instructions about the triadic elicitation. It was noted that this was not a questionnaire and that there were no right or wrong answers. Three elements were then presented to the individual who was asked to think about the elements and the way in which two elements are alike and thereby different from the third. After ticking two elements the individual was asked to write a word or short phrase stating the likeness, and then to consider all of the remaining elements and to tick those which could also be included with the likeness. Finally the individual was asked to write the contrast to the likeness. This procedure was followed for each line of the grid except for the supplied constructs, where the individuals were asked to accept and think about the supplied construct and to tick any appropriate elements, and to provide a contrasting phrase. Thus the grids were completed.

One of the features of this piece of research is that the studies are longitudinal. Initially, it was considered that the grids would be completed at intervals of about eight to twelve months of each intervention, in order to allow ample time for individuals to construe the information. However, this was reduced to a target time of three to four months following from the study by Morris (1977). She considered that the completion of grids after two to three months would be more sensitive to change, rather than the year which she had used. Of course it was recognized that in any event it would be likely that the requirements of the organization involved would determine the time intervals.

6.5.25 The Basic Work Plan

It was anticipated that the individuals forming the studies would be female and male 'shopfloor workers', drawn from different types of organizational background. A number of individuals from each organization would be interviewed in order to generate some of the grid elements. The interview schedule (see Appendix I) also would be designed to prepare individuals for construing, and would use the

terminology of construing wherever possible. The interview also would serve to ensure that those individuals participating in the study considered themselves involved at their workplace, and would make them aware of financial information. Then the written notes from the session would be analyzed for content to find those elements which were common across individuals. The grid would be prepared using the elements from the content analysis, the elements of 'myself' and 'my immediate boss', together with the elements of financial information which would be provided to the individuals.

The grid would then be administered to a representative sample of workers. It was further anticipated that for a more extensive testing of the hypotheses an ideal situation would allow some workers to be provided with financial information, leaving others without, and allow some workers to be trained, and leave others without. Again it was considered that what training or non-training occurred would be something which would largely be dictated by the custom and practice of the organization.

An ideal basic scheme was considered to consist of three administrations of a grid to each individual. The first session would be at a time before 'new' financial information was provided to the individual. Then the 'new' financial information would be provided and some three months later a second grid session would occur. Finally some education would be provided and some three months later the third grid completed. At the conclusion of the second and third sessions the individuals would also be asked about the grid and changes with respect to the provision of financial information and themselves. In this way the data from the studies was to be collected. Again the precise design would be subject to the organizations involved.

6.6

The Analysis of Data

The written constructs were examined to ascertain if, through time and training etc., these have altered. For example, it is anticipated that for an individual who is naive with respect to construing financial information at the time of the first grid, then such naive constructs will, with the provision of financial information and education, modulate and indicate notions of financial management.

The completed grids were analysed using the INGRID program devised by Slater (1965), and extended as INGRID 72 Slater (1972). From each grid, the program produces as output, principal components, as well as co-ordinates which enable both the constructs and the elements to be plotted and interpreted through the psychology of personal constructs.

This research is not testing hypotheses in the orthodox sense, but it has its own criteria, which is that there is a general change or lack of change in particular directions. Slater (1977) considers it inappropriate to use hypotheses. The data on an idiographic grid refers to elements which can neither be defined objectively nor randomly sampled to assess the reliability and significance in the orthodox manner. The grid's primary interest is to show what is in the individual's mind at the time of its completion (Slater, 1977).

Slater (1977) noted that the component space is related to the construct space. The components' location, extent and orientation are determined by the distribution of the elements and constructs. The components are dependent on both the constructs and the elements (Slater, 1977). Thus as revisions in the construing of the elements, especially the elements of financial information, take place so it is anticipated that there will be a change in the percentage of variance of the first principal component. It is not possible to predict the direction of the change because it depends upon the creativity cycle and the position of the individual with respect to this. Loose construing, a simple system, will give a relatively high first principal component, whilst tight construing, a more complex system, will give a relatively low first principal component. With individuals in a similar situation it is anticipated that there will be commonality in the direction of the change of the first principal component. These data were then submitted to a 't' Test to ascertain correlations.

When plotted, the constructs and elements which come closest together are the ones which are the most closely correlated, i.e. most similar in effect (Slater undated). Thus the similarities amongst elements and constructs can be seen by inspection of the plots.

Successive completed grids of each individual were examined and compared for the permeability of the constructs in total, the permeability of the supplied

constructs, as well as the use of the financial information elements. This was carried out by counting the numbers of elements involved with each grid and the amount of change that has occurred. The data were then submitted to a 't' Test to ascertain correlations.

For each individual the separate grids, the plots of the elements and the plots of the constructs were examined. This was carried out to ascertain the construing of the financial information elements by each individual. With the successive grids it was possible to ascertain if there had been changes in the construing of the individual. In this way it was possible to examine changes in understanding, meaning, power and influence for each individual.

6.7 The Construing of Individuals in Organizations

In these ways it has been possible to construe, examine and construe the provision of financial information to employees. The examination of the changes in the construing of financial information by individuals was achieved through three separate studies of individuals in three separate organizations. These organizational studies form the next three chapters. The studies are similar in the sense that the experimental methods outlined in this chapter were applied, but as appropriate to each organization.

At the start of this research it was anticipated that co-operation would be forthcoming from at least one of the large public companies who had co-operated with some previous research, for example Purdy (1981a) and Purdy (1981b), and who had indicated a willingness to participate in further studies. It was anticipated that there would be one or two studies from these large public companies utilizing the reports to employees as the financial information. Attempts to gain access to these and similar companies were unsuccessful over several years. A precis of events at this time is provided in Appendix I. It has been possible to complete studies in three organizations, although work was started in four organizations. The financial information which forms the basis of these studies is various types of management financial information.

The expectation of examining groups of individuals at similar levels, for example shopfloor workers, in different organizations has not been achieved. In fact

there is very little commonality between the individuals in the three organizations when viewed from the points of similar levels and types of organization.

All of the organizations operate in the Southern part of England. The first organization is a Regional Health Authority. The six individuals who participated in the study came from the different disciplines at the top of the management structure of that Authority. The second organization is a Retail Co-operative. The fifteen participating individuals are Store Managers, Assistant Store Managers and Section Heads. Although these individuals are literally working on a shopfloor they are not sampled from the large numbers of industrial shopfloor workers generally found in research. The third organization is a workers' Printing Co-operative. The fifteen participants regard themselves as workers in the sense that they are paid for working, as is found amongst workers in limited companies for example. However, they are working in an environment which is continually evolving and generally evolving through the structures which the workers promulgate for their own greater benefit.

These three distinctive types of organizations appear to offer little prospect of commonality, yet it is possible to construe potential ways of commonality. At times the individuals in the Printing Co-operative could be construing events in a manner similar to some of the individuals in the Regional Health Authority and at times in a manner similar to some of the individuals in the Retail Co-operative.

There is, then, an apparent lack of commonality with respect to both the organizations and the individuals working in them. However, it was maintained from the outset that the issues being pursued in this research were issues which could be found in any type of organization and at any levels in those organizations. Thus the unplanned variation in the type of organization has the potential of indicating if the initial tenets were correct, of enriching the research design, the results and the commonality of these results across organizations, and across individuals in different organizations at different levels and in different spheres in organizations.

With respect to the issue of individuals being in different spheres in organizations it must be noted that there are clear differences amongst the individuals in this study. The individuals in the Regional Health Authority all hold

some form of professional qualification, and act as professionals in their fields. This means that all of the individuals in the study had been involved in some form of higher education. The individuals in the Retail Co-operative were not so consistent in their educational backgrounds. The younger individuals held at least some 'O' levels and in some instances 'A' levels or further education, whilst the older individuals were not in this formal education position but held a lot of retail trade experience. Although at least three individuals held degrees, in general the individuals in the Printing Co-operative were from a craft background. This means that in all spheres they either held or were obtaining appropriate qualifications.

One of the potential problems with a study such as this is the question of the size of the sample, but one of the reasons for seeking to construe individuals and embracing the psychology of personal constructs was to study individuals and not groups. Even so it was hoped to have samples of fifteen to twenty individuals drawn from much larger constituences of similar individuals in two organizations. The total number of individuals is thirty six, after the inevitable wastage through individuals leaving. The whole approach to individuals has been to allow individuals to construe freely, even though such an approach has been extremely time consuming.

It was anticipated that through embracing the psychology of personal constructs the outcomes would be unequivocal even if they were individual. Due to this approach it was anticipated that it would be necessary to construe what was happening with the individual. From this then to construe if there was commonality amongst the individuals who were apparently placed in similar situations with respect to either the provision of financial information and/or the provision of training. The original research designs with each organization would have allowed quite simple groupings to emerge from each study.

Of course dealing with the dynamic environment of continuing organizations, coupled with the dynamic approach to individuals had the potential for a dynamic disaster. The investigator was in control of nothing except the cards containing the elements and the uncompleted grids. The time schedules for the completion of the grids and the provision of financial information were agreed before the start of the studies, as were the schedules for training, or the lack of it. In no case were any of these agreements honoured. This was not to say that the individuals who entered into these agreements were dishonourable or malicious to the investigator. These

agreements appeared not to be kept due to the occurrence of events beyond the individuals' control, and for brevity are referred to here as organizational turbulence.

Thus the one aspect of organizational life which all of the individuals in these studies have in common is some form of organizational turbulence. It is suggested that the ship of 'scientific laboratory research' would have sunk under such conditions. Fortunately the individuals construed the turbulence and continued to construe events. In the same spirit that the individuals construed and reconstrued their organizational turbulence so the organizational turbulences have been construed and reconstrued into these studies.

What started as neat schedules of anticipated activities in the 'laboratory orderliness' mode, or the weedless, 'highly stylized garden' mode, have turned out to be the 'reality of organizational life' mode, or the 'naturalness of nature' mode complete with weeds. Of course there are implications here for the relevance of laboratory studies and the general applicability of such results outside of their limited environment. This is because the researcher in the laboratory attempts to screen out unwanted variables in the same way that the stylized gardener abhors weeds. However, the categorization of a weed is the somewhat arbitrary assignment of a plant to that category, and so is the unwanted variable. Weeds are plants and have to be construed as such by the botanist. In the same spirit the events which have occurred with each individual in the studies have been construed and the individual categorized accordingly.

The eventual categorization of individuals still has been based upon the similarity of the individuals' situations with respect to either the provision of financial information and/or the provision of training. This has not led to the simple groupings which were anticipated. The details of the groupings of each study are provided in that study so that only an outline is provided here. It was anticipated that in the Regional Health Authority the six individuals would form one group who had been provided with more financial information and provided with some formal training relating to that financial information. Although there was more financial information there was neither the increase in financial information expected nor the training. In view of the lack of these anticipated events the changes in construing have been interpreted in the context of two groups of three

individuals. One group is composed of individuals who, before the study began, had received some formal training relating to financial information and who regularly used financial information. The other group is composed of those who were not in this position.

The initial design of the Retail Co-operative study was for all individuals to receive financial information and subsequently to receive some formal training in respect of financial information, and so form one group. Although initially the financial information was provided to all individuals, it was subsequently withdrawn from three individuals and these form one group. Of the remainder, four individuals were not provided with formal training and so form a second group. All of the remaining individuals were provided with formal training in the Co-op, though they were not trained in the manner initially agreed. This remainder contain two butchers whose financial information and training came from a different source to the rest, so that a third and fourth group have been formed. Thus the study is interpreted the changes in the construing of the fifteen individuals assigning individuals to one of four groups.

The initial design of the Printing Co-operative was for all individuals to receive the new financial information and not receive training and so form one group. After the completion of the first grid the Co-operative decided that it wanted to make some training in financial information available. The investigator was asked to design and to supply this training. The requested training was supplied to those individuals who wanted to attend the sessions. Although a number of individuals attended the training sessions, only five of these were working in the Co-operative at the time of the first grid and so form one group. The remainder received none of this training. Five of the remainder came from one particular department and form a second group, leaving the rest to form a third group. Thus the study is interpreted through three groups of five individuals.

The carefully anticipated time schedules and the advice of Morris (1977) to examine change over periods of three months was lost in each organization's own turbulence. The anticipations about studying the change in the individuals construing of reports to employees was not fulfilled because the financial information used by the organizations in these studies was various types of management financial information, which is specific to the organization.

Thus the anticipated straightforward studies have become convoluted with respect to a longer time between the completion of the grids; the use of specialized management financial information; with individuals of different educational backgrounds; with individuals at different levels in distinctly different organizations. A rich mixture to construe and interpret, but nonetheless a mixture with the potential to provide some insights into various stages of the Information-Influence Matrix, and the changes in the construing of individuals in relation to this.

Chapter Seven

Organizational Study One - A Southern Regional Health Authority

Introduction

7.0

At the commencement of this study the organization of the National Health Service in England was as follows. The Service is centrally administered by the Department of Health and Social Security with a three tier administrative structure before care is provided. The D.H.S.S. allocates funds to 14 Regional Health Authorities who then allocate funds to District Health Authorities, who in their turn allocate funds to hospitals, clinics and doctors. The funding of the N.H.S. is by way of regional allocations through formulae set down in 1976 by the Resource Allocation Working Party. These formulations are based upon demographic notions within each region whilst at the same time moving towards an equalization of health care throughout each region by around 1990.

This study was conducted in a Southern Regional Health Authority in which, during the 1980's, there was to be a gradual reduction in growth as part of the equalization process.

The Structure of the Authority

7.1

The Authority's staff are in one of five Departments: Nursing; Medicine; Works (design, building and maintenance of estates); Treasury and Administration. The Chief Officers of each Department form the Regional Team of Officers who are responsible for the running of the Authority.

The Role of the Southern Regional Health Authority

7.20

The Authority translates the politics of the Government and the D.H.S.S. towards health care into practice. The D.H.S.S. issues guidelines, for example it had recently requested that the number of acute beds be reduced and that spending on mental health be increased. The Authority translates these guidelines into plans through three processes.

1. A Strategic Plan The Authority has a ten year strategic plan which includes the objective, set in 1977 by the D.H.S.S., to achieve equality of access to care. Consequently the Authority has the dual task of (i) reducing its long term expenditure and (ii) moving money to priority care areas. The Authority was in the process of drawing up a new strategic plan so that it could allocate cash on a more strategic basis.

2. An Operational Plan To complement the strategic plan is an operational plan which covers the successive three years. The operational plan could include the closure of a hospital which would need to show how patients would be dealt with, as well as the financial consequences of the plans.

3. An allocation of cash The Authority receives an allocation of cash from the D.H.S.S. The current basis of this allocation is a reduction in the amount allocated in the previous year.

7.21 Planning Groups

These groups are composed primarily of the first line officers supporting the Regional Team of Officers, and thus these members are at the top of the Authority. All of these planning groups have the right to request any information which they require. A part of such information is financial information for planning and forecasting. The Treasurer's office currently supplies this financial information and is prepared to provide any financial information which the groups require. Within the Authority there are three planning groups.

1. The Strategic Planning Group There is a group of seventeen members who constitute the Strategic Planning Group. This is a new group producing a new strategy.

2. The Operational Planning Group The Operational Planning Group has ten members, almost the same people as the Strategic Planning Group.

3. The Capital Programme Committee The Capital Programme Committee is composed of six members. Two of these are also members of the Strategic Planning Group. An indication of the seniority of the members of the Capital Programme Committee is that, at times they deputize for their respective Regional Team Officer. The committee has the vital role of planning and controlling all regional capital expenditure. Capital expenditure in this context relates to buildings. For example, the committee sets up a project team to advise on the building of a new hospital and prepare the brief for the architect.

7.30 A Study of the Members of the Capital Programme Committee

The Authority was approached for the facility to study a suitable situation. It was anticipated that such a study would contain individuals from towards the

bottom of the Authority's structure. The Authority offered, in exchange for a survey, a study of the members of the Capital Programme Committee, individuals at the top of the Authority.

Since this Committee, theoretically, had access to any financial information which the Authority possessed or could construct, the application of new financial information or training seemed misplaced. The researcher was told that although the Committee received both financial information and non-financial information, recent experiences had suggested that some of the financial information had not been used or understood, and that some new form of financial information was to be made available. If the Committee was only making limited use of the financial information then it was not fulfilling its purpose and some consideration was being given to providing members with the necessary training.

It was agreed that the survey would commence, the first grids would be completed and the survey report would be circulated and the Authority would quickly take final decisions about new financial information and training. It was anticipated that the second and third grids would be taken at three to four monthly intervals, with the training occurring before the third grid.

7.31 Financial Information, Training and the Grids

One item of financial information which the Committee worked with was the Quarterly Progress Report. This report was lacking in various aspects and during the course of the study it was amended to provide information more appropriate to the decisions involved.

From the interviews conducted for the Authority's survey, some members of the Committee variously reported that they did not understand investment appraisal, nor the linkage between capital budgets, revenue budgets and cash limits. The survey report recommended that the Authority give some attention to this by providing training seminars for the six members of the Committee.

The survey report, apparently, was never discussed by the Committee. No formal training, as such, was provided to the members of the Committee. The committee member from the Treasury Department noted that the general view was that there was no need for training, and that more time was now taken in presenting financial information and the member provided detailed explanations of documentation to the Committee. It was considered by the Authority that these more detailed presentations and explanations of implications would enable the Committee to understand the financial information. At the same time the committee members

apparently were asking many more questions than previously, about the financial information.

During the course of the study the financial information was improved. The quarterly report was enhanced to provide more relevant information. The other financial information was also enhanced in terms of containing more detail. The information about the options contained the implications for both capital and revenue expenditures. Committee members were dealing with this financial information with the knowledge that the Authority had been informed that there would be anticipated reductions in funding allocations until 1993, at which time the Authority would be handling a budget at 4% below the current level, in real terms.

Although the survey and the first grids were completed quickly, access for the second grids was delayed for seven to eight months, and for the third grids the delay was five to six months after the second. The inability of the Authority to honour the provisional timetable was due to the pressure of work faced by these committee members.

7.32 The Membership of the Capital Programme Committee

The six members of the committee decided upon the precise building requirements of the Authority. The Works Department provided three members of the committee, these were all heads of their own sections, but in turn directly responsible to the Regional Works Officer. These members were the Regional Architect, the Regional Engineer and the Regional Surveyor. The Deputy Regional Nurse was responsible to the Regional Nurse. The Senior Assistant Treasurer was responsible to the Regional Treasurer. The Chairman of the Committee came from the Administration Department and was responsible to the Regional Administrator. The Chairman of the Committee was considered to be in an unusual position in that the chairman was a doctor, and because of this there was no representative from the Medical Department.

At the start of the study all of these members attended the weekly management meeting of the Regional Team of Officers. During the course of the study the Griffiths Report on the National Health Service (Department of Health and Social Security, 1983) was produced, and one of its recommendations was the appointment of a General Administrator. The Authority's General Administrator restricted attendance of the committee, at the weekly management meeting, to the chairman of the Capital Programme Committee.

7.33 The Partition of the Committee Members into Groups

Three of the six individuals on the Committee are concerned with financial information as a daily feature of their work. These are the Doctor, the Regional Surveyor and the Treasurer. The Doctor and the Treasurer have both received training in financial analysis and accounting, and, in addition are members of the Strategic Planning Group. The Regional Surveyor had received training in the financial aspects of his work. The other three members of the group do not possess these attributes. The two individuals, who are also members of the Strategic Planning Group, are aware of the thinking and plans connected with the formulation of the Strategic Plan, this is information which the other four individuals do not possess.

For the purpose of this study the members of the Committee are partitioned into two groups which are explored separately. There are the irregular users of financial information, the Irregular User Group, composed of the Regional Nurse - CU; the Regional Architect - CR and the Regional Engineer - TH. There are the regular users of financial information, the Regular User Group, made up of the Doctor - KA; the Regional Surveyor - SP and the Treasurer - TK. These letters are used to represent these individuals in the Tables in this chapter.

7.40 The Elements of the Grid

All of the members of the Committee were interviewed in order to generate elements for the grid. The interview also served to introduce them to construing; the study, and its concern with financial information; and, to generally make them aware of the financial information which was available.

The interview sessions were documented in writing during the interview. Subsequently all of these interview notes were analysed for their content to find issues suitable for elements which were common across all or most of the individuals. The elements were examined for the work of the Committee, colleagues or groups of colleagues, problems or issues faced by the Committee and information. The following list was compiled:

1. Myself.
2. My immediate boss.
3. The Capital Programme Committee.
4. The Strategic Planning Group.
5. The Regional Team of Officers.
6. Capital Budgets.
7. Revenue Budgets.
8. Cash Limits.
9. Quarterly Progress Reports.
10. Service Planning Information.
11. The quality of care of patients.
12. The investment appraisal of projects.
13. The District Health Authorities.
14. Doctors and nurses in the Districts.
15. The Regional Strategy.
16. Professional judgement.

7.41 The Presentation of the Grid

The elements listed above formed the basis of the grid on which there were three supplied constructs. This grid was then presented on three occasions to the individuals on the Committee in the standard manner previously established. On the completion of each grid the individuals were asked for any comments that they wished to make about the grid, and any matters relevant to the study. After the final presentation of the grid the individuals were asked, also, what additional financial information they wished to receive.

7.42 The Analysis of Individual Grids

The completed grids of each individual were collated and examined for the changes in construing over the time of the study. Each grid was subjected to the program INGRID 72 (Slater, 1972). The output of the INGRID 72 program provided principal components for each grid, as well as co-ordinates which enabled the elements to be plotted in the construct space, and conversely, the constructs to be plotted in the element space. This facilitated an examination of the relationships between the elements and the constructs, and between the elements themselves and the constructs themselves. An example of a set of three completed grids for one individual together with the output of the INGRID 72 program, and the attendant individual analysis is contained in Appendix III.

Principal components and the factor loadings of the constructs are part of the output of the INGRID 72 program. By taking the highest construct loadings contributing to a principal component, the underlying component can be identified. The written constructs of the highest construct loadings enable a sense to be attributed to the component (Harris, 1975). The sense of the component is examined for change with successive grids. The literature of personal constructs discusses permeability of constructs, for example Kelly (1955), and Fransella and Bannister (1977). However, the issue of permeability is taken further here by examining the permeability of the written constructs, associated with the first three principal components, to ascertain if there are changes with successive grids. In other words the principal component analysis is a way of accounting for change to ascertain if financial constructs occur in these components. The issue of permeability is also extended by examining the whole grid. The whole grid is considered to be a representation of an individual's construct system. If there are

changes in the system then it is possible that the grid will reflect this in the number of financial information elements used in construing.

7.5

The Results

The remainder of this chapter is a distillation of the examination of the analysis of each grid for each individual. Initially the commonality in the construing of all of the individuals in the study is considered and then the six individuals in either the Irregular User Group or the Regular User Group. The results obtained from each group are analysed and then compared.

7.5.100 The Presence of 'Financial' Constructs

The elicited written constructs of the individuals were examined to ascertain if they referred to financial information or financial management. It was anticipated that there would be fewer of these 'financial' constructs in naive construers and that in such construers the constructs would be less complex. This examination found that there were individuals with written constructs including or employing terms of or from financial information or financial management. This indicates that there are individuals in the study who can construe financial information. These 'financial' 'constructs' can be classified into four categories: constructs of need; constructs of description; constructs of function and constructs of structure.

7.5.101 The Categorization of 'Financial' Constructs

The basis for placing a construct into one of these four categories is as follows:

The need constructs contain the word "need", and relate to needs for financial information. For example, "the need for information for people".

The descriptive constructs describe financial information or financial management terms for the individual. For example, "hard data, quantified information".

The functional constructs demonstrate the function or use of financial information for the individual. For example, "the extent of cash limits eventually impacts quality of care to patients".

The structural constructs amalgamate financial information or financial management terms with some structure of the Health Authority. For example, "Finance department is largely responsible for formulating revenue budgets".

7.5.102 The 'Financial' Constructs Construed in Terms of the Psychology of Personal Constructs

When the first three categories of constructs are considered in terms of the types of personal constructs, then they can be allocated to the following types of constructs identified by Kelly (1955).

The need construct is a comprehensive construct, that is a construct which subsumes a relatively wide variety of events. This type of construct is permeable and is enabled by its open-endedness to embrace more and more constructs and elements (Kelly, 1955). With the occurrence of a need-comprehensive construct, it can be anticipated that, in such individuals the construct system will become more elaborated through both the experience and modulation corollaries (Kelly, 1955). Simultaneously the need construct could be a superordinate construct which would allow the elaboration of the part of the construct system concerned with financial information.

The descriptive construct is a propositional construct, that is a construct which leaves the elements open to construction in all other respects (Kelly, 1955). With a descriptive-propositional construct the construct describes one of the attributes or facets of a particular piece of financial information. Kelly notes that propositional constructs are employed when an individual construes circumspectively. Such construing occurs at the start of the cycle in the sequence Circumspection-Pre-emption-Control in the C-P-C Cycle (Kelly, 1955).

The functional construct is a pre-emptive construct, that is a construct which pre-empts elements for membership in its own realm (Kelly, 1955). With a functional-pre-emptive construct the construct demonstrates/identifies/states the use of financial information in terms of financial management. Kelly (1955) notes that the construction of pre-emption makes for control.

7.5.103 The Individual's Construing of Financial Information

The individual, construing the elements presented, will construe these in his own way. Thus through the individuality corollary there are differences in the construing of the same elements. Simultaneously, through the organizational corollary, each individual evolves his own construction system. The individual's construction system, through the experience corollary, varies as the individual successively construes the replication of events.

The experiences of the individuals in this study would appear to have some limited commonality. They all work for the Health Authority, although one individual

is located on a different site to the other five. They each have a different professional/technical speciality and are in different sections of the Health Authority. Though in different sections, the three individuals from the Regional Works Department, and the one individual from the Regional Administration Department were Heads of their own section/department, and appeared to have the most day to day contact with each other. During the course of the study the daily contact between all members appeared to increase, especially between the Administration Department and other Departments, and in particular with the Finance Department. The frequency of the formal Committee meetings did not alter. No formal training was provided, but the member from the Finance Department did provide detailed explanations at the Committee meetings and outside of these.

The elaboration of the construct system is through the modulation corollary, and the variation of the system is limited by the permeability of the constructs. At the same time, through the fragmentation corollary, an individual may successively employ a variety of construction subsystems which are inferentially incompatible with each other.

It may be that an individual may construe the need for financial information, but this does not mean that if any quantity of financial information is provided, that it will be understood. It will be understood only if the construct system is already elaborated or is subsequently elaborated in this direction.

The presence of descriptive-propositional constructs indicates that the construct system of the individual recognizes financial information, and can describe it. This acknowledgment of the existence of financial information does not mean that the financial information is understood.

The use of financial information is demonstrated through the existence of functional-pre-emptive constructs. These functional-pre-emptive constructs enable the individual to exercise control, which results from receiving financial information, and to so make an appropriate decision through the choice corollary.

An analysis of the constructs shows that financial information or financial management is implicated in the structure of the Health Authority. The explanations of the financial information given by the member from the Finance Department may provide the opportunity for the other five individuals to elaborate their construct systems, and to provide conditions suitable for the formation of new constructs.

7.5.104 The Anticipations of the Changes in Construing

It is anticipated that if an individual's construct system elaborates so as to include notions about financial information and financial management, then the number of such 'financial' constructs is likely to increase over successive grids. At the same time, if this elaboration is more salient for an individual then it is likely to show itself in the senses of the principal components. That is, if on an individual's first grid there are no 'financial' constructs, but on the third grid they are present, then some of these 'financial' constructs could be involved with the sense of at least one of the first three principal components.

7.5.110

The Senses of the Principal Components and the Plots of Elements and Constructs

7.5.111 The Derivation of the Senses of the Principal Components

The senses of the constructs on the principal components were obtained in the following manner. The output from the analysis performed by the INGRID 72 program included the loadings of the constructs on the principal components. The loadings on the first three principal components were examined in turn. The construct with the largest loading was taken together with its loading. The construct with the next largest loading was also taken. The comparative sizes of the loadings were noted, as were the semantics of the constructs. If the loadings and semantics were relatively close together, then the next largest loading and the construct was also taken and compared with the earlier constructs. This process was continued until there was an apparent lack of relationship between the magnitudes of the loadings and the semantics of the constructs. This procedure constituted the cut-off point for the constructs in the sense of the principal component. The main construct senses of the first three principal components were built up in this way. An example of this is included in Appendix III.

These three principal components are the main ways in which the individual construes. Appendix IV lists the senses of the first three principal components of the individuals in this study. It is these construct senses of the first three principal components that form the basis of the following analysis.

7.5.112 Commonality Amongst the Senses of the First Three Principal Components

The senses of the first three principal components were examined for the amount of commonality amongst the constructs. It was anticipated that, apart from

the supplied constructs, there would be no identical constructs amongst the individuals in the study. This was found to be the case. The constructs were sequentially compared with each other to establish if the total meaning of a construct could be said to demonstrate commonality with at least one construct from another individual. This method of comparison understates the commonality. This is because with four of the six individuals many of their constructs are quite complex and include more than one notion or activity. For example, "Service planning needs investment appraisal and professional judgement to interpret information". In such cases the ultimate object of the action in the construct has been taken and the construct categorized accordingly. For example, in the foregoing the ultimate object is 'to interpret information', so the construct is placed with constructs concerned with information. This means that issues such as 'service planning'; 'investment appraisal' and 'professional judgement' are ignored in the primary classification and brought into the wider discussion of the other constructs.

It was found that with a number of the issues there was not much close correspondence between the semantics of the constructs. Accordingly the issues were formulated at a superordinate level in order to handle the issues in a more cohesive way. An example of this superordination, and in fact the most numerous of these constructs, occurs with the issue of 'ability to use information'. Thus one individual construes information on two of the three grids together with the issues of firstly knowledge, secondly decision-making, and thirdly interpretation. A second individual on three grids construes essentially the construct 'Service planning needs investment appraisal and professional judgement to interpret information'. Placing these constructs at a superordinate level reduces the number of construct cases and this understates the amount of commonality.

By taking the first three principal components from the 6 individuals on 3 grids means that there is a maximum of 54 construct senses which could be in common. Taking two constructs as the minimum form of commonality between constructs, there are 13 types of constructs, where constructs are held in common, and 42 construct senses in total. Dividing the actual number of construct senses, 42, by the number of types of construct, 13, provides a possibility of an approximate average of 3.2 individuals who share one of these constructs in common.

To demonstrate those constructs held with the widest commonality during the course of the study, the constructs which occur on 3 or more occasions during the study are listed in Table 7.1. This Table also shows the incidence of

occurrence of these constructs on the first, second and third grid, the total of these three grids and the number of different individuals holding these constructs.

Table 7.1 Constructs Held with the Widest Commonality

Construct	Grid	1	2	3	Total	diff individuals
Ability to use information.	2	2	3	1	6	2
Controlling capital resources.	1	1	2	2	5	3
Working with cash limits.	1	1	1	3	5	3
Power resides elsewhere.	2	2	1	0	3	3
As I influence.	2	2	0	1	3	3
Total	2	8	7	7	22	13

Table 7.1 shows that there are 5, out of the 13 types of construct held by more than one individual which occur on three or more occasions over the three grids. These account for 22 out of the 42 construct senses, about 52%.

The nature of the construct 'ability to use information' has been mentioned already. This construct indicates one of the issues of information at an individual level, namely that the provision of information is not sufficient in itself. It indicates that information requires knowledge and contexts before either the Nurse or the Treasurer can use it. It is not an issue for the Nurse on the third grid.

The salience of the construct 'power resides elsewhere' is on the first grid, and its subsequent reduced salience could indicate decreases in this issue. The construct 'as I influence' is also more salient on the first grid, so that perhaps when the salience of these two constructs are taken together it may reflect an increase in power.

The two remaining constructs appear to increase in their salience over the grids. The construct 'controlling capital resources' certainly reflects the work of the two individuals concerned, the Surveyor and Treasurer, where they monitor the capital resources once the Committee has decided where these resources should be employed. However, the issue of control can be construed to include some form of power in the monitoring of these resources. The construct 'working with cash limits' clearly increases in salience over the grids, and reflects the issue of cash limits which has affected the Health Authority.

There seems to be limited commonality of construing these elements in the grid amongst the Committee. Only 'working with cash limits' is construed with commonality by three individuals at the same time.

7.5.113 Financial Constructs and Constructs of Influence and Power

The two groups are now examined, separately, for the existence of 'financial constructs', as well as 'influence' and 'power' constructs in the senses of the first three principal components. This was carried out by examining the construct senses of the first three principal components found in the Appendix IV.

7.5.114 The Irregular User Group

The number of financial constructs in the sense of the first three principal components on the three grids is shown in Table 7.2

Table 7.2
The Number of Financial Constructs in the Sense of the First Three Components

<u>Grid</u>	<u>Description</u>			<u>Function</u>			<u>Structure</u>			<u>Influence</u>			<u>Power</u>		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
First component	0	0	0	0	0	1	1	1	0	0	0	0	0	0	1
Second component	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Third component	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	0	0	0	0	0	1	1	1	0	0	0	1	0	0	1

There is clearly a paucity of these types of constructs occurring the sense of the first three principal components. In fact only the Nurse has the financial constructs, two constructs of structure and one functional-pre-emptive on the first principal component on each grid. The other individuals do not appear to have salience for financial management in their main ways of thinking at any time. The Nurse is also the only individual with an influence construct. The Engineer construes power, but this construct is accompanied by a construct with the same loading but with the title 'projects'. It would appear that this construct refers to the fact that for several months before the third grid the Committee had been working on a number of small projects, such as the removal of asbestos from insulation systems. These projects had been brought to the Committee and were being supervised by the Engineer.

For one individual in this group the elaboration of the construct system has lead to a change in their construing so as to construe a functional-pre-emptive construct in the main way of thinking. The functional-pre-emptive construct enables an individual to have more control in his decision-making. The other members of the group have not elaborated their construct systems so as to bring financial

constructs into, or increase the number of constructs in, their main ways of thinking. However, the issue of influence and that of power has entered into their thinking to a limited extent.

7.5.115 The Regular User Group

The number of financial constructs in the sense of the first three principal components on the three grids is shown in Table 7.3

Table 7.3
The Number of Financial Constructs in the Sense of the First Three Components

Grid	Description			Function			Structure			Influence			Power		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
First component	1	1	0	0	1	2	1	0	0	0	0	0	0	0	0
Second component	0	0	0	1	1	2	1	0	0	0	0	(1)	(1)	0	0
Third component	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0
	1	1	0	1	2	5	2	1	0	2	0	(1)	(1)	0	0

The items in parentheses indicate 'I do not have power over' or 'Inability to influence'.

A small number of descriptive-propositional constructs occur on the first two grids, but even these appear to lose salience by the third grid. On the other hand, the functional-pre-emptive constructs gradually increase their salience. It starts with one individual, the Treasurer, on the first grid, then two individuals on the second grid, and three individuals on the third grid. By the third grid the Treasurer has increased the number of functional-pre-emptive constructs to three, and the three individuals have a functional-pre-emptive construct on either the first or the second component. Thus there is increased salience for financial management or financial information in this group.

The constructs of structure have some salience for two of the individuals on the first and second grids, but lose their salience on the third grid. The influence construct is salient for two individuals on the first grid, but by the third grid one of these individuals construes the converse, the 'inability to influence'. The same individual construes on the first grid 'I do not have power' and it would appear that by the third grid that power is not construed by these individuals, whilst one individual construes the inability to influence.

Over the three grids there has been an elaboration of the construct systems away from notions of description and structure connected with financial information.

and towards functional-pre-emptive constructs and greater control. At the same time there is less salience with influence, and little construing of power in the main ways of thinking by these individuals.

7.5.116 Summary

There appears to be very little commonality between the two groups, as such. Although there would appear to be some commonality between one member of the Irregular User Group, the Nurse, and the Regular User Group. Clearly, for two members of the Irregular User Group, the Architect and the Engineer, financial constructs do not enter into their main ways of thinking. These two individuals have no construct senses in the first three principal components which include financial information or financial management, and they do not even construe financial information in the work of the Committee.

There are two members of the Regular User Group, the Surveyor and the Administrator, and one member of the Irregular User Group, the Nurse, who on the first grid do not construe a functional-pre-emptive construct. Instead they construe either constructs of structure, in the case of the Surveyor, on the first grid, or constructs of description, in the case of the Administrator, on the first and second grids, or constructs of structure on the first and second grid, in the case of the Nurse, which do not occur on subsequent grids. On the subsequent grids of these individuals functional-pre-emptive constructs occur. For these three individuals their construing of financial information has elaborated to include functional-pre-emptive constructs in their main ways of thinking possibly by way of the descriptive and structural constructs.

The remaining individual, the Treasurer, construes at least one functional-pre-emptive construct on each of the three grids, and then construes functional-pre-emptive constructs on all three principal components on the third grid.

Thus for four individuals, financial information or financial management has more salience on the third grid than on the first grid. On the third grid these four individuals construe a functional-pre-emptive construct in the sense of either the first or second principal component. In this way four individuals have more control through construing functional-pre-emptive constructs.

Although the notions of influence and power occur in the senses of the first three principal components over the three grids, on the third grid one individual construes influence, another construes power, whilst a third individual,

the Administrator who is Chairman of the Committee, construes the lack of both of these.

The financial constructs of description only occur with one individual, and then only on the first two grids, indicating a lack of salience. It is of note that there are no constructs relating the need for financial information which occur in the principal components. This probably indicates that there is sufficient financial information available to the Committee, and any financial information which they require can be made available.

These results suggest that at the start of this study the salience of the financial information elements used in the grid was not very marked for most of the individuals since only one individual held a functional-pre-emptive construct on one of the first three components. It will be re-called that the financial information elements for the grid originated from the members of the Committee and constitutes the labels of the types of financial information with which the Committee works. At the end of the study the salience of these financial information elements increased because four individuals had functional-pre-emptive constructs on one of the first three components.

This then suggests that the financial information presented to the Committee at the start of the study would not necessarily have been construed by the Committee using financial management constructs indicative of decision-making. In other words, at the start of the study most individuals would have found difficulty using the financial information as a basis for their decision-making. However, by the end of the study this situation had altered and there were four individuals who would have had less difficulty in using such information.

7.5.20 The Constructs and the Construing of the Elements

The constructs and the construing of the elements on each individual's grids are now examined.

7.5.21 The Irregular User Group

Over the course of the three grids there is little change in the construing of the financial information elements by two individuals, but some change in the third individual in this group. This has been determined from the analysis of the individual grids and the subsequent plots of the constructs and elements construed by the individuals.

Table 7.4 The Amount of Variance of the Principal Components

Grid	The First Principal Component			The First Three Principal Components		
	1	2	3	1	2	3
CU	28.1	28.1	27.6	57.6	64.2	58.2
CR	44.7	52.3	54.9	77.1	77.4	78.2
TH	37.4	19.8	22.1	63.6	53.5	50.7

Table 7.4 shows the amount of variance of the first principal component and the first three principal components on each of the three grids. Before the study it was impossible to indicate in which direction the variance of these principal components would move. It was anticipated that the principal components would move if individuals who were previously without financial information were provided with such information and training. Although the size of the principal components did change, a Page's L Trend Test did not indicate any trend amongst these. A 't' Test on the absolute change in the variance of the first and first three principal components between the first and third grids was not statistically significant. (However, the absolute change in variance of all of the individuals in the study between the grids, was statistically significant.) The variance for the two individuals, who showed little change in construing, moves in opposite directions over the grid. The variance for the third individual increases on the second grid, possibly indicating a broadening of understanding of the financial information. On the third grid the variance decreases to just below its initial amount, which may indicate the tightening of the construct system with a deepening of understanding.

**Table 7.5
The Number of Financial Constructs Occurring in the Sense of
the First Three Components**

Grid	1	2	3
CU	1	1	1
CR	0	0	0
TH	0	0	0

Table 7.5 shows the number of times that financial constructs occur in the sense of the first three principal components. The first principal component indicates the main way in which the individual construes the elements. It is anticipated that when an individual construes financial information elements financial terms will occur in the constructs and subsequently in the sense of the principal components. Essentially the more these financial constructs arise in the

principal components, so the more understanding the individual is likely to display. It can be seen from Table 7.5 that with two of the individuals there are no occasions when financial constructs occur, and this is construed to mean that these individuals do not have much understanding of financial information or financial management. On the other hand the third individual has such a financial construct occurring once on each grid which suggests some understanding. As a group the small number of times that financial constructs occur in the principal components suggests that financial management is not one of the main ways in which the group construes.

Table 7.6 The Number of Financial Constructs that Occur in Each Grid

<u>Grid</u>	1	2	3
CU	6	6	8
CR	1	2	2
TH	2	1	2

Table 7.6 shows the number of financial constructs that occur in each individual's grid. The same two individuals have a low incidence of such constructs over the grids, with the Architect-CR starting at 1 and rising to 2 and the Engineer-TH starting and ending with 2. These findings indicate again, that these individuals do not employ constructs which include terms of financial information or management. The Nurse-CU starts at 6 and ends with 8, which indicates that financial terms are increasingly employed in the constructs. The group's percentage of such constructs is constant over the first two grids at 21% but increases to 29% on the third grid. This increase is due mainly to the increase in the number of constructs of the third individual from 42% on the first two grids to 57% on the third grid. A 't' Test, conducted on the increases in the financial constructs from the first to the third grid, found that the increases are not significant. This might indicate that any changes in construing financial information that have occurred are very small. Thus as a group financial constructs are not commonly employed.

Table 7.7 The Classification of the Financial Constructs

<u>Grid</u>	<u>Need-comprehensive</u>			<u>Descriptive-propositional</u>			<u>Functional-pre-emptive</u>		
	1	2	3	1	2	3	1	2	3
CU	2	2	0	1	1	0	3	3	8
CR	0	0	0	1	2	2	0	0	0
TH	0	0	0	2	1	2	0	0	0

Table 7.7 classifies the financial constructs into need-comprehensive; descriptive-propositional and functional-pre-emptive. Again there is a clear difference between two individuals and the third. The small number of financial constructs of the two individuals are descriptive-propositional constructs on all three grids. From this there does not appear to be any change of construing in these individuals. The third individual has financial constructs in each of the three categories, and these change over the grids. For this individual on the first two grids the same number of constructs are distributed in the same way over the categories; 2 need-comprehensive; 1 descriptive-propositional and 3 functional-pre-emptive. On the third grid the only financial constructs are 8 functional-pre-emptive constructs. Thus the individual initially employs all three categories of financial constructs, but on the third grid this changes, and there would appear to be a change in the construing. The existence of the functional-pre-emptive constructs suggests a deeper understanding and position of control from which to take decisions.

Table 7.8
The Number of Financial Information Elements Construed with Meaning

Grid	The First Two Components			The First Two Components with Financial Constructs		
	1	2	3	1	2	3
CU	1	1	5	1	0	3
CR	5	5	5	0	0	0
TH	4	4	5	0	0	0

Table 7.8 shows the number of financial information elements construed with meaning on the first two principal components, that is construed in the sense of the first two principal components. The first part of Table 7.8 is with any sense on the first two components, and it again shows the dichotomy between two of the individuals and the third. The two individuals construe four or five financial information elements with meaning for all three grids, whilst the third construes one for the first two grids, and five on the third grid. There is an increase in the total financial information elements construed from 66% to 100%. The impression could be given by this part of the Table that the two individuals construe the majority of the elements of financial information with meaning all of the time, whilst the third individual does not.

However, these financial information elements need to be examined in the context of the number of financial information elements construed on the emergent

poles whose sense include financial constructs. The second part of Table 7.8 contains the number of financial information elements construed with meaning where the first two principal components contain the sense of financial constructs. In other words the elements of financial information are examined when they are construed in the context of financial constructs and understanding. Now the two individuals do not have any financial information elements, whilst the third individual has one on the first grid and three on the third, the number of financial information elements so construed increasing from 20% to 60%. Thus for two individuals the elements of financial information are not construed with meaning in the context of financial management, but the third individual has such understanding and meaning. Thus the financial information elements have some meaning in the context of financial information for one individual but none for the others. This clearly demonstrates that it is possible for an individual to construe financial information elements with meaning, although that meaning is construed when the principal components do not contain financial terms, there is no meaning in a financial management context.

7.5.22 The Plots of the Constructs and the Elements

By using output from the INGRID 72 program the elements were plotted in the construct space, and the constructs were plotted in the element space. An example of this can be found in Appendix III.

Amongst this group only one person has a number of financial management constructs which have increased over the course of the study, and this has been accompanied by an increase in the use of the elements of financial information and meaning. This individual noted, after the last session, that on occasions when she was unable to extract the relevant information the people in the Finance Department were good at explaining and providing information. However, the cash flows and financial wording were still not easy to understand, but the understanding was increasing.

In the case of the other two individuals, they have gained very little meaning of the elements of financial information. With these two individuals the elements of financial information are quite close together on the plots and separate from the non - financial information elements. This suggests that when individuals construe financial information elements without financial management constructs, the lack of meaning is shown by financial information elements being clustered quite closely together and not integrated with the non - financial information elements.

At the same time the elements of financial information are construed with a construct such as 'data', describing what the elements of financial information are, but not indicating that these elements have any meaning beyond this.

7.5.23 The Regular User Group

All of the group construe the elements of financial information on the first grid. From an analysis of the constructs and elements of the individuals, there is a noticeable change in the construing of the elements of financial information by the three individuals who form this group over the course of the study. In two cases their understanding of financial information has increased, and in the third has possibly increased. For the first two individuals there is an increase in the salience of the financial information elements, but in the third case there is less salience. This has been determined from the analysis of the individual grids and the subsequent plots of the constructs and elements construed by the individuals.

Table 7.9 The Amount of Variance of the Principal Components

<u>The First Principal Component</u>	<u>The First Three Principal Components</u>					
	<u>Grid</u>	<u>1</u>	<u>2</u>	<u>3</u>		
KA	42.0	32.6	21.9	68.6	62.5	54.4
SP	29.5	39.6	28.1	58.6	75.8	64.4
TK	28.5	32.6	34.5	64.5	65.1	65.1

Table 7.9 shows the variance of the first principal component and the first three principal components. Although the amount of variance has altered over the course of the study the direction of the change is not uniform. A 't' Test on the absolute change in the variance of the first and first three principal components between the first and third grids was not statistically significant, but between the first and second grids the absolute change was statistically significant at the level of 5% with 2 d.f. Two individuals have increases in variance on the second grid. One of these is a slight increase which remains at this amount on the third grid, indicating a broadening of understanding, the other is a large increase which decreases but still remains above the variance of the first grid, indicating a broadening then tightening of the construct system. The variance of the third individual successively decreases, indicating a deepening and tightening of the construct system.

Table 7.10
The Number of Financial Constructs Occurring in the Sense of
the First Three Components

<u>Grid</u>	<u>1</u>	<u>2</u>	<u>3</u>
KA	1	1	1
SP	2	1	1
TK	1	2	3

Table 7.10 shows the number of times that financial constructs occur in the sense of the first three principal components. The first principal component indicates the main way in which the individual construes the elements. It is anticipated that when an individual construes the elements, financial constructs will be held and could occur the sense of the principal components. Essentially the more these financial constructs occur in the principal components, so the more understanding of financial information the individual is likely to display. The Table shows that all individuals had a financial construct in the sense of one of the principal components on each grid. These constructs increase for one individual, the Treasurer-TK, remain the same for another, the Administrator-KA, and decrease for the third, the Surveyor-SP. It is this decrease in senses that 'facilitates' the decrease in salience for the financial information elements.

With the Surveyor-SP, for whom there is a decrease in salience, there are similar themes that occur in the senses of the principal components over the course of the study, but the financial constructs do not continue to accompany the themes. The decrease in salience is shown, also, by the fact that on the first grid there are financial constructs on the first two components, but on the second grid only on the first component, and on the third grid only on the second component.

Table 7.11 The Number of Financial Constructs that Occur in Each Grid

<u>Grid</u>	<u>1</u>	<u>2</u>	<u>3</u>
KA	8	5	10
SP	8	8	7
TK	10	10	13

Table 7.11 shows the number of financial constructs construed by each individual. Two individuals have an increase in these constructs whilst the third has a decrease. A 't' Test conducted on the changes of the two individuals found these to be statistically significant at the level of 10% with 1 d.f. Whilst a 't' Test conducted on the absolute changes of all three individuals found these changes

to be statistically significant at the level of 10% with 2 d.f. The group's percentage of financial constructs increases from 62% on the first grid through 55% on the second grid to 71% on the third grid. The treasurer, by the third grid, has increased the number of these constructs from 71% to 93%.

Table 7.12 The Classification of the Financial Constructs

Grid	Need-comprehensive			Descriptive-propositional			Functional-pre-emptive		
	1	2	3	1	2	3	1	2	3
KA	0	0	0	6	3	3	2	4	7
SP	0	1	0	3	1	0	5	6	7
TK	0	0	0	7	5	6	3	5	7

Table 7.12 classifies the financial constructs into 'need-comprehensive'; 'descriptive-propositional' and 'functional-pre-emptive' constructs. The sole structural construct occurs with TK on the second grid and is not considered further. Again there is a clear difference between two individuals and the third. The third individual is the only one who has a need-comprehensive construct and also has a smaller number of descriptive-propositional constructs which eventually reduce to zero. This decrease in the number of descriptive constructs is also found with the other two individuals. These decreases, when subjected to a 't' Test, are found to be significant at the 10% level. All three individuals exhibit increases in the number of functional-pre-emptive constructs, and a 't' Test found these significant at the 10% level.

The existence of the functional- pre-emptive constructs with all individuals on all grids suggests that each individual has some understanding of financial information from the first grid. The construct system has elaborated so that any need-comprehensive constructs or descriptive-propositional constructs have decreased whilst the functional-pre-emptive constructs increased. The larger number of functional-pre-emptive constructs suggests a deeper understanding and a position of control from which to take decisions.

**Table 7.13
The Number of Financial Information Elements Constructed with Meaning**

Grid	The First Two Components			The First Two Components with Financial Constructs		
	1	2	3	1	2	3
KA	3	4	3	0	0	1
SP	5	3	4	5	2	1
TK	3	3	4	3	3	4

Table 7.13 shows the number of financial information elements construed with meaning on the first two principal components, that is construed in the sense of the first two principal components. There is the same total number of financial information elements construed on the first and third grids, 73%. The first part of the Table shows that the third individual has a decrease in the number of elements construed, whilst for the other two, one remains the same and one increases. All of them clearly construe a number of the elements of financial information with some meaning.

However, these financial information elements need to be examined in the context of the constructs and the senses of the emergent components. The second part of Table 7.13 contains the number of financial information elements construed with meaning where the first two principal components contain the sense of financial terms. Although there is a reduction in the number so construed, there are still some elements construed with meaning. There is the increased salience of the financial information elements for two individuals and the decrease in the third individual.

7.5.24 The Plots of the Constructs and the Elements

Over the course of the study the elements of financial information change their position in construing with respect to the non - financial information elements. For the Administrator, for whom the salience of the information has increased, the elements of financial information were quite close together, although apart from the non - financial information elements on the first two grids. However, on the third grid, the elements of financial information were more widely spaced apart from each other, and some were closer to the non - financial information elements. The other two individuals construe in the opposite manner, namely the elements of financial information are close to the non - financial information elements on the first grid, but they are progressively less close to the non - financial information elements by the third grid.

During the course of the study the positions of the financial management constructs change. The tendency is for an initial concentration of constructs in one area to move into several areas. With the Administrator on the first grid there is one area of descriptive constructs, on the second one area of descriptive and one of functional constructs, and on the third grid three areas mainly concerned with functional constructs. The Treasurer, on the first two grids, has one area of constructs concerned with monitoring capital resources and budgets, and another area

concerned with service planning. The third grid has three areas of constructs, one concerned with service planning, investment appraisal and cash limits, another concerned with Regional Strategy and the quality of information which can be qualitative, and a third area concerned with power, the quality of information and the Capital Programme Committee. There is a similar movement with the Surveyor, one area of constructs on the first grid concerned with the three E's (Economy, Efficiency and Effectiveness), to two areas on the second and third grids both of which are concerned with keeping the service running.

7.5.25 A Comparison of the Two User Groups

All individuals in both groups construe some understanding of the financial information elements on the first grid. The construing of the individuals changes between the grids and there is a change in the variance. The direction of change of the variance is not uniform amongst the individuals, and 't' Tests, did not show any statistical significance in the absolute change in variance of the two groups. This indicates that as groups there are no statistically significant changes in construing.

An initial analysis of the individuals in each group suggests that the Irregular User Group had a limited degree of understanding of the financial information elements, and with one exception this did not alter over the course of the study. The Regular User Group started with more understanding of the financial information elements and with more complex constructs than the Irregular User Group. Over the course of the study the Regular User Group has increased its understanding of financial information elements and employs more complex constructs.

The statistics appearing in the corresponding Tables of each group were compared with each other and submitted to a 't' Test, and with the exception of the variance of the principal components, all of the tests showed significant differences between the two groups.

Table 7.14 A Comparison of the Total Amount of Variance of the Components

Grid	The First Principal Component		The First Three Principal Components	
	Irregular	Regular	Irregular	Regular
1	110.2	100.0	192.3	191.3
2	100.2	105.1	195.1	203.4
3	104.6	84.5	187.1	183.9

Table 7.14 compares the total variance of the first and the first three principal components. This was calculated by taking the total variance for each group on each grid, as shown in Tables 7.4 and 7.9. The results of the 't' Tests did not reach statistically significant levels of difference, even when absolute changes in variance were used. This suggests that there are no obvious differences in the ways in which the two groups construe the elements overall. The tendency in both groups is towards a tightening of construing which seems to be more pronounced in the Regular User Group.

Table 7.15
A Comparison of the Total Number of Financial Constructs Occurring in the Sense of the First Three Components

	<u>Irregular</u>	<u>Regular</u>
<u>Grid</u> 1	1	4
2	1	4
3	1	5

Table 7.15 compares the total number of times that financial constructs occur in the sense of the first three principal components, as shown in Tables 7.5 and 7.10. The result of the 't' Test shows that there is a difference between the two groups, statistically significant at the 1% level with 2 degrees of freedom. Thus the Regular User Group has a statistically significantly larger number of financial constructs occurring in the sense of the first three principal components than the Irregular User Group. The level of significance suggests that there are very large differences between the groups in this respect.

Table 7.16
A Comparison of the Total Number of Financial Constructs Occurring in Each Group

	<u>Irregular</u>	<u>Regular</u>
<u>Grid</u> 1	9	26
2	9	23
3	12	30

Table 7.16 compares the total number of financial constructs that occur in each group, as shown in Tables 7.6 and 7.11. The result of the 't' Test shows that there is a difference between the two groups statistically significant at the 1% level with 2 degrees of freedom. Thus the Regular User Group has a statistically significantly larger number of financial constructs, occurring on each grid, than the

Irregular User Group. The level of significance suggests that there are very large differences between the groups in this respect.

Table 7.17 A Comparison of the Classified Financial Constructs

Grid	Descriptive-propositional		Functional-pre-emptive	
	Irregular	Regular	Irregular	Regular
1	4	16	3	10
2	4	9	3	15
3	4	9	8	21

Table 7.17 compares the total number of financial constructs found in Table 7.17 but classified according to type of financial construct as shown in Tables 7.7 and 7.12. The occurrence of the need-comprehensive constructs is relatively small for each grid and although the Irregular User Group has more of these than the Regular User Group a 't' Test did not find the difference statistically significant.

There are more descriptive-propositional constructs held by the Regular User Group than the irregular user group, on each grid. A 't' Test shows that there is a difference between the two groups statistically significant at the 10% level with 2 degrees of freedom. Thus the Regular User Group has statistically more descriptive propositional constructs on each grid than the Irregular User Group.

There are more functional-pre-emptive constructs held by the Regular User Group than the Irregular User Group, on each grid. A 't' Test shows that there is a difference between the two groups statistically significant at the 10% level with 2 degrees of freedom. Thus the Regular User Group has statistically more functional-pre-emptive constructs on each grid than the Irregular User Group.

**Table 7.18
A Comparison of the Financial Information Elements Construed with Meaning**

Grid	The First Two Components		The First Two Components with Financial Constructs	
	Irregular	Regular	Irregular	Regular
1	10	11	1	8
2	10	10	0	5
3	15	11	3	6

Table 7.18 compares the total number of financial information elements construed with meaning on the first two principal components. On the first part of Table 7.18 with the first two grids the total number of financial information elements is similar for each group, but on the third grid the Irregular User Group construes the maximum 15 financial information elements in comparison with 11

Irregular User Group. The level of significance suggests that there are very large differences between the groups in this respect.

Table 7.17 A Comparison of the Classified Financial Constructs

Grid	<u>Descriptive-propositional</u>		<u>Functional-pre-emptive</u>	
	<u>Irregular</u>	<u>Regular</u>	<u>Irregular</u>	<u>Regular</u>
1	4	16	3	10
2	4	9	3	15
3	4	9	8	21

Table 7.17 compares the total number of financial constructs found in Table 7.17 but classified according to type of financial construct as shown in Tables 7.7 and 7.12. The occurrence of the need-comprehensive constructs is relatively small for each grid and although the Irregular User Group has more of these than the Regular User Group a 't' Test did not find the difference statistically significant.

There are more descriptive-propositional constructs held by the Regular User Group than the irregular user group, on each grid. A 't' Test shows that there is a difference between the two groups statistically significant at the 10% level with 2 degrees of freedom. Thus the Regular User Group has statistically more descriptive propositional constructs on each grid than the Irregular User Group.

There are more functional-pre-emptive constructs held by the Regular User Group than the Irregular User Group, on each grid. A 't' Test shows that there is a difference between the two groups statistically significant at the 10% level with 2 degrees of freedom. Thus the Regular User Group has statistically more functional-pre-emptive constructs on each grid than the Irregular User Group.

**Table 7.18
A Comparison of the Financial Information Elements Construed with Meaning**

Grid	<u>The First Two Components</u>		<u>The First Two Components with Financial Constructs</u>	
	<u>Irregular</u>	<u>Regular</u>	<u>Irregular</u>	<u>Regular</u>
1	10	11	1	8
2	10	10	0	5
3	15	11	3	6

Table 7.18 compares the total number of financial information elements construed with meaning on the first two principal components. On the first part of Table 7.18 with the first two grids the total number of financial information elements is similar for each group, but on the third grid the Irregular User Group construes the maximum 15 financial information elements in comparison with 11

elements by the Regular User Group. There is no statistically significant difference between the groups, and it would appear that the Irregular User Group construes the largest number of financial information elements with meaning.

On the second part of Table 7.18 the first two principal components contain the sense of financial constructs, as shown in the second part of Tables 7.8 and 7.13. On each grid the Regular User Group construes more principal components with financial terms in their senses than the Irregular User Group. A 't' Test shows that there is a difference between the two groups statistically significant at the 5% level with 2 degrees of freedom. Thus the Regular User Group has statistically significantly more financial terms in the sense of the first two principal components than the Irregular User Group. So that when viewed in the context of financial management, the Regular User Group clearly construes meaning into the financial information elements with an understanding compatible with financial management.

7.5.26 Summary

Both groups do not change their construing of the elements presented in the grid in a statistically significant manner in respect of:

- (1) The variance of the principal components.
- (ii) The number of financial management terms used in the sense of the first three principal components.

(iii) The number of financial information elements construed with meaning on the first two principal components, even when these components contain financial management terms.

In addition the Irregular User Group does not change its construing of the elements presented in the grid in a statistically significant manner in respect of:

- (1) The number of financial constructs.
- (ii) The changes in the classification of financial constructs in terms of need-comprehensive, descriptive-propositional and functional-pre-emptive constructs.

However, with the Regular User Group there are statistically significant differences between grids in respect of:

- (1) The number of financial constructs.

(ii) The changes in the classification of financial constructs in terms of descriptive-propositional and functional-pre-emptive constructs, but not in terms of need-comprehensive constructs.

These changes suggest that the Regular User Group not only increase the number of financial constructs, but there are reductions in the number of descriptive-propositional constructs and increases in the functional-pre-emptive constructs, which indicate that the individuals have a deeper understanding and more control in making decisions.

When the construing of the two groups is compared there are no statistically significant differences between the groups in respect of:

(i) The total amount of variance on each group on the first and the first three principal components.

(ii) The need-comprehensive constructs.

(iii) The financial information elements construed with meaning on the first two principal components.

There are statistically significant differences between the groups as follows:

(i) The Regular User Group have more financial management constructs in the sense of the first three principal components than the Irregular User Group.

(ii) The Regular User Group have more financial management constructs than the Irregular User Group.

(iii) The Regular User Group have more descriptive-propositional constructs than the Irregular User Group.

(iv) The Regular User Group have more functional-pre-emptive constructs than the Irregular User Group.

(v) The Regular User Group have more financial information elements construed with meaning on the first three principal components, where the senses contain financial terms, than the Irregular User Group.

(vi) The individuals in the Regular User Group have construct systems which have become more elaborated with respect to financial information than the individuals in the Irregular User Group.

7.5.300 The Construing of the Supplied Constructs and of the Elements

On each grid were the three supplied constructs "As I influence", "As I would like to influence" and "I have power over". The construing of these constructs, together with the construing of the elements, is now examined.

7.5.301 "As I influence"

It was anticipated that if individuals received and used financial information then there would be an increase in the use of the supplied construct "As I influence" upon a greater number of elements.

The two groups are similar in three ways. Firstly, in the Irregular User Group there is one individual whose construing of the number of elements remains the same, another construes influence upon less elements and the third construes influence upon more elements. The Regular User Group is similar in that two individuals construe the same number of elements, and one individual construes influence upon more elements. There is, then, no common movement concerning influence.

Secondly, there is a commonality in the construing of some elements. All of the Irregular User Group and two of the Regular User Group consistently construe influence over the elements 'my immediate boss'; 'the Capital Programme Committee' and 'the Regional Team of Officers'.

The third similarity concerns 'professional judgement'. On the first grid only one individual, who is in the Regular User Group, construed influence over 'professional judgement', but on the third grid all individuals construe influence over this. The reason for this is not obvious. It may indicate that the individuals exercise influence through what they term professional judgement.

Beyond this, differences begin to emerge. The Irregular User Group more consistently construes influence over 'capital budgets' than the Regular User Group, although on the third grid two individuals in each group construe influence over this element. With the 'revenue budgets' the Irregular User Group consistently influences this element, whilst only one member of the Regular User Group eventually influences it. An explanation for these differences may be found in the difference in the composition of the two groups. The Irregular User Group is composed of the Nurse, the Architect and the Engineer, and because of the nature of their respective work areas: staffing a hospital with nurses; design of the hospital building; equipping the

hospital, they may construe more influence on both of these budgets than the individuals in the Regular User Group.

On the first grid both groups also construe influence over 'quality of care' and 'investment appraisal', however, on the third grid only the Irregular User Group still construes influence over these elements. It is possible that again the explanation lies within the different composition of the groups and that the Nurse, the Architect and the Engineer construe their work to influence these elements.

It is found that over the course of the study the Regular User Group, who have a deeper understanding of financial information in their construing, move away from the elements concerned with the delivery of care, such as 'quality of care', 'doctors and nurses' and 'investment appraisal', and move towards the elements concerned with the area of control, such as 'Quarterly Progress Reports', 'cash limits' and 'capital budgets'. On the other hand, the Irregular User Group is more static in the elements which it construes it influences. It considers that it can influence both the elements concerned with the delivery of care, as well as some of the elements of financial information in the area of control, such as 'capital budgets' and 'revenue budgets'.

One explanation of these differences is that with the imposition of cash limits on the Authority and the enforcement of budgets, those who understand the financial information and its implications, the Regular User Group, do not construe influence over elements concerned with both the delivery and the cost control of care. This is perhaps because the group recognizes that it is not possible to influence both of these areas. Thus, by the third grid, the Regular User Group construes that it influences the elements concerned with the area of control of costs alone, and that the group's influence upon delivery recedes. The Irregular User Group, however, construes influence upon both the delivery of care and some of the financial information elements concerned with control. In other words the Irregular User Group have a less pervasive understanding of the financial information and its implications, in that the group still construes influence over the financial information elements. At the same time, through their work, the members of the Irregular User Group may construe that they still can influence the delivery of care.

7.5.302 Summary

It would appear, then, that these results do not accord with the anticipation that the receipt and use of financial information would increase the use of this supplied construct. This is because in each group one individual construes

influence upon more elements, one less, and one remains the same. However, the Irregular User Group, who have a limited understanding of financial information, have some commonality in that the group is more static in its construing of particular elements which are construed on this supplied construct. On the other hand, the Regular User Group, who construe a deeper understanding of financial information, is less static with respect to its construing of particular elements. The Regular User Group construe their influence, at the end of the study, to be concerned with elements associated with areas of control.

7.5.303 "As I would like to influence"

It was anticipated that individuals would like to influence more elements than they actually influenced, and that if individuals receive and use the financial information then there would be an increase in the number of elements which individuals would like to influence.

The members of both groups generally would like to influence more elements than they actually influence. The Irregular User Group would like to influence not only the personal and job elements, 'boss', 'the Committee' and 'Regional Team of Officers', along with 'quality of care' and 'professional judgement', but also the 'D.H.As.'; 'the Strategic Planning Group'; 'the Regional Strategy', and to a lesser extent financial information elements such as 'capital budgets'. This group would like to influence the course of future events through the institutional bodies of the D.H.As, the Strategic Planning Group and the Regional Strategy. The individual, whose understanding has increased, would like to influence less elements on the third grid than on the first grid. The two individuals, whose understanding did not change, would like to influence more elements on the third grid than on the first grid.

In comparison the Regular User Group are generally satisfied with their actual influence and show little difference between this and desired influence. For example, the Treasurer construes 'As I would like to influence' with the same elements on both the first and third grids. The Administrator, on the third grid, would like to influence more elements than are construed with actual influence, these are 'doctors and nurses'; 'D.H.As.'; 'service planning information' and 'cash limits'. To a certain extent these are elements which help to shape the Regional Strategy and its implementation. The Treasurer and the Surveyor do not indicate a desire to influence the delivery of care. Between the first and third grids one individual construes

more elements, another construes less elements, and the third construes the same number of elements.

7.5.304 Summary

By the third grid, three individuals construe an increased number of elements which they would like to influence. This is in accordance with anticipations. However, two individuals construe that they would like to influence a smaller number of elements and one individual construes exactly the same elements.

7.5.305 "I have power over"

It was anticipated that if individuals received and used financial information then there would be an increase in the number of elements construed with this construct.

The two groups are similar in that in each group there is one individual who construes power over noticeably fewer elements than the other members. This perhaps reflects that within a group of similar individuals the construing of power will vary. There are differences between the groups.

In the Irregular User Group the Nurse does not construe power over any of the three grids. This is because the individual only wants to influence affairs and leave others free to make choices which the individual may have influenced. The other members of this group construe power over one element on the first grid, but by the third grid this moves to the personal and job elements of 'the boss'; 'the Capital Programme Committee' and 'the Regional Team of Officers'. These three elements are the same core of elements which this group consistently construed that it actually influenced. It must be questioned to what extent there can be power over individuals, as represented by these groups, who are more likely to be susceptible to influence. However, the construing is of power over individuals.

In the Regular User Group the Surveyor construes power over 'self' on the second and third grids and 'professional judgement' on all grids, and so construes noticeably less elements than the other members. The other members construe power over four elements on both the first and third grids, although some of the elements change between the grids. Amongst these elements there is only one from the personal and job elements, 'the Capital Programme Committee'. The other elements over which power is construed include 'the self'; 'capital budgets'; 'cash limits'; 'quality of care'; 'investment appraisal' and 'professional judgement'. Generally,

there is an absence of construing power over individuals, the group generally construes power over some of the elements of control and professional opinion.

In the Regular User Group, by the second grid, all of the members construe power over the 'self'. In fact, the two individuals, who have been most similar in this group, construed this on the first grid too. When the four elements construed by these two individuals are examined the individuals appear to construe themselves to be quite powerful within the confines of the grid elements. On the other hand the third individual only construes power over himself, perhaps in the sense of 'at least I have power over myself if nothing else'.

7.5.306 Summary

There are differences in the way similar individuals construe 'I have power over' elements on the grid. Two construe little or no power whilst the others construe power over relatively more elements,

There are group differences. In the Irregular User Group, one individual construes the same number of elements, whilst two individuals increase the number of elements over which they have power during the course of the study. In the Regular User Group two individuals construe the same number of elements, whilst one individual increases the number of elements over which they have power during the course of the study. Thus overall equal numbers of individuals construe power over either the same number of elements or a larger number of elements.

On the third grid, the Irregular User Group construes power over elements which are concerned with individuals and groups of individuals, the personal and job elements. The Regular User Group, however, construes power over some of the elements of control and professional opinion rather than individuals. Because of the doubt as to whether there can be power over individuals, as opposed to influence, the Regular User Group appear to be consistently more powerful.

7.5.307 The Relationship between the Supplied Constructs is Examined Through the Number of Elements Construed

Table 7.19 The Total Number of Elements Construed on the Supplied Constructs

Grid	'As I influence'			'As I would like to influence'			'I have power over'		
	1	2	3	1	2	3	1	2	3
Irregular	23	24	22	27	31	28	2	5	8
Regular	22	25	23	25	30	27	9	7	10
	45	49	45	52	61	55	11	12	18

Table 7.19 contains the total number of elements construed by each group on each supplied construct. The total number of elements construed for 'As I influence' are approximately the same for each group on each grid, so that there is really no change in the total number of elements construed. With the construct 'As I would like to influence' the total number of elements construed on each grid is slightly larger than the number for actual influence on each grid, and the total has increased over the first grid. The total elements are approximately the same for each group on each grid although the Irregular User Group are consistently larger by the odd one or two elements. The construct 'I have power over' has the smallest number of constructs, in comparison with the other supplied constructs, with approximately 25% of the number of elements on the actual influence construct on the first grid, rising to approximately 44% on the third grid. Thus the number of elements increase, but this is almost wholly from the Irregular User Group, where one individual did not construe any elements on any grid on this construct, and which consistently has a smaller total number of elements than the Regular User Group.

It was found that in general there is a rank order to the number of elements construed with each construct. Power is construed with the smallest number of elements, next with a much larger number of elements is 'As I influence', and very slightly more than this, with the largest number of elements, is 'As I would like to influence'. So power and influence are not identical in terms of the number of elements construed.

7.5.308 A Construction of the Supplied Constructs in Relation to Changes in Understanding

There are some differences between the groups in the construing of elements on these supplied constructs. The pattern of the number of elements with 'As I influence' is the same for both groups, and in total is two individuals increase; two decrease; two remain the same. With 'As I would like to influence' the groups differ, the Regular User Group has one in each category, but in total three individuals increase; two decrease; one remains the same.

With 'I have power over' the groups differ. In the Regular User Group there is one individual who increases, and two individuals with the same number of elements. In Irregular User Group two individuals increase; and one remains with the same number of elements. No individual construes a smaller number of elements. The two individuals in the Irregular User Group, whose understanding remained the same, were associated with increases in the number of elements on both desired influence and power. Over all, the three individuals who construed the same number of elements with the power construct, were three of the four individuals whose understanding increased.

7.5.309 The Relationship of the construct 'As I would like to influence' to the Other Constructs

The output of the INGRID 72 program provides co-ordinates which enable the constructs to be plotted in the element space. These constructs were plotted and the influence construct was examined in relation to other constructs in its proximity. An example of this can be found in Appendix III.

7.5.310 The Irregular User Group

On each occasion that the members of the Irregular User Group construe the actual influence constructs, they are associated with different constructs to the previous occasion. For example, on the first grid 'influence' is associated with the notions: capital programme; restraints; efficient management, whilst on the second grid it is associated with planning and spending; judgement; government policy. There is no commonality amongst the construing of the members until the third grid. On the third grid all members associate actual influence with power, and also associate actual influence, with accurate information for planning, professional input

and judgement, and planning. Thus by the third grid influence is associated with power, accurate information, capital planning and professional judgement.

7.5.311 The Regular User Group

With the Regular User Group the Surveyor, on all three grids, associates influence with constructs about his work on cost control, and also on the third grid construes influence associated with power. The other members consistently construe influence associated with service planning and the strategic planning process, furthermore, on the second grid the influence construct is associated with the power construct.

7.5.312 Summary

Thus over the course of the study, the construing of the two groups is similar in that by the third grid they both construe influence to be associated with planning notions. However, this commonality does not occur with the Irregular User Group until the third grid, whilst with the Regular User Group this is a consistent association. This suggests that the Irregular User Group took some time to construe its influence over planning, and this was not the case with the Regular User Group. Although they both construe planning, the Irregular User Group construes capital planning, whilst the Regular User Group construes service planning and strategic planning. Capital planning is increasingly contingent upon the service planning and the strategic planning. Thus in the Regular User Group, influence is associated with service and strategic planning, a process which is increasingly before capital planning, whilst capital planning is associated with influence by the Irregular User Group. Although both groups are construing the same elements relating to the Capital Planning Committee, the individuals who also work with the Strategic Planning Group construe these elements within the larger frame of reference; the others construe within a smaller frame.

7.5.313 The Relationship of the construct 'I have power over' to the Other Constructs

The plots of the power construct in the element space were examined in relation to the other constructs in its proximity:-

7.5.314 The Irregular User Group

The Nurse does not construe power on to any grid. The Architect does not associate power with another construct on the first grid, whilst for the Engineer power is associated with professional input. By the third grid they both construe power associated with influence and with professional input and capital planning.

7.5.315 The Regular User Group

The Surveyor construes power continually with the decision-making of his job of cost control. The others, on the first grid, associate power with professional judgement, then on the second grid power is associated with constructs concerned with management decision-making and service planning, whilst on the third it is associated with the planning process of capital and strategy.

7.5.316 Summary

Again there are differences in the construing of the two groups. The Irregular User Group construes power associated with influence, professional input and capital planning. The construing of elements is confined to the Capital Programme Committee. The Regular User Group construes power associated with capital planning and the overall strategic planning. For the Regular User Group power is associated with constructs beyond the concern of the immediate Committee. This suggests the recognition that there are powers beyond the Committee.

7.5.317 The Relationship of the Actual Influence and Power Constructs to Each Other

The relationship of the plots, in the element space, of the two constructs, 'As I influence' and 'I have power over', were examined:-

7.5.318 The Irregular User Group

Over the course of the study the Irregular User Group construes the constructs of actual influence and power to be progressively more closely associated with each other, until on the third grid they are at their closest. At this point it appears that the individuals are not able to construe much distinction between influence and power, that is they construe influence and power in close association.

7.5.319 The Regular User Group

With the Regular User Group the constructs of actual influence and power are not closely associated with each other on the first grid, but on the second grid.

which was shortly after the publication of the Griffiths Report (Department of Health and Social Security, 1983) they are at their closest association only to move apart somewhat on the third grid.

7.5.320 Summary

Both groups exhibit the ability to construe influence differently from power, though at times the constructs are closely associated. However, the groups appear to have undergone different processes so that the Regular User Group finally construes power and influence in a clearly differentiated way. It would appear that the different process that has caused this position is not simply the provision of financial information but also that the individuals have the opportunity to influence and exercise power over the Regional Strategy. A part of this process may be that the individuals also understand the financial information, the implications and the context. The possession of particular information does not of itself cause the individual to be powerful, but perhaps the elaboration of the context through the information, when it is understood.

It should be remembered that at the start of the study the Regular User Group construed more differentiation between influence and power than at the end, and so they too have have been subject to some process which now causes less differentiation. It may be that this process is the management reform suggested in the Griffiths Report, or is Government policy, which anticipates a reduction in the cash available, in real terms, to the Authority in the future.

7.5.321 An Analysis of the Numbers of Elements Used in Construing

Several analyses were conducted on the numbers of elements construed and ticked on each grid. The aim of this analysis was to determine if the two groups construed similar quantities of elements, since it was considered that individuals who understood financial information were likely to construe more elements.

Table 7.20 The Total Number of Elements Ticked on Each Grid

	<u>Irregular</u>	<u>Regular</u>
Grid 1	301	348
2	202	331
3	227	276

Table 7.20 compares the total number of elements ticked on each of the three grids by both groups. Although the Regular User Group construes consistently

more elements than the Irregular User Group, the results of a 't' Test just fail to reach a value of statistical significance. There is a tendency by both groups to construe smaller number of elements with successive grids.

Table 7.21 The Total Number of Financial Information Elements Ticked on Each Grid

	<u>Irregular</u>	<u>Regular</u>
Grid 1	98	112
2	83	88
3	82	85

Table 7.20 compares the total number of the financial information elements ticked on each grid. Again the Regular User Group construes consistently more elements, but this is not statistically significant. In fact on the second and third grids there is little difference between the groups, and a reduction in the number of elements construed with successive grids.

Table 7.22 The Total Number of Elements Ticked with the Construct 'As I influence'

	<u>Irregular</u>	<u>Regular</u>
Grid 1	23	25
2	24	25
3	22	23

Table 7.22 compares the total number of elements ticked when the individuals construed the supplied construct 'As I influence'. Again the Regular User Group construes consistently more elements, which a 't' Test found statistically significant at the 10% level with 2 degrees of freedom.

Table 7.23 The Total Number of Elements Ticked with the Construct 'As I would like to influence'

	<u>Irregular</u>	<u>Regular</u>
Grid 1	27	25
2	28	30
3	28	25

Table 7.23 compares the total number of elements ticked when the individuals construed the supplied construct 'As I would like to influence'. This time the Irregular User Group, on two grids, construes more elements, but this is not statistically significant, although the absolute differences on the three grids are significant at the 2% level with 2 d.f.. So there are statistically significant differences in the number of elements construed by these two groups here even though there is no consistency about which group construes the smallest number, which is generally the Regular User Group.

Table 7.24 The Total Number of Elements Ticked with the Construct 'I have power over'

	<u>Irregular</u>	<u>Regular</u>
Grid 1	2	9
2	5	7
3	8	10

Table 7.24 compares the total number of elements ticked when the individuals construed the supplied construct 'I have power over'. Again the Regular User Group construes consistently more elements, which a 't' Test did not find statistically significant.

7.5.322 Summary

The Regular User Group uses consistently more elements in construing than the Irregular User Group, with the exception of the construct 'As I would like to influence'. It would seem that those who understand financial information use both more elements and more financial information elements in their construing.

7.5.40 An Analysis of the Permeability Found in the Grids

The notion of permeability of a construct means the ability to embrace new elements. It was anticipated that when individuals construe financial information and it changes their construing, then one indication of these changes would be changes in the permeability of some constructs. It was anticipated that some form of education would make this more obvious. It is not possible to look at the changes in permeability of the financial management constructs from the first grid, because the elicited constructs of the individuals were allowed to change on each grid, since one of the main concerns was to examine the change in elicited constructs. The supplied constructs are the only written constructs which are permanent on all grids and can be examined for permeability, along with the grid itself. It was anticipated that if individuals were construing themselves to have more influence, for example, then the influence construct would contain a larger number of elements than the previous grid.

7.5.41 The Supplied Constructs

Table 7.25
The Change in the Number of Elements Used with Each Supplied Construct

Between grids	'As I influence'		'As I would like to influence'		'I have power over'	
	1 and 2	2 and 3	1 and 2	2 and 3	1 and 2	2 and 3
<u>Irregular</u>						
CU	-2	-1	-3	0	0	0
CR	+3	-1	+1	0	+4	0
TH	0	0	+3	0	-1	+3
<u>Regular</u>						
KA	0	0	+3	0	-2	+2
SP	+2	-2	+2	-3	+1	0
TK	-1	0	0	0	-1	+1

Table 7.25 indicates the change in the number of elements used for each of the supplied constructs of 'As I influence'; 'As I would like to influence' and 'I have power over' on each grid for each group. There was no consistent direction of change for any of the constructs. A 't' Test on the relative and absolute changes of the construct 'As I influence' did not reach statistical significance over the grids, when viewed as either separate groups or as a whole.

There was some statistically significant change with the construct 'As I would like to influence'. There was absolute change within the whole study between the first and second and between the first and third grids, this was statistically significant on both occasions at the 2% level with 5 d.f. The Irregular User Group also had absolute change, which was statistically significant at the 10% level with 2 d.f., between the first and second grids. This Group, together with two individuals in the Regular User Group, did not change the number of elements construed between the second and third grids. Thus it appears that there is some change in the construing of this construct, mostly through increases in the number of elements, which is indicative of broadening of the construct which has generally occurred between the first and second grids.

There was also some statistically significant change with the construct 'I have power over'. There was some absolute change within the whole study between the first and second grids which was statistically significant at the 10% level with 2 d.f. The Regular User Group also has absolute change between the first and second grids which was statistically significant at the 10% level with 2 d.f. Thus there has been some change in construing of this construct, mostly through decreases in the number of elements, which is indicative of deepening of the construct.

7.5.42 SUMMARY

There are changes in the permeability of the three supplied constructs but there is no consistent direction of change. There is statistically significant absolute change on two constructs. With 'As I would like to influence', it is generally in the direction of broadening the construct, indicating more elements would like to be influenced. With 'I have power over', it is generally in the direction of deepening the construct, indicating a narrowing of the focus of power on particular elements.

7.5.43 The Permeability of the Whole Grid

Table 7.26
The Change in the Number of Elements Used with Each Grid

	Between grids 1 and 2	2 and 3
<u>Irregular</u>		
CU	-9	+10
CR	-17	+4
TH	-73	+11
<u>Regular</u>		
KA	+14	-30
SP	-36	-42
TK	+5	+17

The permeability of the whole grid was examined and analysed through the change in the total number of elements ticked on each grid. The increase or decrease in the number of elements ticked on each grid is shown in Table 7.26.

Only the individuals in the Irregular User Group had relative changes running in the same direction between the grids. With the Irregular User Group there was a general decrease in elements, between the first and second grids, whilst between the second and third grid there was a general increase in elements. Only these increases in elements were statistically significant, and this at the 10% level with 2 d.f..

With all of the members, over the course of the three grids, four individuals construed less elements than on the first grid. These relative changes were not statistically significant in a 't' Test, but the absolute changes were, at the 10% level with 5 d.f. The absolute changes between the first and second, and second and third grids were statistically significant, at 10% and 5% with 5 d.f., respectively. Thus there have been changes in the construing of the elements on the whole grid by the individuals, but the changes are not all in the same direction.

Those individuals who increase their number of elements construed suggest a broadening of their construing, whilst those who decrease suggest a deepening.

7.5.44 The Permeability of the Supplied Constructs

Table 7.27

The Change in the Total Number of Elements Used with the Supplied Constructs

	<u>Between grids 1 and 2</u>	<u>2 and 3</u>
<u>Irregular</u>		
CU	-5	-1
CR	+8	-1
TH	+2	+3
<u>Regular</u>		
KA	+1	+2
SP	+5	-5
TK	0	+1

The permeability of the supplied constructs was examined and analysed through the change in the total number of elements ticked on each of the three supplied constructs on each grid as shown in Table 7.26. Although there were changes in the total number of elements used by all individuals, the relative changes were not statistically significant, neither in the groups, nor as a whole. The absolute changes of the two groups, also, were not statistically significant. However, the absolute changes of those in the whole study were statistically significant at the 5% level with 5 d.f. between the first and second, the second and third, and the first and third grids, and this suggests much change in the individuals' construing. Over the course of the study there were two individuals in each group who increased the number of elements in the three supplied constructs. During the study the individuals have changed their construing of the supplied constructs, generally by adding elements. The numbers involved in these changes are quite small and might suggest some very slight broadening in the construing of these individuals.

7.5.45 The Change in the Permeability of the First Principal Component

Table 7.28

The Change in the Number of Elements Used with the First Principal Component

	Between grids 1 and 2	2 and 3
<u>Irregular</u>		
CU	0	0
CR	+6	+8
TH	-22	-2
<u>Regular</u>		
KA	-16	-1
SP	+4	+1
TK	+3	+12

The change in the construing of the first principal component was examined and analysed by taking change in the number of elements occurring in the sense of the constructs forming the component. These changes are shown in Table 7.27. Although five individuals changed the number of elements, the relative and the absolute changes in the groups were not uniform and not statistically significant. However, the absolute changes in the number of elements of all of the individuals between the grids were statistically significant at the level of 10% with 5 d.f., and between the first and the third grid at the 2% level with 5 d.f. Thus the changes in the construing of the individuals has also changed the number of elements in the first principal component. The change in the number of elements is generally relatively large, so that over the course of the study the change in the number of elements is quite salient for the majority of these individuals.

7.5.46 The Change in the Number of Financial Information Elements Construed

Table 7.29

The Change in the Number of Financial Information Elements Construed

	Between grids 1 and 2	2 and 3
<u>Irregular</u>		
CU	+3	+1
CR	-5	-1
TH	-13	-1
<u>Regular</u>		
KA	-8	+2
SP	-18	-7
TK	+2	+2

The change in the construing of the elements of financial information was examined through the change in the number of times that the elements of financial

information were ticked on each grid. This is shown in Table 7.28. It was anticipated that if a change in the construing of financial information took place, then it would be likely that the number of financial information elements used would change. All of the individuals changed the number of financial information elements which they construed on each grid, however, the relative and absolute changes in the groups were not statistically significant. Within each group two individuals construed fewer financial information elements over the course of the study. The overall absolute changes were statistically significant at the 5% level with 5 d.f., as were the changes between each grid. Thus the changes in the construing of the individuals have embraced changes in the number of financial information elements construed on each grid, and with two individuals from each group there is a general decrease in the number of financial information elements construed.

7.5.47 Summary

The individuals in this study clearly change their construing of the elements on the grid. This has been demonstrated by examining the permeability of their construing on successive grids. An examination of the permeability of the whole grids has shown the general tendency for individuals to decrease the total number of elements construed, and suggests deeper construing. The permeability of the supplied constructs in total has also been demonstrated, but in this case there has been the general tendency to increase the number of elements construed, and suggests broader construing. Although there has been a quite large change in the number of elements construed in the sense of the first principal component, no general tendency has been observed. Finally the change in the construing of the financial information elements has been shown with a general tendency for a decrease in the number of financial information elements. This has occurred with four individuals, two from the Regular User Group, whose understanding increased, and two from the Irregular User Group, whose understanding remained the same.

7.60

Further Information Required by the Individuals

It was anticipated that if individuals elaborated their construing of the financial information elements so that they enhanced their understanding and meaning of financial information elements, then they would consequently require more information. At the conclusion of the third grid the individuals were asked what further information they would like to receive. The two groups responded to this question in the following ways.

7.61 The Irregular User Group

No individual from the Irregular User Group construed the need for further information. Thus from the three individuals with little apparent deep understanding of financial information, including the two individuals with no change in understanding during the study, there is no expression of the need for more financial information. In fact there were two unsolicited comments stating that there was already too much financial information and the relevance of some of the financial information was not apparent. Thus two individuals stated that they required less financial information, and one required the same information.

7.62 The Regular User Group

The members of the Regular User Group considered that there was a need for the information of the Regional Strategy, to be provided to the Committee. In this group two of the three individuals are members of the Strategic Planning Committee. That Committee had not finalised its report, the Regional Strategy, at the time of the third grid. The three individuals in this group appear to recognise the need for the Capital Programme Committee to work within the Regional Strategy, and suggest that it needs to be made available. Thus they all require more information, including financial information.

7.63 Summary

There is a clear difference in the responses of the individuals in the two groups. The individuals in the Irregular User Group do not require more information and in fact two require less financial information, whilst the Regular User Group do require more information.

These findings are in accord with anticipations, that those individuals who understand the existing information are prepared to accept more, whilst those who do not understand are not prepared for more information. The information in the Regional Strategy can be classified as Structural and Contextual information. Those individuals who do understand the Functional and Structural information with which they work do construe a need for more Structural and Contextual information.

7.70

Summary of Major Results

The Results section contains some commentary which demonstrates why particular analyses have been conducted as well as the outcome of the analyses, and a summary. The study was exploratory in its intent and although a model and some hypotheses were formulated not all of the hypotheses are relevant to this study. The additional findings certainly add to the model of this area. Accordingly it is

necessary to provide some rounding or gestalt as to what has happened to the individuals in this study, what has been construed from these events set down on the grids, and how these findings relate to the initial model and the relevant hypotheses which were formulated.

In order to make more sense out of what happened to the individuals they were placed into a group which related more closely to one of the hypotheses. The individuals were partitioned into two groups. The Irregular User Group comprises three individuals who have had no formal training in connection with financial information and who do not appear to use financial information on a daily basis. The Regular User Group comprises three individuals who in the past have received formal training in connection with financial information and who appear to use it on a daily basis.

Superficially all of the individuals in this study are identical in respect of their influence on the Capital Programme Committee. In this respect they all appear to be in that part of the Information - Influence Matrix where there is Participation and at least Structural information. This means that in broad terms the Irregular User Group can be examined in terms of Hypothesis 8 and the Regular User Group can be examined in terms of Hypothesis 9.

7.71 Hypothesis 1

An individual who is presented with a set of elements, which includes elements which are labels of financial information, will not necessarily find these elements of financial information within his range of convenience.

In both groups all individuals initially find the financial information elements within their range of convenience.

7.72 Hypothesis 2

An individual, who construes the provision of financial information, will construe that financial information and so revise the construing of the same set of elements which was originally presented.

In both groups the individuals revise their construing of the elements between the first and third grids.

7.73 Hypothesis 3

An individual, who construes the use of the financial information provided, will further revise the construing of that same set of elements.

This hypothesis construes that an individual who uses the financial information with which he has been provided, will revise his constructs more than an individual who does not use that information.

All of the Regular User Group and one individual in the Irregular User Group revise their construct systems more than the remaining two individuals in the Irregular User Group.

7.74 Hypothesis 4

An individual, who is trained to use and who does use the financial information provided, will revise, even further, the construing of that same set of elements.

This hypothesis construes that an individual who is trained to use and who uses the financial information with which he has been provided, will revise his constructs more than an individual who is not trained to use that information.

The Regular User Group are clearly different from the Irregular User Group in their construing of the elements. It would seem that the only reasons for this difference relate to either training or use. It must be mentioned that there is one individual, in the Irregular User Group, who had obviously made efforts outside of the formal Committee meetings and training to understand the financial information and its implications. The construing of this individual has also revised in a manner similar to those in the Regular User Group.

7.75 Hypothesis 8

An individual, who construes the provision of financial information in the context of participation and who is not trained, will revise the construing to:

- a. construe more influence.
- b. construe more desired influence.
- c. construe more power.
- d. not construe more financial information elements to be ticked in completing the grid.

- e. not construe the desire for more or different types of financial information
- f. not increase the understanding of financial information elements.

The Irregular User Group

- a. One individual construes influence upon a larger number of elements, one upon a smaller number and the third upon the same number.
- b. Two individuals construe desired influence upon a larger number of elements, and one upon a smaller number.
- c. Two individuals construe power over a larger number of elements, and one over the same number.
- d. Two individuals construe a smaller number of financial information elements, and one a larger number of financial information elements.
- e. Two individuals construe a requirement for less financial information, and one for the same financial information.
- f. The understanding of financial information for individuals remains the same and for one it increases.

2.76 Hypothesis 9

An individual, who construes the provision of financial information in the context of participation and who is trained, will revise the construing to:

- a. construe more influence.
- b. construe more desired influence.
- c. construe more power.
- d. construe more financial information elements to be ticked in completing the grid.
- e. construe the desire for more or different types of financial information.
- f. increase the understanding of financial information elements.

The Regular User Group

- a. One individual construes influence upon a larger number of elements, one upon a smaller number and the third upon the same number.
- b. One individual construes desired influence upon a larger number of elements, one upon a smaller number and the third upon the same number.

c. Two individuals construe power over the same number of elements, and one over a larger number.

d. Two individuals construe a smaller number of financial information elements, and one a larger number of financial information elements.

e. Three individuals construe a requirement for more financial information, both Structural and Contextual.

f. The understanding of financial information for the three individuals increases.

7.77 A Summary of the Results with Respect to the Hypotheses

The movement of the groups in the course of the study can be briefly summarised as follows:

	<u>Increases</u>	<u>Decreases</u>	<u>Remains the same</u>
<u>The Irregular User Group</u>			
Understanding	1	0	2
As I influence	1	1	1
As I would like to influence	2	1	0
I have power over	2	0	1
Financial information elements	1	2	0
Information requirement	0	2	1
<u>The Regular User Group</u>			
Understanding	3	0	0
As I influence	1	1	1
As I would like to influence	1	1	1
I have power over	1	0	2
Financial information elements	1	2	0
Information requirement	3	0	0

7.78 A Summary of Other Results

The Irregular User Group do not appear to have functional understandings about the financial information elements. They have an excess of information which could be reduced and no requirements for further information. There appears to be a movement of the group for less rather than more information.

At the same time there are indications that, although the group construes more influence and more power over the grid elements at the end of the study, power and influence have converged, so that they construe influence and power similarly. Constantly, throughout the study, the group have shown the desire to influence more elements than is construed for actual influence. Thus there is a movement of the group for more participation.

The Regular User Group appear to have functional understandings about the financial information elements. The group considered that the information of the Regional Strategy should be provided to the Committee, a movement for more information, both Structural and Contextual. However, for this group, two members are already aware of the Regional Strategy and participate in its formulation, so the entire group is not requesting information which is new for all of it, but consider that this should be freely available to the Committee members.

The group construes about the same influence and power over the grid elements, but these are over a larger number of elements than are construed by the Irregular User Group. There is a desire for more influence than is actually exercised, but over the course of the study the type of actual influence remains about the same. The position of the individuals in the group would appear to be unchanged with respect to participation for themselves, although it could be construed that, in requesting that the Committee be given more information, these individuals would like the Committee to participate further and fully.

7.79 A Concluding Comment

In this study it would appear that the simultaneous movement of more information, more influence and more power has not occurred. In the Irregular User Group less information is required and there is a desire for more influence, at the same time actual influence and power are construed similarly, although actual influence generally remains about the same, and the number of elements over which power is exercised increases. In the Regular User Group more information is required for the Committee and there is a desire for more influence, at the same time actual influence remains about the same, and the number of elements over which power is exercised remains about the same.

Chapter Eight

Organizational Study Two - A Southern Retail Co-operative

Introduction

8.0

The co-operative movement in the Southern part of Britain has been known through retail co-ops. Although the retail co-ops are connected to the larger co-op movement and the Co-operative Wholesale Society, the majority of these co-ops are locally owned and run, with their own local co-op name. In recent years the retail co-ops have seen a decline in their activity. It was one such Southern retail co-op that forms the basis of this study. At the time of contacting the Chief Executive of the co-op, he had been in post four months and was clarifying and re-thinking the requirements of the co-op. Some fifteen months later the next discussion took place, but this time with the Food Trades Officer (FTO), who had been brought in thirteen months earlier to improve the trading position of the food stores.

8.1

The Structure of the Food Section of the Co-op

At the start of the study the following structure existed. The Chief Executive was the executive in overall charge of the co-op. The FTO had the responsibility for food and centralized buying and reported to the Chief Executive. Working with the FTO was an executive who specialized in butchery and general grocery, but was subordinate to the FTO. Together these two individuals centrally assessed and ordered the requirements of the store for the succeeding week in conjunction with the store manager, and they were responsible for the management of the stores. A manager was in charge of each store.

There were ten stores, eight small Community Stores and two Pricefighter Stores or Superstores. Generally, in the Community Stores, a small number of Section Heads were responsible to the Store Manager. A Section Head was allocated a part of the store and responsible for the position of goods, stocking the shelves and pricing the goods. Occasionally Section Heads did other jobs such as working on a till. The Pricefighter Stores had a Manager, an Assistant Manager and a number of Section Heads, who, in addition to the above work, occasionally did other jobs. In reality only the larger of the two Pricefighter Stores had this structure throughout the whole of the study. Both of the Pricefighter Stores has their own Butchery Section. Included in the study was a third butcher who worked independently, from a butchery attached to the Community Store used in this study, supplying meat to all of the

Community Stores. This third butcher and the butcher in the largest Pricefighter Store had others responsible to him.

Shortly after the first grids had been completed the co-op merged with another. At the time, the merger was not supposed to affect either the provision of information, or the study, as such, and the study continued in the food stores. The food sections of the two separate co-ops merged into one food section. The FTO of the other co-op retired, my contact FTO did not want the enlarged job of the merged food sections and did not apply for it. In the new situation he continued as my contact, but had a different relationship to the Store Managers to before the merger, and now was the Merchandising Marketing Manager (MMM). Between the MMM and the Store Managers were placed Area Managers, first line advisors to the Store Managers.

The co-op was under pressure concerning the viability of the food stores. One of the measures taken to help the situation was to reduce the number of staff in the stores. Staffing was constantly reviewed during the course of the study, and where reductions were made then the remaining staff felt under pressure, and doing the work of the individuals removed. This issue, together with the issue of personnel costs of the staff in each store, was alive during the course of the study.

8.20 Financial Information Training and the Grids

There was a minimal amount of management information available about the food stores in the co-op and virtually nothing supplied to the Store Managers until the present Chief Executive and original FTO arrived. It had been the practice for Store Managers to receive the results of a month's activities sometime in the following month. The only discussions with a Store Manager had been when the annual sales target for the shop was fixed. The FTO considered that the Managers should not be overwhelmed with financial information. Some 10 months before the study commenced the Store Managers started to become involved in comparing their actual sales for a week with the sales target for that week. They then set the sales target for the next week, and were made aware of the permitted personnel costs for that next week. All of this was discussed with the FTO.

The FTO noted that many of the Store Managers had been fearful of these activities and the financial information. Initially the Store Managers had responded in the way which they considered the FTO wanted. The point of the exercise, for the FTO, was simply to discuss the results with the Store Manager and get the Store Manager to assess the prospects for the shop. The FTO noted that, after several

months the fear passed and the Store Managers worked quite easily with the financial information.

The FTO noted that this study would cover the next stage of the development of the provision of financial information. The co-op anticipated providing functional information to the Store Managers and the Section Heads under ten main headings. Nine of these headings contained financial information and one contained non-financial information. The FTO anticipated that within 6 to 9 months the Store Managers, the Section Heads, and the butchers would be able to handle most of these items of information.

The original design of the study incorporated the following features. The study would start in late November 1983 when the first grid would be completed. In January/February 1984 the new information was to be provided and the second grid would be completed three months later in March/April 1984. It was anticipated that, after the second grid had been completed, some training connected with the financial information would be given. This was to be carried out in 2 hourly sessions over 4 weeks. It was then anticipated that the third grid would be completed 3 months after the training had finished.

The actual design was a little different. The interviews and first grid were completed by early December 1983. Changes in the branch recording systems and some problems in producing the new information, which was being computerized, delayed the introduction of the new financial information until March 1984, so that the second grids were completed in late May and early June 1984. Training started in Autumn 1984. The training was not completed in the agreed formal sessions. The training took place at the monthly meetings of the new FTO and the MMK with groups of between eight to ten of the Store Managers. Included in these monthly meetings were explanations of the new types of information and their implications. The two butchers who completed the third grid had been involved in individual discussions of a similar nature with the Butchery Manager. The third grids were completed between the end of January and early March 1985.

8.21 The Participants

The participants in the study were originally located in one of three stores, the two Pricefighter Stores and one Community Store. The participants were the Store Managers, Assistant Managers and Section Heads in these three stores. These stores were selected by the FTO. Seventeen individuals completed the first grid, and one individual in the above categories refused to co-operate with the

study. During the course of the study six individuals left, so that only eleven individuals completed three grids. By the completion of the second grid four individuals had left the co-op. Since financial information had been provided to all, including the replacements, it was considered worthwhile to include any replacements. At this time five replacement individuals were added, and four were available to complete a second grid at the end of the study. There are therefore eleven individuals who have completed three grids and four individuals who have completed two grids.

8.22 The Partition of the Participants into Groups

Events in the co-op have meant that these participants have not all been treated in the same manner with respect to the provision of financial information and training. Accordingly they are partitioned into four groups. At the time of the last grid, and for different reasons, three individuals were no longer provided with financial information, and they had received no training. These comprise the Financial Information Withdrawn and Untrained Group, known as the Withdrawn Group. Four individuals had received or had access to use financial information, but had not received any training. These comprise the Financial Information Provided and Untrained Group, known as the Untrained Group. Six individuals had received both financial information and some training. These comprise the Financial Information Provided and Trained Group, known as the Trained Group. The remaining two butchers had a similar information system and received both financial information and some training. These comprise the Trained Butchers Group.

8.30

The Elements of the Grid

Interviews were held with 15 individuals, out of the original 17 individuals who completed the first grid, in order to generate elements for the grid. The other 2 individuals were not available at the time of the interviews. The interview also served to introduce individuals to construing the study and its concern with financial information, and, to generally make them aware of the types of financial information which was going to be provided.

The interview sessions were documented in writing during the interview, then all interview notes were analysed for their content to find issues suitable for elements which were common across all or most of the individuals.

The interviews were examined for the work carried out; colleagues; issues or problems associated with the co-op and information. The following list was compiled:

1. Myself.
2. My immediate boss.
3. The store.
4. Personnel problems.
5. The timeliness of information about promotions (special offers).
6. Problems of stock.
7. Personnel costs.
8. Actual sales.
9. Sales target.
10. Cost value.
11. Retail value.
12. Gross profit.
13. Gross percentage.
14. Sales percentage.
15. Profit percentage.
16. Product breakdown.
17. Leakage and surplus.

8.31 The Presentation of the Grid

The elements listed above formed the basis of the grid on which there were three supplied constructs. The grid was presented to eleven individuals three times and to four individuals twice in the standard manner previously established. On completion of each grid the individuals were asked for any comments which they wished to make about the grid, and any matters relevant to the study. After the final grid they were asked what additional information they would like to receive.

8.32 The Analysis of Individual Grids

The completed grids of each individual were collated and examined for the changes in construing over the time of the study. Each grid was subjected to the INGRID 72 program (Slater, 1972). The output of the INGRID 72 program provided principal components for each grid, as well as co-ordinates which enabled the elements to be plotted in the construct space, and conversely the constructs to be plotted in the element space. This facilitated an examination of the relationships between the elements and the constructs, and between the elements themselves and the constructs themselves. An example of a set of completed grids for one individual together with the output of the INGRID 72 program, and the attendant individual analysis is contained in Appendix V.

Attention was given to permeability and change. The permeability of the constructs; the sense of the first three principal components and the permeability of whole grid were examined. The issue of permeability has been discussed already and can be found in Chapter Seven page 83.

The remainder of this chapter is distillation of the examination of the results of each grid for each individual. Initially the commonality in the construing of all of the individuals in the study is considered, then the fifteen individuals are partitioned into either the Withdrawn Group, or the Untrained Group, or the Trained Group, or the Trained Butchers Group. The results from each group are analysed and then compared.

8.4.100 The Written Constructs

The elicited written constructs of the individuals were examined to ascertain if they made reference to financial information or financial management. It was anticipated that there would be fewer of these 'financial' constructs in naive construers and that in such construers the constructs would be less complex. This examination revealed that there were individuals with written constructs including or employing terms of or from financial information or financial management. This indicates that there are individuals in the study who can construe financial information. These 'financial' constructs can be classified into six categories of constructs: constructs of need; constructs of figures; constructs of description; constructs of function; constructs of time and constructs of structure.

8.4.101 The Categorization of 'Financial' Constructs

The basis for placing a construct into one of these six categories is as follows:

The need constructs contain the word "need", or relate the need of the individual for financial information. For example, "information about special offers should be given at the start of the week".

The figures constructs contain the word "figures". For example, "figures", or "figures not people".

The descriptive constructs describe the financial information or financial management terms for the individual. For example, "both are a percentage", or "total made overall".

The functional constructs demonstrate the function or use of financial information for the individual. For example, "not hitting the sales target means personnel problems", or "it's up to me to ensure that I make the right retail value from the cost value".

The time constructs amalgamate the financial information or financial management terms with time. For example, "if I do not get the right information on time I may over or under order which will affect my gross profit", or "The timing of information and stock problems can affect the figures"

The structural constructs amalgamate the financial information or financial management terms with some structure in the co-op. For example, "A good store is busy and profitable".

8.4.102 The 'Financial' Constructs Construed in Terms of the Psychology of Personal Constructs

When the first four categories of constructs are considered in terms of the types of personal constructs then they can be allocated to the following types of constructs identified by Kelly (1955).

The need construct is a comprehensive construct, that is a construct which subsumes a relatively wide variety of events. This type of construct is permeable and is enabled, by its open-endedness, to embrace more and more constructs and elements (Kelly, 1955). With the occurrence of a need-comprehensive construct, it can be anticipated that, in such individuals the construct system will become more elaborated through both the experience and modulation corollaries (Kelly, 1955). Simultaneously the need construct could be a superordinate construct which would allow the elaboration of the part of the construct system concerned with financial information. However, in this study only one need construct arises.

The figures construct could be a comprehensive construct, that is a construct which subsumes a relatively wide variety of events. Also, it could be a propositional construct, that is a construct which leaves its elements open to construction in all other respects (Kelly, 1955). With the relatively simple written construct, that a figures construct is, a figures-comprehensive construct at least acknowledges the mathematical properties of figures, but leaves the construing there. On the other hand, a figures-propositional construct not only acknowledges the mathematical properties, but accepts that figures could just as easily concern money, or length, or weight. It is impossible from these simple written constructs to determine the inclination of the individual to, either a figures-comprehensive construct, or a figures-propositional construct. In each case the construct is apparently at a superordinate level capable of allowing the construct system to elaborate.

The descriptive construct that is a propositional construct, that is a construct which leaves its elements open to construction in all other respects. With a descriptive-propositional construct the construct describes one of the attributes or facets of a particular piece of financial information. Kelly considers that propositional constructs are employed when an individual construes circumspectively. Such construing occurs at the start of the cycle in the sequence of Circumspection-Pre-emption-Control, in the C-P-C Cycle (Kelly, 1955).

The functional construct is a pre-emptive construct, that is a construct which pre-empts elements for membership in its own realm (Kelly, 1955). With a functional-pre-emptive construct the construct demonstrates/identifies/states the use of financial information in terms of financial management. Kelly notes that the construction of pre-emption makes for control.

8.4.103 The Individual's Construing of Financial Information

The individual, construing the elements presented, will construe these in his own way. Thus through the individuality corollary, there are differences in the construing of the same elements. At the same time, through the organizational corollary, each individual evolves his own construction system. The individual's construction system, through the experience corollary, varies as the individual successively construes the replication of events.

The experiences of the individuals in the co-op have some commonality. They all work for the co-op, although in an increasing number of different stores. No individual would appear to be doing exactly the same job as another in the sense of, say, a number of people on a bench inserting electrical components. They all, at some time, have received some financial information from the co-op during the course of this study. Financial information is one of the main issues in the study and one group have had it withdrawn, two groups have received some training connected with the financial information, and one group has merely received the financial information.

The elaboration of the financial construct system is through the modulation corollary, and the variation of the system is limited by the permeability of the constructs. Simultaneously, through the fragmentation corollary, an individual may successively employ a variety of construction sub-systems which are inferentially incompatible with each other.

It may be that an individual may construe that financial information partially consists of figures, but this does not mean that if any amount of financial

information is provided, that it will be understood. It will be understood only if the construct system is already elaborated, or is subsequently elaborated, in this direction.

The presence of descriptive-propositional constructs indicates that the individual's construct system recognizes financial information and can describe it. Again, this does not mean that the financial information is understood, merely its existence is acknowledged.

The use of financial information is demonstrated through the existence of functional-pre-emptive constructs. These functional-pre-emptive constructs enable the individual to exercise control, as a result of receiving financial information, and to make an appropriate decision through the choice corollary.

At the same time other issues arise with financial information or financial management, so that in the co-op it has been possible to categorize two other general areas of constructs. One is the issue of time, the timeliness of information, and the formation of time constructs. The other issue is the relationship of the financial information to the structure of the co-op, and the formation of structural constructs. The training or explanation given to an individual is an opportunity for an individual to elaborate his construct system and to have conditions suitable for the formation of new constructs.

8.4.104 The Anticipations of the Changes in Construing

It is anticipated that if an individual's construct system elaborates to include notions about financial information and financial management are included, then the number of such 'financial' constructs is likely to increase over successive grids. At the same time if this elaboration is more salient for an individual then it is likely to show itself in the senses of the principal components. That is, if on the individual's first grid there are no 'financial' constructs, but on the second or third grid they are present, then some of these 'financial' constructs could be involved with the sense of at least one of the first three principal components.

8.4.110

The Senses of the Principal Components and the Plots of Elements and Constructs

8.4.111 The Derivation of the Senses of the Principal Components

The senses of the constructs on the principal components were obtained in the following manner. The output from the analysis performed by the INGRID 72

program, included the loadings of the constructs on the principal components. The loadings on the first three principal components were examined in turn. On the first component, the construct with the largest loading was taken together with its loading. Then the construct with the next largest loading was taken. The comparative sizes of the loadings were noted, as were the semantics of the constructs. If the loadings and the semantics were relatively close together, then the next largest loading and its construct was taken. These were then compared with the earlier loadings and constructs. The process was continued until there was an apparent lack of relationship between the magnitudes of the loadings and the semantics of the constructs. This procedure constituted the cut off point for the constructs in the sense of the component. The main construct senses of the first three principal components were built up in this way. An example of this is included in Appendix V.

These three principal components are the main ways in which the individual construes. Appendix VI lists the senses of the first three principal components of the individuals in this study. It is these construct senses from the first three principal components which form the basis of the following analysis.

8.4.112 Commonality Amongst the Senses of the First Three Principal Components

The senses of the first three principal components were examined for the amount of commonality amongst the constructs. It was anticipated that, apart from the supplied constructs, there would be no identical written constructs amongst the individuals in the co-op. This was found to be the case. The constructs were then sequentially compared with each other to establish if the total meaning of a construct could be said to demonstrate commonality with at least one other construct. In almost all cases the constructs were quite straightforward and only contained one notion, so that identification of commonality was quite straightforward too.

In this study the first three principal components are taken from 15 individuals. There are 4 individuals who completed two grids, so providing 24 construct senses, and there are 11 individuals who completed three grids, so providing 99 construct senses. In total there are 123 construct senses which could demonstrate commonality. Two constructs were taken to be the minimum form of commonality between constructs, and there are 17 types of constructs where constructs are held in common, using 103 construct senses in total. Dividing the actual number of construct senses, 103, by the number of types of construct, 17,

provides a possibility of an approximate average of 6 individuals who share one of these constructs in common.

To demonstrate those constructs with the widest commonality during the course of the study, the constructs which occur on any of the grids by 6 or more individuals are listed in the order of most commonality in Table 8.1. This Table also indicates on which grid the construct occurred, and the number of different individuals holding those constructs. Where individuals only completed two grids, being the last two sessions, these are included under the second and third grids.

Table 8.1 Constructs Held with the Widest Commonality

Construct	Grid	1	2	3	diff individuals
Required to make a profit		1	3	7	8
Stocking the store		3	5	4	8
Trying to affect sales		3	4	1	7
Personnel and people in the store		4	6	2	7
Boss affects aspects of the store		1	4	4	6
Influence: As I influence		4	2	3	6
I do not influence		0	1	2	3
Power: I have power over		2	3	1	4
I do not have power over		0	2	2	4
<u>Total</u>		18	30	26	53

Table 8.1 shows that the first 5 constructs in the Table, out of the 17 types of construct, are held by more than six individuals. These account for 61 of the 103 construct senses, so that about 59% of the construct senses are construed in common. When the issues of no influence and the general area of power are also included there are 74 construct senses, 72% construed in common.

The most commonality occurred with the construct notion 'required to make a profit'. Clearly there is an increase in the salience of this issue, with 6 different individuals on the third grid. On the first grid this notion would not even be ranked in the first five amongst the other construct senses shown in Table 8.1. It would seem likely that the greater awareness of this issue has been brought about by the management of the co-op. At the same time the notion of 'trying to affect sales' has decreased in salience. It would appear that the decline in the construing of this issue is not unrelated with the increase in the construing of the requirement for profit. In other words individuals are aware that it is not just the amount of sales that is of importance, but that there is a sufficient profit.

With two of the other constructs construed with some commonality on the first grid, 'stocking the store' and 'personnel and people in the store', their

saliency has also altered. The notion of 'stocking the store' shows a small increase in saliency. Generally these notions are concerned with the store having the correct stock to sell, and would seem to fit in with the constructs concerned with profit and sales. The notion of 'personnel and people in the store' decreases in saliency over the study. This is generally construed in a quite straightforward manner that some elements are people. However, these are clearly less salient.

Another issue which has increased in saliency is the 'boss affects aspects of the store'. From the individuals construing in this way, it would seem that there is recognition of some more centralized control over certain aspects, such as personnel costs, and recognition of the individual role of the store manager.

The issues of influence and power are taken together. It would appear that there is a slight decrease in the saliency of actual influence as a construct. This is accompanied by constructs noting that individuals do not have influence. Thus it would appear that less influence is generally construed. A similar pattern emerges with the issue of power. There is a slight decrease in the saliency of actual power, and this is accompanied by constructs noting that individuals do not have power, so that in general individuals construe less power.

8.4.113 Financial Constructs and Constructs of Influence and Power

The four groups are now examined for the existence of 'financial' constructs, as well as 'influence' and 'power' constructs, in the senses of the first three components. This was carried out by examining the construct sense of the first three principal components of each individual, and shown in Appendix VI.

8.4.114 The Withdrawn Group

The number of financial, influence and power constructs, in the sense of the first three principal components on the three grids, is shown in Table 8.2.

Table 8.2
The Number of Financial Constructs in the Sense of the First Three Components

Grid	Figures			Function Structure			No influence			No power		
	1	2	3	1	2	3	1	2	3	1	2	3
First component	0	1	1	0	0	1	0	0	0	0	0	0
Second component	0	0	0	0	2	1	0	1	0	0	0	0
Third component	0	0	0	0	0	1	0	0	0	0	0	1
	0	1	1	0	2	3	0	1	0	0	0	1

There are only three individuals forming this group. Two of these did not join the co-op until after the first grid and it is these who have the 'financial' constructs. There are no financial constructs relating to description or time, or the constructs of influence or power. There is one individual who construes financial information in relation to the structure of the co-op on the second grid. There are figures-comprehensive constructs, on the first component, construed by one individual who also construes a functional-pre-emptive construct on the second component of the second and third grids. The second individual construes one functional-pre-emptive construct on the second grid and two on the third grid. So that not only is there an increase in the number of functional-pre-emptive constructs, for this individual, but also a movement of financial constructs into the first component, the main way of thinking. The third individual has none of these 'financial' constructs, and on the third grid construes both no influence and no power.

For this group the construing of financial information has elaborated a little. The range of financial constructs is very limited and the constructs are very simple. Only one individual has elaborated their construct system to increase the number of functional-pre-emptive constructs and their salience, so that one occurs on the first component on the third grid. This individual had separately indicated that financial information had been discussed with the manager. The second individual's construct system has elaborated to include some financial terms, whilst the third individual does not construe financial information in any way, and construes that she is without influence and power by the third grid.

8.4.115 The Untrained Group

The number of financial, influence and power constructs, in the sense of the first three principal components on the three grids, is shown in Table 8.3.

Table 8.3

The Number of Financial Constructs in the Sense of the First Three Components

Grid	<u>Descrip</u>			<u>Function</u>			<u>Time</u>			<u>Structure</u>			<u>Influence</u>			<u>No influ</u>			<u>Power</u>			<u>No power</u>		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
First	0	2	0	1	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Second	0	1	0	0	1	0	0	0	0	0	0	0	0	1	1	0	0	1	0	1	0	0	0	0
Third	0	0	0	1	3	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
	0	3	0	2	4	5	0	0	1	0	1	0	1	1	1	0	0	1	0	1	0	0	0	1

There are four individuals in this group. The figures-comprehensive constructs do not occur in the first three principal components. However, there are three descriptive-propositional constructs which occur only on the second grid with

two individuals. The incidence and salience of these constructs is limited. On the third grid one of these first components is replaced by a functional-pre-emptive construct.

The functional-pre-emptive constructs increase their salience over the study, so that one individual construes these on the first grid, on the first and third components, and by the third grid there are three individuals construing these. On the third grid two different individuals construe these functional-pre-emptive constructs on the first component, and the original individual construes functional-pre-emptive constructs only on the third component along with these two individuals. So in one individual there is a decrease in the salience of the construing of financial information, whilst in two individuals there is an increase in the salience of such construing. The functional-pre-emptive constructs construed are very simple in their form, however, they are clearly in the main ways of thinking of the majority of the group, both at the time of the second grid and after the provision of financial information. It is possible that the provision of financial information is also associated with the occurrence of the single time and structural constructs on the third and second grids.

There is one individual who, during the course of the study, consistently construed actual influence, which moved from the third component on the first grid to the second component on the two last grids. This individual also construes power on the second grid. Two of the other individuals construe either no influence or no power. Thus there are indications of influence and power being less salient in some cases.

In this group the construct system has elaborated to include some very simple 'financial' constructs. On the second grid, after the provision of financial information, the construct systems elaborated to include descriptive-propositional and functional-pre-emptive constructs. The third grid provided the further elaboration of more functional-pre-emptive constructs in two cases. These two individuals indicated that they had discussed the issue of financial information with their respective managers, and it is possible that such discussions assisted the elaboration of these constructs. The salience of influence has increased in one individual, but the salience of influence and power has also decreased in two individuals.

8.4.116 The Trained Group

The number of financial, influence and power constructs, in the sense of the first three principal components on the three grids, is shown in Table 8.4.

Table 8.4
The Number of Financial Constructs in the Sense of the First Three Components

Grid	Figures			Function			Time			Influence			No influence			Power			No power		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
<u>First component</u>	0	0	1	0	2	3	0	0	0	2	1	2	0	0	0	1	1	0	0	1	0
<u>Second component</u>	0	0	0	2	2	4	1	0	1	0	0	0	0	0	0	1	0	0	0	0	0
<u>Third component</u>	1	0	0	1	2	2	0	1	0	1	0	0	0	1	0	2	1	0	0	1	0
	1	0	1	3	6	9	1	1	1	3	1	2	0	1	0	2	1	0	0	1	0

There are six individuals in this group. The descriptive-propositional and the structural constructs do not occur in the first three principal components. However, there is one individual who construes 'figures' constructs on both the first and third grids. On this occasion, because of the known initial facility of this individual with respect to financial information, it is not clear to what extent these can be regarded as simply figures-comprehensive constructs, as in other cases, or whether the individual construes the word 'figures' euphemistically for financial information. This individual does not construe functional-pre-emptive constructs in the first three components. In any event, these are quite clearly simple written constructs, which have increased in salience from the third component to the first component during the course of the study, so that there is an increase in the salience of figures.

On the first grid there are two individuals who construe functional-pre-emptive constructs in the first three components, and by the third grid this has increased to four individuals. Not only has the incidence of these constructs increased, but the salience of these functional-pre-emptive constructs has also increased. From a position of two individuals construing these constructs on the second and third component of the first grid, by the third grid there are three individuals construing functional-pre-emptive constructs on the first component, four individuals construing functional-pre-emptive constructs on the second component, and two individuals construing functional-pre-emptive constructs on the third component. There has clearly been an increase over the study. It would appear that the occurrence of these functional-pre-emptive constructs has increased by the time of the second grid, after the provision of financial information, and increased even further by the end of the study, after the provision of some training. The

functional-pre-emptive constructs of this group are less simple than those construed by the Untrained Group, but these constructs could not be termed complex with respect to conventional financial information or financial management.

The time constructs occur with three different individuals on the three grids.

The influence constructs are construed by three individuals on the first grid, but on the third grid this has decreased to two individuals. One of these individuals construed both influence and power, together, as the first component on the first and second grids, but on the third grid influence alone was construed. There would appear to be a slight decrease in salience. This is supported by the occurrence of one 'no influence' construct on the second grid.

A similar, but more obvious, pattern occurs with the issue of power. The actual power constructs occur on the first and second grids, but not on the third grid. This reduction in salience is supported by the occurrence of a 'no power' construct on the second grid.

For this group the elaboration of the construct system has brought an increase in the salience of financial information through the occurrence of either figures constructs, or functional-pre-emptive constructs. No individual construed descriptive-propositional constructs on the third three components. The increases in salience have occurred both on the second grid, after the provision of financial information, and on the third grid, after the provision of training. The 'financial' constructs employed on the third grid are the least simple of all of the 'financial' constructs construed by the first three groups. At the same time, on the third grid, power is construed with less salience, and influence is construed with slightly less salience.

8.4.11B The Trained Butchers Group

The number of financial, influence and power constructs, in the sense of the first three principal components on the three grids, is shown in Table 8.5.

Table 8.5
The Number of Financial Constructs in the Sense of the First Three Components

Grid	Description	Function	Time	Influence	Power	No power
	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3
First component	1 0 0	0 2 2	0 0 0	0 0 0	0 1 1	0 0 0
Second component	0 0 0	1 0 1	0 1 1	0 0 0	0 0 0	0 0 1
Third component	0 0 0	1 0 1	0 0 0	0 0 1	0 0 0	0 0 0
	1 0 0	2 2 4	0 1 1	0 0 1	0 1 1	0 0 1

There are two individuals in this group. The figures-comprehensive and the structural constructs do not occur in the first three principal components. However, there is one individual with a descriptive construct on the first component of the first grid, and on the second and third grids this has been replaced with a functional-pre-emptive construct. The other individual construes two functional-pre-emptive constructs on the second and third components of the first grid. By the second grid they both construe functional-pre-emptive constructs on the first component, and by the third grid one individual construes one functional-pre-emptive construct on each component. This indicates increased salience for the functional-pre-emptive constructs by both individuals.

By the third grid one individual construes influence and no power, whilst the other individual, who has the functional-pre-emptive constructs on each of the three components, construes power. Thus there are increases in salience of influence for one individual, and power for the other.

The elaboration of the construct system of these two individuals has brought more influence and power with increased salience and the appearance of functional-pre-emptive constructs.

8.4.118 Summary

The groups exhibit some commonality between the individuals in each group and between the groups. Various types of 'financial' constructs were found in the grids.

There was a need-comprehensive construct on one individual's grid. The construct did not occur in the principal components. The need for financial information is not an issue for individuals in this study.

There are only two individuals who construe a 'structural' construct on the components, and this is once in the Withdrawn Group and once in the Untrained Group. So that generally there are no issues of structure through which individuals construe and link financial information. For example there are no widely held constructs such as 'the co-op must make profits'.

Three of the groups contain individuals who construe 'time' constructs. These are in the Untrained Group, one individual, the Trained Group, three individuals, and the Trained Butchers Group, one individual. These intermittently note that to be effective information is required to be on time for the event. These time constructs are of sufficient salience for these individuals that they occur in their components. Beyond this time is not a very widely held or persistent notion.

Both the Withdrawn Group and the Trained Group contain one individual who construes figures-comprehensive constructs on their grids, and on the third grid this is on the first component. In the Withdrawn Group the individual appears to construe figures-comprehensive constructs in a very generalized manner. There is some other evidence which suggests that the individual in the Trained Group could be construing 'figures' as a euphemism for 'financial information', and in any event the individual construes such constructs with more salience. Thus figures-comprehensive constructs are not widely construed.

There are the descriptive-propositional constructs which occur with two groups. It occurs with two individuals on the second grid in the Untrained Group, as the first component, and, with one individual on the first grid in the Trained Butchers Group, as the first component. These appear to be quite transitory constructs and not widely construed.

The most commonality is found with the functional-pre-emptive constructs. These occur with individuals in all of the groups. The functional-pre-emptive constructs, which are construed, are generally simple in nature, but there are differences between the groups. On the occasion of the third grid the most simple and straightforward of the functional-pre-emptive constructs are construed by the Withdrawn Group and the Untrained Group, the less simple constructs are construed by the Trained Group and the most complex of the functional-pre-emptive constructs occur in the Trained Butchers Group.

It is quite clear that, at this time of the first grid, there are fewer of the functional-pre-emptive constructs on the first three components in all of the groups. This is because only a small number of individuals construe the financial information, in any way, on the first three components. In fact, on the first grid there was only one individual, from the Untrained Group, for whom financial information was sufficiently salient to occur on the first component. At this stage only 4 of the 11 individuals completing the first grid construed the functional-pre-emptive constructs on one of the first three components.

On the second grid, after the provision of financial information, there are 12 out of the 15 individuals who construe the functional-pre-emptive constructs on one of the first three components. Two individuals in the Trained Group and two individuals in the Trained Butchers Group construed these constructs on the first component, clearly indicating an increase in the salience of these constructs.

On the third grid, after the provision of some formal training to some of the individuals, there is a further increase in salience. There are 12 out of 15

individuals who construe the functional-pre-emptive constructs on one of the first three components, and 8 of these construe these on at least the first component. Thus the provision of financial information and training to some individuals has increased the salience of the construing of financial information amongst the individuals in the study.

All four of the groups show increases in the number of individuals construing the functional-pre-emptive constructs, increases in the number of the functional-pre-emptive constructs occurring on the first three components, and increases in the number of individuals construing the functional-pre-emptive constructs on the first component. It is in the Trained Group and the Trained Butchers Group that there are the greatest proportionate increases in the occurrence of the functional-pre-emptive constructs in the first and the second components. This suggests that financial information is more salient for these two groups than the other two groups. Superficially the only external difference between the individuals in these two groups, as opposed to those in the other two groups, is the form of training which they have received. It would appear that with those individuals who have received the financial information and received some formal training there is the greatest increase in salience of financial information, in that it enters into the main way of construing by these individuals.

It should be noted, also, that there is oral evidence which indicates that one individual in the Withdrawn Group and two individuals in the Untrained Group also received some discussion/ training from their respective bosses. It is these three individuals who also construe the functional-pre-emptive constructs on the first component of the third grid. So it would appear that some form of training is associated with an increase in the salience of financial information. The training would appear to be associated, also, with the complexity of the financial constructs, and that those who received the formal training have more complex financial constructs.

There are differences between the groups in respect of the issue of influence. For the Withdrawn Group actual influence is not construed amongst the first three components, and one individual construes no influence on the third grid on the first component. So that either influence is not in the main ways of construing, or the lack of influence occurs as a main way of construing. In the Untrained Group there is a slight increase in the salience of actual influence for one individual, whilst for another no influence is construed on the third grid. Both of these constructs occur on the second component of the third grid, so that

influence and the lack of influence are weakly construed issues. Out of the 5 individuals in the Trained Group who completed the first grid, 2 individuals construe influence on the first component and one on the third component. On the third grid with 6 individuals there are just 2 individuals who construe influence on the first component. When this is coupled with the occurrence of a lack of influence on the second grid, there would appear to be a slight decrease in the construing of influence. In the Trained Butchers Group an influence construct occurs on the third grid, indicating a slight increase in influence. There is then just slightly less construing of influence in the main ways of thinking amongst those in the study.

There are differences between the groups in respect of the issue of power. For the Withdrawn Group 'no power' is construed by one individual on the third component of the third grid, so there is a lack of power which is construed. In the Untrained Group actual power is construed by one individual on the second grid, and 'no power' is construed by one individual on the third grid, so that there is a lack of power which is construed. With the Trained Group actual power is decreasing. It changes from being construed in the first three components with two individuals on the first grid to none on the third grid. At the same time one individual construes 'no power' on the second grid. There appears to have been a reduction in the salience of power in the main ways of construing. In the Trained Butchers Group initially neither actual power nor the lack of power are construed, but by the third grid one individual construes actual power on the third component, and the other individual construes a lack of power on the second component. So that in one way or the other power is an issue for these two individuals.

In general, over the study actual power has lost its salience in the main ways of construing for these individuals and some even construe the lack of power, which is more salient and obvious.

8.4.20 The Constructs and the Construing of the Elements

The constructs and the construing of the elements on each individual's grids are now examined.

8.4.21 The Withdrawn Group

The commonality in this group is that financial information has been formally withdrawn for various reasons. One of the three individuals could not construe all of the financial information elements on any of three grids. In any case it would appear that the withdrawal of financial information impaired the ability of all of the group to construe. This is shown, in one case, by the increasing inability of the individual to construe a triad of elements, and in the other cases, by the inability to provide a written construct once the triad had been construed.

The constructs construed by this group are simple. In two cases, when the initial grid was completed, the individuals did refer to financial information, whilst on the last grid such constructs either disappeared or became more simple. In the third case, the individual, who had been preparing the returns of the Store Manager for the Head Office and who had recently discussed financial information with the boss, construed 'financial' constructs which less simple, and more robust than the constructs of the two others, in that they altered only a little on the last grid.

The only individual to construe any financial information element in the context of financial management was this third individual, and in particular the element 'retail value'. In general the financial information elements have little meaning for these individuals on the final grid. This was the situation, even where, on their initial grid, there was some meaning. Each of these individuals demonstrates a lack of understanding of financial information elements, in the context of financial management, by construing different types of financial information elements to be coincident with each other. This is in a situation where such financial information elements are not considered to be identical. This has been determined from the analysis of the individual grids and the subsequent plots of the constructs and the elements construed by the individuals.

Table 8.6 The Amount of Variance of the Principal Components

<u>The First Principal Component</u> <u>Grid</u>	<u>The First Three Principal Components</u>		
	<u>First</u>	<u>Last</u>	<u>Last</u>
VE	31.54	44.75	69.11
JOR	40.56	54.17	68.10
GA	18.43	19.48	49.38

Table 8.6 shows the amount of the variance of the first and the first three principal components on the first and the last grid completed by each individual. The direction of the changes in the variation of the first component for each individual suggests either a broadening or a lessening of their understanding. Thus these increases in variance support the analysis of the individual grids. A 't test' found that the change in the variance of the first component of the group, between the first and last grid, was statistically significant at 5% level with 2 d.f. With the first three components together, the variance increases in two individuals, but in the third individual a slight decrease. Thus the removal or reduction of financial information appears to affect and to increase the variance of the first principal component.

Table 8.7
The Number of Financial Constructs Occurring in the Sense of the First Three Components

Grid	1	2	3
VE	0	0	0
JOR		1	1
GA		1	2

Table 8.6 shows the number of times that financial constructs occur in the sense of the first three principal components. In one case there are no financial constructs on the first three components on any of the three grids. With the two other individuals, there is at least one construct on each component on both grids, whilst the third individual increases to two constructs on the third grid. This third individual had the recent experience of preparing the returns to Head Office of the Store Manager, and had discussed financial information with her boss, so that it is possibly the salience of these experiences which has contributed the change in construing.

Table 8.8 The Number of Financial Constructs that Occur in Each Grid

Grid	1	2	3
VE	2	0	0
JOR		9	6
GA		7	8

Table 8.8 shows the number of financial constructs that occur in each individual's grid. Over the course of the grids, there are two individuals who

decrease the number of financial constructs, and it is these individuals who construe less understanding. In the third individual the number of financial constructs increases. Thus there is generally a reduction in the number of financial constructs, from the average of initial constructs, 40% to 31%, suggesting a reduction in salience.

Table 8.9 The Classification of the Financial Constructs

Grid	<u>Figures-comprehensive</u>			<u>Descriptive-propositional</u>			<u>Functional-pre-emptive</u>		
	1	2	3	1	2	3	1	2	3
WE	0	0	0	0	0	0	1	0	0
JOR		3	2		3	2		3	2
GA		1	1		2	2		4	5

Table 8.9 classifies the financial constructs into 'figures-comprehensive', 'descriptive-propositional' and 'functional-pre-emptive' constructs. There is also one 'need-comprehensive' construct which occurs with WE on the first grid. The largest number of financial constructs an individual construes is three. This individual construes a 'need-comprehensive' construct and a 'functional-pre-emptive' construct on the first grid, but thereafter construes no financial constructs. This is the only 'need-comprehensive' found in this study. The second individual construes an equal number of 'figures-comprehensive', 'descriptive-propositional' and 'functional-pre-emptive' constructs on each grid, although on the final grid the number construed has decreased by one of each type. In the third individual the number of 'figures-comprehensive' and 'descriptive-propositional' constructs remains constant, but the 'functional-pre-emptive' constructs increase by one. The existence of the 'figures-comprehensive' constructs suggests that these individuals construe the elements of financial information with some degree of superordination, and so probably at a level of superficial understanding. However, slightly greater degrees of understanding are shown by firstly the 'descriptive-propositional' constructs, that individuals can describe financial information. This is shown especially by the 'functional-pre-emptive' constructs, which suggest a deeper understanding and a position of control from which to take decisions. All of these things are relative, and the financial constructs here are very simple.

Table 8.10
The Number of Financial Information Elements Construed with Meaning

Grid	<u>The First Two Components</u>			<u>The First Two Components with Financial Constructs</u>		
	1	2	3	1	2	3
WE	3	0	0	0	0	0
JOR		10	8		6	6
GA		8	7		4	3

Table 8.10 shows the number of financial information elements construed with meaning on the first two principal components, that is construed the sense of the first two principal components. The first part of Table 8.10 is with any sense on the first two components, and there is a clear dichotomy between one individual and the others. In each case the number of elements decreases between the initial and the last grid. The second part of the Table 8.10 contains the number of financial information elements construed on the emergent poles whose senses include financial management terms. In one individual there are no financial information elements construed on any of the three grids. In another individual the same number of financial information elements are construed on both grids. With the third individual there is a decrease in the number of elements. Thus for these individuals there is a general decrease in meaning of the financial information elements when these are construed on the first two components, and in the context of financial management there is either no change or a decrease.

On the first grid there is an individual who construes some financial information elements with meaning, yet does not construe these with components which contain financial management terms. This demonstrates that individuals can construe the financial information elements with meaning in the context of non-financial constructs. This demonstrates that individuals can construe financial information elements but not within the framework of financial management.

8.4.22 The Untrained Group

All of the group construe the financial information elements on the initial grid. The individuals start with various states of understanding of, and meaning about, some of the financial information elements. On the final grid there is a clarification in the construing of some of the financial information elements. The financial information elements which contain percentages these are generally construed with very little meaning. For all individuals in the group on the final grid there are at least two financial information elements, including a 'percentage'

element, which are coincident on the plot. This coincidence indicates a lack of meaning. Two individuals increase their understanding and two individuals understanding remains about the same with respect to financial information elements.

Amongst the financial information elements which are construed more meaningfully is 'leakage & surplus', and this occurs in each individual. Then there are notions of sales 'actual sales'; 'sales target'; 'gross profit' and product breakdown'. Perhaps it is not surprizing that these elements are construed with more meaning because the co-op laid more emphasis on the quarterly stocktakings and the need for small leakages. The issue of the need for sales to be increased was introduced into each shop, together with sales targets. Thus the financial information elements appear to have polarized into those with meaning and those without. From the analysis of the individual grids there are generally slight increases in the understanding and meaning of the financial information elements.

Table 8.11 The Amount of Variance of the Principal Components

<u>The First Principal Component</u> <u>Grid</u>	<u>The First Three Principal Components</u>	
	<u>First</u>	<u>Last</u>
JOH	21.9	47.7
NI	29.9	29.4
COL	17.7	22.2
MO	42.7	46.4

Table 8.11 shows the amount of variance of the first principal component and the first three principal components on the first and the last grid. In both sets of variances there are three increases and one decrease in variance, but not with the same individuals. The increases in variance indicate a looser construct system and broader understanding, whilst the decreases indicate a tighter construct system and deeper understanding. This would tend to support the analysis of the individual grids. A 't' Test did not find either the relative or the absolute changes significant. This suggests that the provision of financial information to these individuals has only slightly altered their construing.

Table 8.12
The Number of Financial Constructs Occurring in the Sense of
the First Three Components

Grid	1	2	3
JOH	0	1	2
NI	0	2	0
CO	3	3	2
MO		2	1

Table 8.12 shows the number of times that financial constructs occur in the sense of the first three principal components. Two individuals do not construe financial constructs on their initial grids, but increase to at least one on the second grid, whilst on the third grid one individual decreases to none and the other increases by one further construct. A third individual construes financial constructs on all three grids, but less on the third grid. The fourth individual, who completed two grids, initially construes two financial constructs but finally construes one. There is a general tendency for the number of financial constructs in the principal components to decrease. However, there are three individuals with constructs on the first component on the third grid.

Table 8.13 The Number of Financial Constructs that Occur in Each Grid

Grid	1	2	3
JOH	4	5	8
NI	5	6	7
CO	10	11	8
MO		7	13

Table 8.13 shows the number of financial constructs that occur in each individual's grid. Three individuals increase the number of financial constructs, whilst the fourth decreases. The group's percentage of financial constructs increases from 42% to 60%, suggesting an increase in salience. This suggests that the construing of financial information is of some importance to the group.

Table 8.14 The Classification of the Financial Constructs

Grid	<u>Figures-comprehensive</u>			<u>Descriptive-propositional</u>			<u>Functional-pre-emptive</u>		
	1	2	3	1	2	3	1	2	3
JOH	0	0	0	0	0	0	4	5	8
NI	2	0	0	1	4	5	2	2	2
CO	0	0	0	0	0	0	10	11	8
MO		5	0		0	0		2	13

Table 8.14 classifies the financial constructs into 'figures-comprehensive'; 'descriptive-propositional' and 'functional-pre-emptive' constructs. Although two individuals construe 'figures-comprehensive' constructs on their initial grids, these do not recur. In one of these individuals there are an increasing number of 'descriptive-propositional' constructs construed, but the same number of 'functional-pre-emptive' constructs construed on successive grids. The second individual also has 'functional-pre-emptive' constructs which increase in number. The remaining two individuals construe only 'functional-pre-emptive' constructs on the three grids.

The commonality amongst the group is to construe an increasing number of 'functional-pre-emptive' constructs. This suggests a deeper understanding of financial information and a position of control from which to take decisions. However, it must be remembered that the constructs of this group are simple financial constructs, and this will be reflected in the level of decisions.

Table 8.15
The Number of Financial Information Elements Construed with Meaning

Grid	The First Two Components			The First Two Components with Financial Constructs		
	1	2	3	1	2	3
JOH	7	5	5	0	0	3
NI	9	6	8	0	6	0
CO	8	7	11	8	7	2
MO		11	8		10	5

The first part of Table 8.15 shows the number of financial information elements construed with meaning on the first two principal components, that is construed in the sense of the first two principal components. The first part of Table 8.15 is with any sense on the first two components. Three individuals decrease the number of elements and one increases. There are decreases from the average 79% to 73% of financial information elements.

In the second part of the Table 8.15, the financial information elements are construed with respect to the components which contain financial constructs. One individual has financial information elements only on the third grid, whilst another has financial information elements on the second of the three grids. Two individuals decrease the number of elements. There is a general decrease in the number of financial information elements construed with respect to financial management. The movement in the sense of the principal components to include or to omit financial management terms demonstrates the fluidity of the construct system. It also

demonstrates that financial information elements can be construed by an individual with meaning, but not within the framework of financial management.

8.4.23 The Trained Group

All of the individuals construe the financial information elements on their initial grid. From an examination of the grids there has been an increase in the understanding of financial information and in the meaning of the financial information elements.

In this group there are some individuals who, at the start of the study, were able to provide the researcher with satisfactory explanations and understandings of the functional nature of some of the financial information elements, and yet, when these elements are construed onto the grid some of these elements do not appear to have any meaning for the individual. Thus there is a difference between the individual's ability to explain a particular financial information element, so that it is understood, and for that particular financial information element to hold meaning for the individual in specific contexts. This divorce between understanding and meaning was found in the four cases where it had been possible to ask the individual to explain the financial information elements at the start of the study. The four individuals "knew" more about some of financial information elements than they could construe meaning for on the first grid.

At the same time, although these individuals construe no meaning into some financial information elements on the first grid, this is also true of the last grid. No individual construed all of the financial information elements with meaning on the last grid. In fact there are two individuals who construe two disparate financial information elements onto the same point on the last plot clearly indicating a lack of meaning. The same elements are not involved in both cases. One explanation is that some of the financial information elements are redundant for the individual. Thus, even if it is known what the element represents, the context of that element does not allow meaning. Another explanation is that through the training the individual construes what the financial information element represents, but also construes that it is not of use in his decision-making and so has no meaning.

Five individuals construe no meaning for both 'sales target' and 'gross percentage', and three individuals with no meaning for 'cost value'; 'sales percentage' and 'profit percentage'. Thus the more complex elements tend to have less meaning.

Table 8.16 The Amount of Variance of the Principal Components

Grid	The First Principal Component		The First Three Principal Components	
	First	Last	First	Last
SM	23.96	29.83	59.50	57.95
HI	21.29	24.63	52.86	54.81
LI	21.85	23.73	50.86	51.34
CU	33.25	25.67	58.22	55.67
HE	33.52	39.73	63.13	62.74
TI	24.83	27.59	59.74	61.20

Table 8.16 shows the amount of variance of the first and the first three principal components on the first and the last grid. The variance on the first component increased for 5 of the 6 individuals. This appears to support the analysis of the individual grids, namely that there have been changes in understanding. The increase in variance indicates the broadening of understanding. A 't' Test found that the relative change was not statistically significant, but the absolute changes are at the 1% level with 5 d.f. Although the variance of the first three principal components increases with 3 individuals and decreases with 3 individuals, the absolute changes are statistically significant at 1% with 5 d.f.. These changes indicate a change in the construing of the individuals in the group, even though the change is not in a consistent direction.

Table 8.17
The Number of Financial Constructs Occurring in the Sense of the First Three Components

Grid	1	2	3
SM		1	1
HI	1	2	2
LI	1	2	1
CU	0	0	3
HE	2	3	3
TI	0	1	1

Table 8.17 shows the number of times that financial constructs occur in the sense of the first three principal components. Four of the six individuals have increased the number of financial constructs occurring in the last grid in comparison to the first grid. Two individuals have the same number of financial constructs, but even here the salience of financial management has increased through

the financial construct occurring in a higher component. Thus there is an increase in the salience of financial management for each individual.

Table 8.18 The Number of Financial Constructs that Occur in Each Grid

Grid	1	2	3
SM		7	10
HI	9	8	5
LI	8	7	7
CU	3	9	11
HE	11	13	11
TI	5	6	6

Table 8.18 shows the number of financial constructs on each grid. Three of the six individuals increase the number, one remains the same after an increase on the second grid, and two decrease in number. One of those who decreases has more complex financial constructs, whilst the other's financial constructs remain about the same. The general tenor of this group is that the construing of financial information is important. The financial constructs are less simple and there is an increase in the average number of such constructs from 48% to 56%.

Table 8.19 The Classification of the Financial Constructs

Grid	<u>Figures-comprehensive</u>			<u>Descriptive-propositional</u>			<u>Functional-pre-emptive</u>		
	1	2	3	1	2	3	1	2	3
SM		0	0		0	0		7	10
HI	0	0	0	3	0	0	6	8	5
LI	4	3	5	3	1	1	1	3	1
CU	0	0	0	0	0	0	3	9	11
HE	0	0	0	0	0	0	11	13	11
TI	0	0	0	1	0	0	4	6	6

Table 8.19 classifies the financial constructs into 'figures-comprehensive', 'descriptive-propositional', and 'functional-pre-emptive' constructs. Only one individual has 'figures-comprehensive' constructs, and these occur on each of the three grids and the number of 'figures-comprehensive' constructs are more or less constant around four. This individual is the only individual who has all three types of construct, and these occur on each grid. With this individual over the three grids, the number of 'descriptive-propositional' constructs decreases from three to one, whilst there is only one 'functional-pre-emptive' construct on the first and third grids.

More generally there are two individuals who have some 'descriptive-propositional' constructs on the first grid, but these do not occur on subsequent grids. Both of these individuals have 'functional-pre-emptive' constructs on the first grid, and on the second grid, after the provision of financial information, the number of 'functional-pre-emptive' constructs increases, and on the third grid either remains at the same number or decreases below the number on the first grid. The only financial constructs which the other individuals in the group construe are 'functional-pre-emptive' constructs. The tendency is for these to increase with the second grid, but where the individuals have completed three grids then one increases further, the other returns to the original number.

Thus over the study there are three individuals who increase, two who remain the same and one who decreases their number of 'functional-pre-emptive' constructs. It would appear that the provision of financial information is associated with the increase in the number of these constructs construed at the time of the second grid. The increase in the number of 'functional-pre-emptive' constructs between the first and second grids, by those five individuals completing three grids, is statistically significant at the 1% level with 4 d.f. in a 't' Test. This is indicative of some broadening in the construct system, which may still be occurring with those who do not subsequently reduce the number of such constructs. The relative change in the number of 'functional-pre-emptive' constructs between the second and third grids is statistically significant at the 5% level with 4 d.f.. Clearly changes in construing are occurring, but the elaboration of the construct system is not in a uniform manner. Although the financial constructs of this group are not complex, the individuals generally exhibit a number of 'functional-pre-emptive' constructs through which they can exercise control.

Table 8.20
The Number of Financial Information Elements Construed with Meaning

Grid	<u>The First Two Components</u>			<u>The First Two Components with Financial Constructs</u>		
	1	2	3	1	2	3
SM		8	5		0	5
HI	6	7	8	3	7	8
LI	4	4	8	0	2	4
CU	7	5	7	0	0	7
HE	10	7	8	10	7	8
TI	5	4	8	0	1	7

The elaborated construing of the constructs has affected the construing of the meaning of the elements. The first part of Table 8.20 shows the number of financial information elements construed with meaning on the first two principal components, that is construed in the sense of the first two principal components. All individuals construe some of the financial information elements in this way on each grid. The change in the number of financial information elements construed between the first and second grid, by the five individuals completing three grids, is that three have decreased, one has increased and one retains the same number of elements. The absolute changes are statistically significant at the 10% level with 4 d.f. in a 't' Test. The general indication is that apparently fewer financial information elements are construed with meaning on the second grid. Between the second and third grids there is an increase in the number of financial information elements construed and these increases are statistically significant at the 5% level with 5 d.f.. Over the three grids three individuals increase, one decreases and one retains the same number of financial information elements. These absolute changes are statistically significant at the 5% level with 4 d.f.. There is an increase from the average number of financial information elements construed of 58% on the first grid, to 53% on the second, and 67% on the third.. There are then, quite clearly different numbers of financial information elements construed on the different grids.

In the second part of Table 8.20, the financial information elements are construed with respect to the components which contain only financial management terms. On the first grid only two individuals construe financial information elements with meaning. On the second grid this has increased to four, whilst the additional individual construes no financial information elements. On the third grid all six individuals construe these elements, and the number of such elements has increased in five individuals in comparison with their initial grids. In relative terms these increases statistically are significant at the 5% level with 5 d.f., and the absolute changes are statistically significant at the 2% with 5 d.f.. There is an increase from the average number of financial information elements construed of 24% on the first grid to 26% on the second, and 62% on the third grid. There are then, quite clearly increasing numbers of financial information elements construed on the different grids.

What appears to have happened with respect to the construing of the financial information elements is as follows. Initially the financial information elements are construed with meaning, but not in the context of financial management. Hence the higher numbers on the first grid, as shown in the first part of Table 8.20.

and the lower numbers on the first grid for the second part of Table 8.20. The second part of Table 8.20 shows the number of financial information elements construed with respect to financial constructs. Then, as the number of financial management constructs increases, and their salience increases, and more financial management constructs appear in the senses of the first two components, so more financial information elements are construed with meaning on the first two components. This occurs with meaning in the context of both financial and non-financial constructs in the sense of the first two components. Thus both understanding and meaning have increased.

8.4.24 The Trained Butchers Group

The two butchers construe the financial information elements on the first and subsequent grids. From an analysis of each of their grids they alter their construing of the financial information elements over the course of the study. The number of financial constructs increases and there is enhanced construing of the financial information elements. There is more understanding of the financial information and more meaning in the financial information elements.

It was only possible to interview one of these individuals at the start of the study, but this individual was able to provide satisfactory explanations and show understanding of all of the financial information elements. However, throughout the course of the study there are always some financial information elements which are construed in the contrast to the emergent poles, and hence without meaning. Thus although the individual "knows" what these financial information elements are, he does not construe meaning into some of them in the specific context of the grid.

Table 8.21 The Amount of Variance of the Principal Components

<u>The First Principal Component</u> <u>Grid</u>	<u>The First Principal Component</u>		<u>The First Three Principal Components</u>	
	<u>First</u>	<u>Last</u>	<u>First</u>	<u>Last</u>
EP	27.11	27.87	60.03	56.98
MU	33.21	33.01	61.48	63.14

Table 8.21 shows the amount of variance of the first and the first three principal components over the first and last grids. The change in the variance of the first component is very small in both individuals, but the change is in opposite directions, and not statistically significant. There are small increases in the total of the first three components but again these are not statistically significant.

These findings suggest that there have been some small changes in the construing of the grid elements, with some small broadening and deepening of understanding.

Table 8.22
The Number of Financial Constructs Occurring in the Sense of
the First Three Components

Grid	1	2	3
EP	1	1	1
MU	1	1	2

Table 8.22 shows the number of times that financial constructs occur in the sense of the first three principal components. One individual consistently has a financial construct in the first component in each grid and the sense of the construct becomes increasingly complex. The other individual increases the number of financial constructs from one construct on the second component of the first grid, to one construct on each of the first and second component of the third grid. At the same time these financial constructs have increased their complexity, thus more complex financial notions are construed. There is thus more salience towards the financial information elements.

Table 8.23 The Number of Financial Constructs that Occur in Each Grid

Grid	1	2	3
EP	8	11	13
MU	6	8	11

Table 8.23 shows the number of financial constructs that occur in each individual's grid. Over the three grids there are increases in the number of financial constructs. These constructs increase from 47% on the first grid, to 63% on the second, and 80% on the third grid. A 't' Test found these changes statistically significant at the 10% level with 1 d.f.

Table 8.24 The Classification of the Financial Constructs

Grid	<u>Figures-comprehensive</u>			<u>Descriptive-propositional</u>			<u>Functional-pre-emptive</u>		
	1	2	3	1	2	3	1	2	3
EP	2	0	0	6	4	0	0	7	13
MU	0	0	0	0	0	0	6	8	11

This change in the construct system is reflected in Table 8.24 which analyses the financial constructs into 'figures-comprehensive', 'descriptive-propositional', and 'functional-pre-emptive' constructs. The 'figures-comprehensive' and 'descriptive-propositional' constructs only occur with one individual. On the first grid this individual construes 'figures-comprehensive' and 'descriptive-propositional' constructs, but no 'functional-pre-emptive' constructs. Then, on the second grid there are no 'figures-comprehensive' constructs, but a small number of 'descriptive-propositional' constructs and some 'functional-pre-emptive' constructs. This in turn gives way to a third grid on which there are thirteen 'functional-pre-emptive' constructs. The other starts with six 'functional-pre-emptive' constructs and these increase to eleven on the third grid. These 'functional-pre-emptive' constructs increase from an average of 20% on the first grid, to 50% on the second, and 80% on the third grid. These increases are not statistically significant in a 't' Test. Clearly the 'functional-pre-emptive' constructs are the most salient for both individuals by the third grid, and the construct system elaborates in this direction. They are thus in a position to use these 'functional-pre-emptive' constructs in their control and decision-making.

Table 8.25
The Number of Financial Information Elements Construed with Meaning

Grid	The First Two Components			The First Two Components with Financial Constructs		
	1	2	3	1	2	3
EP	9	8	10	8	4	8
MU	8	5	6	4	5	6

The first part of Table 8.25 shows the number of financial information elements construed with meaning on the first two principal components. Over the three grids one individual has an increase of one element and the other a decrease of two financial information elements. In the second part of the Table 8.25, the financial information elements are construed with respect to the components which contain only financial constructs. Over the three grids one individual, who increases the number of elements in the first part of the Table, has the same number of elements. The other individual, who has a decrease in the number of elements in the first part, has an increase of two elements. Thus there is a slight increase in the number of financial information elements construed with meaning in a financial management context.

What appears to have happened with respect to the construing of the financial information elements is as follows:- Initially the financial information elements are construed with meaning, but slightly less meaning in the context of financial management. Hence the higher numbers of financial information elements on the first grid, as shown in the first part of Table 8.25, and the lower numbers on the first grid for the second part of Table 8.25. In the second part of Table 8.25 the financial information elements are construed with respect to financial constructs. Then, as the number of financial management constructs increases, and their salience increases, and more financial management constructs appear in the senses of the first two components, so more financial information elements are construed with meaning on the first two components. This occurs with meaning in the context of both financial and non-financial constructs in the sense of the first two components. Thus both understanding and meaning have increased.

8.4.25 A Comparison of the Four Groups

In this organization it has been possible to collect three grids from eleven individuals and two grids from four individuals, thus the analysis is uneven. Also in this organization, there is no group which is the same size as another. This is unlike the two other organizations, where by coincidence, the partition of individuals has resulted in equal size groups. Consequently it is not possible to conduct an equal-size group discussion.

None of the groups start with any clear understanding of the financial information elements. However, there are individuals who appear to have a little more understanding than others at the start. The four groups exhibit three distinct sets of characteristics. Firstly, the Withdrawn Group who never seem to get to grips with the financial information elements. There are individuals who have problems construing the triads and supplying written constructs. The constructs, especially the financial constructs, are generally very simple. It would appear that the withdrawal of financial information has impaired the construing of the group. The longer the information has been withdrawn the more impaired the construing.

Secondly, the Untrained Group are able to construe the elements presented but divide into two areas. There are two individuals who increase their understanding, and two individuals who decrease their understanding. In all individuals the constructs on the first grid are generally simple and/or show an absence of financial management terms. These simple financial constructs tend to

persist onto the third grid, although there are slight changes which mainly state the requirement for the store to make a profit.

The third set of characteristics are common to the remaining two groups. In the Trained Group there is an increase in the number of financial management constructs. There is an increase in the understanding of financial information and in the meaning of the financial information elements. The Trained Butchers Group change and enhance their construing of the financial information elements, and the number of financial management constructs increases. There is an increase in both understanding and meaning with respect to the financial information elements. Amongst the individuals in both groups the financial management constructs increase in complexity. Also, in both groups, is the paradox that there are some individuals who are able to explain and demonstrate understanding of the financial information elements, but when these are construed in the context of the grid, some of these elements do not appear to have meaning for the individual. The construing of these groups is now further explored and compared.

8.4.26 The Variance of the Principal Components

It was anticipated that with the provision of financial information and some training the variance of the first, and perhaps the first three, principal components would alter. It was not possible to predict the direction of change. In the Withdrawn Group the variance of the first component increased. These increases are statistically significant at the 5% level with 2 d.f.. In this group the financial information was provided and then withdrawn. Such actions are also likely to affect the construing of the individual, where financial information elements are presented on the grid but the individual no longer has contact with these elements. Consequently, such increases could indicate a simplifying of construing, and perhaps a breakdown of meaning of the grid elements. The variance of the first three components changed in different directions, two increased and one decreased.

In the Untrained Group three increased and one decreased the variance of both the first and the first three principal components. In both cases neither the relative nor the absolute changes are statistically significant. This is almost in accordance with anticipations, in that there would be no change or that any change would be haphazard.

In the Trained Group, with the first component, five individuals had increases in their variance, one decreased, and with the first three components there were three increases and three decreases. Although these relative changes are not

statistically significant, both sets of the absolute changes are statistically significant at the 1% level with 5 d.f. This is in accordance with anticipations. In the Trained Butchers Group, with the first component, the variance changes in different directions, and with the first three components the variance increases. These changes did not reach statistical significance. The changes are not consistent with those of the Trained Group. The reason for the discrepancies might be that the butchers started with more understanding of the financial information elements and the training has not shown a marked change in the variance. The butchers were not trained in the same way as the Trained Group, but through individual discussion with their superior.

Thus the provision of financial information and some training does appear to alter the variance of the first and first three principal components. The provision and subsequent withdrawal of financial information also appears to alter the variance of the first principal component, whilst the provision of financial information alone may alter the variance but in a less consistent direction.

8.4.27 The Financial Constructs in the Senses of the Principal Components

In the Withdrawn Group, generally, there is no change in the number of financial constructs found in the sense of the first three principal components. In the Untrained Group one increases and three decrease the number of financial constructs. In the Trained Group and in the Trained Butchers Group all individuals increase the number of financial constructs. It would appear that training has allowed the construct system to elaborate and has produced a consistent increase in the number of financial constructs used in the first three principal components. In other words the lack of training does not allow the construct system to elaborate and therefore the construct system remains in a similar situation, or, that the construct system alters in an inconsistent direction within a group. These changes are generally in accordance with anticipations.

8.4.28 The Number and Type of Financial Constructs

In the Withdrawn Group there is generally a reduction in the number of financial constructs and no elaboration of the construct system. The one 'need-comprehensive' construct does not recur, whilst the 'figures-comprehensive' and/or 'descriptive-propositional' and 'functional-pre-emptive' constructs decrease.

In the Untrained Group there is generally an increase in the number of financial constructs. The 'figures-comprehensive' constructs do not recur after these

are initially construed. Only one individual has 'descriptive-propositional' constructs and these increase, whilst the number of 'functional-pre-emptive' constructs remain constant. Two individuals increase their number of 'functional-pre-emptive' constructs, and the fourth decreases.

In the Trained Group three individuals increase, two decrease and one retains the same number of financial constructs. There are few common changes in the construing in this area. Generally the 'descriptive-propositional' constructs do not recur after they are initially construed. One individual persists with both 'figures-comprehensive' and 'descriptive-propositional' constructs on all three grids. The individuals each construe a number of 'functional-pre-emptive' constructs, but three increase, two decrease and one retains the same number of these constructs.

In the Trained Butchers Group both individuals increase the number of financial constructs by the third grid. Any 'figures-comprehensive' or 'descriptive-propositional' constructs are not construed on to the third grid, where there are only 'functional-pre-emptive' constructs.

In those groups and individuals where there has been training this has facilitated an elaboration of the construct system and the number of financial constructs has increased. These financial constructs have become more complex over the course of the study and with a number of 'functional-pre-emptive' constructs allows the individual to exercise control and develop understanding and meaning of financial information. At the same time, the lack of training has not facilitated the elaboration of the construct system in this way, and has not allowed an understanding of financial information. This is in accordance with anticipations

8.4.29

The Construing of Financial Information Elements in the Sense of the Principal Components

The financial information elements are examined with respect to the first two principal components, and also when those components contain financial terms. In the Withdrawn Group there is a decrease in the number of financial information elements construed with meaning in both ways. In the Untrained Group there is generally a decrease in the number of financial information elements construed with meaning in both ways. In the Trained Group there is generally an increase in the number of financial information elements construed with meaning in both ways. The Trained Butchers Group have either an increase in the number, or the same number of financial information elements construed with meaning in both ways.

The training appears to have generally facilitated an increase in the number of financial information elements construed with meaning when the first two principal components have a financial sense. At the same time the lack of training has facilitated a decrease in the number of financial information elements construed with meaning. This is in accordance with anticipations

8.4.30 Summary

Over the course of the study there are changes in construing amongst the individuals in the groups. The Withdrawn Group generally construe fewer financial management constructs, and fewer financial information elements, so that financial information is less salient and there is less understanding of and meaning to the financial information elements. The individual who has continued to have some interaction with financial information does not change in such a marked fashion. Thus the provision and use of financial information appears to facilitate salient construing of financial information elements, but when this financial information is withdrawn the salience lessens and in some cases the ability to construe the financial information elements is lost.

The Untrained Group are mixed in their changed construing, due to some 'unofficial training' which two individuals have received. In these two individuals there is a small amount of elaboration of the construct system which facilitates some understanding of financial management and the financial information elements. The two other individuals construe some slight decreases in the number of financial management constructs and financial information elements. Thus the provision of financial information does alter their construing, but the direction of the change appears to depend upon training. For those who have received 'unofficial training', there is an increase in the salience of financial information, but for those without this there is a decrease in the salience.

The two trained groups appear to change their construing in a broadly similar manner with respect to the financial information elements. There are more financial constructs and more complex financial constructs used by the individuals in these groups. The elaboration of the construct system has brought more understanding of and meaning to the financial information elements.

The provision of financial information to individuals without training does not lead to a consistent outcome and could result in confusion. The provision of training leads to a more consistent outcome, with more understanding of and meaning to the financial information.

8.4.400 The Construing of the Supplied Constructs and of the Elements

On each grid were the three supplied constructs "As I influence", "As I would like to influence" and "I have power over". The construing of these constructs, together with the construing of the elements, is now examined.

8.4.401 "As I influence"

It was anticipated that if individuals received and used financial information then there would be an increase in the use of the supplied construct "As I influence" with a greater number of elements. The term primary influence is used where the majority of individuals in a group construe the same element. The notion of secondary influence can not be applied because the size of three of the groups increases on the second grid.

The Withdrawn Group

One individual construes an increase in the number of elements which they influence, another construes the same number and the third individual decreases the number of elements influenced. There is primary influence on the second grid, where two individuals first complete grids. This influence is on 'actual sales' and continues to the third grid and joined by 'the store' and 'leakage & surplus'.

The Untrained Group

One individual increases the influence, two individuals construe the same number, and the fourth decreases influence on the number of grid elements. On the first grid there is primary influence on 'the store'; 'personnel problems' and 'stock problems', but on the third grid 'the store' and 'leakage & surplus' (which all four construe). Thus individuals construe influence with a larger range of elements on the third grid.

The Trained Group

Four individuals increase their influence and two have the same influence on the number of grid elements. On the first grid there is primary influence on 'the store'; 'personnel problems'; 'stock problems' and 'personnel costs', which has increased to 'the store'; 'personnel problems'; 'stock problems'; 'personnel costs'; 'actual sales' and 'leakage & surplus' (with five individuals influencing this item).

The Trained Butchers Group

One individual influences more elements on the third grid than on the first. The other influences one element less. On the first grid there is primary influence on 'actual sales'; 'retail value' and 'gross profit', but on the third grid 'stock

problems'; 'personnel costs'; 'actual sales'; 'gross profit'; 'sales percentage' 'product breakdown' and 'leakage & surplus'.

8.4.402 Summary

Over the course of the study the generality of individuals, in each of the four groups, construe an increase in the number of elements which they influence. However, there are differences between the groups when influence is construed on the third grid. By the third grid primary influence has; increased for the Withdrawn Group from 1 to 3 elements; decreased for the Untrained Group from 3 to 2 elements; increased for the Trained Group from 4 to 6 elements; and the Trained Butchers Group from 3 to 7 elements. So the primary influence in the trained groups is concentrated upon a larger number of elements, that is there is more commonality in the construing of particular elements. The increase found in the Withdrawn Group is much smaller. Thus although the generality of individuals construe influence on more elements, on the third grid the influence is markedly more concentrated upon particular elements in those groups which have received some training.

On the first grid the amount of commonality amongst the groups with respect to primary influence is limited. The commonality in primary influence amongst the groups is interesting in that commonality of primary influence only occurs between the Untrained Group and the Trained Group. These two groups are made up of individuals involved with overall store management, or at least were clearly in this position by the third grid. The elements construed in this way are 'the store', 'personnel problems' and 'stock problems'. The primary influence of the Trained Butchers Group lies with other elements including 'actual sales'.

By the third grid there is one element construed with primary influence in commonality by all four groups this is 'leakage & surplus'. This would appear to be an issue which is now salient to most of the individuals, whilst on the first grid there was no salience for it in this respect. The element 'the store' is construed with primary influence by three groups, but not by the Trained Butchers Group. An explanation for this difference could be that the butchers do not construe the store as their area of operation, but more to supply the store.

The element 'actual sales' is also construed with primary influence by three groups but not by the Untrained Group. This difference cannot be easily explained. However, it is of note that on the first grid 'actual sales' was construed solely by the Trained Butchers Group with primary influence, and now this group is joined by two others. The two trained groups construe, in commonality, primary influence on

'stock problems' and 'personnel costs'. The emphasis in these two trained groups on these particular elements would appear to reflect the seniority and areas of responsibility of these individuals. By the third grid the Trained Group is the group which has the most elements with primary influence which are construed in commonality with at least one other group. There are five of these elements construed in this way. The Trained Butchers Group have four elements which are construed in commonality with at least the Trained Group, however, there are still three other such elements which the group alone construes with primary influence.

8.4.403 "As I would like to influence"

It was anticipated that if individuals received and used financial information then there would be an increase in the use of this supplied construct on a greater number of elements. The term primary influence is used where the majority of individuals in a group construe the same element. The notion of secondary influence can not be applied because the size of three of the groups increases on the second grid.

The Withdrawn Group

Initially the individuals construed either the same number of elements as actual influence, or more. On the last grid there was no commonality, as one wanted less, one wanted the same and one wanted no influence more elements than were construed with actual influence.

By the last grid, and in comparison with their initial grid, two individuals construed fewer elements which they would like to influence, whilst the third individual construed a greater number of elements. In fact one wanted no influence with respect to the elements on the third grid. On the second grid there was commonality amongst the three individuals in that they all would like to influence 'actual sales'. However, on the third grid there was commonality amongst the two individuals who would like to influence 'the store' and 'leakage & surplus'. Thus although there is a general decrease in the number of elements which individuals would like to influence, there is some increase in commonality with respect to the elements which they would like to influence.

The Untrained Group

Initially the individuals construed either the same number of elements as actual influence, or less. On the last grid there was commonality, as they all wanted to influence more elements than were construed with actual influence.

By the last grid, and in comparison with their initial grid, all four individuals construed more elements which they would like to influence. On the first grid there is some commonality in the construing of the elements, and these are 'the store' and 'timeliness of information' which have primary influence. By the third grid this commonality and primary influence is with 'timeliness of information'; 'personnel costs' and 'sales target'. Thus there is an increase in the number of elements which individuals would like to influence, and there is an increase in commonality with respect to the elements which they would like to influence.

The Trained Group

Initially the individuals construed either the same number of elements as actual influence, two individuals, or more, four individuals. On the last grid there was a little less commonality, as one wanted less, two wanted the same and three wanted to influence more elements than were construed with actual influence. In fact the two individuals who changed their numerical positions, with respect to the number of elements construed with actual influence and desired influence by the last grid, did so because the number of elements which they construed actual influence with on the last grid has increased. Thus the change in commonality here is not due to a desire to influence a smaller number of elements than on the initial grid.

By the last grid, and in comparison with their initial grid, one individual construed fewer elements, one individual construed more elements, and four individuals construed the same number of elements which they would like to influence. On the first grid there is some commonality in the construing of the elements, and these are 'timeliness of information', 'actual sales' and 'gross profit' which have primary influence. By the third grid this commonality and primary influence is with 'the boss'; 'the store'; 'actual sales' and 'leakage & surplus'. Thus there is generally the same number of elements which individuals would like to influence, and there is an increase in commonality with respect to the elements which they would like to influence.

The Trained Butchers Group

The two individuals construe differently. One construed a smaller number of elements than actual influence, the other construed more. This was the case for both the first and the third grids.

By the last grid, and in comparison with their initial grid, the two individuals construed more elements which they would like to influence. On the first grid there is some commonality in the construing of the elements, and these are 'the store'; 'actual sales' and 'cost value' which have primary influence. By the third

grid this commonality and primary influence is with 'the store'; 'timeliness of information'; 'sales target'; 'cost value'; 'sales percentage'; 'product breakdown' and 'leakage & surplus'. Thus there is an increase in the number of elements which individuals would like to influence, and there is an increase in commonality with respect to the elements which they would like to influence.

8.4.404 Summary

There is a change in the individual's construing of the elements they would like to influence, and little commonality between the groups. The number of elements construed with this construct on the initial grid, is compared with the number on the last grid. It was found that the Withdrawn Group generally would like to influence less elements, all of the Untrained Group would like to influence more elements, the Trained Group generally would like to influence the same number of elements, and all of the Trained Butchers Group would like to influence more elements.

Within each of the groups there is an increase in the commonality and in the primary influence with respect to the elements construed. The increase in the number of elements construed with commonality within each group is as follows:- The Withdrawn Group increases from 1 to 2. The Untrained Group increases from 2 to 3. The Trained Group increases from 3 to 4. The Trained Butchers Group increases from 3 to 7.

There is some commonality in the elements construed with primary influence in each group. On the first grid three groups, the Withdrawn; the Trained and the trained Butchers, construe 'actual sales', two groups, the Untrained and the Butchers construe 'the store' and two groups, the Untrained and the Trained, construe 'timeliness of information'. On the third grid the three groups, the Withdrawn, the Trained and the Butchers, construe 'the store' and 'leakage & surplus', whilst the two groups, the Untrained and the Butchers construe 'timeliness of information' and 'sales target'. There is move away from the desire to influence 'actual sales' and towards the desire to influence 'sales target' and 'leakage and surplus', as well as the continuation of 'the store' and 'timeliness of information'.

8.4.405 "I have power over"

It was anticipated that if individuals received and used financial information then there would be an increase in the use of this supplied construct on a greater number of elements. The term primary power is used where the majority of

individuals in a group construe the same element. The notion of secondary power can not be applied because the size of three of the groups increases on the second grid.

The Withdrawn Group

There is no uniform direction to the change of construing with these individuals. One individual construed power over one less element on the third grid than on the first grid where two elements were construed. Another individual construed no power over any of the elements on two grids. The third individual, who exhibited the most understanding, construed power over more elements increasing from none to three elements. It would appear that in general power over the elements is not construed very much by this group.

The Untrained Group

By the last grid there is no uniform direction of change. One individual, whose understanding increases, construes power over the same number of elements, another individual construes power over less elements, and two individuals, the understanding of one of these increases, construe power over more elements.

On the first grid the only element which more than one individual construed, and in fact all construed, was 'personnel costs'. By the third grid they all construed power over 'the store' and 'stock problems', and primary power over 'personnel costs' and 'leakage & surplus'. Thus there is no distinct change in direction for the number of elements which individuals construe power over, although most increase. At the same time there is an increase in commonality with respect to the elements which they do construe power over. This suggests that there is realignment of the elements into some form of commonality.

The Trained Group

There is no uniformity in the change in the construing of power in this group where five individuals increased their understanding. One individual increases the number of elements over which power is construed. Two individuals construe power over the same number of elements, and three individuals construe power over a smaller number of elements. Two of the last three individuals construe power over only one element, themselves.

On the first grid there is primary power over 'personnel problems'; 'stock problems'; 'personnel costs'; 'actual sales' and 'leakage & surplus'. On the third grid there is no primary power, although three individuals do construe power over 'myself'; 'the store'; 'personnel costs' and 'leakage & surplus'. Thus there is no distinct change in direction for the number of elements which individuals construe power over, although most increase. At the same time there is a decrease in

grid this commonality and primary influence is with 'the store'; 'timeliness of information'; 'sales target'; 'cost value'; 'sales percentage'; 'product breakdown' and 'leakage & surplus'. Thus there is an increase in the number of elements which individuals would like to influence, and there is an increase in commonality with respect to the elements which they would like to influence.

8.4.404 Summary

There is a change in the individual's construing of the elements they would like to influence, and little commonality between the groups. The number of elements construed with this construct on the initial grid, is compared with the number on the last grid. It was found that the Withdrawn Group generally would like to influence less elements, all of the Untrained Group would like to influence more elements, the Trained Group generally would like to influence the same number of elements, and all of the Trained Butchers Group would like to influence more elements.

Within each of the groups there is an increase in the commonality and in the primary influence with respect to the elements construed. The increase in the number of elements construed with commonality within each group is as follows:- The Withdrawn Group increases from 1 to 2. The Untrained Group increases from 2 to 3. The Trained Group increases from 3 to 4. The Trained Butchers Group increases from 3 to 7.

There is some commonality in the elements construed with primary influence in each group. On the first grid three groups, the Withdrawn; the Trained and the trained Butchers, construe 'actual sales', two groups, the Untrained and the Butchers construe 'the store' and two groups, the Untrained and the Trained, construe 'timeliness of information'. On the third grid the three groups, the Withdrawn, the Trained and the Butchers, construe 'the store' and 'leakage & surplus', whilst the two groups, the Untrained and the Butchers construe 'timeliness of information' and 'sales target'. There is move away from the desire to influence 'actual sales' and towards the desire to influence 'sales target' and 'leakage and surplus', as well as the continuation of 'the store' and 'timeliness of information'.

8.4.405 "I have power over"

It was anticipated that if individuals received and used financial information then there would be an increase in the use of this supplied construct on a greater number of elements. The term primary power is used where the majority of

individuals in a group construe the same element. The notion of secondary power can not be applied because the size of three of the groups increases on the second grid.

The Withdrawn Group

There is no uniform direction to the change of construing with these individuals. One individual construed power over one less element on the third grid than on the first grid where two elements were construed. Another individual construed no power over any of the elements on two grids. The third individual, who exhibited the most understanding, construed power over more elements increasing from none to three elements. It would appear that in general power over the elements is not construed very much by this group.

The Untrained Group

By the last grid there is no uniform direction of change. One individual, whose understanding increases, construes power over the same number of elements, another individual construes power over less elements, and two individuals, the understanding of one of these increases, construe power over more elements.

On the first grid the only element which more than one individual construed, and in fact all construed, was 'personnel costs'. By the third grid they all construed power over 'the store' and 'stock problems', and primary power over 'personnel costs' and 'leakage & surplus'. Thus there is no distinct change in direction for the number of elements which individuals construe power over, although most increase. At the same time there is an increase in commonality with respect to the elements which they do construe power over. This suggests that there is realignment of the elements into some form of commonality.

The Trained Group

There is no uniformity in the change in the construing of power in this group where five individuals increased their understanding. One individual increases the number of elements over which power is construed. Two individuals construe power over the same number of elements, and three individuals construe power over a smaller number of elements. Two of the last three individuals construe power over only one element, themselves.

On the first grid there is primary power over 'personnel problems'; 'stock problems'; 'personnel costs'; 'actual sales' and 'leakage & surplus'. On the third grid there is no primary power, although three individuals do construe power over 'myself'; 'the store'; 'personnel costs' and 'leakage & surplus'. Thus there is no distinct change in direction for the number of elements which individuals construe power over, although most increase. At the same time there is a decrease in

commonality with respect to the elements which they do construe power over. This suggests that there is realignment of the elements and this results in a reduction of commonality, which could be indicative of a reduction in power.

The Trained Butchers Group

One individual decreases the number of elements construed, the other increases the number. On the first grid they both construe power over 'personnel problems'; 'stock problems'; 'product breakdown' and 'leakage & surplus', and on the third grid, 'personnel problems'; 'stock problems'; 'actual sales'; 'gross profit'; 'sales percentage'; 'product breakdown' and 'leakage & surplus'.

The change, in opposite directions, the number of elements over which they construe power. At the same time there is an increase in the commonality with respect to the elements which they do construe power over. This suggests that there is realignment of the elements into some form of commonality.

8.4.406 Summary

There is commonality between the groups in that in all of the groups there are differences between the individuals in respect of the changes in the direction of the construing of power over the elements. These are as follows:-

(i) In the Withdrawn Group the number of elements so construed increases with one individual, decreases with one individual and remains the same with one individual.

(ii) In the Untrained Group the number of elements so construed increases with two individuals, decreases with one individual and remains the same with one individual.

(iii) In the Trained Group the number of elements so construed increases with one individual, decreases with three individuals and remains the same with two individuals.

(iv) In the Trained Butchers Group the number of elements so construed increases with one individual and decreases with one individual.

The strongest inference from this is probably that in the Trained Group five individuals construe either the same or a reduced number of elements, and therefore there is not an increase in power over the elements. In the Withdrawn Group the majority also do not increase the number of elements construed. In fact the total position is that most individuals construe power over fewer elements. One explanation for this reduction in the number of elements construed could be because of the merger in the co-op and the subsequent the change of Food Trades Officer, who

in turn centralised the system of ordering goods. The Untrained Group are the only exception to this pattern, and the explanation for this difference could lie in the different jobs which the individuals were doing at the time of the third grid.

Amongst the groups there are some indications of primary power over elements being construed with commonality. On the first grid there is commonality between the Trained Group and the Trained Butchers Group. These groups construe power over 'stock problems' and 'personnel problems'. At the same time all of the individuals in the Untrained Group and the primary power of the Trained Group construe power over 'personnel costs'.

By the third grid there are some changes. The construing of power has reduced to such an extent that there is no commonality amongst the individuals in the Withdrawn Group, and in the Trained Group there are insufficient numbers to achieve primary power, although three individuals in the Trained Group do construe four elements with commonality. With this qualification the following commonality occurs. The Untrained Group, the Trained Group and the Trained Butchers Group construe 'leakage and surplus'. All of the Untrained Group and three of the Trained Group construe the store', and the Untrained Group and the Trained Group construe 'personnel costs'. All of the Untrained Group and the Trained Butchers Group construe 'stock problems'. Although there is not a movement in the direction of construing more elements on the third grid, by the third grid there is a realignment of construing the elements here with more commonality.

8.4.407

The Commonality of the Supplied Constructs is Examined Through the Number of Elements Construed

Table 8.26
The Total Number of Elements Construed with Primary Commonality on the Supplied Constructs

Grid	<u>"As I influence"</u>			<u>"As I would like to influence"</u>			<u>"I have power over"</u>		
	1	2	3	1	2	3	1	2	3
<u>Withdrawn</u>		1	3		1	2		0	0
<u>Untrained</u>	3	0	2	2	1	3	1	0	4
<u>Trained</u>	4	2	6	3	4	4	5	3	0
<u>Butchers</u>	4	6	7	3	9	8	4	7	7
	11	9	18	8	15	17	10	10	11

Table 8.26 shows the total number of elements construed by the four groups on each grid on each supplied construct with either primary influence or power. This

is a measure of a group's commonality of construing. There is generally an increase in the commonality with which elements are construed within the groups, although on the second grid there is a decrease in the commonality of construing actual influence. With the construct "As I would like to influence" the increase in the commonality with which there is a desire to influence is really quite marked, especially between the first and second grids. With the construct "I have power over", there is only a slight increase in commonality.

Within these four groups there are differences in the general way in which these supplied constructs are construed with primary influence or primary power. This results in changes in the elements which are construed with primary influence and primary power. The Withdrawn Group increases actual influence and desired influence, but power is never construed with commonality over elements. The Untrained Group slightly decreases actual influence, slightly increases desired influence and increases the number of elements with power, when construed with commonality.

The Trained Group is similar to the Withdrawn Group in that there are increases in actual influence and desired influence, but although power is construed on the first two grids in commonality it is not construed on the third grid. The Trained Butchers Group have increases in all three supplied constructs. The Trained Butchers Group where the understanding of both individuals increased, is associated with increases in commonality of construing actual influence, desired influence and power. However, in the Trained Group where the majority also construed increases in understanding, there are increases on actual influence and desired influence, but power was not construed with sufficient commonality on the third grid.

An explanation for the differences between these two groups could be that the individuals in Trained Butchers Group are apparently in a more autonomous work situation than those in Trained Group. In this situation the provision of financial information and training could be beneficial to them as a whole. With the individuals in Trained Group, although there has been the provision of financial information and training, there has also been other changes with the new Food Trades Officer in the way the stores are run. The most obvious of these changes concerns the centralisation of ordering stock. Irrespective of whether this is the correct explanation for this difference, clearly the provision of financial information is not automatically accompanied by an increase in power over elements construed with commonality. The individuals in the Withdrawn Group, who generally have the same or less understanding, have a tendency to construe the same number or fewer elements

with successive grids for actual influence, desired influence and power. Here the commonality increases with both influence constructs, but is never attained for the power construct. The individuals in the Untrained Group construe less or the same number of elements with actual influence, and this comes through in the slightly less commonality found with this actual influence construct.

8.4.408 The Number of Elements Construed on the Supplied Constructs

Table 8.27 The Total Number of Elements Construed on the Supplied Constructs

Grid	<u>"As I influence"</u>			<u>"As I would like to influence"</u>			<u>"I have power over"</u>		
	1	2	3	1	2	3	1	2	3
<u>Withdrawn</u>	2	10	14	2	14	14	2	1	4
<u>Untrained</u>	16	13	15	9	14	31	11	11	20
<u>Trained</u>	27	36	45	38	40	51	31	30	23
<u>Butchers</u>	16	21	21	16	26	22	14	19	18
	61	80	95	65	94	118	58	61	65

Table 8.26 shows the number of elements construed on each supplied construct by each group. It was found that in general there is a rank order to the number of elements construed with each of the supplied constructs. The overall rank order is that "As I would like to influence" is the largest. By the third grid "As I would like to influence" has risen from 6% to over 20% more elements than "As I influence", which is second in rank. Power is always the smallest, but the gap between "As I influence" and power has risen from 5% to 49% more elements than power. The total number of elements construed with power is about the same by the third grid, even though there are more individuals, whilst "As I influence" and "As I would like to influence" have increased. Thus power and influence are not identical in terms of the number of elements construed.

8.4.409

The Commonality of the Supplied Constructs is Examined Through Particular Elements

The groups exhibit some commonality in the construing of particular elements when looked at from the point of primary influence and power on the third grid. Here commonality is taken in its basic form of two or more groups having primary influence or power over any particular element. Most of the basic commonality is between the Trained Group and the Trained Butchers Group who, along with individuals from the other groups, construe "As I influence" on 'the store'.

'stock problems', 'personnel costs', 'actual sales' and all groups construe 'leakage and surplus'. The Trained Butchers Group are the only group not involved in construing actual influence on 'the store'. There is more commonality in this respect on the third grid than on the first grid.

On the third grid with desired influence there is slightly less commonality. It exists with 'the store', 'timeliness of information', 'sales target' and 'leakage and surplus'. There is more commonality in this respect on the third grid than on the first grid. The elements 'the store' and 'leakage and surplus' are construed in commonality in the construct of actual influence. These two elements are inter-related whilst the two other elements construe issues which are clearly relevant to the effective management of the store but which are beyond the immediate scope of the individuals. This commonality of desired influence is not shared by the Trained Group, who are essentially store managers by the third grid. It is of note that although there are more elements generally construed on the individual grids with the supplied construct "As I would like to influence", there is less commonality here with this construct than the construct "As I influence".

The power construct, on the third grid, shows the smallest amount of commonality. This is not unexpected since this construct has the smallest number of elements. Power is construed over 'actual sales' and 'leakage and surplus'. The element 'actual sales' is construed with commonality with actual influence, and 'leakage and surplus' is construed with commonality with actual and desired influence. It would appear that 'leakage and surplus' is a very salient issue amongst the participants, and 'actual sales' slightly less salient. However, it should be noted that this commonality of power over these two elements is not shared on the third grid by the Trained Group, who are essentially store managers, although this group does construe them in commonality with actual influence.

8.4.410

A Construction of the Supplied Constructs in Relation to Changes in Understanding

There are differences between the supplied constructs in respect of the direction of change in the number of elements which are construed with the supplied constructs. In total the direction of change with each supplied construct is as follows. With "As I influence" 7 individuals increase, 3 decrease and 5 remain the same. Three of the individuals construing the same number of elements here also have a similar understanding over the course of the study. The individual whose

understanding decreases construes a fewer number of elements. Six individuals who construe more elements have more understanding.

With "As I would like to influence" 8 individuals increase, 3 decrease and 4 remain the same. One individual construes the same number of elements and has similar understanding. The individual whose understanding decreases construes a fewer number of elements. Five individuals who construe more elements have more understanding.

With "I have power over" 5 individuals increase, 6 decrease, and 4 remain the same. Two individuals construe the same number of elements and have similar understanding. The individual whose understanding decreases construes a fewer number of elements. Four individuals who construe more elements have more understanding.

It would appear that there is some correspondence between the direction of the change in understanding and the direction of change in the number of elements construed. This appears to be the case particularly with respect to the construct "As I influence".

The only supplied construct on which there is a clear majority of individuals in a particular state is with "As I would like to influence". This state is an increase in the number of elements. The construct "As I influence" has almost a majority of individuals with an increase in the number of elements. With power the largest state is of those who construe a decrease in power over the elements, although there are almost as many who construe an increase. There has been more reduction in power than has occurred with the other two supplied constructs.

8.4.4.11

The Relationship of the Construct "As I influence" to the Other Constructs

The output of the INGRID 72 program provides co-ordinates which enable the constructs to be plotted in the element space. These constructs were plotted and the construct "As I influence" was examined in relation to other constructs in its proximity. An example of this can be found in Appendix V.

The Withdrawn Group

There is no consistent pattern of relationships with other constructs. The lack of a power construct with all three individuals at some time means that no changes can be examined in relation to power. However, where power is construed it is not close to the influence construct. On the third grid, in one case, influence is

at the centre of all of the constructs, and in the others it is close to a person construct, or stock, the store and leakage.

The Untrained Group

Over the course of the study, the influence construct is closer to other constructs and connected with constructs associated with the personnel, primarily, then stock and leakage. At times the influence and power constructs are some distance apart, however on the third grid, with the three individuals who construe power, two have these supplied constructs quite close together whilst with the third they are some distance apart. The closeness of the influence and power constructs may mean a lack of differentiation between these.

The Trained Group

At times the influence and power constructs are quite close together and at other times, quite far apart. For three individuals the tendency was for these constructs to move further apart, and for influence to be associated with staff and stock. This is the same for the fourth individual who seemed to have the influence and power constructs in the same close relationship for all three grids. For the two individuals whose influence and power constructs came closer, influence is close to stock constructs.

The Trained Butchers Group

One individual moves from influence being close to 'information' and 'display' constructs on the first grid, to influence being a little distance from power and two constructs concerned with 'good product breakdown' and 'good promotions giving sales and profit'. With the other individual, on the first grid influence is associated with constructs concerned with the need to cut meat correctly and avoid mistakes, this association persists onto the third grid where influence is still close to this and the need to not cause leakage and increase sales.

8.4.4.12 Summary

There are no large differences between the groups for, in each group, influence is firstly associated with stocks and the need to prevent leakage, and then with constructs relating to people.

8.4.413

The Relationship of the Construct "I have power over" to the Other Constructs

The Withdrawn Group

One of the group has not construed power onto any grid and the other two only construed power either on the first grid or the last. The one individual with a power construct on the last grid has this associated with overall profit and losing money.

The Untrained Group

Power is not construed onto the grid at some time by three individuals. When it is construed it is generally associated with constructs concerned with goods and or leakage. On the third grid power and influence are quite closely associated by two individuals, and this leads to a lack of differentiation between these and other constructs.

The Trained Group

Over the course of the study four individuals differentiate between power and influence constructs. With these four individuals power is associated with constructs which are concerned with producing the sales required to make a profit. The two other individuals construe influence and power more closely together and have less differentiation so that power is associated with stock and staff.

The Trained Butchers Group

On the third grid both butchers construe power associated with constructs concerned with adequate sales and profit, and information to achieve targets.

8.4.414 Summary

On the last grid two individuals in the Withdrawn Group do not construe power onto the grid. Of the remaining 13 individuals 7 (1 Withdrawn Group, 4 Trained Group, 2 Trained Butchers Group) differentiate between power and influence and the constructs closely associated with influence. These individuals associate the power construct with making sales and producing a profit. The other 7 individuals do not make this differentiation and so power is associated with the same or constructs similar to influence, that is stock, leakage and people. Thus some individuals clearly construe a difference between the constructs of power and actual influence whilst others do not.

8.4.415

The Relationship of the Actual Influence and Power Constructs to Each Other

The relationship of the plots, in the element space, of the two constructs, "As I influence" and "I have power over", were examined.

The Withdrawn Group

One of the group has not construed power onto any grid and the other two only construed power either on the first grid or the last grid and so comment is possible.

The Untrained Group

Power is not construed onto the grid at some time by three individuals. Although the influence and power constructs are construed separately at times, these constructs generally are quite close together. For all individuals the constructs have come closer together over the course of the study.

The Trained Group

For 3 individuals these are closer, for 2 individuals these are further apart, and for 1 individual about same distance apart.

The Trained Butchers Group

For 1 individual these are closer and for the other individual they are further apart.

8.4.416 Summary

This examination of the 12 individuals with two construing of these constructs, shows that with 8 individuals the constructs move closer together, for 3 individuals further apart, and 1 individual about the same distance. These movements do not appear to be obviously associated with the individual's changes in understanding, nor with the provision of financial information and training. It would appear that with the individuals in the Withdrawn Group and the Untrained Group there have been occasions when it was not possible for them to construe power over the elements presented. This inability to construe power would not appear to relate to financial information provision, but to their position in the co-op.

8.4.417 An Analysis of the Numbers of Elements Used in Construing

Several other analyses were conducted on the numbers of elements construed and ticked on each grid. The aim of this analysis was to determine if the groups construed similar quantities of elements during the study. The differences in the sizes of the groups means that a straight pairwise comparison between groups is not possible.

Table 8.28 The Change in the Total Number of Elements Ticked on Each Grid

	Change between Grid 1 and 2	Grid 2 and 3
<u>Withdrawn</u>		
WE	-10	-1
JOR		+39
GA		+4
<u>Untrained</u>		
JOH	-48	+10
WI	0	-3
CO	+1	+12
NO		+16
<u>Trained</u>		
SM		+27
HI	-16	+5
LI	+3	-6
CU	-15	+50
HE	-16	-28
TI	-7	+5
<u>Butchers</u>		
EP	+33	+49
NU	-6	-15

Table 8.28 shows the change in the total number of elements ticked on the grids for each group. With the Withdrawn Group there is a general increase in the number of elements ticked, but these absolute and relative changes are not statistically significant. With the Untrained Group there is no clear change in the direction of the number of elements construed on the first and second grids. There is a general increase in the number of elements ticked between the second and third grids and the relative change is statistically significant at the 1% level with 3 d.f.. With the Trained Group there is a general decrease in the number of elements ticked between the first and second grids and the absolute changes are statistically significant at the 10% level with 4 d.f.. There is a general increase in the number of elements ticked between the second and third grids and the absolute change is statistically significant at the 5% level with 5 d.f.. With the Trained Butchers Group there is no consistent direction of change between the grids and the changes are not statistically significant.

Over the course of the study the Trained Group appear to change the number of elements which they construe quite clearly on all three grids, although these changes are not in complete uniformity. For the groups generally there is an increase in the number of elements. It would appear that in general the changes

reach statistical significance with the larger groupings of individuals and those who are concerned with managing the store.

Table 8.29 The Change in the Total Number of Financial Elements Ticked on Each Grid

	<u>Change between Grid 1 and 2</u>	<u>Grid 2 and 3</u>
<u>Withdrawn</u>		
WE	-6	-3
JOR		+27
GA		+2
<u>Untrained</u>		
JOH	-39	+2
NI	+5	-10
CO	-3	+1
NO		+12
<u>Trained</u>		
SN		+18
HI	-12	+20
LI	+6	-3
CU	-1	+27
HE	-12	-34
TI	-14	+30
<u>Butchers</u>		
EP	+19	+10
MU	-7	+6

Table 8.29 shows the change in the total number of financial information elements ticked on the grids for each group. With the Withdrawn Group there is a general increase in the number of elements ticked, but these absolute and relative changes are not statistically significant. With the Untrained Group there is a general decrease in the number of elements between the first and second grids, and a general increase in the number of elements ticked between the second and third grids. The absolute and relative changes are not statistically significant. With the Trained Group there is a general decrease in the number of elements ticked between the first and second grids and the absolute changes are statistically significant at the 5% level with 4 d.f.. There is a general increase in the number of elements ticked between the second and third grids and the absolute change is statistically significant at the 1% level with 5 d.f.. With the Trained Butchers Group there is no consistent direction of change between the first two grids, but there are increases between the second and third grids, but these are not statistically significant.

Over the course of the study the Trained Group change the number of financial information elements which they construe, but over the three grids there is an increase in the number of financial information elements. This is also the case with the other groups. It would appear that in general the changes reach statistical significance with the larger groupings of individuals and those who are concerned with managing the store.

From the results obtained and because of the different sizes of the groups it is not clear whether the provision of financial information and training is associated with these changes. It would appear to be associated with the changes.

8.4.50

An Analysis of the Permeability Found in the Grids

The notion of permeability of a construct means the ability of a construct to embrace new elements. It was anticipated that when an individual construes financial information and alters his construing, one indication of this would be changes in the permeability of some constructs. It was anticipated that this would be more obvious when some form of training occurred too. It is not possible to look at the changes in permeability of the financial constructs from the first grid, because the elicited constructs of the individual were allowed to change as this was one of the prime areas of investigation. The supplied constructs are the only written constructs which are permanent on all grids and can be examined for permeability, along with the grid itself. It was anticipated that if individuals were construing more influence, for example, then the influence construct would contain a larger number of elements than the previous grid.

Table 8.30 The Change in the Number of Elements Ticked on "As I influence"

Change between	Grid 1 and 2	Grid 2 and 3	Grid 1 and 3
<u>Withdrawn</u>			
WE	-1	0	-1
JOR		+4	+4
GA		0	0
<u>Untrained</u>			
JOH	-5	-3	-8
NI	-1	+1	0
CO	0	0	0
MO		+4	+4
<u>Trained</u>			
SM		+3	+3
HI	+1	+2	+3
LI	+2	-2	0
CU	-1	+2	+1
HE	-2	+4	+2
TI	0	0	0
<u>Butchers</u>			
EP	+5	+1	+6
MU	0	-1	-1

Table 8.30 shows the change in the number of elements ticked on the construct "As I influence". The Withdrawn Group show very little change between any of the grids. The Untrained Group have small changes in both directions. Between grids one and two, the Trained Group have small changes which provide no uniform direction, but the absolute changes are statistically significant at the 5% level with 4 d.f. The same is the case between grids two and three where the absolute change is statistically significant at the 2% level with 5 d.f. The Trained Butchers Group only has clear changes between the second and third grids in and then opposite directions. When the absolute changes for the four groups, between grids one and two, are submitted to a 't' Test the changes are statistically significant at the 2% level with 10 d.f. It is the same between grids two and three, where the sum of the absolute changes of the four groups is statistically significant at the 1% level with 14 d.f. Thus the majority of the participants alter their construing of influence between the first and second and the second and third grids. These changes are indicative of a broadening of the construct system where increases have occurred and deepening where decreases have occurred.

Table 8.31
The Change in the Number of Elements Ticked on "As I would like to influence"

Change between	Grid 1 and 2	Grid 2 and 3	Grid 1 and 3
<u>Withdrawn</u>			
WE	-1	-1	-2
JOR		+3	+3
GA		-2	-2
<u>Untrained</u>			
JOH	+2	+1	+3
NI	-1	+3	+2
CO	+1	0	+1
MO		+13	+13
<u>Trained</u>			
SM		0	0
HI	+1	-1	0
LI	0	0	0
CU	-8	+10	+2
HE	-3	+2	-1
TI	0	0	0
<u>Butchers</u>			
EP	+3	+1	+4
MU	+7	-5	+2

Table 8.31 shows the change in the number of elements ticked on the construct "As I would like to influence". Between the grids there are changes in the number of elements construed by each group, but no uniform direction. The absolute changes, between grids one and two, for the Untrained Group, are statistically significant at the 10% level with 2 d.f.; and between grids two and three, for the Withdrawn Group, are statistically significant at the 10% level with 2 d.f.. However, the absolute changes for all of the participants between the first two grids are statistically significant at the 2% level with 10 d.f., and between the second two grids are statistically significant at the 2% level with 14 d.f. Thus the majority of the participants alter their construing of desired influence between the first and second and the second and third grids.

Table 8.32 The Change in the Number of Elements Ticked on "I have power over"

Change between	Grid 1 and 2	Grid 2 and 3	Grid 1 and 3
<u>Withdrawn</u>			
WE	-1	0	-1
JOR		0	0
GA		+3	+3
<u>Untrained</u>			
JOH	+2	-2	0
NI	-2	+5	+3
CO	0	-4	-4
MO		+10	+10
<u>Trained</u>			
SM		+8	+8
HI	+2	-3	-1
LI	+1	-1	0
CU	-2	+2	0
HE	-1	-10	-11
TI	-2	-3	-5
<u>Butchers</u>			
EP	+4	+1	+5
MU	+1	-2	-1

Table 8.32 shows the change in the number of elements ticked on the construct "As I have power over". Between the grids there are changes in the number of elements construed by each group, but no uniform direction. Within each group the absolute changes between grids one and two, for the Trained Group, are statistically significant at the 1% level with 4 d.f., and between grids two and three, for the Untrained Group, are statistically significant at the 10% level with 3 d.f., and, for the Trained Group, are statistically significant at the 5% level with 5 d.f. However, the absolute changes for all of the participants between the first two grids are statistically significant at the 1% level with 10 d.f., and between the second two grids are statistically significant at the 1% level with 14 d.f. Thus the majority of the participants alter their construing of power between the first and second and the second and third grids.

8.4.52 Summary

There are changes in the permeability of the three supplied constructs, and at times the changes are even statistically significant. With the influence constructs there is a tendency for an increase in the number of elements, which is indicative of a broadening of the constructs. With the power construct there is

almost a majority of individuals with a decrease in the number of elements, which is indicative of a deepening of the construct. Clearly changes have occurred to these individuals in directions which are not uniform within each group

The pattern which emerges is that the Withdrawn Group generally decrease their desired influence. This could suggest that the group has sufficient influence, but in the circumstances it is more likely that the group do not want much influence. The Untrained Group generally increase their desire to influence, which suggests a lack of influence. The Trained Group generally increases its actual influence, but at the same decreases its power.

8.4.52 The Permeability of the Whole Grid

Table 8.33 The Change in the Number of Elements Ticked on the Whole Grid

	Change between	Grid 1 and 2	Grid 2 and 3	Grid 1 and 3
<u>Withdrawn</u>				
VE		-10	-1	-11
JOR			+39	+39
GA			+4	+4
<u>Untrained</u>				
JOH		-48	+10	-38
NI		0	-3	-3
CO		+1	+12	+13
NO			+16	+16
<u>Trained</u>				
SM			+27	+27
HI		-16	+5	-11
LI		+3	-6	-3
CU		-15	+50	+35
HE		-16	-28	-44
TI		-7	+5	-2
<u>Butchers</u>				
EP		+33	+16	+49
MU		-6	-9	-15

Table 8.33 shows the change in the number of elements ticked on the whole grid. Between the grids there are changes in the number of elements construed by each group, but no uniform direction. Within each group the absolute changes between grids two and three, for the Untrained Group, are statistically significant at the 5% level with 3 d.f., and for the Trained Group are statistically significant at the 2% level with 5 d.f. However, the changes for all of the participants between the first two grids are statistically significant at the 1% level with 10 d.f., and between the

second two grids are statistically significant at the 1% level with 14 d.f. Thus the participants alter their construing of the grid elements between the first and second and the second and third grids.

All of the individuals appear to alter their construing of the grid elements. It is only in the separate Untrained Group and the Trained Group where absolute changes reach statistical significance. The general direction is to increase the number of elements construed. These increases are indicative of a broadening of the construct system.

8.50

Further Information Required by the Individuals

It was anticipated that if individuals elaborated their construing of the financial information elements so that they enhanced their understanding and meaning of financial information elements, then they would consequently require further information. After the last grid the individuals were asked what further information they would like to receive. The groups responded to this question in the following ways.

The Withdrawn Group

All three required further information which could be classified as 1 Functional; and 2 Structural.

The Untrained Group

One individual, whose understanding had increased, currently had enough information. The three others required further information. This could be classified as 1 none further; 1 Functional and 2 Contextual.

The Trained Group

Four individuals did not require further information, and of these 3 increased their understanding, 1 remained the same. The other two individuals, whose understanding increased, required further information. This could be classified as 4 none further; 1 Functional and 1 Contextual.

The Trained Butchers Group

Both individuals, whose understanding increased, did not require further information.

8.51 Summary

There is an almost equal division between the eight individuals who require further information and the seven who do not. It appears that amongst those who have received some training there is a tendency not to require further information, whilst those who have not been trained do require further information. There seems

to be no distinct pattern to the type of information required, though five require historic information and three require future-oriented information. The information which the groups require is summarised in Table 8.34.

	<u>None</u>	<u>Functional</u>	<u>Structural</u>	<u>Contextual</u>
Withdrawn Group	0	1	2	0
Untrained Group	1	1	0	2
Trained Group	4	1	0	1
Trained Butchers Group	2	0	0	0

8.60

Summary of Major Results

The Results section contains some commentary which demonstrates why particular analyses have been conducted as well as the outcome of the analyses, and a summary. The study was exploratory in its intent and although a model and some hypotheses were formulated not all of the hypotheses are relevant to this study. The additional findings certainly add to the model in this area. It is necessary to provide an appraisal as to what has happened to the individuals in this study, what has been construed from the events set down on the grids, and how these findings relate to the initial model and the relevant hypotheses which were formulated.

To make more sense out of what happened to the individuals they were placed into a group which related more closely to one of the hypotheses. The groups were devised on the basis of the provision of information and training. The Withdrawn Group were not formally included in the model, since the model deals with the provision of financial information, and not its withdrawal. There is the Untrained Group, the Trained Group and the Trained Butchers Group. The information provided appears to be used quite freely by those receiving it.

The study commenced in an atmosphere of the Co-op moving in the direction of some Communication towards Consultation in respect of information provision. The change in the Food Trades Officer halted and reversed this movement to more like one of Communication. Due to these events it would seem that the groups stand the best opportunity of evaluation if they are placed into the contexts of the following hypotheses. The Withdrawn Group examined in terms of Hypothesis 5, the Untrained Group with Hypothesis 6, and the Trained Group and the Trained Butchers Group with Hypothesis 7.

8.61 Hypothesis 1

An individual who is presented with a set of elements, which includes elements which are labels of financial information, will not necessarily find the elements of financial information within his range of convenience.

The individuals in the Withdrawn Group did not always find the financial information elements in their range of convenience, but those in the other groups did find these within the range.

8.62 Hypothesis 2

An individual, who construes the provision of financial information, will construe that financial information and so revise the construing of the same set of elements which was originally presented.

The provision of financial information, even with its subsequent withdrawal, allows the individuals in all groups to revise their construing.

8.63 Hypothesis 3

An individual, who construes the use of the financial information provided will further revise the construing of the same set of elements.

This hypothesis construes that an individual who uses the financial information with which he has been provided will revise his constructs more than an individual who does not use that information.

The individuals in both of the Trained groups revise their construct systems more than the individuals in the other two groups. The individuals in the Untrained Group revise their construing more than those in the Withdrawn Group. The only apparent reason for the difference between these last two groups is that one group are still provided with the financial information and the other group have had it withdrawn.

8.64 Hypothesis 4

An individual, who is trained to use and who does use the financial information provided, will revise, even further, the construing of that same set of elements.

This hypothesis construes that an individual who is trained to use and who does use the financial information with which he has been provided, will revise his constructs more than an individual who is not trained to use that information.

The individuals in both of the Trained groups revise their construct systems more than the individuals in the other two groups. The only apparent reason for the differences between the Trained and the Untrained is the issue of training. There are even indications amongst a couple of individuals in the Withdrawn and Untrained Groups that they have received some training, not within the context of this study, and this has resulted in the revision of their construct systems in a manner similar to those formally trained.

8.65 Hypothesis 5 The Withdrawn Group

An individual, who construes the provision of financial information in the context of communication, will revise the construing to:

- a. not construe more influence.
 - b. not construe more desired influence.
 - c. not construe more power.
 - d. not construe more financial information elements to be ticked in completing the grid.
 - e. not construe the desire for more or different types of financial information
 - f. not increase the understanding of financial information elements.
-
- a. One individual construes influence upon a larger number of elements, one individual construes influence upon a smaller number and the third upon the same number.
 - b. One individual construes influence upon a larger number of elements, two individuals construe influence upon a smaller number of elements.
 - c. One individual construes power over a larger number of elements, one individual construes power over a smaller number and the third over the same number.
 - d. Two individuals construe a larger number of elements, one individual construes a smaller number of elements.
 - e. The three individuals construe a requirement for more financial information.
 - f. One increases, one decreases and one's understanding remains the same.

8.66 Hypothesis 6 The Untrained Group

An individual, who construes the provision of financial information in the context of consultation, will revise the construing to:

- a. construe more influence.
- b. construe more desired influence.
- c. not construe more power.
- d. not construe more financial information elements to be ticked in completing the grid.
- e. not construe the desire for more or different types of financial information.
- f. not increase the understanding of financial information elements.

a. One individual construes influence upon a larger number of elements, one individual construes influence upon a smaller number and two upon the same number.

b. The four individuals construe influence upon a larger number of elements.

c. Two individuals construe power over a larger number of elements, one individual construes power over a smaller number and the fourth over the same number.

d. One individual construes a larger number of elements and three individuals construe a smaller number of elements.

e. Three individuals construe a requirement for more financial information and one individual for the same financial information.

f. Two individuals increased their understanding, two remained the same.

8.67 Hypothesis 7 The Trained Group

An individual, who construes the provision of financial information in the context of consultation and who is trained, will revise the construing to:

- a. construe more influence.
- b. construe more desired influence.
- c. not construe more power.
- d. construe more financial information elements to be ticked in completing the grid.
- e. construe the desire for more or different types of financial information.
- f. increase the understanding of financial information elements.

- a. Four individuals construe influence upon a larger number of elements, and two upon the same number.
- b. One individual construes influence upon a larger number of elements, one upon a smaller number, and four upon the same number of elements.
- c. One individual construes power over a larger number of elements, three individuals construe power over a smaller number and two over the same number.
- d. Five individuals construe a larger number of elements and one individual construes a smaller number of elements.
- e. Two individuals construe a requirement for more financial information and four individuals for the same financial information.
- f. The understanding of financial information for five individuals has increased and one remains the same.

8.68 Hypothesis 7 The Trained Butchers Group

An individual, who construes the provision of financial information in the context of consultation and who is trained, will revise the construing to:

- a. construe more influence.
 - b. construe more desired influence.
 - c. not construe more power.
 - d. construe more financial information elements to be ticked in completing the grid.
 - e. construe the desire for more or different types of financial information.
 - f. increase the understanding of financial information elements.
-
- a. One individual construes influence upon a larger number of elements, and one upon a smaller number.
 - b. The two individuals construe influence upon a larger number of elements.
 - c. One individual construes power over a larger number of elements, and one individual construes power over a smaller number.
 - d. One individual construes a larger number of elements and one individual construes a smaller number of elements.
 - e. The two individuals construe a requirement for the same financial information.
 - f. The understanding of financial information for both has increased.

B.69 A Summary of the Results with Respect to the Hypotheses

The movement of the groups in the course of the study can be briefly summarised as follows:

	<u>Increases</u>	<u>Decreases</u>	<u>Remains the Same</u>
<u>The Withdrawn Group</u>			
Understanding.	1	1	1
As I influence.	1	1	1
As I would like to influence.	1	2	0
I have power over.	1	1	1
Financial information elements	2	1	0
Information requirement.	3	0	0
<u>The Untrained Group</u>			
Understanding.	2	0	2
As I influence.	1	1	2
As I would like to influence.	4	0	0
I have power over.	2	1	1
Financial information elements	1	3	0
Information requirement.	3	0	1
<u>The Trained Group</u>			
Understanding.	5	0	1
As I influence.	4	0	2
As I would like to influence.	1	1	4
I have power over.	1	3	2
Financial information elements	5	1	0
Information requirement.	2	0	4
<u>The Trained Butchers Group</u>			
Understanding.	2	0	0
As I influence.	1	1	0
As I would like to influence.	2	0	0
I have power over.	1	1	0
Financial information elements	1	1	0
Information requirement.	0	0	2

8.7.0 A Summary of Other Results

The individuals in the Withdrawn Group produce a mixed pattern. In general they do not have many financial constructs and few functional-pre-emptive constructs. The issues of understanding, actual influence and power remain the same overall. All three individuals require more financial information, and this is the only clear movement and because of this there is a tendency for the group to move upwards on the Information-Influence Matrix with respect to financial information.

The individuals in the Untrained Group have either more understanding, which is accompanied by an increase in functional-pre-emptive constructs, or their understanding remains about the same and functional too. Two individuals construe more power though actual influence is about the same, whilst the group generally require more financial information and would like to influence more elements and so there is a slight tendency to move upwards to the right of the Information-Influence Matrix.

The individuals in the Trained Group generally have more understanding which is accompanied by more functional-pre-emptive constructs. Although actual influence has increased, power has generally decreased or remained the same, and the desire to influence generally remains the same. The group generally has the same requirement for information and thus there is little movement across the matrix, but some tendencies upwards.

In the Trained Butchers Group there is generally more understanding accompanied by a larger number of functional-pre-emptive constructs. There is a mixed construing of influence and power, both would like more influence but no further financial information. Thus both move towards the right on the matrix.

8.8 A Concluding Comment

In this study it would appear that the simultaneous movement of more information, more influence and more power has not occurred. At this stage only the groups with some formal training connected with the information do not want more information, and this may be due to the fact that individuals are still in the process of assimilating and using this information. The other two groups do require more information. The Withdrawn Group may simply want to revert to that which they have had or may construe they need. There is no obvious reason why the Untrained Group require further information. It is almost certain that the change of Food Trades Officer has not allowed the development of consultation to occur and that he was trying to move to a position of communication of financial information. Even

though the provision of more financial information continued, those trained to use this information generally construed more influence, but less power.

Chapter Nine

Organizational Study 3 - A Southern Printing Co-operative

9.0

Introduction

Recent movements in the economy have seen the growth of worker co-ops. The Co-operative Advisory Group (1984) noted that, in autumn 1984, there were some 750 worker co-ops, a growth from an estimated 67 in 1980. The printing co-op in this study was set up in 1980. I approached one of the founder members of the co-op in early 1985 and explained the nature of the study, and that I would be prepared to tutor co-op members in their use of their information as a way giving something more tangible to the co-op than just the participation in the study. The suggestions were accepted with certain limitations. The limitations were that only one individual from each department would be interviewed to establish the elements for the grid, and that only two grids would be completed by those workers who wished to participate.

9.10

The Structure of the Co-op

The co-op had been operating for nearly 5 years when I made initial contact. During this time the number employed in the co-op had grown from 6 founders to 21. This is quite a large number for a worker co-op in the U.K. The number of people employed had increased to cope with increasing volumes of work. In consequence the working arrangements and the structure of the co-op had changed and it was anticipated that these would continue to change.

9.11

The Workforce

There are two types of worker in the co-op. There are co-op members who are individuals who have worked in the co-op for a minimum of one year, and who have been found to be acceptable to the existing members and so have become members. In fact not only are these individuals members they are also directors of the co-op, so that if at meetings of the co-op there is the need for a formal decision then the directors have the voting power. It was noted that it was unusual for the directors alone to take a formal decision because the co-op tried to allow all workers an equal say in the affairs of the co-op.

The other workers employed by the co-op are co-op employees, individuals who are not yet qualified to become members. In general the only difference between a co-op member and a co-op employee is that employees are not always formally

involved in making and taking policy decisions. Although policy decisions are collective decisions taken at monthly meetings, some small decisions are delegated to individuals.

There are two categories for salary arrangements, apprentices and non-apprentices. Apprentices are based on the union rate for three year apprenticeship. Non-apprentices are based on six grades primarily related to the years of experience with the co-op, irrespective of the current job performed. At the start of the study the founder members had just reached the top grade, which is equal to the salary of the average skilled manual printing worker according to the figures produced by the Department of Employment. The salary for the remaining grades drops by 4% per grade, so that the lowest grade is 20% below the top yet above minimum union rates.

9.12 The Working Arrangements

The co-op has 6 departments or areas: Artwork & Design; Typesetting, Camera & Platework; Printing; Finishing; Administration & Co-ordination. It was noted that there are no heads of departments, but those members who have experience and knowledge in the particular area are the ones who are sought and respected for their opinions and decisions.

There is a monthly meeting of all of the workers of the co-op at which financial information is discussed and the affairs of co-op debated and policy decisions made. These monthly meetings are supplemented by weekly meetings, but the weekly meetings are only attended by one individual from each department. The weekly meeting is to assist the running of the co-op and generally discusses and co-ordinates the more routine matters and does not make policy decisions.

Six months before the study commenced the structure of the co-op had been altered so as to formally recognise the need for an Administration Department. This action recognized the need for individuals to work almost exclusively on tasks such as production scheduling, quotations, invoicing and record-keeping etc. An Apricot computer was installed to take up the burden of this work. An off the peg accounting system, the SAGE system, was introduced. This provided conventional financial accounting record-keeping as well as a budgeting spreadsheet.

2.13 Financial Information, Training and the Grids

The co-op had a record of financial success as seen in terms of the co-op producing a surplus, but there were no signs that the workers were complacent about this. It did mean that the co-op was not struggling to exist and workers were aware of the co-op's need to remain viable.

The requirement for financial information occurred in several ways. The type of information that was required determined who was likely to be responsible for producing it. One individual prepared information concerned with quotations and production. This activity required a conceptual understanding of the proposed work so that all aspects were thought through and costed. The costing for work was based upon the ideas of the co-op and the standards from the British Printing Industries Federation. Generally this information did not concern the workers.

Basically all other types of financial information were prepared by another individual. This other information included routine financial records, management accounting information and projections of future events. The historical financial information fell into two categories. The statutory annual accounts, together with a six months account, were prepared by the auditor, who presented these at a meeting of the co-op, and answered any questions etc. The second category of financial information consisted of a monthly summary, which in the past had been assembled manually from the accounting records. Most months these summaries comprised an income and expenditure account for the month, on which the difference was taken to be 'profit' or 'loss', and the position of the creditors, debtors and cash balance at the end of the month. The monthly summaries were erratic in their timing and content. A half-yearly summary was also circulated in advance of the audited figures.

The workers in the co-op were used to receiving financial information. The start of the study coincided with the first dissemination of monthly figures produced via the computer, which were anticipated to be produced more quickly and regularly than in the past. The financial information from the computer comprised a monthly profit and loss account, budget and actual, and actual balance sheet, all together with a set of cumulative actual figures.

Not only were the workers in the co-op used to receiving financial information, but the information was discussed by the co-op at its monthly meeting, at least. Furthermore, irrespective of the type and the basis of the information which was provided, the information was generally supplemented at the monthly meeting by explanations and it was placed into a context.

Through this process of the provision of financial information and its amplification through explanation, contextual arrangement and discussion, the workers in the co-op were not without some understanding of the financial information elements. The meaning of the financial information is likely with the individual.

Two months after the first grids had been completed the co-op decided that it wanted to provide some training to those workers who wanted it. The investigator was asked to provide this training in exchange for the access which had been given. Apart from an insistence that any material discussed in the training sessions must be placed in the context of its accounting source, the content of the sessions was determined by the workers both before and during the sessions. The sessions were based upon the latest monthly figures that were available at the time and were supplemented by handouts of the explanations etc., of the material.

The six interviews were completed quite quickly but the first grids were completed over several weeks because the study had started at what proved to be an abnormally busy time. The second grid was completed some seven to eight months after the first to allow for the training session and the minor problems with the flow of the financial information.

9.14 The Participants

At the start of the study 20 of the 21 workers completed a grid, only one was not prepared to participate. By the time of the second grid only 15 of the original 20 workers remained and completed the second grid. The workers are a mixture of females and males with ages ranging from late teens to early forties, and with a range of education and abilities. It was not uncommon for individuals to be adept at working in more than one department and to have started working in one department and progressed to another.

The majority of individuals were not questioned using the long interview schedule so that at the time of the first grids these individuals were briefly questioned about their work and financial information. It was accepted and expected that financial information was provided. Most mentioned that if they wanted more information they only had to ask, and, if the information was simple to prepare it would be provided immediately. Many recognized, that in theory they had the right to pick up the records of the co-op and look at anything for themselves. It was recognized that the new information system was a response to requests for more information.

Everyone seemed to be involved with their work and the co-op. The workers had the opportunity to participate in the decision-making of the co-op at all levels, whilst those who were also members had a legal right to this. Thus there was the opportunity for all to utilize information in making decisions along with others.

9.15 The Partition of the Participants of the Co-op into Groups

When the study commenced it was anticipated that all of those who participated, fifteen workers, would have passed through one series of common experiences with respect to financial information and no training. This did not occur and participants have been placed into one of three groups. Amongst those from the co-op who attended the training sessions were five participants from the study. These form the Trained Group and in this group there is one individual from the following five departments: Artwork & Design; Typesetting; Camera & Platework; Finishing; Administration & Co-ordination.

None of the five printers attended the training sessions. The Printing department was physically separate from the rest of the co-op and it appeared to have a separate culture. Perhaps a part of that culture meant that no printer attended the training sessions. However, these form the Printers Group. The remaining five individuals form the Rest Group. There are three individuals from Administration & Co-ordination, and one each from Camera & Platework and Artwork & Design.

The financial information was not just presented to the workers who were then left with it. Through the provision of financial information, its explanation, contextual arrangement and discussion, the workers already had some understanding of financial information. Naturally the meaning of the financial information will vary with the individual. At the start of the study one participant had been with the co-op for only two weeks and had received no financial information during that time. All of the others had been to at least two monthly meetings, and this meant that they had been into contact with at least two sets of monthly figures and presentations. It was anticipated that financial information elements would have been understood and would have some meaning for the individuals on the first grid.

The Elements of the Grid

Six individuals were interviewed in order to generate elements for the grid. The six were representatives from each of the six departments in the co-op. The way in which these representatives were chosen was that, in five cases, the individual who was free in the department at the time they were required to be interviewed was the individual interviewed. The sixth individual was the one responsible for the production of the historic financial information, and he asked his colleagues to allow him to be interviewed. The interview also served to introduce them to construing, the study and its concern with financial information. It also generally made them aware of the types of financial information which was going to be provided.

The interview sessions were documented in writing during the interview, then all interview notes were analysed for their content to find issues suitable for elements which were common across all or most of the individuals. The elements were examined for the work carried out; colleagues, issues or problems associated with the co-op and information. Because of the nature of the co-op it was impossible to include the element 'my immediate boss' which had been used in the two other studies. The following list was compiled:

1. Myself.
2. The members of the co-op.
3. The employees of the co-op.
4. The co-op.
5. The monthly co-op meeting.
6. The number of hours worked.
7. Structural problems of the co-op.
8. Time to study the financial information.
9. The budget for a capital purchase.
10. The actual figures for trading & profit & loss account.
11. The budget figures for trading & profit & loss account.
12. The net profit.
13. An up-to-date cash balance.
14. The debtors outstanding.
15. The creditors outstanding.
16. The balance sheet.

9.21 The Presentation of the Grid

The elements listed above formed the basis of the grid on which there were three supplied constructs. This grid was presented on two occasions to the participants from the co-op in the standard manner previously established. On completion of each grid the individuals were asked for any comments that they wished to make about the grid, and any matters relevant to the study. After the second grid they were asked what additional financial information they would like to receive.

9.22 The Analysis of Individual Grids

The completed grids of each individual were collated and examined for the changes in construing over the time of the study. Each grid was subjected to the program INGRID 72 (Slater, 1972). The output of the INGRID 72 program provided principal components for each grid, as well as co-ordinates which enabled the elements to be plotted in the construct space, and conversely, the constructs to be plotted in the element space. This facilitated an examination of the relationships between the elements and the constructs, and between the elements themselves and the constructs themselves. An example of a set of completed grids for one individual together with the output of the INGRID 72 program, and the attendant individual analysis is contained in Appendix VII.

Attention was given to permeability, the ability of constructs to embrace new elements, and change. The permeability of the constructs; the sense of the first three principal components and the permeability of the whole grid were examined. The issue of permeability has been discussed already and can be found in Chapter Seven page 83.

9.3

The Results

The remainder of this chapter is a distillation of the examination of the results of each grid for each individual. Initially the commonality in the construing of all of the individuals in the study is considered and then the fifteen individuals in either the Printers Group, or the Rest Group, or the Trained Group. The results obtained from each group are analysed and compared.

9.3.100 The Presence of 'Financial' Constructs

The elicited written constructs of the individuals were examined to ascertain if they referred to financial information or financial management. It was anticipated that there would be fewer of these 'financial' constructs in naive construers and that in such construers the constructs would be less complex. This examination revealed that there were individuals with written constructs which included or employed terms of or from financial information or financial management. This indicates that there are individuals in the study who can construe financial information. These 'financial' constructs can be classified into five categories: constructs of need; constructs of description; constructs of function; constructs of time and constructs of structure.

9.3.101 The Categorization of 'Financial' Constructs

The basis for placing a construct into one of these five categories is as follows:

The need constructs contain the word "need" and relate the need of the individual for financial information. For example, "the financial information needs looking at to contribute at meeting", or "we need figures to discuss at the monthly meeting".

The descriptive constructs describe financial information or financial management terms for the individual. For example, "balance sheet shows net profit", or "total for creditors outstanding should show on balance sheet".

The functional constructs demonstrate the function or use of financial information for the individual. For example, "if creditors aren't paid they distort the cash balance", or "production has a direct influence on the actual trading and profit & loss account".

The time constructs amalgamate financial information or financial management terms with time. For example, "setting a budget involves time", or "there is never enough time to work and study the financial information". Infact it is possible to regard many of these time constructs as issues which relate to the structuring of the work of the co-op.

The structural constructs amalgamate financial information or financial management terms with some structure of the co-op. For example, "budget figures need the involvement of the whole co-op", or "members and employees have a say in how the money is spent".

9.3.102 The 'Financial' Constructs Construed in Terms of the Psychology of Personal Constructs

When the first three categories of constructs are considered in terms of types of personal constructs then they can be allocated to the following types of constructs identified by Kelly (1955).

The need construct is a comprehensive construct, that is a construct which subsumes a relatively wide variety of events. This type of construct is permeable and is enabled by its open-endedness to embrace more and more constructs and elements (Kelly, 1955). With the occurrence of a need-comprehensive construct, it can be anticipated that, in such individuals the construct system will become more elaborated through both the experience and modulation corollaries (Kelly, 1955). Simultaneously the need construct could be a superordinate construct which would allow the elaboration of the part of the construct system concerned with financial information.

The descriptive construct is a propositional construct, that is a construct which leaves its elements open to construction in all other respects (Kelly, 1955). With a descriptive-propositional construct the construct describes one of the attributes or facets of a particular piece of financial information. Kelly notes that propositional constructs are employed when one construes circumspectively. Such construing occurs at the start of the cycle in the sequence of Circumspection-Pre-emption-Control in the C-P-C Cycle (Kelly, 1955).

The functional construct is a preemptive construct, that is a construct which preempts elements for membership in its own realm (Kelly, 1955). With a functional-preemptive construct the construct demonstrates/identifies/states the use of financial information in terms of financial management. Kelly notes that the construction of preemption makes for control.

9.3.103 The Individual's Construing of Financial Information

The individual, construing the elements presented, will construe these in his own way. Through the individuality corollary, there are differences in the construing of the same elements. At the same time, through the organizational corollary, each individual evolves their own construction system. With the experience corollary the individual's construction system varies as the individual successively construes the replication of events.

The experiences of the individuals in the co-op are similar to each other, although one of the groups is comprised of individuals who received training. The elaboration of the construct system is through the modulation corollary, although the variation of the system is limited by the permeability of the constructs. Simultaneously, through the fragmentation corollary, an individual may successively employ a variety of construction subsystems which are inferentially incompatible with each other. Thus an individual may construe a need for financial information, but this does not mean that if any amount of financial information is provided that it will be understood. It will be understood only if the construct system is already elaborated, or is subsequently elaborated in this direction.

The presence of descriptive - propositional constructs indicates that the individual's construct system recognizes financial information and can describe it. Again, this does not mean that the financial information is understood, merely its existence is acknowledged.

The use of financial information is demonstrated through the existence of functional - preemptive constructs. These functional - preemptive constructs enable the individual to exercise control, as a result of receiving the financial information, and to make an appropriate decision through the choice corollary.

At the same time other issues arise with respect to financial information or financial management, so that in the co-op it has been possible to categorize two general areas of constructs. One is the issue of time, and the formation of time constructs, the other is the relationship of the financial information to the structure of the co-op and the formation of structural constructs. The training given, is the opportunity for the individual to elaborate his construct system and to have conditions suitable for the formation of new constructs.

9.3.104 The Anticipations of the Changes in Construing

It is anticipated that if an elaboration of the construct system occurs so that notions about financial information and financial management are included, then the number of such 'financial' constructs is likely to increase over successive grids. At the same time if this elaboration is more salient for an individual then it is likely to show itself in the senses of the principal components. That is, if on the individual's first grid there are no 'financial' constructs but his system has become elaborated with 'financial' constructs, then some of these 'financial' constructs could be involved with the sense of at least one of the first three principal components.

9.3.110

The Senses of the Principal Components and the Plots of Elements and Constructs

9.3.111 The Derivation of the Senses of the Principal Components

The senses of the constructs on the principal components were obtained in the following manner. The output from the analysis performed by the INGRID 72 program included the loadings of the constructs on the principal components. The loadings on the first three principal components were examined in turn. The construct with the largest loading was taken together with its loading. The construct with the next largest loading was also taken. The comparative sizes of the loadings were noted, as were the semantics of the constructs. If the loadings and semantics were relatively close together, then the next largest loading and the construct was also taken and compared with the earlier constructs. This process was continued until there was an apparent lack of relationship between the magnitudes of the loadings and the semantics of the constructs. This procedure constituted the cut off point for the constructs in the sense of the principal component. The main construct senses of the first three principal components were built up in this way. An example of this is included with Appendix VII.

These three principal components are the main ways in which the individual construes. Appendix VIII lists the senses of the first three principal components of the individuals in this study. It is these construct senses of the first three principal components that form the basis of the following analysis.

9.3.112 Commonality Amongst the Senses of the Principal Components

The senses of the first three principal components were examined for the amount of commonality amongst the constructs. In fact, apart from the supplied constructs, it was anticipated that there would be no identical constructs amongst the individuals in the co-op, and this was found to be the case. However, constructs were sequentially compared with each other to establish if the total meaning of a construct could be said to demonstrate commonality with at least one other construct. This comparison understates the commonality. This is because there are constructs which include more than one notion or activity, for example, "hours worked, co-op meeting and time to study information should be related, but are not". In these few cases, where the commonality in a construct cuts across several notions, the constructs have been ignored.

By taking the first three principal components from the 15 individuals on 2 grids provides 90 construct senses which could be in common. Taking two constructs as the minimum form of commonality between constructs, there are 19 types of constructs where constructs are held in common, and 67 construct senses in total. Dividing the construct senses, 67, by the number of types of construct, 19, provides an approximate average of 3.5 individuals who share one of these constructs in common.

To demonstrate those constructs with the widest commonality, those constructs held on either grid by more than 4 different individuals are now listed in Table 9.1, together with the incidence of occurrence on the first or second grid, and the number of different individuals holding these constructs.

Table 9.1 Constructs Held with the Widest Commonality

<u>Construct</u>	<u>1st grid</u>	<u>2nd grid</u>	<u>diff individuals</u>
As I influence.	5	2	7
Hours worked affects profit.	2	5	6
Debtors & creditors will influence end figures.	3	3	5
Not enough time to study financial information.	1	4	5
Financial position of the co-op.	4	1	4
I have power over.	0	4	4
	15	19	31

Table 9.1 shows that there are 6, out of the 19, types of construct held by more than 4 different individuals over the two grids. These account for 34, out of the 67 construct senses. Thus 6 constructs account for about half of the constructs construed in common.

The constructs "As I influence" and 'Financial position of the co-op', occur mainly on the first grid, and the constructs 'Hours worked affects profit' and 'Not enough time to study financial information' occur mainly on the second grid. The construct 'Debtors & creditors will influence end figures' occurs equally on both grids, whilst 'I have power over' occurs only on the second grid.

In view of this there would appear to be a decrease in the salience of 'influence' and an increase in the salience of 'power'. There is also a decrease in the salience of the descriptive - propositional construct 'Financial position of the co-op', and an increase in the salience of the functional - pre-emptive construct 'Hours worked affects profit', and the construct 'Not enough time to study financial information'. The salience of the construct 'Debtors & creditors will influence end figures' remains the same. Thus the construing of some members of the co-op

appears to have shifted to constructions of less influence and less description of financial information. The construing of some members of the co-op appears to have shifted to constructions of more power and more functional construing of financial information. The functional appreciation of the nature of debtors and creditors is similar. There is also more common construing of the fact that there is a lack of time to study the financial information.

9.3.113 Financial Constructs and Constructs of Influence and Power

The three Groups are now examined for the existence of 'financial' constructs, as well as 'influence' and 'power' constructs in the senses of the first three principal components. This was carried out by examining the construct senses of the first three principal components found in the Appendix VIII.

9.3.114 The Printers Group

The number of financial constructs in the sense of the first three principal components on both grids are shown in Table 9.2.

Table 9.2
The Number of Financial Constructs in the Sense of the First Three Components

Grid	<u>Need</u>		<u>Description</u>		<u>Function</u>		<u>Time Structure</u>		<u>Influence</u>		<u>Power</u>			
	1	2	1	2	1	2	1	2	1	2	1	2		
First component	0	0	0	0	2	3	0	0	0	0	1	1	0	0
Second component	0	0	0	0	3	3	0	0	1	0	0	0	0	0
Third component	0	0	2	1	1	2	1	0	0	0	1	0	0	0
Total	0	0	2	1	6	8	1	0	1	0	2	1	0	0

The lack of construct senses expressing a need for financial information and power suggest that these notions hold little salience for this group. The decrease in the occurrence of the descriptive-propositional constructs in the sense of the principal components over the two grids suggests less salience for the group. On the other hand the increase in the functional-pre-emptive constructs in the sense of the principal components would appear to indicate more salience. As a generality the construct systems of the members of this group appear to have elaborated so as to facilitate more control through the existence of more pre-emptive constructs. At the same time there are more pre-emptive constructs in all of the principal components, indicating that such constructs have entered into the main ways of thinking of at least two individuals.

In fact on the first grid three individuals had pre-emptive constructs compared with five individuals on the second grid.

There are two individuals who on the first grid have the construct "As I influence", one on the first principal component and the other on the third principal component. On the second grid these are respectively replaced by a 'functional-pre-emptive' construct, and on the third principal component by a descriptive-propositional construct. However, there is one individual, on the second grid, who has the construct "As I influence" which has replaced a functional-pre-emptive construct on the first grid.

There is only one time construct and one structural construct which occur in the first construing of this group, so that these issues do not appear to be either very salient or persistent.

For this group the elaboration of the construct system brought less influence but greater control through the appearance of functional-pre-emptive constructs which can be brought to bare in decision-making. Power constructs have not occurred.

9.3.115 The Rest Group

The number of financial constructs in the sense of the first three principal components on both grids are shown in Table 9.3.

Table 9.3

The Number of Financial Constructs in the Sense of the First Three Components

Grid	Need		Description		Function		Time		Structure		Influence		Power	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2
First component	0	0	1	1	3	3	0	0	0	0	0	0	0	1
Second component	0	0	1	0	2	1	0	1	1	0	0	0	0	3
Third component	0	0	0	0	1	1	1	1	0	1	2	0	0	0
Total	0	0	2	1	6	5	1	2	1	1	2	0	0	4

The need-comprehensive constructs do not occur in any of the first three principal components and are not salient, and the decrease in the descriptive-propositional constructs in the sense of the principal components over the two grids would appear to indicate less salience. There is also a decrease in the number of the functional- pre-emptive constructs. At first sight this would suggest that because of the reduction in salience of these constructs, there is reduction in control by this group, but that is not the situation.

Four individuals construe all of the functional- pre-emptive constructs on the first grid. The fifth individual is included in a different combination of four

individuals with functional-pre-emptive constructs on the second grid. Two individuals who construe financial constructs on the first grid replace these constructs, on the second grid, with the pre-emptive construct "I have power over". Another two individuals also construe power.

There are two individuals who have the propositional construct "As I influence" in the third principal component on the first grid, but on the second grid this has been replaced by 'financial' constructs.

The lack of time to study the financial information which is provided is a salient issue for two individuals, whilst different individuals, using structural constructs, note the involvement of the whole co-op in budgets.

For this group the elaboration of the construct system brought greater control through the appearance of the power-pre-emptive constructs together with the functional-pre-emptive constructs which can be brought to bear in decision-making.

9.3.116 The Trained Group

The number of financial constructs in the sense of the first three principal components on both grids are shown in Table 9.4.

Table 9.4

The Number of Financial Constructs in the Sense of the First Three Components

Grid	Need		Description		Function		Time Structure		Influence		Power		
	1	2	1	2	1	2	1	2	1	2	1	2	
First component	0	2	2	0	1	3	0	0	1	0	0	0	0
Second component	0	0	0	0	2	1	0	2	0	1	1	0	0
Third component	0	1	0	0	0	2	0	0	1	0	0	1	0
Total	0	3	2	0	3	6	0	2	2	1	1	1	0

Three individuals construe need-comprehensive constructs on the second grid, and there is clearly some salience in their occurrence. However, two of the three need-comprehensive constructs are likely to be more concerned with the quality of financial information than with the simple need, for example, the constructs "essential information" and "good information is important". Two of the three constructs replace a descriptive and a structural construct.

The salience of the descriptive-propositional constructs for two individuals on the first grid does not recur on the second grid. However, functional-pre-emptive constructs have increased on the second grid. Three individuals construe more functional-pre-emptive constructs on the second grid than on the first grid, another remains the same with one functional-pre-emptive construct on the first principal component of both grids. The fifth individual has replaced a functional-pre-emptive

construct on the second principal component of the first grid with a structural construct. Thus there is increased salience for financial information, and its implications in terms of functional constructs.

The lack of time to study the financial information provided, is a salient issue for two individuals, whilst structural constructs are slightly less salient.

Although no individual construes power, influence is construed by two individuals. The influence construct on the first grid is replaced by a construct linking individuals and the future of the co-op, whilst that on the second grid has replaced a construct "paper and people".

Over the two grids there appears to be an elaboration of the construct system towards the recognition of the financial information and its implications for the individual. This is shown by the need for financial information on the second grid, yet the descriptive-propositional constructs about financial information do not occur on the second grid, yet on this grid there is an increase in the number of functional-pre-emptive constructs. These functional-pre-emptive constructs enable the individuals to have more control in their decision-making, but this increase is not accompanied by power constructs.

9.3.117 Summary

There is a certain amount of commonality between individuals in each group and between groups. Only the Trained Group employs principal components that contain need-comprehensive constructs, and this is on the second grid. So the need for financial information does not appear to be a main issue with two groups, but for individuals in the Trained Group, to quote the construct of one of them "good financial information is important".

The three groups have two principal components which contain descriptive-propositional constructs on the first grid. On the second grid the Trained Group has none, and the other two groups have one. Thus there is less salience in these main ways of construing the elements of financial information.

On the first grid the Printers Group and the Rest Group have six principal components containing functional-pre-emptive constructs, whilst the Trained Group has three. On the second grid the Trained Group has increased this to six, the original level of the Printers and Rest Groups, and the Printers Group have increased to eight functional-pre-emptive constructs. However, the Rest Group have decreased their functional-pre-emptive constructs to five. For two groups the functional-pre-emptive constructs are more salient and for one they are less salient.

By the second grid, the majority of individuals have at least one of the first three principal components containing functional-pre-emptive constructs. This provides a construct system which is clearly aware of financial information and financial management, and is available for decisions. The increases demonstrate an elaboration of the construct system, and that understanding has increased, although the Rest Group appears to be static.

There are other issues with financial information, such as 'the lack of time to study the financial information', and that 'budgets are controlled by the co-op meeting', which are construed by some individuals. These issues are not central to this study and have been construed as either time constructs, or structural constructs. However, it would appear that the increase in the provision of financial information to individuals has meant that a small number of individuals construe the lack of time in which to study this information. These types of constructs occur amongst individuals in the Rest Group and the Trained Group on the second grid, but not in the Printers Group.

In all groups there are some components which contain 'influence' constructs on the first grid. On the second grid these 'influence' constructs have generally decreased in number and salience. On the first grid there are no components which contain 'power' constructs, but on the second grid the Rest Group has four individuals with these. This suggests that the construct system has been elaborated to include 'power' amongst the first three components, and providing more pre-emptive constructs for the Rest Group to accompany their functional-pre-emptive constructs.

Although the elaboration of the construct systems has occurred allowing further understanding, there are differences. The individuals in the Printers Group have elaborated only with respect to functional financial information, and to a lesser extent the same has happened with the Trained Group. With the Rest Group the components have elaborated through to power. So although all groups have more control in this context, only the Rest Group construes power.

9.3.20 The Constructs and the Construing of the Elements

The constructs and the construing of the elements on each individual's individual's grids are now examined.

9.3.21 The Printers Group

All of the group construe the elements of financial information on the first grid. From an analysis of the grids of each individual there are three

individuals for whom there are slight increases in understanding and meaning of the financial information elements, a fourth individual who has remained in the similar situation, and the fifth individual for whom understanding and meaning have decreased. Each individual is represented by letters in the following analysis

Table 9.5 The Amount of Variance of the Principal Components

Grid	<u>The First Principal Component</u>		<u>The First Three Principal Components</u>	
	1	2	1	2
BA	48.41	40.50	75.20	60.30
BI	21.36	19.02	55.72	51.69
KE	30.79	45.65	65.82	77.04
PR	25.37	27.21	57.13	57.57
XA	24.23	29.97	57.93	65.10

Table 9.5 shows the amount of variance of the first principal component and the first three principal components on both grids. The changes in variation of the first three individuals in Table 9.5 appear to support the analysis of the individual grids. This is that the variance of the principal components in the case of two individuals decreases in line with a tighter construct system, indicative of a deeper understanding. At the same time the variance of the principal components of the other three individuals increases in line with a looser construct system, indicative of a broadening of understanding. The analysis of the grids of the last two individuals in Table 9.5, revealed that one has an increased understanding whilst the other is in a no change situation. The change in construing is in the same direction for each individual on both sets of components. The relative changes of variance in the construing of the group were not significant when submitted to a 't' Test. However, the absolute changes are significant at the 10% and 5% levels, respectively, with 4 d.f., and this indicates a change in the construing of the group, although this is not in a consistent direction.

Table 9.6

The Number of Financial Constructs Occurring in the Sense of the First Three Components

Grid	1	2
BA	3	3
BI	1	1
KE	3	1
PR	1	3
XA	2	1

Table 9.6 shows the number of financial constructs that occur in the sense of the first three principal components. Clearly financial constructs are in the sense of the principal components of each individual on both grids, so that financial management does occur in the construing of all of the individuals in this group. The individual, whose understanding has decreased, has reduced the number of financial management terms occurring in the senses from three on the first grid to one on the second. The individual, whose understanding is in a no change situation, reduced the number of financial management terms occurring in the senses by one. Those whose understanding increased also increased the number of financial management terms occurring in the senses, or they remained constant. However, only one individual, a founder member, construes more than one financial management term occurring in the sense on both grids.

It is of note that influence occurs in the sense of a component on the second grid for the individual who has a decrease in understanding. However, with the three individuals who have an increase in understanding, influence occurs in the sense of a component in the first grid but not in the second.

Table 9.7 The Number of Financial Constructs that Occur in Each Grid

Grid	1	2
BA	8	11
BI	9	9
KE	11	5
PR	11	13
XA	8	7

Table 9.7 shows the number of financial constructs that occur in each individual's grid. Over the two grids the individual with less understanding appears to have tightened his construing and decreased the number of financial management constructs from 11 to 5. The individual who has a similar understanding on both grids has one less financial management construct on the second grid. With the three individuals whose understanding has increased, so, two have increased the number of financial management constructs whilst the third has the same number. Although there are changes in the number of financial management constructs used there is no consistent direction of change; two increase; two decrease; one remains the same. The group's percentage of such constructs is almost constant over both grids at around 65%. This suggests that the construing of financial information is quite important for this group.

Table 9.8 The Classification of the Financial Constructs

Grid	<u>Need-comprehensive</u>		<u>Descriptive-propositional</u>		<u>Functional-pre-emptive</u>	
	1	2	1	2	1	2
BA	0	0	1	2	7	9
BI	0	0	6	6	3	3
KE	1	1	5	1	5	3
PR	3	0	4	3	4	10
XA	0	1	4	3	4	3

Table 9.8 classifies the financial constructs into 'need-comprehensive'; 'descriptive-propositional' and 'functional-pre-emptive' constructs. There is only one individual who has at least one of all of the three types of financial management construct on both grids. Of the three individuals who have a 'need-comprehensive' construct on either of the grids only one individual has at least one of these on both grids, whilst the constructs of the other two individuals vary. There is a tendency for individuals not to have 'need-comprehensive' constructs, but it is not possible to note a uniform direction of change.

All individuals have at least one 'descriptive-propositional' construct on each grid. The 'descriptive-propositional' constructs show a decrease in number in three cases, whilst in the fourth individual they increase and in the last remain constant. There is a tendency for these to decrease. All individuals have at least three 'functional-pre-emptive' constructs on each grid, and individuals either have the same number, or a greater number, of 'functional-pre-emptive' constructs than their number of 'descriptive-propositional' constructs. The 'functional-pre-emptive' constructs increase in two individuals; decrease in two individuals and remain at the same number in two individuals. There is no clear direction of change.

The uniformity amongst the individuals in this group is centred upon a tendency for individuals not to have 'need-comprehensive' constructs, and a number of 'functional-pre-emptive' constructs which either equals or exceeds the number of 'descriptive-propositional' constructs. The existence of the 'descriptive-propositional' constructs suggests that each individual has some understanding of financial information. The existence of the 'functional-pre-emptive' constructs suggests a deeper understanding and a position of control from which to take decisions. Any changes in direction or number of constructs are not uniform. The events between the two grids do not appear to have uniformly altered the construing of individuals.

Table 9.9
The Number of Financial Information Elements Construed with Meaning

Grid	The First Two Components		The First Two Components with Financial Constructs	
	1	2	1	2
BA	8	8	8	8
BI	4	7	0	5
KE	8	5	8	5
PR	5	7	5	7
XA	4	5	5	0

The first part of Table 9.9 shows the number of financial information elements construed with meaning on the first two principal components. There is an increase in the total number of financial information elements construed from 72.5% on the first grid to 80% on the second grid. Three individuals increase the number of elements, one decreases and one remains the same.

The second part of the Table shows the number of financial information elements construed on the principal components whose senses include financial constructs. On both grids the total of elements is the same, 62.5% of financial information elements. These elements must be construed in the context that the first grid has six financial components and one influence component, whilst the second grid has only six financial components. Thus over the two grids there is an increase in the meaning of the elements of financial information for these individuals on the first two components, but when this is in the context of financial management there is no change.

There are two individuals who increase the number, two who decrease and one remains the same. On both grids there is one individual who construes no elements within this financial management framework, and the individuals do not have any financial constructs in the sense of the first two principal components. On the first grid it is an individual who increases in understanding and on the second grid it is the individual whose construing exhibits no change. Thus for the group there would appear to be very little change in the construing of the financial information elements over the study.

This movement in the sense of the principal components to include or omit financial constructs demonstrates the fluidity of the construct system. This movement and Table 9.9 shows that the elements of financial information can be construed by an individual in a manner which is apparently meaningful to the

individual, but is construed using principal components which do not contain financial constructs and so has no meaning in the financial management context.

9.3.22 The Rest Group

All of the group construe the elements of financial information on the first grid. From an analysis of the grids of each individual all individuals have an increase in understanding and meaning of the financial information elements. The changes in construing are of limited commonality. Each individual is represented by letters in the following analysis

Table 9.10 The Amount of Variance of the Principal Components

Grid	<u>The First Principal Component</u>		<u>The First Three Principal Components</u>	
	1	2	1	2
AR	22.73	21.34	53.31	48.75
LY	23.65	33.23	51.89	65.99
NO	56.10	36.22	80.10	66.13
PE	29.56	31.40	67.11	58.98
RE	34.66	29.64	65.77	58.73

Table 9.10 shows the amount of variance of the first and first three principal components on both grids. There are very small changes in the variance of the first principal component and slightly larger changes in the first three. Taking the first principal components, the variance of these decreases in line with a tighter construct system, for three individuals, whilst for two individuals it increases in line with a looser system. When the first three principal components are considered the variance decreases, indicating a tighter construct system in four individuals.

The direction of the changes is not consistent so that a 't' Test did not find these significant. However, when the absolute changes were subjected to a 't' Test these were significant at the 10% and 1% levels, respectively, with 4 d.f. This indicates that there are changes in construing, but the direction of the changes is not uniform amongst the individuals in the group.

Table 9.11
The Number of Financial Constructs Occurring in the Sense of the
First Three Components

<u>Grid</u>	<u>1</u>	<u>2</u>
AR	1	2
LY	2	1
NO	2	3
PE	3	1
RE	2	2

Table 9.11 shows the number of financial constructs that occur in the sense of the first three principal components. There is at least one of this type of component is found on each grid. Over the two grids there is an overall decrease of one component, and no uniform change. Two individuals decrease these components, two increase these components and one has no change.

In the sense of some of the other components on the first grid each individual refers to either influence, in three cases, or control or involvement. However, with one exception on the second grid these are absent, and power is construed as a sense in three cases on the second component and in one individual on the first component. Thus the individuals construe power in a fair measure along with financial information and financial management.

The constructs have also altered in the second grid. In all cases financial management notions are construed in a manner which is either more understanding of financial information and its use, or is construed in a more mature manner towards financial management and the involvement of people in the co-op, or the power of the individual concerned.

With these increases in understanding, the individuals construe the elements of financial information with more meaning, in four cases, and with power in four cases.

Table 9.12 The Number of Financial Constructs that Occur in Each Grid

<u>Grid</u>	<u>1</u>	<u>2</u>
AR	8	9
LY	9	8
NO	14	11
PE	7	7
RE	9	8

Table 9.12 shows the number of financial constructs that occur in each individual's grid. With the exception of the individual who reduces the number of

such constructs from 14 to 11, the others are fairly stable over both grids, yet the group's percentage of the total of these constructs falls from 67% to 61%. This all suggests that the construing of financial information is important for this group although its salience has reduced slightly.

Table 9.13 The Classification of the Financial Constructs

Grid	Need-comprehensive		Descriptive-propositional		Functional-pre-emptive	
	1	2	1	2	1	2
AR	0	0	6	0	2	9
LY	0	1	2	2	7	5
NO	1	0	0	0	13	11
PE	3	1	2	3	2	3
RE	0	0	5	3	4	5

Table 9.13 classifies the financial constructs into 'need-comprehensive', 'descriptive-propositional' and 'functional-pre-emptive'. There is one individual who has at least one of the three types of construct on both grids. There are only two individuals on both grids who demonstrate need constructs, and there are two individuals who do not construe need constructs on either grid, so that these vary and there is tendency to either one need construct or none.

There is a tendency for most individuals to have a small number of 'descriptive-propositional' constructs on the second grid. Overall there is a total reduction, and two individuals have none of these constructs on the second grid.

In fact the two individuals without 'descriptive-propositional' constructs on the second grid only construe 'functional-pre-emptive' constructs, one with a very much larger number than on the first grid, and the other with a few less. The others also show no uniform change of direction.

On the second grid, the individuals in this group can be typified as having either one or none of the 'need-comprehensive' constructs; either a small number or none of the 'descriptive-propositional' constructs, and a number of 'functional-pre-emptive' constructs. There seems to be an emphasis towards 'functional-pre-emptive' constructs enabling decisions to be made.

Table 9.14
The Number of Financial Information Elements Construed with Meaning
The First Two Components The First Two Components with Financial Constructs

Grid	The First Two Components		The First Two Components with Financial Constructs	
	1	2	1	2
AR	5	3	4	2
LY	7	8	5	8
NO	8	7	8	7
PE	8	8	8	7
RE	8	8	8	6

The first part of Table 9.14 shows the number of financial information elements construed with meaning on the first two principal components. On the first grid there are 90% of the financial information elements construed, and on the second grid there are 85%. The second part of the Table shows the number of financial information elements construed on the emergent poles where the financial constructs are used. On the first grid 82.5% of the financial information elements are used, compared with 75% on the second grid.

These are interesting findings. On the first grid, the five individuals on the first two principal components used eight components with financial constructs, whilst on the second grid there were only six components with financial constructs. However, in addition, on the second grid, there were the four power constructs in components. Thus looking at the construing of financial information in the context of financial constructs and power constructs the comparison should be between the 82.5% on the first grid and 85% on the second grid, showing that in this context there is slightly more meaning for the elements of financial information. This the group has a high degree of use of the financial information elements.

9.3.23 The Trained Group

All of the group construe the elements of financial information on the first grid, but three construe with some degree of understanding whilst for the remaining two the understanding is slight. These last two have been with the co-op for three weeks and two months respectively. From an analysis of the grids of each individual there are four individuals for whom there are increases in understanding and meaning of the financial information elements, and the fifth individual has remained in the similar situation. Each individual is represented by letters in the following analysis

Table 9.15 The Amount of Variance of the Principal Components

Grid	The First Principal Component		The First Three Principal Components	
	1	2	1	2
AS	22.18	50.75	51.65	71.02
BL	30.74	22.61	62.67	57.58
HA	20.64	22.51	55.00	54.19
MA	39.24	69.63	71.65	89.78
TO	20.61	25.17	50.16	53.04

Table 9.15 shows the amount of variance of the first and the first three principal components on both grids. The variance on the first component has increased for the four individuals whose understanding has increased, but decreased for the individual whose understanding remained similar. When the variance on the first three components is considered a similar position exists, except that one of the four has a small decrease in variance. In a 't' Test the absolute changes in variance of both sets are significant at the 10% level with 4 d.f..

Table 9.16

The Number of Financial Constructs Occurring in the Sense of the First Three Components

Grid	1	2
AS	0	3
BL	1	2
HA	1	2
MA	2	2
TO	3	3

Table 9.16 shows the number of financial that occur in the sense of the first three principal components. On the first grid all of the individuals, with the exception of the individual who has been in the co-op for three weeks, use/construe at least one phrase relating to financial information or management. With the new individual this lack of a financial construct is not surprising, since she was not used to receiving or dealing with financial information in her previous employments. On the second grid, three individuals construed at least one additional component which contained a financial construct, whilst the other two individuals construed the same number. Thus three individuals have two financial constructs, and two individuals have three financial constructs on first three principal components. In addition to the increase in the use of financial constructs, on the second grid the sense of the components is construed in a more complex manner, so that the thinking of the individuals is more complex. A 't' Test is not significant.

There is, therefore, an increase in the number of financial constructs construed in the sense of the first three components, and therefore, an increased prominence of such terms in the construing of the individuals. This has been accompanied by an increase in the complexity of the senses of the components, so overall construing is more complex. One individual on each grid construes influence, but power is not construed.

Table 9.17 The Number of Financial Constructs that Occur in Each Grid

<u>Grid</u>	<u>1</u>	<u>2</u>
AS	1	7
BL	8	9
HA	5	6
MA	7	11
TO	9	10

Table 9.17 shows the number of financial constructs on each grid. Over the two grids the total number of these constructs have increased from 43% to 61% of written constructs. Each individual increases their number of financial constructs and this demonstrates that these five individuals have increased their understanding of financial information and management. The increase in the number of constructs is significant at 10% with 4 d.f. in a 't' Test.

With two individuals the increase in understanding, through the change in construing, has not occurred simply through the increase in the number of financial constructs but through the broadening of the construct system taking in more financial management notions. With the individual, TO, who had been on a book-keeping course, the financial information or management constructs have increased and have become quite complex. It would appear that this complexity has reached such a stage of understanding for the individual, that it enables financial information to be construed so that one of the financial information elements does not have meaning in the sense of the emergent principal components. That is she can discriminate between elements and determine those which are not relevant for her. In the case of the new arrival there was only one financial management term on the first grid but this had increased to seven on the second grid.

Table 9.18 The Classification of the Financial Constructs

Grid	<u>Need-comprehensive</u>		<u>Descriptive-propositional</u>		<u>Functional-pre-emptive</u>	
	1	2	1	2	1	2
AS	0	0	1	1	0	6
BL	1	2	5	2	2	5
HA	1	2	2	1	2	3
MA	1	0	4	4	2	7
TO	0	0	2	0	7	10

This broadening of the construct system is also seen from Table 9.18, which classifies the financial constructs into 'need-comprehensive'; 'descriptive-propositional' and 'functional-pre-emptive'. There is the tendency for individuals to have no 'need-comprehensive' constructs on the second grid or a small number. Even so at least two of the constructs which have been placed in this class are really emphasising quality, rather than need. For example, "good financial information is important".

With the 'descriptive-propositional' constructs there is a tendency for these to reduce and for individuals to construe a small number of these. Each individual has increased their number of 'functional-pre-emptive' constructs and a 't' Test was significant at the 5% level with 4 d.f. with the changes between the grids.

The individual who has received training in book-keeping and works in that area, only construes 'functional' constructs on the second grid, whilst the new individual construes the majority of 'functional' constructs with only one 'descriptive' construct on the second grid. On both grids the 'need' constructs are the smallest in number. With the others some change has occurred. On the first grid there was just one more 'descriptive' construct than 'functional', but on the second grid 'functional' constructs increased 2½ times and were nearly 4 times greater than the 'descriptive' constructs. Thus over the grids there has been a move in the construing from 'need' and 'descriptive' constructs to 'functional' constructs.

It would appear that the opportunity provided for construct revision by means of the training has resulted in a more definite elaboration of the construct systems of the individuals in this group.

Table 9.19
The Number of Financial Information Elements Construed with Meaning

Grid	The First Two Components		The First Two Components with Financial Constructs	
	1	2	1	2
AS	2	8	0	8
BL	8	8	8	8
HA	3	4	2	3
MA	8	8	8	8
TO	8	7	8	7

The elaborated construing of the financial components has affected the construing of the meaning of the elements. The first part of Table 9.19 shows the number of financial information elements construed with meaning on the first two principal components. Individuals have construed either the same number of financial information elements or an increased number on the second grid, although one individual has decreased. On the first grid 77.5% of the possible financial information elements are construed and on the second 87.5%. The second part of Table 9.19 contains the number of financial information elements construed with meaning where financial constructs are in the first two components. On the first grid 65% of the possible financial information elements are construed and 85% of these elements on the second grid. In both conditions there has been an overall increase in the number of financial information elements construed on the first two components. On the second grid there has been an increase in the number of financial information elements construed by two individuals though two remain constant and one decreases. This change in construing has occurred using financial terms in both of the first two components. Thus at the same time as the construct systems of the individuals have revised to embrace financial information and financial management terms, so the number of financial information elements construed by the system has increased. Both understanding and meaning have therefore increased.

9.3.24 A Comparison of the Three Groups

All individuals in the three groups construe some understanding of the financial information elements. The construing of the individuals changes between the grids, and there is a change in the variance. The direction of change of the variance is not uniform amongst the individuals. However, the absolute change in the variance of the first and third principal components for all groups is

statistically significant in 't' Tests. This indicates that there have been revisions in the construing of the grid elements.

An initial analysis of the groups suggests that the Printers Group started with a reasonable degree of understanding of the financial information elements and over the course of the study there were slight increases in the general understanding of these elements. The Rest Group also started with a reasonable degree of understanding of the financial information elements, perhaps with more complex constructs than the Printers, and over the course of the study this understanding has increased and more complex constructs have appeared. The Trained Group started with less understanding than either of the other two groups but over the course of the study the understanding of the financial information elements has increased. Thus although the Trained Group start off with least understanding of the groups, and are behind the Rest Group and the Printers Group, at the end of the study the Trained Group have an understanding at perhaps a higher level than the Printers Group, and are second to the Rest Group in this respect.

The data appearing in the corresponding Tables of each group were compared pairwise, and the differences submitted to a 't' Test. The results obtained from using the 't' Test are patchy but tend to confirm the above initial analysis, that there are some similarities and some differences amongst the group. The pairwise analysis follows the sequence Printers v Rest; Printers v Trained; Rest v Trained.

Table 9.20 A Comparison of the Total Variance of the Components of the Groups
The First Principal Component

	<u>Printers</u>	<u>Rest</u>	<u>Printers</u>	<u>Trained</u>	<u>Rest</u>	<u>Trained</u>
Grid 1	150.16	166.70	150.16	133.41	166.70	133.41
2	162.35	151.83	162.35	190.67	151.83	190.67

The First Three Principal Component

	<u>Printers v Rest</u>	<u>Printers v Trained</u>	<u>Rest v Trained</u>
Grid 1	311.80	291.13	318.18
2	320.70	325.61	298.58

Table 9.20 compares the total variance of the first and the first three principal components of each group. The relative changes in the variance amongst the groups did not achieve any level of significance with a 't' Test. This is not surprising since when individuals alter their construing the variance can increase or decrease indicating tighter or looser construing. The absolute changes in variance also were not significant when the Printers Group was compared with the two other groups. This suggests that the changes in the construing of the Printers Group was

not significantly different to the other two groups. However, the changes in the variance of both the first and the first three principal components between the Rest Group and the Trained Group were significant at the 5% level with 1 d.f. What appears to have occurred is that the Rest Group have tightened their construing, that is deepened their understanding of financial information with more complex constructs, thus the variance has decreased. On the other hand the Trained Group started with tight construing and over the course of study this has become looser and the variance increased, so that their understanding of financial information has broadened. With the variance of the Rest Group getting smaller, and that of the Trained Group getting larger, the differences are significant.

Table 9.21

A Comparison of the Total Number of Financial Constructs Occurring in the Sense of the First Three Components

	Printers v Rest	Printers v Trained	Rest v Trained
Grid 1	10	7	9
2	9	12	10

Table 9.21 compares the total number of financial constructs that occur in the sense of the first three principal components of each group. There were no significant differences found with 't' Tests but it should be noted that with the Trained Group started with the lowest number of such senses and finished with the highest.

Table 9.22

A Comparison of the Total Number of Financial Constructs Occurring In Each Group

	Printers v Rest	Printers v Trained	Rest v Trained
Grid 1	48	30	47
2	48	43	43

Table 9.22 compares the total number of financial constructs that occur in each group. There were no significant differences found with 't' Tests. It should be noted that with the Trained Group started with the lowest number of such constructs and finished with a higher number. This was the same number as the Rest Group, who decreased their number of constructs. The Printers Group had a constant number as well as the largest number of constructs on both grids.

Table 9.23 A Comparison of the Classified Financial Constructs
Need-comprehensive

	<u>Printers v</u>	<u>Rest</u>	<u>Printers v Trained</u>	<u>Rest v</u>	<u>Trained</u>
Grid 1	5	4	5	3	4
2	3	2	3	4	2

Descriptive-propositional

	<u>Printers v</u>	<u>Rest</u>	<u>Printers v Trained</u>	<u>Rest v</u>	<u>Trained</u>
Grid 1	22	15	22	14	15
2	17	8	17	8	8

Functional-pre-emptive

	<u>Printers v</u>	<u>Rest</u>	<u>Printers v Trained</u>	<u>Rest v</u>	<u>Trained</u>
Grid 1	21	28	21	13	28
2	27	33	27	31	33

Table 9.23 compares the total number of financial constructs classified according to type. The Printers Group have the highest number of 'need' constructs with the same total on both grids. Whilst the Trained Group increases by one, the Rest Group decreases by two, the differences are not significant in a 't' Test.

All three groups decrease their number of 'descriptive' constructs. The Rest Group has one more construct than the Trained Group on the first grid, but they are the same on the second. However, the Printers Group has the largest number on both grids and the difference is significant at the 10% level with 1 d.f. with the Rest Group, and at the 5% level with 1 d.f. with the Trained Group.

All three groups increase the number of 'functional' constructs. The Rest Group has the largest number on both grids. Although the Trained Group group had 8 less than the Printers Group on the first grid but only two less than the Rest Group on the second grid, there was no significant difference between the numbers for this group and others. However, the difference between the Printers Group and the Rest Group was significant at 5% with 1 d.f. Thus the Trained Group appear to lie in between the two other groups.

Thus the number of 'need' constructs are similar for each group and grid. The Printers Group have more 'descriptive' constructs than the other two groups, who have almost the identical number as each other, and less 'functional' constructs than the Rest Group. It would appear that throughout the co-op there is a basic recognition of the need for financial information which is provided or available. Beyond this the three groups appear to represent different general approaches. Although the Printers Group reduces the number of its 'descriptive' constructs it does not reduce these as much as the other two groups, in other words it uses a number of its financial constructs to describe the financial information. This

continues into the 'functional' constructs where although it increases the number of these constructs, the increase is not as great as the other groups. In other words the group uses less constructs concerned with the functional aspects of financial information, that is towards making decisions, so that the financial information has a limited meaning.

The Rest Group use a smaller number of 'descriptive' constructs but a larger number of 'functional' constructs than the other groups. The group is less concerned with describing the information and is more concerned with the functional aspects of the financial information and its use for making decisions. The Trained Group initially has 'descriptive' constructs and 'functional' constructs. The 'descriptive' constructs decrease and the 'functional' constructs increase as the group becomes more concerned with the functional aspects of the financial information and its use for making decisions. Training would appear to have made this difference.

Table 9.24

A Comparison of the Financial Information Elements Construed with Meaning
Where the First Two Components have Financial Constructs

	<u>Printers v</u>	<u>Rest</u>	<u>Printers v Trained</u>	<u>Rest v</u>	<u>Trained</u>
Grid 1	25	33	25	33	26
2	25	30	25	30	34

Table 9.24 compares the total number of financial information elements construed with meaning where the first two principal components contain the sense of of financial constructs. On both grids the Printers Group has the same number of constructs, 25, and this is the lowest number, although on the first grid it is just one lower than the Trained Group. The Trained Group increases from 26 to 34 to be the highest number on the second grid, and the Rest Group decreases from 33, the highest number of the first grid, to 30. These differences were not significant in a 't' Test. The main way in which the Printers Group construes the financial information elements remains the same. The Rest Group would appear to be similar, but with more financial information elements. The Trained Group construes a similar number of financial information elements to the Printers Group on the first grid, but on the second grid construes a similar number of financial information elements to the Rest Group. Thus the Trained Group increases the number of financial information elements which it construes.

9.3.25 Summary

Over the course of the study it appears that the construing of the groups is as follows. The Printers Group has very little change in its construing of the elements or the financial information elements over the grids. This constancy is

shown by the variance of the first and the first three principal components; the number of financial constructs occurring in these components; the number of financial constructs and the number of financial information elements construed with a financial management sense on the first two components. Within this general constancy are the 'need' constructs. The 'descriptive' constructs reduce, but not as much as the other groups and the 'functional' constructs increase, but not as much as the other groups. In other words the group is less concerned with describing the financial information and more concerned with what it is saying, but at a level which is lower than the other two groups.

The Rest Group changes its construing to a deeper understanding of the financial information. This is shown by the tighter construing and the smaller variance of the first and the first three principal components, whilst the number of financial constructs occurring in these components remains the same. The number of financial constructs and the number of financial information elements construed with a financial management sense on the first two components reduce slightly. Within this generally deeper understanding a basic need for financial information is recognized. The 'descriptive' constructs describing financial information reduce, and there is an increase in the 'functional' constructs and the ability to use the financial information to make decisions.

The Trained Group changes its construing to a broader understanding of the financial information. This is shown by the looser construing and the larger variance of the first and the first three principal components, whilst the number of financial constructs occurring in these components increases. The number of financial constructs and the number of financial information elements construed with a financial management sense on the first two components increase considerably. Within this general broader understanding the basic need for financial information is recognized, whilst the 'descriptive' constructs describing financial information reduce, and the 'functional' constructs increase so that there is the ability to use the financial information to make decisions.

The Trained Group appear to have increased their understanding of financial information to an extent which is greater than that of the Printers Group and approaching that of the Rest Group. Although in general all individuals have changed their construing, they have all been subject to similar conditions except for the Trained Group. It would appear that the intervention of training has made a difference to their construing of financial information elements.

9.3.300 The Construing of the Supplied Constructs and of the Elements

On each grid were three supplied constructs "As I influence", "As I would like to influence" and "I have power over". The construing of these constructs, together with the construing of the elements, is now examined.

9.3.301 "As I influence"

It was anticipated that if individuals received and used financial information then there would be an increase in the use of this supplied construct on a greater number of elements. The term primary influence is used where 3 or more individuals construe the same element, and secondary influence where 2 construe the same element.

9.3.302 The Printers Group

The pattern which emerges is not uniform. However, three individuals construe influence on more elements on the second grid. These three are the two individuals whose understanding of financial information elements was either similar or less, and one individual who construes more understanding. The other two individuals influence less elements and in one case one less financial information elements. These two are the individuals whose understanding increases.

On the first grid the group construes primary influence on 'the co-op'; 'monthly meeting'; 'hours worked'; 'structural problems'; and 'net profit', with secondary influence on 'members' and 'employees'. On the second grid primary influence continues with all those of the first grid except 'structural problems', additional elements are 'members'; 'employees'; and 'balance sheet'. There is secondary influence on 'self'; and 'capital budget'. So over the study there is no longer influence on 'structural problems', but there is a broadening of primary influence on the people and constitutional elements, together with influence on 'net profit'; and 'balance sheet'. The secondary influence of the first grid has become primary influence on the second grid, but secondary influence on the second grid is on 'self'; and 'capital budget'.

9.3.303 The Rest Group

The pattern which emerges is not uniform. All individuals in this group increased their understanding of financial information, however, one increased their influence on elements on the second grid, whilst three decreased their influence. One of those with decreased influence was an individual who construed influence on all of the elements on the first grid. The fifth individual construed influence on the same number of elements but the influence moved from financial information to people elements.

On the first grid the group construes primary influence on 'members'; 'employees'; 'the co-op'; 'monthly meeting'; 'structural problems'; and 'capital budget', with secondary influence on 'hours worked'; 'time to study information'; 'net profit'; and 'cash balance'. On the second grid the group construes primary influence on 'members'; 'employees'; 'the co-op'; 'monthly meeting'; 'hours worked'; and 'capital budget', with primary influence on 'structural problems'; and 'time to study information'. Over the study there is a decrease in the influence of the group in terms of the number of elements, which are the financial information elements of 'net profit' and 'cash balance', and 'structural problems' reducing to secondary influence, although 'hours worked' increased to primary influence.

9.3.304 The Trained Group

The pattern which emerges is quite uniform. Four individuals in the group increased their understanding of financial information elements, one remained similar. Over the study all individuals increased their influence on the number of elements.

On the first grid the group construes primary influence on the 'members'; 'employees'; 'the co-op'; and monthly meeting, with secondary influence on 'structural problems'; 'capital budget'; and 'net profit'. On the second grid the primary influence of the first grid has been increased with the addition of 'hours worked'; 'structural problems'; 'capital budget' and 'net profit', whilst 'actual profit & loss' has secondary influence. Thus there is a consolidation of primary influence including two financial information elements, and the addition of 'actual profit & loss' with secondary influence.

9.3.305 Summary

Over the course of the study the individuals in the three groups construe their influence differently. The Printers Group remains somewhat static with three individuals with more influence and two with less. The majority of the Rest Group, three, have less influence, one has more and one is similar. All of the Trained Group increase influence on the elements. Over the co-op the change in influence on the number of elements by individuals is an increase by 9 individuals; a decrease by 5; and the same number by 1. The increase in influence on the number of elements is found in 6 individuals who increased their understanding, (of these 5 were those who broadened their understanding 1 deepened) 2 whose understanding was similar and 1 whose understanding decreased. The decrease in influence is found in 5 individuals who increased their understanding, (of these 4 were those who deepened

their understanding, 1 broadened). The 1 individual with the same number of elements had increased understanding, (with deepened understanding).

The position with respect to the elements is that there is a slight decrease in the secondary influence of the Rest Group, from 4 elements to 2, whilst the number of elements with primary influence remains at 6. The Printers Group has an increase in primary influence from 5 elements to 7, whilst secondary influence remains at 2. The Trained Group has the largest increase with primary influence from 4 elements to 8, whilst secondary influence reduces from 3 to 1. There is a fair amount of commonality in the elements influenced on the second grid. They all have primary influence on 'members'; 'employees'; 'the co-op'; 'monthly meeting'; and 'hours worked'. The Rest Group and the Trained Group have primary influence, and the Printers Group secondary influence, on 'capital budget', whilst the Printers Group and the Trained Group have primary influence on 'net profit', an element which the Rest Group reduce from secondary influence.

It appears that the increases in the broader understanding of financial information by the Printers Group and the Trained Group are associated with increases in influence, whilst the deeper understanding of the Rest Group is associated with slightly less influence.

9.3.306 "As I would like to influence"

It is anticipated that if individuals receive and use the financial information then there would be an increase in the number of elements which individuals would like to influence. The term primary influence is used where 3 or more individuals construe the same element, and secondary influence where 2 construe the same element.

9.3.307 The Printers Group

The majority of individuals, 4, wanted influence on more elements on the second grid, and 1, who had increased understanding of financial information, had the same number on both grids.

On the first grid, the group construes the desire for primary influence on 'members'; 'employees'; 'the co-op'; 'monthly meeting'; 'hours worked'; 'structural problems'; and 'net profit'. On the second grid the desire for influence of the first grid is reinforced by the number of individuals construing those elements, and although 'structural problems' no longer occurs, 'balance sheet' does. The secondary influence is on 'time to study'; 'capital budget'; and 'cash balance'. Thus there is an increase in desired influence through secondary influence.

9.3.308 The Rest Group

The pattern of change for the group is identical to that of actual influence and by the same individuals. All individuals in this group increased their understanding of financial information, however, one increased their desired influence on elements on the second grid, whilst three decreased their desired influence. One of those with decreased desired influence was an individual who construed desired influence on all of the elements on the first grid. The fifth individual construed desired influence on the same number of elements but the desired influence moved from financial information to the elements 'hours worked' and 'time to study information'.

On the first grid the group construes the desire for primary influence on 'members'; 'monthly meeting'; 'hours worked'; 'structural problems'; 'capital budget'; 'net profit'; and 'cash balance', with secondary influence on 'employees'; 'the co-op'; 'time to study information'; 'actual profit & loss'; 'budget profit & loss'; 'debtors'; and 'balance sheet'. On the second grid only 4 elements of primary influence continue; 'members'; 'monthly meeting'; 'structural problems'; and 'capital budget' and in addition 2 elements change from secondary influence 'the co-op'; and 'time to study information'. From the first grid, the primary influence construed with 2 financial information elements are dropped and 'hours worked' reduced to secondary influence. Also of secondary influence are 'employees'; and 'budget profit & loss'. Thus there is a decrease in primary influence of 1 element and in secondary influence of 4 elements.

9.3.309 The Trained Group

In this group all of the individuals increased their understanding of financial information. The majority of individuals, 3, increased the number of elements they desired to influence, 1 decreased the number and 1 construed the same number.

On the first grid there is only the desire for primary influence, and this is on 8 elements which are 'members'; 'employees'; 'the co-op'; 'monthly meeting'; 'hours worked'; 'structural problems'; 'capital budget'; and 'net profit'. On the second grid three are the same 8 elements of primary influence, and three elements of secondary influence; 'time to study information'; 'actual profit & loss'; and 'cash balance'. Thus there is an increase in the desire for influence shown by the secondary influence.

9.3.310 Summary

The individuals in the Printers Group and the Trained Group show some similarities in their change for desired influence. The majority of the Printers Group, 4 individuals, desire more influence than on the first grid, whilst 1 individual construes the same number. With the Trained Group 3 individuals construe more elements, 1 the same number and 1 less. This is different to the Rest Group where the majority, 3 individuals, increase their desired influence, 1 remains the same and 1 construes less. Over the two grids 8 individuals desire influence on more elements, (of these 5 broadened their understanding, 1 deepened, 1 decreased, and 1 remained similar in understanding), 4 desire influence on less elements, (3 deepened their understanding, 1 broadened), and 3 desired to influence the same number of elements (2 broadened their understanding, 1 deepened).

The position with respect to the elements is that there is a slight decrease in the primary influence of the Rest Group, from 7 elements to 6, whilst the secondary influence decreases somewhat more from 7 elements to 3. The Printers Group has an increase in secondary influence from 0 to 3 elements, the primary influence remains at 7 elements. The Trained Group has an increase in secondary influence from 0 to 3, and the primary influence remains at 8 elements.

Although there is a fair amount of commonality between the groups in terms of the elements they desire to influence, the intensity of influence in terms of primary influence or secondary influence alters, mainly with the Rest Group. All groups on the second grid construe primary influence on 'members'; 'the co-op'; and 'monthly meeting'. Two groups construe primary influence and one group secondary influence on 'employees'; 'hours worked'; and 'capital budget'. Two groups construe secondary influence and one primary influence on 'time to study information'. Two groups construe primary influence on 'structural problems'; and 'net profit', and secondary influence on 'cash balance'.

9.3.311 A Comparison of the Two Supplied Constructs Concerned with Influence

Table 9.25 A Comparison of the Number of Elements Construed on Each Construct

	Grid 1				Grid 2			
	Actual		Desired		Actual		Desired	
	Primary	Secondary	Primary	Secondary	Primary	Secondary	Primary	Secondary
Printers	5	2	7	0	7	2	7	3
Rest	6	4	7	7	6	2	6	2
Trained	4	3	8	0	8	1	8	3
	15	9	22	7	21	5	21	8

There is far less commonality in desired influence, "As I would like to influence", than actual influence, "As I influence", in terms of the intensity of influence. As anticipated the desired influence is more extensive than actual influence. This desire to have influence a little in excess of actual influence is shown by the difference in the *scores* on the intensity of influence that can be seen in the Table 9.25. Table 9.25 compares the number of elements ticked on the supplied constructs "As I influence" and "As I would like to influence" for the three groups. These have been *scored* as either primary or secondary degrees of influence as stated earlier. The differences between actual and desired influence on the second grid are smaller than those on the first grid, and perhaps this indicates a more satisfied construing of influence.

9.3.312 "I have power over"

It was anticipated that if individuals received and used financial information then there would be an increase in the use of this supplied construct on a greater number of elements. The term primary power is used where 3 or more individuals construe the same element, and secondary power where 2 construe the same element.

9.3.313 The Printers Group

In this group 3 individuals construed power over more elements on the second grid than on the first, (2 had increased understanding, 1 decreased). However, 1, whose understanding increased, was less, and 1, whose understanding was the same, construed the same number on both grids.

On the first grid the group construes primary power over 2 elements 'hours worked'; and 'net profit', and secondary power over 4 elements 'self'; 'members'; 'employees'; and 'structural problems'. On the second grid the same overall intensity of power emerges, but it is altered amongst the elements, although two, 'net profit'

and 'members' do remain the same. The primary power is over 'self' and 'net profit', thus there is an increase in intensity over the 'self'. The secondary power is over 'members'; 'monthly meeting'; 'hours worked'; and 'balance sheet'. So there is a reduction in intensity for 'hours worked', whilst the 'monthly meeting'; and 'balance sheet' are now included and 'employees'; and 'problems' are dropped.

9.3.314 The Rest Group

In this group all increased their understanding of financial information. The change in the number of elements construed with power over the two grids is that 2 increase, 2 decrease, and 1 remains the same.

On the first grid the group construes primary power over 3 elements: 'self'; 'time to study information'; and 'capital budget', and secondary power over 5 elements 'employees'; 'monthly meeting'; 'hours worked'; 'structural problems'; and 'budget profit & loss'. On the second grid there are 2 less elements over which secondary power is construed, and there are alterations amongst the elements, as well as changes in intensity. The 'self' is the only primary power element from the first grid to be included with primary power on the second grid, and this has been construed by the group with increased intensity, i.e. one more individual construes power over it. The other elements the group construe primary power over are 'employees'; and 'hours worked', which have increased from secondary power. The primary power over 'time to study' on the first grid has been dropped. There is secondary power over 'structural problems' (again); 'capital budget' (reduced from secondary power); and 'cash balance' (increased intensity). The secondary power over 'meeting' and 'budget profit & loss' has dropped.

9.3.315 The Trained Group

In this group all increased their understanding of financial information. The change in the number of elements construed with power over the two grids is that 4 increase, and 1 remains the same.

On the first grid the group construes primary power over no elements, and secondary power over 6 elements: 'self'; 'members'; 'employees'; 'the co-op'; 'monthly meeting'; and 'structural problems'. On the second grid there is an increase in intensity of power and 4 elements of secondary power on the first grid are now primary power, these are: 'self'; 'members'; 'the co-op'; 'monthly meeting'; and a fifth 'capital budget'. The elements of secondary power are 'employess' (from the first grid); and 'hours worked'. The 'problems' have dropped.

9.3.316 Summary

The Printers Group and the Trained Group are similar in that the majority of individuals construe power over more elements on the second grid, 3 and 4 individuals respectively. These are joined by 2 from the Rest Group, who also have 2 who construe less, along with 1 from the Printers Group. There are also 3 individuals who construe the same number of elements and these are 1 from each group. From the 9 individuals who construe more power 6 have broader understanding, 2 deeper; and 1 decreased. From the 3 who construe less power 2 have deeper understanding, and 1 broader. From the 3 who construe the same number 1 has broader; 1 deeper; 1 similar understanding.

By the end of the study there is 1 element which is construed with common increased intensity, this is the 'self'. On the second grid the three groups increase the intensity with which they construe this element, and it is the only element which is construed by the three groups with primary power. Infact 10 individuals construe this and so power over the self is quite prominent in the co-op. The 'hours worked' is construed also by all three groups, 1 with primary power and 2 with secondary power, and there is a very slight increase in the intensity of power here. For the other elements construed by 1 group with primary power and 1 group with secondary power, these are 'members'; 'employees'; 'monthly meeting'; and 'capital budget'. Thus general individuals do not construe power over many elements. They appear to construe power over themselves in terms of self and hours worked. Power is construed to a limited extent over co-workers, and the capital budget. This last item is the only financial information element, and the capital budget is considered by many in the co-op to indicate the future of the co-op.

9.3.317

The Changes in the Construing of the Supplied Constructs

The way in which the individuals in the co-op construe these supplied constructs is examined along several dimensions. There is some commonality in the changed construing of the number of elements with these supplied constructs. In general there are increases in the number of elements. With actual influence 9 individuals increase, 5 decrease, 1 remains the same. With desired influence 8 individuals increase, 4 decrease, 3 remain the same. With power 9 increase, 3 decrease, 3 remain the same. Thus a tendency for those with deepened understanding to be associated with the decreases; 3 out of 5; 2 out of 4; and 2 out of 3.

Table 9.26 The Total Number of Elements Construed with Influence and Power

	<u>"As I influence"</u>				<u>"As I would like to influence"</u>			
	<u>Grid 1</u>		<u>Grid 2</u>		<u>Grid 1</u>		<u>Grid 2</u>	
	<u>Prime</u>	<u>Second</u>	<u>Prime</u>	<u>Second</u>	<u>Prime</u>	<u>Second</u>	<u>Prime</u>	<u>Second</u>
Printers	5	2	7	2	7	0	7	3
Rest	6	4	6	2	7	7	6	3
Trained	4	3	8	1	8	0	8	3
	15	9	21	5	22	7	21	9

	<u>"I have power over"</u>			
	<u>Grid 1</u>		<u>Grid 2</u>	
	<u>Prime</u>	<u>Second</u>	<u>Prime</u>	<u>Second</u>
Printers	2	4	2	4
Rest	3	5	3	3
Trained	0	6	5	2
	5	15	10	9

In general there is a rank order to the number of elements construed with each construct. Power is construed with the smallest number of elements, next is actual influence, and very slightly more than actual influence with the largest number of elements is desired influence. So power and influence are not identical. Table 9.26 contains the total number of elements construed by the three groups on each grid on each supplied construct. The term primary influence or power is used where 3 or more individuals construe the same element, and secondary influence or power where 2 construe the same element. The total situation is dealt with first.

There is clearly an increase in the concentration of actual influence. With the construct "As I would like to influence" there is no real apparent change. The desire to influence would not appear to have altered much, whilst actual influence has increased to be almost in line with desired. It would appear that there has been an increase and concentration of power over particular elements.

Within the three groups there are changes in the general way these supplied constructs change. The Printers Group has slight increases in actual and desired influence, whilst power remains the same. The Rest Group has slight decreases in all three supplied constructs, whilst the Trained Group has slight increases in all three supplied constructs. This is within the context that the Printers Group showed a slight increase in its broader understanding of financial information, the Rest Group an increase in its deeper understanding, and the Trained Group an increase in its broader understanding. The broadening of understanding seems to be associated with increases in actual and desired influence and to some extent with increases in power. However, the deepening of understanding does not seem to be associated with increases but with slight decreases.

The groups exhibit a great deal of commonality in their actual and desired influence on elements. There is a primary commonality on 'members'; 'employess'; 'the co-op'; 'monthly meeting'; 'hours worked'; and 'capital budget', and slightly less on 'structural problems' and 'net profit'. There is also a desire from three groups to influence the 'time to study information', and from two groups to influence 'cash balance'. It is perhaps of interest that the Printers Group and the Trained Group desire to influence cash balance, yet the Rest Group construe secondary power over this element. There is much less comonality amongst the groups with power. Only the 'self' is construed with primary power, and followed by 'hours worked' by all three groups. Various combinations of two groups and intensity of power construe power over 'members'; 'employees'; 'monthly meeting'; and 'capital budget'. So the actual and desired influence is on the people and constitutional constructs and the capital budget, and slightly less on net profit. Yet there is a desire to influence the cash balance. Power is strongly construed over self and hours worked, and then to a lesser extent over people and constitutional elements and capital budget.

9.3.318

The Relationship of the Construct "As I influence" to the Other Constructs

The output of the INGRID program provides co-ordinates which enable the constructs to be plotted in the element space. These constructs were plotted and the influence construct was examined in relation to other constructs in its proximity. An example of this can be found in Appendix VII.

9.3.319 The Printers Group

There are two individuals who construe influence and power quite closely together, a number of the constructs are associated with both of these. On the first grid influence is associated with constructs concerned with figures discussed at meetings; that workers affect the profit; and profit depends on the co-op working effectively; the co-op's aim is to make a profit. On the second grid influence is only associated with power for one individual, however, for the others, is associated with constructs concerned with workers and the co-op needing each other; both information and workers contribute to the co-op and meetings; and no profit, no co-op and no capital budget. Influence is associated with workers contributing to the co-op and making a profit, for they construe that without a profit there would be no co-op, as the profit forms the basis of the capital budget and the future.

9.3.320 The Rest Group

On the first grid influence is associated with constructs concerned with workers contributing to the co-op and meetings; time; members share the profit. On the second grid influence is associated with profit and financial management by two individuals; with another two it is associated with the participation of the workers in the co-op and its decision-making; whilst with the fifth is associated with the capital budget and the meeting.

9.3.321 The Trained Group

On the first grid influence is associated with constructs concerned with profits, for two individuals; problems; people; the co-op, hours worked and meetings. On the second grid influence is associated with constructs concerned with profit and financial information, for two individuals; workers and the co-op for two individuals; and budget setting. The constructs are more complex on the second grid.

9.3.322 Summary

The themes emerging from the three groups on the second grid are very similar, but the Printers Group is the most cohesive, and, perhaps the most consistent, as well as all-embracing. For the Printers Group influence is associated with workers contributing to the co-op and making a profit, for without profit there would be no co-op as the profit forms the basis of the capital budget and the future. The individuals in the two other groups associate influence with more specific aspects, they are more distinct, perhaps more articulate, for example, profit, financial management and workers participating in decision-making.

9.3.323 The Relationship of the Construct "I have power over" to the Other Constructs

The plots of the power construct in the element space were examined in relation to the other constructs in the proximity.

9.3.324 The Printers Group

Two individuals did not construe power onto the first grid. On the first grid power is associated with constructs concerned with workers affecting profit, and profit depends upon the co-op working effectively. On the second grid all construe power, although for one individual it is not associated with any other

construct. The others associate power with constructs concerned with profit affecting re-investment, the capital budget and this determines the co-op's structure.

9.3.325 The Rest Group

One individual did not construe power onto the first grid and another does not associate power with the other constructs. Three of the four individuals associate power with constructs concerned with their own areas of work, the preparation of financial information; interdepartmental conflicts of priority; and budget preparation. These continue into the second grid where the fourth individual associates power with the hours worked, and the fifth with the interpretation of financial information. Thus there is an emphasis on work-related issues for the most part.

9.3.326 The Trained Group

One individual did not construe power onto the first grid. On the first grid the others associate power with various constructs: influence; the co-op and salary and hours worked. On the second grid power is associated with constructs concerned with the capital budget, for two individuals; the third with the co-op' future; the fourth with administrative staff problems; and the fifth with the self and hours worked.

9.3.327 Summary

There are no explicit themes which come out from all three groups on the second grid. For the Printers Group power is associated with constructs concerned with profit affecting re-investment, the capital budget and this determines the co-op's structure. These are very similar to the constructs associated with influence but omit workers and meetings. The Trained Group construe power associated with some similar constructs; capital budget and the future; staff problems and hours worked. The Rest Group construe power associated with work, for the most part, also hours worked and the interpretation of financial information. Thus the Printers Group and the Trained Group tend to associate power with the future of the co-op, whilst the Rest Group tend to associate power with their actual job. Of note is that four individuals did not construe power onto the first grid, but did on the second grid, perhaps indicating an increase in their power over some of the elements relating to the co-op.

9.3.328 The Relationship of the Actual Influence and Power Constructs to Each Other

From the plots of these two constructs the proximity of the two constructs to each other was examined to see if there were any large movements between them over the two grids. Power was not construed onto the first grid by four individuals, but on the second grid 2 individuals construed the constructs some distance apart and 2 quite close. Those at a distance both had increases in the number of power elements, but with the number of influence elements 1 increased, 1 decreased.

Four individuals who had small distances between the constructs on the first grid, remained about the same on the second grid. Three increased the number of elements influenced, 1 decreased, and 2 increased the number of power elements, 1 decreased, 1 remained the same.

Two individuals, whose constructs were some distance apart on the first grid, moved noticeably closer together, but as the number of elements influenced increased and power decreased with 1, the change in the number of the other was in the opposite direction.

The constructs of 5 individuals moved noticeably further apart. In 3 individuals the number of influence elements increased, whilst power in 1 increased, in 1 decreased, in 1 remained the same. In the others 1 influence decreased and power increased, 1 influence remained the same and power decreased.

From this inspection, the direction of the change in the proximity of the constructs to each other does not appear to be associated with changes in the direction of the number of elements construed with these constructs.

9.3.329 An Analysis of the Numbers of Elements Used in Construing

Several analyses were conducted on the numbers of elements construed and ticked on each grid. The aim of the analysis was to determine if the groups construed similar quantities of elements.

Table 9.27 The Total Number of Elements Ticked on Each Grid

	<u>Printers v Rest</u>		<u>Printers v Trained</u>		<u>Rest v Trained</u>	
Grid 1	347	442	347	301	442	301
2	379	342	379	416	342	416

Table 9.27 compares the total number of elements ticked on the two grids by the three groups. Both the Printers Group and the Trained Group increased the total number of elements construed, whilst the Rest Group decreased the number of elements.

The relative changes in the number of elements between the groups was not significant, but the absolute change between the Printers Group and the Trained Group was significant at 10% with 4 d.f. This shows that the number of elements construed by the Trained Group was significantly, lower on the first grid, and higher on the second.

Table 9.28 The Total Number of Financial Information Elements Ticked on Each Grid

	<u>Printers v Rest</u>		<u>Printers v Trained</u>		<u>Rest v Trained</u>	
Grid 1	190	242	190	151	242	151
2	196	203	196	236	203	236

Table 9.28 compares the total number of financial information elements ticked on the two grids. Again both the Printers Group and the Trained Group increased the number whilst the Rest Group decreased. The relative changes in the number of financial information elements between the groups was not significant, but the absolute change between the Printers Group and the Trained Group was significant at 1% with 4 d.f. This shows that the number of financial information elements construed by the Trained Group was significantly, lower on the first grid, and higher on the second.

Table 9.29 The Total Number of Elements Ticked with the Construct "As I influence"

	<u>Printers v Rest</u>		<u>Printers v Trained</u>		<u>Rest v Trained</u>	
Grid 1	23	36	23	23	36	23
2	35	34	35	37	34	37

Table 9.29 compares the total number of elements ticked on the supplied construct "As I influence". Again both the Printers Group and the Trained Group increase the number of elements from the same base figure, but although the Trained Group have two more on the second grid, there is no significant difference between the two groups. However, the Rest Group again decreased the number of elements.

Table 9.30
The Total Number of Elements Ticked with the Construct "As I would like to influence"

	<u>Printers v Rest</u>		<u>Printers v Trained</u>		<u>Rest v Trained</u>	
Grid 1	26	37	26	32	37	32
2	42	33	42	40	33	40

Table 9.30 compares the total number of elements ticked on the supplied construct "As I would like to influence". Again both the Printers Group and the Trained Group increased the number of elements, whilst the Rest Group decreased. The relative changes between these two groups is not significant, but the relative change

between the Printers Group and the Rest Group is significant at 10% with 4 d.f. This shows that the number of elements construed by the Printers Group was lower on the first grid, and, higher on the second grid.

Table 9.31
The Total Number of Elements Ticked with the Construct "I have power over"

	<u>Printers v Rest</u>		<u>Printers v Trained</u>		<u>Rest v Trained</u>	
Grid 1	17	25	17	10	25	10
2	22	24	22	22	24	22

Table 9.31 compares the total number of elements ticked on the supplied construct "I have power over". Again both the Printers Group and the Trained Group increased the number of elements, whilst the Rest Group decreased. The relative and absolute changes between the groups are not significant even though the Trained Group have clearly increased the number which they construe.

9.3.330 Summary

Over the course of the study there appears to be an equalization of the number of elements construed in the Rest and Trained groups. The Trained Group seems to consistently increase the number construed.

9.3.40 An Analysis of the Permeability Found in the Grids

The notion of the permeability of a construct is the ability of a construct to embrace new elements. The supplied constructs are the only written constructs which are permanent on both grids, and can be examined for permeability. It was anticipated that when an individual construes financial information and alters their construing, then one indication of this would be changes in permeability, and, furthermore, that this would be more obvious when some form of education or training took place. An increase in the number of elements would tend to indicate that the construing is more elaborate with respect to breadth, and a decrease would tend to indicate that the construing is more elaborate with respect to depth.

Table 9.32 The Change in the Number of Elements Used with Each Supplied Construct

	<u>"As I influence"</u>	<u>"As I would like to influence"</u>	<u>"I have power over"</u>
<u>Printers</u>			
BA	-1	-1	+1
BI	+7	+3	+8
KE	+1	+1	0
PR	0	0	0
XA	+5	+13	-4
<u>Rest</u>			
AR	-3	-1	+1
LY	+5	+2	-4
NO	-4	-5	+4
PE	0	0	-2
RE	0	0	0
<u>Trained</u>			
AS	+3	-2	0
BL	+5	+5	+1
HA	+3	+3	+2
MA	+2	+2	+3
TO	+1	0	+3

Table 9.32 shows the changes in the number of elements construed on each grid for the three supplied constructs. For the Printers Group and the Rest Group there are mostly changes in the number of elements, but the direction of the change varies. Although there are indications that the permeability of these constructs changes, both the relative and the absolute changes are not significant. With the Trained Group, the individuals increase the number of elements on the constructs "As I influence" and "I have power over", and for the group these relative changes are significant on both constructs. "As I influence" is significant at 2% with 4 d.f., and "I have power over" is significant at 5% with 4 d.f. Thus there is an increase in the permeability of these constructs, indicative of a broadening of construing. The absolute change in "As I would like to influence" is significant at 5% with 4 d.f., indicating that there are changes in permeability in this construct, but not all changes are in the same direction for each individual.

Table 9.33 The Change in the Number of Elements Used in Various Ways

	Whole Grid	Supplied Constructs	First Component	Financial Information
<u>Printers</u>				
BA	-16	-1	-15	-8
BI	+19	+18	+1	+9
KE	+3	+2	+10	-13
PR	+15	0	-2	+12
XA	+11	+14	+4	+6
<u>Rest</u>				
AR	-17	-3	-7	+3
LY	+13	+3	+3	+6
NO	-60	-5	-2	-32
PE	-18	-2	+3	0
RE	-18	0	-3	-16
<u>Trained</u>				
AS	+44	+1	+15	+33
BL	+28	+11	+2	+5
HA	+9	+8	+1	+7
MA	+31	+7	+22	+37
TO	+3	+4	+5	+2

Table 9.33 contains the change in the number of elements construed analysed in four ways. For each one of these analyses, although there are mostly changes in the number of elements, the relative and absolute changes of the Printers Group and the Rest Group are not significant.

The permeability of the whole grid was examined and analysed through the change in the total number of elements ticked on each grid. The increase in the number of elements with Trained Group is significant at 5% with 4 d.f.

The permeability of the supplied constructs was examined in total and analysed through the change in the number of elements. The increase in the number of elements with Trained Group is significant at 5% with 4 d.f.

The change in construing of the first principal component was examined by taking the change in the number of elements construed in the sense of the first principal component. The increase in the number of elements with Trained Group is significant at 10% with 4 d.f.

It was anticipated that if a change in construing of financial information occurred, then it would be likely that the number of financial information elements would alter. There is an increase in the number of elements of the Trained Group which is significant at 10% with 4 d.f.

Clearly then there are changes in the construing of the elements by all groups, but the Printers Group and the Rest Group do not show changes which are either in the same direction or large enough to attain statistical significance. On

the other hand the changes of the Trained Group are significant and would appear to indicate that the training has brought about this significant and generally uniform shift.

9.40 Further Information Required by the Individuals

It was anticipated that if individuals elaborated their construing of the financial information elements so that they enhanced their understanding and meaning of financial information elements, then they would consequently require more information. After the second grid individuals were asked what further information they would like to receive. The groups responded as in the following ways.

9.41 The Printers Group

One individual whose understanding increased, and the one whose was similar over both grids did not require further information. The individual whose understanding decreased wanted information to work out his profit share. Of the remaining two whose understanding increased, one wanted departmental information to see losses and faults for improvements, and the other required more information surrounding capital expenditure. The requirement for more information could be classified as 1 Functional; 1 Structural; 1 Contextual.

9.42 The Rest Group

One individual whose understanding deepened did not require further information. The others all required further information. The three whose understanding deepened wanted: much more detailed departmental information; last two months figures with the current month, annual cash flow projections, and more budgets when alternatives are proposed; departmental analyses and productivity measurement. The fifth whose understanding broadened, wanted departmental figures to check waste and mistakes. The requirement for more information could be classified as 2 Functional; 2 Structural; 2 Contextual. The reason why 4 individuals requiring information sums to 6 is because 2 of them want both Structural and Contextual information.

9.43 The Trained Group

Two individuals did not require further information at present. Of the others one wanted departmental information; one the annual expenditure on buildings, wages and taxes; the fifth current figures on capital investment. The requirement for more information could be classified as 1 Functional; 1 Structural; 1 Contextual.

9.44 Summary

Some individuals in all groups require more information, a minority of 5 do not currently want more. Those who do not currently require more information may still be construing to understand the existing information, since this is still relatively new. It is encouraging to find so many individuals construing the existing financial information and being able to recognise the areas of deficiency for themselves and require more information. The information required is generally more historic about what has happened as well as projections about the future. The above groups could be summarised to produce:

The Printers Group	1 Functional	1 Structural	1 Contextual
The Rest Group	2 Functional	2 Structural	2 Contextual
The Trained Group	1 Functional	1 Structural	1 Contextual

Thus from 11 individuals who require more information, there is a requirement for more information of all types about the existing and planned activities of the co-op. It should be mentioned that generally speaking those requiring information about future projects are the founder members.

9.50

Summary of Major Results

The Results section contains some commentary which demonstrates why particular analyses have been conducted as well as the outcome of the analyses, and a summary. The study was exploratory in its intent and although a model and some hypotheses were formulated not all of the hypotheses are relevant to this study. The additional findings certainly add to the model of this area. Accordingly it is necessary to provide some gestalt as to what has happened to the individuals in this study, what has been construed from these events set down on the grids, and how these findings relate to the initial model and the relevant hypotheses which were formulated.

In order to make more sense out of what happened to the individuals they were placed into a group which related most closely to one of the hypotheses. The individuals were partitioned into three groups which are coincidentally of equal size. The Printers Group are the individuals from the Print Department, the Rest Group are those who were not printers and, like the printers, were not trained. The Trained Group are those individuals who were provided with some training about the financial information during the course of the study.

Superficially all of the individuals in this study are similar in respect of their position of influence within the wider co-op. In this sense they all appear to

be in that part of the Information-Influence-Matrix where there is participation. Potentially all types of information are available to all of the individuals in the co-op. This means that in broad terms the Printers Group and the Rest Group can be examined in terms of Hypothesis 8 and the Trained Group in terms of Hypothesis 9.

9.51 Hypothesis 1

An individual who is presented with a set of elements, which includes elements which are labels of financial information, will not necessarily find these elements of financial information within his range of convenience.

One individual who had recently joined the co-op did not find these financial information elements within her range of convenience on the first grid. On the second grid they were within her range of convenience the same as with the other members of the co-op.

9.52 Hypothesis 2

An individual, who construes the provision of financial information, will construe that financial information and so revise the construing of the same set of elements which was originally presented.

The individuals in the three groups revise their construing of the elements during the course of the study.

9.53 Hypothesis 3

An individual, who construes the use of the financial information provided, will further revise the construing of the same set of elements.

The Rest Group and the Trained Group revise their construct systems more than the Printers Group.

9.54 Hypothesis 4

An individual, who is trained to use and who does use the financial information provided, will revise, even further the construing of that same set of elements.

There are clearly differences between the three groups in their construing. The Printers Group has slightly more complexity to the construct systems at the end of the study, but generally has remained in a similar position. The most complex construing is found in the Rest Group, and this is revised during the study. The Trained Group exhibits the most revision of their construct systems.

9.55 Hypothesis 8 The Printers Group

An individual, who construes the provision of financial information in the context of participation and who is not trained, will revise the construing to:

- a. construe more influence.
- b. construe more desired influence.
- c. construe more power.
- d. not construe more financial information elements to be ticked in completing the grid.
- e. not construe the desire for more or different types of financial information.
- f. Not increase the understanding of financial information elements.
 - a. Three individuals construe influence upon a larger number of elements and two construe influence upon a smaller number.
 - b. Four individual construe desired influence upon a larger number of elements and one construes influence upon a smaller number.
 - c. Three individuals construe power over a larger number of elements, one construes power over a smaller number and one over the same number of elements.
 - d. Three individuals construe a larger number of financial information elements and two construe a smaller number of elements.
 - e. Three individuals construe a requirement for more financial information, and two construe the same financial information.
 - f. The individuals increase their understanding, one decreases and one remains the same.

9.56 Hypothesis 8 The Rest Group

An individual, who construes the provision of financial information in the context of participation and who is not trained, will revise the construing to:

- a. construe more influence.
 - b. construe more desired influence.
 - c. construe more power.
 - d. not construe more financial information elements to be ticked in completing the grid.
 - e. not construe the desire for more or different types of financial information.
 - f. not increase the understanding of financial information elements.
-
- a. Three individuals construe influence upon a smaller number of elements, one construes influence upon a larger number and one remains the same.
 - b. Three individuals construe influence upon a smaller number of elements, one construes influence upon a larger number and one remains the same.
 - c. Two individuals construe power over a larger number of elements, two construe power over a smaller number and one over the same number of elements.
 - d. Two individuals construe a larger number of financial information elements, two construe a smaller number of elements, and one construes the same number.
 - e. Four individuals construe a requirement for more financial information, and one construes the same financial information.
 - f. All individuals increase their understanding.

9.57 Hypothesis 9 The Trained Group

An individual, who construes the provision of financial information in the context of participation and who is trained, will revise the construing to:

- a. construe more influence.
- b. construe more desired influence.
- c. construe more power.
- d. construe more financial information elements to be ticked in completing the grid.

e. construe the desire for more or different types of financial information.

- f. increase the understanding of financial information elements.

a. Five individuals construe influence upon a larger number of elements.

b. Three individuals construe influence upon a larger number of elements, one construes influence upon a smaller number and one remains the same.

c. Four individuals construe power over a larger number of elements and one over the same number of elements.

d. Five individuals construe a larger number of financial information elements.

e. Three individuals construe a requirement for more financial information, and two construe the same financial information.

9.58 A Summary of the Results with Respect to the Hypotheses

The movement of the groups in the course of the study can be briefly summarised as follows:

	<u>Increases</u>	<u>Decreases</u>	<u>Remains the same</u>
<u>The Printers Group</u>			
Understanding.	3	1	1
As I influence.	3	2	0
As I would like to influence.	4	1	0
I have power over.	3	1	1
Financial information elements	3	2	0
Information requirement.	3	0	2
<u>The Rest Group</u>			
Understanding.	5	0	0
As I influence.	1	3	1
As I would like to influence.	1	3	1
I have power over.	2	2	1
Financial information elements	2	2	1
Information requirement.	4	0	1
<u>The Trained Group</u>			
Understanding.	5	0	0
As I influence.	5	0	0
As I would like to influence.	3	1	1
I have power over.	4	0	1
Financial information elements	5	0	0
Information requirement.	3	0	2

9.59 A Summary of Other Results

Generally the Printers Group increases its functional understanding; actual influence and power, and would like more influence and information and so tends to move upwards and to the right of the Information - Influence Matrix.

The Rest Group is not so easily generalized. Although understanding increased, actual influence decreased and power remained the same on balance. The group also wants less influence but requires more information. Thus as a group they want more information for decision - making, but less influence on the co-op. It needs to be remembered that three of this group were from the Administration Department for the whole of the study, and a fourth for the latter part. In addition two were founder members who outside of the grid work expressed the view that they wanted the other members of the co-op to fully participate in the decision-making and not be lead into decisions. This group generally consolidates its position on the Information - Influence Matrix.

The Trained Group clearly increases in all aspects during the study, and wants more influence and requires more information, so indicating a desire to move upwards and right across the Matrix.

9.60 A Concluding Comment

In this study it would appear that the simultaneous movement of more information, more influence and more power has generally occurred. There are differences between the groups because of the different states of their understanding and the start and at the conclusion of the study. The Rest Group has the most complex financial constructs and the Printers Group has the less complex. The Trained Group have elaborated their construct system the most in comparison with the start of the study. It would seem that this has occurred with the organizational conditions of participation and of training to use the financial information.

Chapter Ten
Overall Summary and Conclusions

10.0

Preamble

This research is not testing hypotheses in the orthodox sense, but it has its own criteria, which are general change or lack of change in particular directions. Even with orthodox testing of hypotheses what can be claimed is limited, and in the individual situation this is more so. The detailed discussion of the results of each organizational study has occurred in the chapter concerned with each study, chapters seven, eight and nine. Rather than reiterate this discussion it is considered sensible for this chapter to demonstrate the development of this research through a precis of the first six chapters. This is followed by the major results from the three organizational studies. In order to present a more general view of the provision of financial information, the results are presented in relation to the hypotheses generated rather than a consideration of the results from each organizational study. This is an attempt to resolve the dilemma of research at an individual level not fitting the orthodox framework.

The stimulation for this piece of research was a desire to ascertain what company employees thought when they were provided with financial information, principally in the form of a report to employees. Earlier work found that although many large public companies were providing such reports the company management were unable to specify the use of these reports to the employees (Purdy, 1981a). This is to say that managers could relate various reasons why the management of a company had provided an employee report (Purdy, 1981b), but there was no satisfactory data about what the employees thought of these reports and how they used them.

From one point of view this appeared to be a quite remarkable phenomenon. After spending some seven years teaching financial and management accounting to a variety of students, it was difficult to see how even the most adept of these types of students could have sensibly interpreted an employee report 'on their first day'. Given that the average student starting to study accountancy has a higher level of basic education than the average company employee, it was difficult to see how the employee reports could have much meaning for employees. There was no evidence to

indicate that there was any form of training available to the employees to help them understand (Purdy, 1981b).

10.10

Earlier Studies

There were those in company management and elsewhere who considered that the provision of employee reports were useful to employees and that such reports should be promoted. One example of this is the tenth annual competition for the top employee report which is sponsored by Accountancy Age (1987). In the late 1970's the Social Science Research Council funded a number of projects connected with the disclosure of financial information to employees, but none appeared to address the issue of what this financial information did to or for employees. The literature does not appear to contain any developments from these projects.

Woodward (1970), whose research focus was on other issues in her study conducted in the 1950's, observed that the provision of financial information through employee reports did not help the employee to understand the significance of his own particular job or change the frame of reference within which he did it. One of the S.S.R.C. projects found that the relevance of financial information was obscure to employees (Mitchell, Sams and White, 1981). Goodlad has twice, (1982) and (1984), unsuccessfully tried to conduct research into aspects of employees and their connections with financial information. The first time Goodlad (1982) encouraged several organizations to involve their employees in the preparation and monitoring of budgets. In organizations without the experience of providing financial information to employee representatives the management made disparaging remarks about the ability of employees to handle such information, but this type of comment was absent in organizations with experience (Goodlad, 1982). The second study found management taking the view that time spent with employees would not be worthwhile (Goodlad, 1984).

It seemed that the employee report has been provided to employees without too much regard for the employee's ability to understand the information and to act upon it. The evidence which exists perhaps suggests that management consider that the employees are not possible to educate to hold understandings about financial information. It seemed that neither the act of providing the financial information nor the information itself would enable the employee to comprehend the information.

However, it seemed that over time through the use of the information, or through training or both, such information could become significant to the employee.

10.20

Initial Theoretical Perspectives

Although there was a desire to know what happened to employees when they were provided with financial information, there were very few notions available to suggest ways into the problem. Accordingly various bodies of literature were examined to ascertain what that literature could contribute to the problem. These diverse bodies of literature appeared to impinge on the problem in some way and are now brought together.

10.21

Industrial Democracy and Participation

It was quite clear from an early stage that the issues surrounding the provision of financial information to employees, including employee reports, was not simply a technical accounting matter. There were other notions which appeared to facilitate or impede this provision of financial information, for example industrial democracy and participation (Purdy, 1981a).

There is a general argument that there is a need for industrial democracy in order to get employee involvement in decisions. The involvement of employees in decisions is considered to be desirable because it is likely to lead to more organizational cohesiveness once decisions have been made. This is seen, for example, in terms of the employee's commitment to the aims and plans of the organization which have been discussed and agreed, and with more satisfaction for the employee due to greater perceived involvement.

There is a lack of agreement in the literature concerning the nature of industrial democracy and participation and what they mean. Although there is evidence that employees want to participate (Holter, 1965) at least one organization has found it impossible to define participation. This is because participation is interpreted differently by different categories of people and by different countries (International Labour Organization, 1981). The twelve country study undertaken by the Industrial Democracy in Europe International Research Group (IDE, 1980) found more national differences in participative structures and industrial relations systems than similarities.

This lack of clarity was not aided by the confusing interjection and interspersed issues of communication and consultation as surrogates for participation. For clarity it was necessary to define these terms (Purdy, 1987).

The dimensions of participation can be classified in five ways: Economic, Ethical, Political, Psychological and Social. The economic dimension can be analysed into five further areas: Management style, Organizational culture, Change, Productivity and the Work task. In all of these literatures there is a strong thread and body of opinion towards the self-direction and self-control of the employee. From a study of changed cultures there is clear evidence that managers perceived themselves to be more participative (Smith and Jones, 1968). The more perceived participation that employees have the more satisfied they feel (Lisher and Wall, 1975).

It has been known for some time that if there are changes in the environment of an individual, the individual will respond to the changes whilst the responses can be affected by personal growth (Herzberg, 1968). Personal growth is considered to consist of the cognitive and the motivational. The cognitive is represented by learning, knowledge and creativity, and the motivational is represented by effectiveness, individuation and real growth. These personal growth items go together with the work needs of motivating and hygiene factors in Herzberg's notions (1968).

More recent work is a conceptualization of work motivation that expands on the principles of job enrichment which are not based on the work of Herzberg. Hackman has developed a job characteristics model which stipulates that certain characteristics of jobs cause workers to experience certain psychological states which in turn lead to certain personal and organizational outcomes. The relationship between job characteristics and psychological states suggests that work motivation should be highest when job characteristics are high for an individual (Geen, Beatty and Arkin, 1984). However, this approach has been criticised for having more emphasis on behaviour as a surrogate for motivation than on motivation itself, and it has been suggested that there is a need for more integration of existing theories (Geen, Beatty and Arkin, 1984).

It has been suggested that participation may be intrinsically satisfying (Tannenbaum, 1966), and that the psychological and physical qualities of work vary systematically with rank and help to explain the differences in satisfaction (Tannenbaum et al, 1974). Tannenbaum et al (1974) found that members of participative organizations did not exhibit depression or the lack of self-esteem so that there is a psychological impact with implications for depression and self-esteem at the lower levels of organizations in relation to the amount of participation which individuals perceive. It has been observed that so far the studies in participation have viewed the desires of the individual as secondary (Wall and Lisher, 1977).

The term industrial democracy covers a range of concepts with various notions of influence which can be grouped around the terms communication, consultation and participation. Studies concerned with participation inevitably contain issues of self-control and self-direction of the employee. Thus where employees have perceived that they are participating this is accompanied by expressions of well-being. Previous studies have not been conducted with the individual employee as the central feature, so that there is a need for studies at the level of the individual from which common features may be deduced, rather than the other way round.

10.22 Control, Influence and Power

The notion that information is power is quite a common construction. Consequently the issue of power in organizations, together with influence and control was examined. It was found that there were different approaches to these concepts. Tannenbaum (1968) considered that control is synonymous with influence and power, and measured actual and ideal control from questionnaire responses.

Lisher and Wall (1977) demonstrate that participation is not a unitary concept but that there are three central elements, interaction, information-sharing and influence. They observed that organizational decisions can be viewed as either local, or medium, or distant decisions in terms of distance from the employee. They developed a methodology which asked employees about specific decisions at particular organizational levels so that respondents gave opinions about decisions at different distances from different events. The one longitudinal study conducted by Lisher and Wall concentrated upon actual influence where its increase was found to increase

the employee's satisfaction with the immediate superior. The study ignored the issue of desired influence and information.

The theoretical lines of control, influence and power were extended by the Industrial Democracy in Europe International Research Group (IDE, 1981). The IDE group took power to be a revealed preference of the individual which is exercised over decisions by way of participating in those decisions. Power measures were derived from measures of influence and involvement. The empirical studies were conducted at different sites of various organizations and were without any experimental control or planned manipulation of variables. The group found that social scientists interested in participation were not always easily understood by the employees, and the group had to develop something other than questionnaires in order to generate material which employees could understand and which the group could interpret. Accordingly a list of key decisions was compiled and involvement treated at the individual level and aggregated over each level of decisions.

The IDE group felt that the strong inter-dependence between actual and desired involvement was the main internal source of the participative dynamic which could be inhibited or excited by external circumstances. The group was aware that the provision of information might be a crucial issue but found it impractical to include any detail of this in their work. The group observed that the character of industrial democracy is voluntaristic and is more determined by human action than by technology or structural and economic conditions. This implies that there should be more concentration upon individual inter-personal reactions to provide more illumination about the issues of involvement, influence and information.

10.23 Social Psychology Pertinent to the Individual

The accounting literature concerned with the provision of financial information was found to be descriptive and prescriptive, and of no use in modelling what happened to individuals when they were provided with financial information. An examination of the literature relating to industrial democracy and participation found concepts and studies which acknowledged self-direction and self-control, but none of these were taken from the point of view of the individual and common features aggregated. An examination of the literature relating to control, influence and power in organizations produced similar conclusions. Firstly researchers construed that the provision of financial information might be crucial

but they were unable to operationalize and study it. This was because the issue of information focusses on the individual and the effects of any information are likely to be individualistic. Secondly the nature of participation was one of individual interaction with other individuals. Thirdly questionnaires were an inadequate instrument through which to capture these events.

The conclusions from earlier work all indicated that there was a need to focus upon the individual in the context of the organization. Due to this position it was necessary to examine the social psychology of the individual in order to obtain some perspectives on the social forces and social system in operation for the individual in an organization, and to consider the issues which shape the behaviour of the individual. It is accepted that the more that individuals take control of their lives the more closely will their wants correspond with their personal needs and requirements (Bay, 1972).

This literature demonstrates that power is intimately related to influence. Powerlessness is accompanied by feelings of misery and low self-esteem (Archibald, 1978). On the other hand power is accompanied by feelings of self-worth and the competence to control one's own environment and to be able to create through intrinsically involving activity (Ng, 1980). This suggests that participation in power is central to the feelings of well-being in the individual.

Yet again it was found that the research conducted in this domain had not been conducted at the level of the individual, even though it was obviously directly concerned with the individual. Although research work conducted on an individual basis had been anticipated by Warr (1978), there was still a need for this individual approach to research. This would enable an individual interpretation of the findings, which then can be brought together with others and generalizations sought from the individuals studied.

At this juncture it was possible to construct a model which was capable of taking into consideration the most basic of the issues involved with an individual, namely information and influence. However, none of the previous research work provided any clues as to how it would be possible to operationalize and then investigate this model.

10.30

The Model

In constructing this model and the Information-Influence Matrix it is accepted that this is a somewhat generalized model. This is to say that the model deals with issues at the level of the individual, and because of this it is obviously impossible to provide definitions which have unequivocal universal applicability for all individuals under all circumstances. Because the research problem is addressed at the level of the individual, not only are there many issues which have been identified but these are capable of developing into a myriad of issues when taken from the perspective of the individual.

The model is directed at the individual employee as he participates in his organization and is provided with financial information. Five issues have been identified which are of concern to both the organization and the individual. These issues are interaction, involvement, information, cognition/knowledge and education/training. It is anticipated that an individual in the context of the work organization will be faced with these issues. The outcome of this will be specific to the individual, and probably specific to the organization although this is not a particular concern here.

Information, including financial information, will be required by an employee willing to be involved in the decisions of the organization. In order to facilitate an understanding of the position of the individual with respect to the organization's financial information, financial information can be classified into three groups. This classification is, roughly, according to the relationship of the individual to the level of the information. In this way the financial information provided to an individual can be classified as either Functional, or Structural, or Contextual information.

10.31 The Information - Influence Matrix

Arising from this model was the notion that there could be a number of different situations in which the provision of financial information could occur. Employees could be in different situations with respect to influence, and they could receive different types of financial information. Accordingly an Information-Influence Matrix was designed. The various classes of financial information form the vertical axis of the Information-Influence Matrix. The vertical axis starts from a position of No information and passes through Functional

and Structural to Contextual information. The horizontal axis supports various notions associated with influence. It starts from a position of No influence and passes through Communication and Consultation to Participation and by inference on to power.

From a knowledge of the organization's approach to its employee gained through talking with the individual, and a knowledge of the financial information which is provided to that individual, it is possible to locate the individual within the Information-Influence Matrix.

There are a number of different changes in the location of the individual which can be anticipated from the dynamics of any particular situation. However, a quite basic situation serves as an illustration. It is anticipated that if an individual receives financial information and if the information is to be understood or to have meaning then the individual requires education, training or experience. When the individual does understand the information and/or it has meaning, the individual is able to use the information, and personal change has occurred. From these premises it is anticipated that over time the individual will tend to desire to move upwards across the Information-Influence Matrix. This is to say that the individual will desire more influence and more information. Thus the individual will desire and will have actually changed location from a No information-No influence position to say the location of Functional information and Communication.

10.32 The Research Problem

The research problem was a desire to know what happens to employees when they are provided with financial information. From a review of the previous literature and through intuiting a number of different situations in which individuals could find themselves, it was possible to design a model which incorporated the Information - Influence Matrix.

At this point it was not possible to define information, although the attempt had been made to classify or to define various offerings of financial information in relation to the position of the individual. The various types of influence also were defined. An example of a generalized matrix, together with what the employee would be doing in each cell of the matrix was prepared and is given in

Chapter Five, Diagram 5.2. An attempt was made to demonstrate what was involved with cognition/knowledge and education/training.

It was possible to specify several notions about the research.

Notion 1 An individual who is provided with financial information does not necessarily understand this information or find it meaningful. The information is not integrated into the individual's thinking.

Notion 2 Successive provisions of financial information to an individual over a period will not necessarily allow the information to be understood or to be more meaningful for the individual. The information will not be more integrated into the individual's thinking.

Notion 3 The provision of training, together with the provision of financial information, will allow the financial information to be understood and to be more meaningful for the individual. The information will become more integrated into the individual's thinking.

Notion 4 Where an individual understands financial information in a context which is meaningful to the individual, then it is expected that the individual will want to move upwards to the right of the Information-Influence Matrix. Once able to deal with the existing information and influence, the individual will want more financial information and more influence.

It has already been noted that the earlier studies were not conducted at the level of the individual and that they ignored the issue of information. The earlier studies have been conducted with large scale research work which has utilized questionnaires. These questionnaires are simple to administer but are subject to the possible mismatch between the respondent's perception and the researcher's perception of the questions. None of this previous research work provided any clues as to how it would be possible to make this model operational in terms of the sensitivity of its construction and kernel of the research problem, the apparently insoluble issue of information and the individual. This is because there is a need for a personal approach, an individual approach which accepts the dynamism of the individual and the environment or organization in which he operates, and at the same time allows

the individual to report the effects in his own terms. Such an approach is found in the psychology of personal constructs (Kelly, 1955).

10.4

The Psychology of Personal Constructs

At this stage it was possible to construct a model concerned with the provision of financial information from the surveys of the literature and through intuition. One of the potential weaknesses of the model was that it had been constructed on the basis of a variety of previous research studies most of which appeared to have different bases to each other. This, of course, is common in social science research. Another potential weakness was the emphasis of the model on the individual and no obvious way to view, sensibly, the individual. Accordingly use was made of the psychology of personal constructs (Kelly, 1955).

The richness of personal construct psychology provided an approach to the individual with its fundamental postulate stating that "a person's processes are psychologically channelized by the way in which the person anticipates events" (Kelly, 1963, p.46). From the fundamental postulate are drawn eleven corollaries and some elaboration of the way in which the individual construes events (Kelly, 1955). The psychology of personal constructs is concerned with both intrapersonal and interpersonal construing so that the issues of involvement and interaction with other individuals is a normal part of life.

10.41 Information

Following from Kelly (1955) it was possible to address quite directly the issue of information in relation to the individual. Kelly (1955) considers that an individual has constructs through which he perceives events. Through the individual reconstruing events it is possible for his constructs to change and for his construct system to change. For Kelly (1955) life is experience for an individual and part of this experience is learning and/or training. These experiences are construed and reconstrued by the individual and as such issues of knowledge/cognition, education/training or emotion/motivation are implicit in the process of construing. Bearing this in mind it was possible to specify that for an individual information can be considered to be an event which alters his construing or thinking.

10.42 Understanding and Meaning

In the psychology of personal constructs (Kelly, 1955) an individual construes events by way of a system of constructs. An individual construes elements by way of the construct system. In order for an individual to be able to understand an element, financial information for example, the individual must have his own system of constructs which relate to, or construe, that financial information or element. An individual has a construct system which is permeable, with constructs that will admit new elements, so that through the modulation corollary the range of convenience for the elements alters and so the construct system changes.

Another way of looking at this is that the absence of constructs appertaining to an element, financial information, indicates that the individual cannot construe that element in the context that the element occurs. An individual cannot construe or understand financial information without financial constructs. Thus an individual could start with either no financial constructs or a few financial constructs and through time and the revision of his construing, financial constructs are added to his construct system. In this way an individual acquires understanding.

Meaning is different to understanding. An individual can construe or understand an element, but this does not confer meaning on that element. There cannot be meaning without understanding, but there can be understanding without meaning. A notion has both understanding and meaning at the same time when the individual can construe the notion both as an element and as a construct in the same circumstances.

10.50

The Research is Re-designed

The psychology of personal constructs (Kelly, 1955) has provided a means of accepting the individual as a whole. It has been possible to elaborate personal construct psychology so as to subsume the research problem, the model (including the Information-Influence Matrix) constructed to try to explain this problem, and the four notions derived from the model. The self-contained approach of the psychology of personal constructs (Kelly, 1955) has automatically taken care of some of the problems and difficulties experienced with the model and the operation of the model. For example involvement, interaction, knowledge and training is part of life. In addition it has been possible to elaborate personal construct psychology so as to define information and to define understanding and meaning.

At the time that Kelly (1955) promulgated the psychology of personal constructs he also produced several methods concerned with making personal constructs tangible and accessible for study (Kelly, 1955). Although there are several aspects to this, there are two which are of relevance here. There is firstly the use of elements in the minimum context card form, in order to elicit the individual's personal constructs. Accompanying this form of elicitation is the repertory grid through which the individual construes the elements used in the grid and writes down his elicited constructs (Kelly, 1955).

Three other developments of personal construct methodology have also been utilized. Firstly the use of some supplied constructs (Fransella and Bannister, 1977) on the repertory grid in addition to those elicited. Secondly the use of the INGRID 72 program (Slater, 1972), and thirdly the plotting of elements in the construct space and constructs in the element space (Slater, 1976 and 1977). In this way it has been possible to re-design the research in terms of the psychology of personal constructs.

10.51 The Way in which the Research has been Re-designed

The way in which the research has been re-designed is perhaps demonstrated best by explaining the four research notions set out in 10.32 in the context and language of the psychology of personal constructs. To commence, the individual is asked to complete a repertory grid which contains elements which are suitable for the individual to construe, as well as three supplied constructs. Such completed grids form the basis of this research. The completed grids are subjected to the INGRID 72 program (Slater, 1972) which produces various analyses as output. From amongst the output, the principal component analysis provides details from which the elements can be plotted in the construct space and the constructs can be plotted in the element space.

An inspection of the elicited constructs indicates whether constructs concerned with financial information/management are present. The presence of financial constructs indicates financial understanding. The construct loadings on the first two principal components can be examined and the sense of the constructs provide the main ways in which the individual construes/thinks. Again this may include constructs concerned with financial information/management, and so where this is the case it indicates the salience of financial information/management to the

individual. From the plot of the elements into the construct space it is possible to examine which financial information elements have meaning with respect to the first two principal components. In this way it is possible to examine the individual's construing of a set of elements, which include financial information elements, and so construe how salient financial information is to the individual, and what understanding and meaning of financial information elements is construed by the individual, in the terms of that individual.

It is possible to study what happens to the individual through time by examining successive grids and the associated data. During this time the organization continues with its activities, for example the provision of new financial information, the provision of training, or simply in a manner similar to before. It is necessary to be aware of any changes which have occurred in the work environment of the individual in respect of influence. This makes it possible to construe whether an individual has experienced changes in, for example the general influence structure of the organization, or the receipt of financial information and training. On the basis of these changes, or the lack of change, it is generally possible to categorize individuals into different groups. The construing of the individuals, as they occur in the different groups, can then be examined to find if there are any differences between these groups in terms of the issues of the provision of financial information and the provision of training.

Thus the four notions stated in 10.32 have been demonstrated briefly in terms of the psychology of personal constructs. Therefore in a longitudinal study, which uses two or more grids, there should be some indications about the change over time and the effect of the provision of financial information upon the construing of employees.

10.52 The Hypotheses

Using the original model and the cells of the Information-Influence Matrix nine hypotheses were constructed in terms of the psychology of personal constructs. At the time that these hypotheses were constructed the participating organizations were not known. At that time it was anticipated that any study would involve employees who were naive with respect to financial information. In other words it was expected that any employees would be likely to be found in a position of no financial information and no influence, the cell in the bottom left-hand corner of

the Information-Influence Matrix. In the event this kind of situation only applies to two individuals in different organizations.

The nine hypotheses were constructed with an emphasis on trying to cover all of the situations anticipated on the Information-Influence Matrix. The Information-Influence Matrix takes a very comprehensive view of organizations in relation to their provision of financial information and their structures for influence, and so includes a number of scenarios. There are five hypotheses which specifically revolve around and relate to the type of influence structure of the organization and to training. It was clear at that time, that if, in the subsequent studies, all of the employees happened to be located in one cell on the Information-Influence Matrix then only one hypothesis would be relevant, and so the other four could not be used.

It would seem better then, not to view the hypotheses generated and stated as the limits or boundaries to the research, but more as pivotal notions stated in the process of the research and around which more fruitful discussion can be developed. This approach is suggested because the original model and the Information-Influence Matrix were constructed on the basis of the previous research, which was not conducted at the level of the individual, whilst this research is at the individual level. Furthermore, the analysis of the grids has provided more data than was envisaged at the time that the hypotheses were drawn up.

In part this situation reflects that with the benefit of hindsight there was an apparent, incomplete conceptualization of what could happen to the construct systems of an individual when construing financial information. In part this situation also reflects the richness of this approach which has enabled rich data to be produced. In turn, further analysis and results have been included which do not appear to have a direct implication for any particular hypothesis, but which provide insights into the construing of financial information by individuals, under the circumstances of these organizational studies.

Of course the organizational studies differ from organization to organization. Each organization is an umbrella for separate pieces of research with each individual. In each organization the objects of the research are identical, the research instruments are similar, but the content of the elements on the grid are

drawn from the context of that organization. Consequently the organization provides the context or environment for the financial information and the individual.

The aggregation of the results from the different organizations, so as to present one set of results, is only possible where the same hypothesis has been available for use. This enables this research to reach out towards the earlier research from which the model was constructed. Also, in part, this situation serves to demonstrate the robustness of the model.

10.60

A Summary of the Major Results

One unanticipated result was that all of the hypotheses were tested during the course of this work because of the variety of situations within the different organizations. Hypotheses one to four were tested in each organization. Hypotheses 5, 6 and 7 were tested in the Retail Co-op and Hypotheses 8 and 9 were tested in the Regional Health Authority and the Print Co-op. It was considered possible to test, tentatively, so many hypotheses because the individuals in each organization were placed into different groups internal to each organization, for the purpose of comparative analysis. There were doubts about the correctness of placing individuals into particular groups, especially in the Regional Health Authority and the Retail Co-op. This was because of financial information 'leaking', albeit unofficially in the confines of the study, to at least one individual, and the 'training' which some individuals received, again unofficially outside of the study. In the same way then, there were doubts about the correctness of placing all of the individuals forming certain groups into one group to test particular hypotheses. This means that according to self-reports, as opposed to the 'official' position from my prime contact in each organization, some individuals are possibly being tested against the incorrect hypothesis. Such is the nature of this type of research.

The hypotheses are presented one at a time, the results for each organization are presented separately, then the overall implications are discussed. The concern is to ascertain if the changes move in the general direction of the hypotheses and do not refute them. For example, Hypothesis four anticipates more change with a trained individual. Finally the different types of constructs which occurred are presented and the implications discussed.

10.61 Hypothesis 1

An individual who is presented with a set of elements, which includes elements which are labels of financial information, will not necessarily find these elements of financial information within his range of convenience.

Regional Health Authority

The individuals in both groups, Irregular Users and Regular Users, initially find the financial information elements within their range of convenience.

Retail Co-op

The individuals in the Withdrawn Group did not always find the financial information elements within their range of convenience. The individuals in the Untrained, Trained and Trained Butchers Groups did find these within their range of convenience.

Print Co-op

One individual, in the Trained Group, who had recently joined the co-op did not find the financial information elements within her range of convenience on the first grid. Apart from this all individuals found the financial information elements within their range of convenience.

Those individuals who did not find the financial information elements within their range of convenience demonstrate that not all individuals can construe financial information elements. There is no reason to consider that all individuals can understand any particular type of financial information. This hypothesis was formulated to see if naive construers could construe the financial information with which they would be, or even were, provided. It was anticipated that a typical study, which included some training, would demonstrate that there was difficulty for some individuals to find the financial information elements in their range of convenience, but that with training the elements would be within the range of convenience. There were very few individuals in these studies who were so naive in their construing that they could not construe the elements, but in the Print Co-op there was one who followed the anticipated pattern. There was almost the reverse situation with two individuals in the Retail Co-op, but this nevertheless substantiates the hypothesis. In the Withdrawn Group financial information was provided and then withdrawn, so that two individuals did not find the financial information elements in their range of convenience, they could not construe from the

triadic presentation, and even when similarities were construed it was not possible for the individual to provide a written label.

10.62 Hypothesis 2

An individual, who construes the provision of financial information, will construe that financial information and so revise the construing of the same set of elements which was originally presented.

Regional Health Authority

In both groups all individuals revised their construing of the elements between the first and final grids.

Retail Co-op

With the provision of financial information the individuals revised their construing.

Print Co-op

The individuals revised their construing of the elements during the study.

There is sufficient evidence of the consistency with which an individual construes a particular set of elements when subject to a re-test (Fransella and Bannister, 1977). It was anticipated that even naive construers would revise their construing, even if the level of understanding and meaning was at a very low level. So the provision of financial information does alter people's construing. What has been found in this area will be discussed in Sections 10.70 to 10.72 on the different types of financial constructs.

10.63 Hypothesis 3

An individual, who construes the use of the financial information provided, will further revise the construing of that same set of elements.

This hypothesis notes that an individual who uses financial information will revise her/his constructs more than someone who does not use the information. In relation to this, use is assumed to be based upon understanding, meaning and the ability to influence.

Regional Health Authority

On this Committee the ability to influence is assumed to be the same for each individual. With all of the Regular User Group and one individual in the

Irregular User Group there was a revision of construing which is more far-reaching than the two other individuals.

Retail Co-op

The individuals in both the Trained and Trained Butchers Groups revised their construing more than the individuals in the two other groups in the Co-op. The individuals in the Untrained Group revised their construing more than the individuals in the Withdrawn Group. The only apparent reason for the difference between these last two groups is that the individuals in the Untrained Group are still provided with financial information.

Print Co-op

The Rest and Trained Groups revised their construing more than the Printers group.

It would appear that the ability to use the new or further financial information, that has been provided in these studies, is reflected in the revision of the individual's construct system. The ability or the opportunity to use the financial information is likely to relate to the individual's understanding of the information, its meaning and whether issues can be influenced. Those individuals in such a position to either understand the information, and/or for the information to have meaning, and/or for influence to be exercised revise their construing the most. The differences which have arisen in this respect will be amplified in Sections 10.70 to 10.72 on the different types of financial constructs.

10.64 Hypothesis 4

An individual, who is trained to use and who does use the financial information provided, will revise, even further, the construing of that same set of elements.

This hypothesis notes that an individual who is trained to use and who does use the financial information, will revise his constructs more than an individual who is not trained.

Regional Health Authority

The Regular User Group are clearly different from the Irregular User Group in their construing of the elements. It would seem that the only reasons for this difference relate to either training or the regularity with which financial information is used. There is one individual in the Irregular User Group who had made efforts, outside of the formal situation, to understand the financial information

and its implications. The construing of this individual has revised in a manner which is similar to those in the Regular User Group.

Retail Co-op

The individuals in the Trained and the Trained Butchers Groups revise their construing more than the individuals in the other two groups. The only apparent reason for this is that they have been trained.

Print Co-op

The Trained Group has revised its construing more than the two other groups have revised their construing. The only apparent reason for this is the training.

It would appear that individuals, who have been 'formally' trained during the course of the study, have undergone a relatively greater revision of their construct system than the individuals in the non-Trained groups. This is because with the 'trained' individuals there is relatively more increase in both the number of financial constructs held and the number of functional financial constructs. Thus training during the course of the study appears to be the reason for this difference.

The Regional Health Authority did not set up training for its members; so the individuals were partitioned in terms of previous training which had been received, and, in turn this was coincident with the individual being a Regular or an Irregular User of financial information in their daily work. With the additional financial information the construing of the Regular (trained) users has revised more than the Irregular users. There is an exception amongst the Irregular users. One individual has received explanations about the financial information and its implications, outside of the formality of any training scheme. This degree of 'education' appears to be related to the fact that the revision of her construing is similar to and closer to the construing of the individuals in the Regular User Group. Of course it is irrelevant whether the training an individual receives is formal or informal in as far as it appears to alter the construct system and in this case lend more weight to the findings from the 'formally' trained. This 'informal' training also appears to have occurred with two individuals in the Untrained Group of the Retail Co-op, where Branch Managers who have received training, have, in turn, passed on some 'education' to their assistants.

The construing of the Regular (trained) users also altered with the provision of the new financial information. This would suggest that an individual with a construct system 'educated' in particular areas of financial information has to elaborate the construct system to embrace the new financial information. This is of course quite consistent with the psychology of personal constructs (Kelly, 1955). It would appear that previous training in the area of financial information facilitates this elaboration.

According to Kelly (1955), the mere fact that people are exposed to an experience enables them to reconstrue, so training is not necessary or sufficient for individuals to reconstrue. The opportunity to enrich that experience exists through training. Thus training appears to provide insights and constructs for the individual such that the individual can elaborate the construct system more than an individual who lacks such training. Again the differences which have arisen in this respect will be amplified in Sections 10.70 to 10.72 on the different types of financial constructs.

10.65 Hypothesis 5 - as modified for items d and e -

An individual, who construes the provision of financial information in the context of communication, after financial information has been withdrawn, will revise the construing to:

- a. not construe more influence.
- b. not construe more desired influence.
- c. not construe more power.
- d. construe more financial information elements to be ticked in completing the grid.
- e. construe the desire for more or different types of financial information.
- f. not increase the understanding of financial information elements.

The Group examined against this hypothesis are individuals who were provided with financial information which was subsequently withdrawn from them. In view of this these individuals do not fit in with the financial information items, d and e, of the original hypothesis. However, at the time that the original hypotheses were written there was no reason to consider that there would be a statistically significant change in the number of elements ticked or the desire for

more financial information in the context of an employee report. The financial information that was actually provided was functional financial information. Because of the closeness of this type of financial information to the daily activities of the individuals this closeness makes it conceivable that some of it would more readily make sense for the individual, and so be noticed, and its absence missed. Consequently it is quite possible that in such circumstances the information would have effected an individual's construing so that the number of financial information elements would increase and there would be a desire for at least the replacement of the financial information and so express a desire for more financial information. Accordingly Hypothesis 5 has been modified for these particular circumstances.

Retail Co-op - Withdrawn Group

a. One individual construes influence upon a larger number of elements, one individual construes influence upon a smaller number and the third upon the same number of elements.

b. Two individuals construe desired influence upon a smaller number of elements and one individual upon a larger number of elements.

c. One individual construes power over a larger number of elements, one individual construes power over a smaller number and the third upon the same number of elements.

d. Two individuals construe a larger number of financial information elements, one individual construes a smaller number of elements.

e. The three individuals construe a requirement for more financial information.

f. One individual increases understanding, one decreases understanding and one remains the same.

The general position with respect to actual influence and power offers no clear support or rejection for the hypothesis. Although two individuals support the hypothesis in respect of desired influence there is no obvious reason why this should be not in accordance with their other construing of influence. One reason for these results is probably because the circumstances of the jobs of the three individuals are not identical although they are similar. Another reason is that because of the different experiences which the three individuals have had in relation to financial information, both before the study and during it. A final reason is that the withdrawal of the financial information was symptomatic of the change in philosophy which the new Food Trades Officer brought to the co-op with a move away from the consultation policy which was being introduced. The information aspects of

the hypotheses are generally supported. The issue of understanding has no clear pattern.

From this study it would appear that the provision of financial information and then its subsequent withdrawal from individuals does not allow any clear indications about issues of influence and power. In these respects it is possible for individuals to be in various states with respect to influence and power. The issue of information seems to be clearer in that the provision of the financial information, and possibly its withdrawal too, has revised the construing of individuals to generally construe a larger number of financial information elements, which is consistent with a broadening of understanding, and to require at least the restoration of the financial information withdrawn.

10.66 Hypothesis 6

An individual, who construes the provision of financial information in the context of consultation, will revise the construing to:

- a. construe more influence.
- b. construe more desired influence.
- c. not construe more power.
- d. not construe more financial information elements to be ticked in completing the grid.
- e. not construe the desire for more or different types of financial information.
- f. not increase the understanding of financial information elements.

Retail Co-op - Untrained Group

- a. One individual construes influence upon a larger number of elements, one individual construes influence upon a smaller number and two upon the same number of elements.
- b. Four individuals construe desired influence upon a larger number of elements.
- c. Two individuals construe power over a larger number of elements, one individual construes power over a smaller number and the fourth upon the same number of elements.
- d. One individual construes a larger number of financial information elements and three individuals construe a smaller number of elements.

e. Three individuals construe a requirement for more financial information and one for the same.

f. Two individuals increased their understanding, two remained the same.

Hypothesis 6 anticipated that individuals would be provided with financial information, which they probably would not understand in the context in which it was meant to be understood, consequently they would not alter their construing of financial information. However, in view of the consultation situation, the individuals would probably construe more actual and desired influence. The results for actual influence and power are unclear in support or rejection of the hypotheses, but desired influence unanimously supports the hypothesis. Clearly actual influence and power do not move in one direction, and because of this there seems no obvious reason why desired influence should move uniformly in the direction anticipated, but there is a desire for more influence. One reason for these mixed results is perhaps the change in philosophy which the new Food Trades Officer brought to the co-op with a move away from the consultation policy which was being introduced.

The hypotheses concerned with financial information were not supported, since individuals generally construed a smaller number of financial information elements, and required more financial information. The smaller number of financial information elements, which is indicative of tightened construing, would be anticipated to be associated with a deeper understanding of financial information. An increase in understanding has in fact occurred in two individuals, whilst two remained the same in accord with anticipations. The two individuals who exhibited an increase in understanding were apparently given some explanations about financial information by their immediate bosses, and it is this which is perhaps associated with the increase in understanding.

It would seem that, because of the ability of information to alter the construing of the individual and the potentially simple way in which this can occur, the dissemination of information without providing it in a clear context will affect the way in which individuals construe, subsequently. This means that, at this simple level of evaluation without a clear knowledge of the precise context of the information, it is not possible to anticipate what will happen to the individual's construing.

10.67 Hypothesis 7

An individual, who construes the provision of financial information in the context of consultation and who is trained, will revise the construing to:

- a. construe more influence.
- b. construe more desired influence.
- c. not construe more power.
- d. construe more financial information elements to be ticked in completing the grid.
- e. construe the desire for more or different types of financial information.
- f. increase the understanding of financial information elements.

Retail Co-op - Trained Group

- a. Four individuals construe influence upon a larger number of elements, and two construe upon the same number.
- b. Four individuals construe desired influence upon the same number of elements, one upon a larger number and one upon a smaller number.
- c. Three individuals construe power over a smaller number of elements, two over the same number and one over a larger number.
- d. Five individuals construe a larger number of financial information elements and one a smaller number.
- e. Four individuals construe a requirement for the same information and two for more.
- f. The understanding of financial information for five individuals has increased and one remains the same.

Hypothesis 7 anticipated that individuals receiving financial information and training in the context of consultation would increase the number of elements construed in all respects except power where it would decrease. These anticipations have largely been borne out, although the desire to influence generally shows no change and there is no apparent reason why this does not follow the actual influence.

Retail Co-op - Trained Butchers Group

- a. One individual construes influence upon a larger number of elements and one upon a smaller number.
- b. Both individuals construe desired influence upon a larger number of elements.
- c. One individual construes power over a larger number of elements and one over a smaller number.
- d. One individual construes a larger number of financial information elements and one construes a smaller number.
- e. Both construe a requirement for the same information.
- f. The understanding of financial information for both has increased.

The anticipations of the hypothesis have been confirmed in relation to desired influence and understanding. The rest are mixed results except for the information requirement. The reason why desired influence did not follow actual influence in both cases is not apparent.

10.68 Hypothesis 8

An individual, who construes the provision of financial information in the context of participation and who is not trained, will revise the construing to:

- a. construe more influence.
- b. construe more desired influence.
- c. construe more power.
- d. not construe more financial information elements to be ticked in completing the grid.
- e. not construe the desire for more or different types of financial information.
- f. not increase the understanding of financial information elements.

Regional Health Authority - Irregular Users Group

- a. One individual construes influence upon a larger number of elements, one upon a smaller number and one upon the same.
- b. Two individuals construed desired influence upon a larger number of elements, and one upon a smaller number.
- c. Two individuals construe power over a larger number of elements and one over the same number.
- d. Two individuals construe a smaller number of financial information elements and one a larger number.
- e. Two individuals construe a requirement for less financial information and one for the same.
- f. The understanding of financial information for two individuals remains the same and for one it increases.

The hypothesis anticipated that individuals receiving financial information who were not trained to understand it, in the context of participation, would alter their construing of influence and power but not of the financial information. One individual in this group apparently received some 'unofficial' training and the results for this individual consistently contrast with those of the two others. This could be the explanation for this consistent difference on five items. Certainly the changes in construing of these two individuals follow the hypothesis with respect to desired influence, power and understanding. They also follow the hypothesis in that they do not construe a larger number of financial information elements, and in fact construe less. They also construe the requirement for less financial information. In this particular situation the reason for these changes may be due to the fact that the two individuals involved do not appear to have many financial constructs with which to utilize the financial information. It would appear that the increase in information is not required and cannot be construed and that their influence and power in making decisions does not include the financial information.

Print Co-op - Printers Group

- a. Three individuals construe influence upon a larger number of elements and two upon a smaller number.
- b. Four individuals construe desired influence upon a larger number of elements and one upon a smaller number.
- c. Three individuals construe power over a larger number of elements, one over a smaller number and one remains the same.
- d. Three individuals construe a larger number of financial information elements and two construe a smaller number.
- e. Three individuals construe a requirement for more information and two for the same.
- f. The understanding of financial information for three individuals has increased, one has decreased and one remains the same.

There is a general change in agreement with the hypothesis in respect of actual influence, desired influence and power. This agreement is not carried through in relation to the financial information where the understanding of financial information and its other aspects have increased. An explanation of the changes relating to financial information is perhaps that at the monthly meeting any financial information is placed into a context. It could be at this stage that the 'learning' occurs, so that the understanding of financial information changes. The issue of placing the financial information into a context was not considered in the original model and hypotheses.

Print Co-op - Rest Group

- a. One individual construes influence upon a larger number of elements, three upon a smaller number and one remains the same.
- b. One individual construes desired influence upon a larger number of elements, three upon a smaller number and one remains the same.
- c. Two individuals construe power over a larger number of elements, two over a smaller number and one remains the same.
- d. Two individuals construe a larger number of financial information elements, two construe a smaller number and one remains the same.
- e. Two individuals construe a requirement for more information and one for the same.
- f. The understanding of financial information for five individuals has increased.

The results for actual and desired influence are in the opposite direction to that anticipated and some unclear support in the direction of power. The understanding of all individuals for financial information has increased as has the information requirement, although the financial information elements are unclear. The explanations for the changes relating to financial information might be as follows. Firstly at the monthly meeting any financial information is placed into a context which allows 'learning' to occur. Secondly the majority of individuals in this group have their construct system concerned with financial information at a sufficient level of financial understanding or competence as to allow the development of further understanding of financial information to occur. Further discussion of this notion arises in Section 10.69. Perhaps it is because of the new financial information which has been provided that the individuals in this group construe less influence and a mixed change in power.

These three studies though testing the same hypothesis produce different results. The general change in the Health Authority group is to not confirm the hypothesis in respect of actual influence and power, but to confirm it in relation to desired influence, understanding and the financial information items. In the Print Co-op, with the Printers Group, the change confirms the hypothesis in relation to actual influence, desired influence and power, but does not confirm the hypothesis in relation to understanding and the financial information items. It would appear that even if the compartmentalised conditions of the model are complied with then the model is an accurate predictor. In the Print Co-op, with the Rest Group, apart from some weak support for the hypothesis in relation to power and financial information elements, the other changes do not confirm the hypothesis. With this group it is considered that the divergence from the hypothesis is partly caused by the amount of initial understanding of financial information possessed by these individuals, and that future specifications of the model need to make any procedures testing the model more sensitive to the existing state of an individual's understanding. The understanding and financial information results for this group would be consistent with Hypothesis 9 which subsumes training.

10.69 Hypothesis 9

An individual, who construes the provision of financial information in the context of participation and who is trained, will revise the construing to:

- a. construe more influence.
- b. construe more desired influence.
- c. construe more power.
- d. construe more financial information elements to be ticked in completing the grid.
- e. construe the desire for more or different types of financial information.
- f. increase the understanding of financial information elements.

Regional Health Authority - Regular User Group

- a. One individual construes influence upon a larger number of elements, one upon a smaller number and one upon the same.
- b. One individual construes desired influence upon a larger number of elements, one upon a smaller number and one upon the same.
- c. One individual construes power over a larger number of elements and two over the same number.
- d. Two individuals construe a smaller number of financial information elements and one a larger number.
- e. The three individuals construe a requirement for more financial information.
- f. The understanding of financial information for the three individuals increases.

The results do not support the hypothesis in relation to actual influence, desired influence and power. There is support for understanding and financial information requirements and some weak support for the financial information elements. It would seem that lack of a clear change in the direction of construing influence and power is perhaps somewhat independent of the new financial information. These differing positions of individuals may be due to insufficient similarities or commonality between them in the Committee.

By way of explanation of the changes relating to financial information the following is suggested. The reason why these individuals were placed together in this group was because they had been previously trained in relation to financial information in general, and they used various types of financial information in their daily work, not just in relation to the financial information studied here. It was anticipated that the results from such individuals would show that their understanding would not change, because they have been trained to appreciate financial information. This is clearly not the result. This is because the measures of understanding are very sensitive to the types of understanding and it would appear that the pre-trained individuals have been able to use their already elaborated construct systems to become even more elaborated and to understand particular information. The movement of the financial information elements is indicative of a tightening of construing and a deepening of understanding. It would seem that the lack of training or pre-training did not allow two of the other individuals on the Committee to elaborate their construing in the same way.

If this is the explanation here then this lends support to the view taken about the Rest Group's position in 10.68 above. Of course 'official training' is not the only way in which individuals learn but is simply a convenient categorization in the original model, which was concerned with naive construers.

Print Co-op - Trained Group

- a. The five individuals construe influence upon a larger number of elements.
- b. Three individuals construe desired influence upon a larger number of elements, one upon a smaller number and one remains the same.
- c. Four individuals construe power over a larger number of elements and one remains the same.
- d. The five individuals construe a larger number of financial information elements.
- e. Three individuals construe a requirement for more information and two for the same.
- f. The understanding of financial information for the five individuals has increased.

From all of the studies, this group is perhaps the closest to the original model in terms of the initial naivete of the individuals and then that they received some formal, meaningful training. The results are supportive of the hypothesis. Earlier the issue of training and learning was mentioned with little direct knowledge of what training had occurred. In this case the type of training and the individuals trained are known. The results are not unanimous but quite clear that the changes which have occurred are in the directions anticipated by the model.

The result of the two studies examined with this hypothesis are not identical. The Regular User Group from the Regional Health Authority did not support the hypothesis in terms of actual influence, desired influence power and the number of financial information elements. It would appear to be reasonable to assume that some of this disparity is related to the lack of commonality of work etc. amongst the group. The issues of understanding and financial information are basically in the direction anticipated and even the notion about the continued elaboration of an individual's construct system, after it has been trained to appreciate financial information, has changed in the direction which this implies. The Trained Group of the Print Co-op generally confirm the hypothesis.

10.70 The Development of the Construing of Financial Information

The previous section has discussed the original model in relation to the results from the studies undertaken, and the nine hypotheses formulated. Generally the results do not refute the hypotheses so that there is some form of validated working model. Due to the psychology of personal constructs (Kelly, 1955) and the use of one of its methodologies, the grid, it has been possible to lift the written constructs of the individuals participating in the studies. These constructs have been subject to analysis, as reported in the chapters concerned with the organizational studies, in order to ascertain if they contain notions concerned with financial information or financial management. For the purposes of this research such constructs have been called financial constructs.

It has not been one of the concerns of the research to make judgements about the level of understanding of financial information in terms of the conventional wisdoms concerned with the simplicity or complexity of notions used. The research also has not made judgements about the 'correctness' of individuals' financial constructs. In order to help the understanding of what happened through

time with individual's constructs, the financial constructs were categorized. Additionally it was possible to match some of these categories of financial construct with some of the different types of construct which Kelly (1955) promulgated.

From an examination of these different types of financial construct it has been possible to suggest a framework to the stages through which individuals pass in elaborating their construing of financial information.

10.71 The Categorization of Financial Constructs

From the organizational studies the following types of financial constructs were found. The names in parenthesis are the organizations in which the constructs were found.

- a. Need constructs contain the word 'need' and relate to the needs for financial information. (Health and Print)
- b. Figures constructs contain the word 'figures' and are used in the basic sense of covering a number of situations with such widespread simplicity. (Retail)
- c. Descriptive constructs describe financial information or financial management terms. (Health, Retail and Print)
- d. Functional constructs demonstrate the function or the use of the financial information. (Health, Retail and Print)
- e. Structural constructs amalgamate financial information or financial management terms with some structure of the organization. (Health, Retail and Print)
- f. Time constructs amalgamate financial information or financial management terms with time. (Retail and Print)

The time and structural constructs are not considered any further in the analysis at this time. They are not being ignored for their irrelevance but that they deal with contextual issues such as for example, "I need time to study the information", or "budgets are set by me".

10.72 Financial Constructs and Personal Construct Psychology

The financial constructs in the categories a to d can be considered in terms of the types of personal constructs identified by Kelly (1955).

The need construct is a comprehensive construct which subsumes a relatively wide variety of events. This type of construct is permeable and by virtue of its open-endedness is able to embrace further constructs. The occurrence of a need construct could allow the construct system to become elaborated with respect to financial information through both the experience and modulation corollaries. At the same time a need construct could be a superordinate construct concerned with financial information.

The figures construct could be a comprehensive construct like the need construct, subsuming a wide variety of events. It is more likely that it is used as a propositional construct. Because it has been used at such a simple level it is impossible to determine the inclination of the individual without specific investigation of the individual concerned. In each case the construct is apparently at the superordinate level capable of allowing the construct system to elaborate.

The descriptive construct is a propositional construct which leaves its elements open to construction in all other respects. Kelly (1955) notes that propositional constructs are employed when an individual construes circumspectively. This form of construing occurs at the start of the cycle in the sequence Circumspection-Pre-emption-Control in the C-P-C cycle (Kelly, 1955).

The functional construct is a pre-emptive construct, that is a construct which pre-empts elements for membership in its own realm (Kelly, 1955). The functional-pre-emptive construct demonstrates/identifies/states the use of financial information in financial management. The construction of pre-emption makes for control.

From the previous section it can be seen that descriptive-propositional and functional-pre-emptive constructs occur in all three organizations together with either a need-comprehensive or figures-propositional construct. It would appear from the organizational studies that some individuals change their construing, and with an appropriate context acquire or increase the number of their functional-pre-emptive

constructs when their understanding increases. With these individuals when understanding increases it is generally accompanied by a reduction in the number of need-comprehensive and/or descriptive-propositional constructs.

This pattern of the change of constructs is common amongst all three organizations. This seems to validate the earliest notions of this research that the issues being pursued here are issues which are possible to generalize to any type of organization and individual.

10.8

Conclusions

A model of financial information provision and influence in organizations was constructed in the form of an Information-Influence Matrix. Through using the psychology of personal constructs (Kelly, 1955) the model was revised and expressed in terms of personal constructs, which lead to a process of measuring variables. The varied data sets are somewhat limited due to the inability to secure access to one large data set or similar data sets in different organizations. On the other hand they have enabled all of the hypotheses to be tested.

The application of personal constructs to the provision of financial information has enabled a previously inaccessible and rich vein to be tapped. The evidence does not refute the hypotheses. Most variations from the hypotheses seem to be due to the researcher's assignment of individuals to inappropriate groups which were consequently matched against inappropriate hypotheses. The assignment of individuals was based on the 'official view' of information and or training rather than the actual events experienced by the individual. Fortunately the detail is rich and has helped to explain these variations, as well generating much insight.

It has been found that over time the construing of financial information by individuals changes. With appropriate conditions financial constructs occur. Several categories of financial constructs have been identified and found to be common across the individuals in the three organizations studied here. This does not refute the notion that the provision of financial information effects the construing of individuals in similar ways in different forms of organization.

Not only are these issues capable of being generalized across organizations, but this study has also indicated that the issue of financial information provision

is capable of generalization across individuals who come from different backgrounds. It has been demonstrated that it is possible for individuals with educational backgrounds which are either quite basic, or craft, or degree and professional to construe and acquire some understanding of financial information. Across the same range of educational backgrounds, there are indications that when financial information is provided the construct systems of some individuals are not currently capable of elaboration to understand that information. This lack of elaboration is because the individual has not been placed in an environment which facilitates their construct system to elaborate in this way.

It would appear that unless there are conditions which are appropriate for understanding to develop about financial information then this understanding will not develop, irrespective of educational background. Where there are conditions which are appropriate for understanding to develop about financial information then this understanding will develop, irrespective of educational background. It would seem that both, training in connection with the financial information and/ or use in connection with financial information, are conditions which are appropriate for an individual's construct system to elaborate and acquire understanding.

At this stage the model which was constructed to deal with the provision of reports to employees remains untested in relation to employee reports. As a result of this research there is every reason to believe that no matter how good the production of an employee report makes the management of an organization feel, unless the recipients have some training or education about that report and that some of the information can be used by those employees, then that information will not be understood.

The model expressed in terms of personal construct psychology seems to be robust and capable of predicting and explaining what happens to employees when they are provided with financial information. Before the research some people suggested that financial information would have no effect on employees and others suggested that it would. After the research it seems that, the effect of the provision of financial information upon the construing of employees is such that, at times the financial information cannot be understood, and, at times it can be understood, and in itself it is an event which alters the construing of an individual.

Future Research

The stimulus for this piece of research, the desire to ascertain what company employees think when they are provided with financial information in the form of an employee report, remains unfulfilled. It would be worthwhile to apply the insights developed here on that task.

Secondly, in view of the apparent sensitivity of individuals' construct systems, which have elaborated all information and experiences, including the 'unofficial' ones, even closer attention needs to be directed to the precise circumstances of the individual concerned. This means that 'benchmarks' for research are likely to be moved even more in the direction of the individual concerned and away from the 'independent' and 'official' positions taken by officers of the organization who are the research contacts. The contextual material which such officers can supply is valuable for the general context, but the grid methodology is specific to individuals and requires interpretation on an individual basis.

Thirdly, construct systems are more sensitive than suggested by either the original model, with its somewhat rigid compartments, or the researcher's personal construct model. The models failed to take into consideration that a truly participative mode of organization would automatically provide a context to financial information. The provision of this context is no different to any other form of education and assists understanding, so that even individuals who have not been separately trained change their construing. Also the models suggested that only training in a participative mode would alter an individual's thinking in that mode, and specifically would facilitate:

1. more financial information elements included in the construing.
2. the desire for more or different types of financial information.
3. an increase in the understanding of the financial information elements.

The evidence indicates that previous training and experience in handling the financial information also facilitates alterations in the construct system, so that this needs to be incorporated in future work. Consideration also needs to be given to the specific situation of individuals in participative modes, for as the organization strives towards more participation some individuals indicate that they have less influence and power, which they have probably ceded to others. Individuals located in the communication and consultation modes are also not in simple

compartments. Further investigation of these modes may provide more insights to strengthen the model.

Finally future research could examine whether it is possible to offer quite high level understanding, in terms of financial management, to shopfloor employees. Certainly the indications are that this is feasible.

One of the tests of orthodox research is that the research should be replicable. It is the researcher's view that the empirical work in this thesis is replicable. It is considered that given similar organizations with similar situations of people and change, a future researcher would arrive at similar findings.

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Appendix I
Negotiating Access to Suitable Organizations

This research project grew out of the desire to know what happens to employees when they are provided with financial information. This desire came from my findings from a previous piece of research which noted that, although a number of large public companies were providing their employees with an employee report, there appeared to be no evidence that these reports had meaning for individuals whom, it was assumed, had no education or training to understand such reports. Accordingly the Information - Influence Matrix was conceived as a framework to handle the provision of employee reports, as well as other forms of financial information, by organizations to their employees. As there had been such an increase in these employee reports it was anticipated that any field studies in organizations was more than likely to include such reports. However, organizations were approached on the basis that a field study would follow through the process of the provision of some 'new' financial information to individuals, and preferably accompanied by training. In addition, the study was to be designed in conjunction with the organization, and so take into consideration the culture of each organization, yet remain within the basic requirements of the research for grids to be obtained from individuals both before and after the provision of the information. Although it would have been ideal to seek out individuals, naive with respect to financial information, in organizations replete with training facilities and obviously keen for their employees to meaningfully use such information, this was pursued as far as such organizations were known.

It was recognized from the beginning that this project, concerned with the nexus between financial information and influence, was one which organizations might not be prepared to support in terms of allowing access. It was disappointing to find that whilst looking for suitable organizations fellow members of groups were unable to offer any prospect of access. Eight fellow members of the Association of Teachers in Management were written to. The members chosen were those who, from their membership details, were apparently working in the communications area. One was employed by a regional gas board, another in central government, and six were employed in public companies. Replies were received from three individuals employed in public companies. These form part of the twenty two different forms of organizations and groups approached and asked to participate in the project. It

might also have been of use to have had access to the findings of Batstone (1984), who in a postal survey of large manufacturing companies found that the most common change occurring since 1978 was some attempt to increase employee involvement. No large manufacturing companies were approached. On the other hand, there is little indication, from discussions with organizations actively concerned with employee involvement, that companies would be prepared to assist in this form of research.

However, in finding suitable organizations, the researcher has been more fortunate than at least one other. Goodlad(1984) was concerned with the involvement of non-managerial employees in the setting of budgets. He was interested to develop a case study approach to this and was equipped with a grant from the Institute of Cost and Management Accountants as well as details of 295 Institute members working in the North West of England. He received 27 replies from members in various organizations, giving replies to a preliminary questionnaire. Although the responding organizations appeared to have levels of aspiration for the involvement of their employees above the existing levels, none of these organizations were prepared to grant him access to gather material. Six went through the preliminary stages but eventually withdrew, with one company observing that the commitment of non-managerial staff would be limited and would not justify the management effort required (Goodlad,1984).

Around the time that this research was registered, access was being negotiated with a garment distribution company, a subsidiary of a quoted public company, a Southern Water Board and a Southern Retail Co-operative Society. The garment distribution company decided not to proceed with its notions. One of the effects of a strike at the Water Board was that its management decided that it was unsure whether it would continue with its plans to disseminate financial information, but in any event the management felt that the situation would not be conducive to a field study. The Retail Co-op went ahead with a field study some 15 months after the initial discussions.

The Public Companies

Nine public companies were approached. The replies from the A.T.M. members in a bank and an insurance company noted that the companies had recently established new procedures for informing employees, and there was no possibility of a field study being conducted. However, the results of such research was considered to be of interest to both parties. The member in a pharmaceutical company was to set a suitable date for a meeting. Although the member was sent a reminder, to date no meeting has occurred. Discussions with six companies known from previous research

work also failed to secure access. Of these the two petrochemical, two confectionary and one paper company considered that they had embarked upon their various information policies and that there was nothing that the project could add. The sixth, a pharmaceutical company started planning for our joint study. It was of interest to learn that the company had provided an employee report for some four years, but that the company secretary noted that the board were considering its withdrawal, because they were not aware that it was of any use to any employee. This was despite the observation that there had been exhortations from various quarters about the desirability of producing such reports. There had been no discussion from employees or questions asked. The company was considering the introduction of functional financial information, that is information more closely related to the work of the employees. This information provision did not come to fruition, and the study ended.

The National Health Service

Three National Health Service organizations were involved in active discussions about joining the research project. A large London teaching hospital was considering introducing some financial information to nurses. The project proposal was tabled for the District Management Team's consideration in the summer of 1983. Apparently because of the problems with the many changes in the service the project proposal was still undiscussed in early 1984, and nothing has been received from the hospital since that time. The second organization was a group of hospitals outside of London which had one of its Treasurers working on the problem of providing financial information to ward nursing staff. The project proposal was agreed in June 1984 with a starting date of October 1984, which was extended to January 1985 and then abandoned the week before commencement. The particular Treasurer had left in November 1984, no person was appointed in his place and there were insufficient staff to continue his work. The third organization was a Southern Regional Health Authority. Although initial discussion centred around middle and lower management staff, the researcher was eventually asked to base the project on the six individuals who comprised the Capital Programme Committee. This was one of the Region's key committees whose members carried out, and to a certain extent made, the Region's hospital building policy.

Social Organizations Promoting Participation, Development and Enterprise

At the beginning of 1984 the researcher contacted the Communication Department of The Industrial Society to ascertain if any of the companies, with which they worked, would be interested to contribute to a field study. An initial response

included " this is an area the Industrial Society is very interested in and we in the Communication Department are always keen to hear of anything investigated on this subject. I would be grateful if the Society could possibly utilise your experience in this area in the future " (Industrial Society correspondence 21 March 1984). A subsequent meeting to discuss the research lead to the researcher being informed that the Industrial Society earned its money from selling communications to organizations and that the research project would compete with that.

The Industrial Participation Association is a non-profit-making organization concerned with the promotion of industrial participation. At a meeting in the summer of 1984 the researcher was variously told that the use of the repertory grid was a very good concept for this project ' and that ' financial information was the *bedrock of participation* ' and that ' the research idea was very good one, but (the contact) was not sure if companies would assist as they had to be sure they did not take in some one who stirred things up '. The Association was prepared to write to some of its members to see if they were interested in this project. Some two months after supplying the requested outline documentation the following was received. " This is just a note to let you know that the long silence does not mean that we will not be in touch again soon " (Industrial Participation Association correspondence 17 August 1984). Although a letter of acknowledgment and reply was sent, no further correspondence has been received.

Early in 1984 the Economic Development Unit of a Southern Local Authority was approached. After several intervening months and a lack of positive response, it was ascertained that although the Unit felt that it should be able to assist, it could not. The Unit did not consider that a field study would be of use in any company with which the Unit was associated. This was because, in these companies the trades unions were the recipients of financial information. The Unit was not in contact with companies with Enterprise Plans and freer financial information supply to its employees.

Again early in 1984 contact was made with a Southern Enterprise Board because, as one of its publications noted " there is encouragement for the application of new technology, especially where it can enhance skills and create jobs, and for new forms of industrial ownership and control, especially where this increases workforce participation ". Also, " normally investment is linked to an Enterprise Plan devised jointly by the management, the workforce and the Board's executives ". Furthermore Enterprise Planning " ..requires joint planning between employees and the management in all aspects of company development, in an effort to

improve levels of industrial democracy. Encouraging greater workforce participation is part of the Board's strategy for the creation of lasting jobs, by ensuring that everyone has an interest in the health and expansion of industry. " The Enterprise Plan "sets out the strategic framework for investment, covering policies on jobs, industrial relations, trade union recognition, equal opportunities and training, as well as the more usual content of business plans ".

Such an approach suggested that the provision of financial information would be ripe and ripe for evaluation. After outlining the research project to appropriate Board employees, it took seven further telephone calls and nine weeks to obtain an interview. One issue from the interviewers was that it was unclear to them why employees should, or even should not, understand the financial information provided. The research proposal was to be evaluated. Some three weeks and several telephone calls later the researcher was told that ' all felt that there were so many research requests at this stage and the Division had no definite view '. ' A lot of things we are doing need to be monitored and assessed, but at the same time we are worried about vulnerable organizations for research access '. ' In another five months we will try to arrive at a decision by recording what we have done so far '. The Enterprise Board were not prepared to help me find access to suitable interested companies.

Worker Co-operatives

It was found, from a previous study of a company converted into a worker co-operative, that amongst other things there was a general lack of financial information throughout the factory; little adequate budgetary control for most functions and the need for financial information to be more widely distributed, including weekly performance reports to foremen, stewards and the shop floor (Eccles,1981). Eccles noted that " performance depends on commitment and implementation, not on the formality of documents. People didn't know the facts; didn't know what to ask for; received little encouragement if they did; and hence were little better off after the effort. In contrast, the leaders believed that people went away dissatisfied because they heard things they didn't want to hear " (Eccles,1981). It appeared that worker co-operatives may be receptive to a field study.

In the autumn of 1984 two Southern Co-operative Development Agencies were contacted to ascertain if any of the co-operatives with which they worked would be prepared to contribute to a field study. Within days I was given, by each Agency, the names of several co-operatives who might be interested in a field study. The

name at the top of each list was chosen, the lists had been drawn up in order of the number of co-operators involved. Both Co-ops, one concerned with printing, the other with the media, were approached and both agreed to take part in a field study.

At the time of writing, it has proved impossible to complete the field work on the media co-op for inclusion in this thesis. The co-op consisted of six co-operators at the time of the first grid in February 1985. The co-op produced its own financial information but had decided to expand this, although it was considered that the existing information was not really understood or used. The 'new' information was to be provided after the first grid. It was agreed that after interviewing the members the researcher would meet with them further and discuss any problems relating to financial information, as well as discussing the possibility of training. The meeting was held, after the completion of the first grid, and the members decided upon some training, although the training was scheduled to take place at a vague future date. Several telephone conversations only revealed that the Co-op were 'too busy' for the training sessions. The second grid was to be completed in June 1985, four months after the new information system was due to be introduced. In June 1985 the researcher was informed that the new system had partly operated but the Co-op was introducing a computer and a concomitant set of monthly financial information would issue from this. After allowing for setting-up etc., it was agreed that the second grid would be taken in December 1985. The coop has been constantly 'too busy' with too much work to allow access. The number of the original members at the coop is now three.

The Three Participating Organizations

This project is unfunded. No funds were sought for its completion because it was considered that any funding might make the task of finding organizations more difficult. Accordingly organizations had the opportunity of free consultancy in any area relating to the project, assistance with training and reports about findings, or the equivalent use of the researcher's time. This offer was accepted in varying degrees. Below are details of the initial arrangements made with the three organizations studied in this thesis. In practice these arrangements varied, especially with respect to time.

A Southern Regional Health Authority

The researcher was given access to the six members of one of the Authority's main committees, the Capital Programme Committee. This Committee is responsible for the Authority's building programme and its members are the direct associates of the Authority's controlling Regional Team of Officers. The reason for

access to this committee was that the Regional Team of Officers considered that recent experiences revealed that some of the financial information available to the Committee had not been used or understood by the Committee. Accordingly some consideration was being given to both new forms of financial information and training. In exchange for access the researcher was required to prepare a report for the Authority, which would also be freely available to the eighteen people interviewed in compiling the report. The report was to deal with the purpose, data, planning process and information available to the Committee. The report could, and indeed did, make recommendations about information and training. The report was to be prepared after the first grid had been completed, and some three to four months later the second grid was to be completed after an intervention of information or training. The third grid was to be completed some three months after the second.

A Southern Retail Co-operative Society

It was arranged that the researcher would have access to twenty people at three of the Society's outlets, two Pricefighter Supermarkets and a Community Store. Those involved were managers, their assistants and section heads. The circumstances surrounding the study were that the Co-op had been facing a difficult period of trading performance. In order to alter the position some new senior management had been engaged. The researcher liaised with one of these. Prior to the field study the provision of financial information to these employees was almost non-existent, and it was the intention to provide particular financial information and training to those involved. In exchange for access the researcher was required to prepare a report about the problems the staff construed, the views of these staff about the information available, how far staff could explain the terms of the intended financial information and what other information they would like. The report was based upon the interviews. It was arranged that when the first grid was completed the 'new' financial information would be provided to employees and that after a period of two to three months the second grid would be completed. Some training would be provided and again two to three months later the third grid would be completed.

A Southern Printing Co-operative

The Co-op had been running for several years and, although the provision of the statutory financial information had been adequate, the monthly financial information was considered to be inadequate. The Co-op had decided upon the financial information which was to be made available each month. At the start of the study the issue of training was undecided by the Co-op, because of concern with

lost production. The Co-op accepted the researcher's consultancy to the person controlling the records and financial information. The Co-op would only agree to complete two grids, and accordingly it was agreed that some six months after the first grid and the provision of the 'new' financial information, the second grid would be completed.

The Results of the Organizational Studies

The more detailed arrangements for each study are contained at the beginning of each chapter containing a study. The results of each study are presented and analysed in those chapters.

Appendix II
An example of the initial interview schedule -
the schedule used with the Retail Co-op

1. Sex.
2. Name.
3. How long have you worked in the Co-op ? In your present position ?
4. What is your job title ?
5. What is your role? Who is your superior/subordinate ?
6. How do you see your role ? In terms of involvement, influence and participation.
7. Do you construe any problems here ?
8. Do you construe any problems with your role ?
9. What are your observations about the information available to you to do your job?
10. From whom do you receive information to do your job ?
Food Trades Officer, Manager, Assistant Manager.
11. How do you receive information ? Verbal, written, other.
12. Do you understand the basis of the preparation of the information provided to you ?
13. What types of information do you receive ?
14. Do you construe the information in financial and non-financial categories ?
Can you give me some idea of what you knowledge is please.
Are you familiar with these terms and could you explain them to me ?
a. personnel costs; b. actual sales; c. sales target; d. cost value;
e. retail value; f. gross profit; g. gross percentage; h. sales percentage;
i. profit percentage; j. product breakdown; k. leakage and surplus.
15. Is the information provided to you adequate with respect to:
a. amount of information, b. kind of information, c. its timeliness.
16. Is there other information which you think should be provided ?
a. Why ? b. Would you require explanations about this information in order to use it ? c. What use would you make of it ?
17. Is there any information which you do not fully understand ?
a. Which types ? b. What is it that is not understood ?
18. Is there any information which is currently provided and you do not use ? Why ?
19. Is there any information which is currently provided and about which you would like some explanations ? Why ?
20. Are there any other factors that you would like to mention about these issues ?

Appendix III

An example of a set of three completed grids for one individual in the Regional Health Authority, together with the output of the INGRID 72 Program, and the attendant analysis

The subject, TK, is a senior member of the R.H.A. Treasury staff who is used to preparing financial information and using it in the context of the Capital Programme Committee, as well as in his membership of the Strategic Planning Group. He has been the Senior Assistant Treasurer for planning and resource allocation for one year before the study commenced. In the circumstances of the study it is anticipated that this subject will have a relatively constant understanding of financial information, though its meaning may alter. This is to say that the subject's constructs are expected to remain similar throughout the study but the salience of particular financial information elements could well vary.

Grid analysis

The following analysis is directly from the three completed grids, the output of the INGRID program and the plots of the constructs and elements.

The loadings and the sense of the first three components

<u>Loading</u>	<u>The constructs</u>
<u>First component</u>	
0.8250	Professional judgement required to interpret service planning information
0.7476	Regional Strategy involves DHAs.
0.7163	Strategic Planning Group decides capital strategy, CPC implements it
<u>Second component</u>	
0.6984	No major capital projects are approved unless an appraisal is undertaken.
0.6765	My job is essentially concerned with the use of resources and control of money.
<u>Third component</u>	
0.7845	Service planning decisions ultimately influence the clients.
0.7771	Ultimately decisions made by RTO will influence the quality of care of patients.
0.7662	My immediate boss.

<u>Grid 1</u>	<u>Variance</u>
<u>Component</u>	<u>of component</u>
First Professional judgement required to interpret service planning information.	28.54%
Second Reporting and the appraisal of projects aids control of capital resources.	21.49%
Third My immediate boss has power to affect patient care.	<u>14.42%</u>
Total	<u>64.52%</u>

Clearly there are constructs concerned with financial management of sufficient salience to the individual to occur in the sense of the first two components. The variance of the first and even the first three components is not as high as that found in the work of others.

The constructs

There are ten financial constructs on this grid; seven descriptive-propositional and three functional-pre-emptive. The plot of the constructs in the element space shows that, with one exception, all constructs are positive in relation to the emergent horizontal pole. There is a cluster of four constructs towards this pole which are concerned with the use and reporting of resources. Similar constructs will be closer together than dis-similar constructs. A little apart from these is a construct "approval of capital projects after appraisal" and "immediate boss concerned with revenue budgets". Moving on towards the negative vertical pole is the construct "I have power over". A little away from this is "own professional judgement", so that the individual's exercise of power is related to professional judgement. On the other side of this last construct and towards the centre of the sphere are constructs concerned with influence, interpretation and capital strategy. Again professional judgement is related to these issues. The construct dealing with District Health Authorities is a way from these, whilst towards the positive vertical pole are two constructs concerned with patient care.

The elements

The plot of the elements in the construct space shows that the information elements are spread through three of the quadrants which suggests that these elements have quite widespread meanings. The elements generally form the shape of an arrow with its tip pointing towards the horizontal pole with the sense of the first component. At the tip are three elements "service planning information"; "investment appraisal" and "regional strategy". The elements on one side of the arrow, moving from the tip, are "strategic planning group"; "care of patients"; "revenue budgets"; "immediate boss" and "quarterly progress reports"

On the other side of the arrow, and towards the positive vertical pole of the second component, are the elements "district health authorities"; "regional team of officers"; "capital programme committee"; "myself"; "capital budgets" and "cash limits". The elements appear to be in a quite sensible relationship with each other, even the extreme position of "quarterly progress reports" probably indicates the lack of meaningful information in these reports at this time.

Post-grid comments

The individual had none to offer.

The loadings and the sense of the first three components

	<u>Loading</u>	<u>The constructs</u>	
<u>First component</u>			
	0.8724	Professional judgement is necessary in the interpretation and use of service planning information	
	0.8365	Investment appraisals are concerned with qualitative aspects as well as quantitative.	
<u>Second component</u>			
	0.7951	Cash limits are monitored and controlled by quarterly progress reports	
	0.7435	CPC is responsible for the control of the capital programme.	
<u>Third component</u>			
	0.6806	Finance dept is largely responsible for formulating revenue budgets	
	0.6452	Revenue budgets.	
	0.4411	Major area of the work I am concerned with.	

Grid 2

<u>Component</u>		<u>Variance of component</u>
First	Information requires interpretation before decisions made.	32.88%
Second	Quarterly progress report aids control of capital resources.	20.49%
Third	Revenue budgets formulated by finance department.	11.77%
	Total	65.14%

The senses of the first two components are similar to those of the first grid, so that the main ways of thinking by the individual are similar, whilst the third component is different. The increase in the variance of the first component is indicative of a broadening of the construct system, although over the first three components there is little change.

The constructs

There are ten financial constructs on this grid; one structural; four descriptive-propositional and five functional-pre-emptive. The descriptive-propositional constructs have decreased and the functional-pre-emptive ones increased. The constructs are now generally more towards the centre of the plot with four constructs on the negative side of the horizontal. Although the positions have altered the main themes of the constructs are similar to the first grid, namely, the capital programme and its monitoring; the interpretation of information and the influence of the individual, and the regional strategy and its links with the D.H.As.

Whilst power has moved towards the centre and is closer to influence, the provision of care is not construed using the word 'care', but "qualitative aspects of investment appraisal". The issue of care would now appear to be more remote and

removed from the individual's construing, even to the extent of using a more abstract and mechanistic term for care. Although professional judgement does not occur as a construct, the individual's work is shown by constructs concerned with service planning and revenue budgets.

The elements

The information elements are in the same three quadrants as the first grid, and the pattern of relationships amongst the elements is broadly similar. The most notable changes are that "my immediate boss" is in the centre of the plot, suggesting that there is little of relevance in this element for the individual. Still towards the sense of the first component and in close proximity are the elements "service planning information" and "investment appraisal", and these are more closely associated with "strategic planning group", "district health authorities" and "professional judgement". There now appears to be a larger number of elements comprising the area of planning services.

In the quadrant opposite to the planning services are "cash limits" and "capital budgets". This situation may indicate an opposition to planning or a consequence of planning. The element "revenue budgets" is away from these two elements but in opposition to the sense of the first component, as is "quarterly progress reports" which is almost on the first axis and at the negative extreme. The position of these information elements is in opposition to the sense of the first component "information requires interpretation before decisions made" so that the inference is that these elements do not contribute in a positive way to interpretation.

The elements "quality of care" and "doctors and nurses in the districts" are away from the other elements and perhaps considered as the result of the planning process and clearly not a part of it.

Post-grid comments

The subject mentioned that at times he found it difficult to construe differences between some of the three elements presented. He gave as an example "that <myself> and the <quality of care of patients> are linked, but a long way down the line". This comment would appear to go some way to substantiate some of the analysis above.

The subject considered that the Capital Programme Committee now received more detail about financial information; was presented with the options available to it, so that the full implications were considered, that is the revenue implications of the capital investment. He considered that there was a lot more discussion of the

information at the Committee, and more questions about the information and the proposals as people were aware of the limits on expenditure.

The loadings and the sense of the first three components
Loading The constructs

<u>First component</u>	
0.7756	No schemes accepted into programme without investment appraisal.
0.7547	Investment appraisal must consider non-financial benefits.
0.7502	Work of SPG has considerable influence on DHAs.
0.7468	CPC and SPG inextricably linked as Regional strategy is corporate objective.
0.7468	Investment appraisal determines money allocated for scheme.
<u>Second component</u>	
0.6675	QPR are the reporting mechanism for capital budgets.
0.6158	Cash limits.
<u>Third component</u>	
0.8175	A prime function of the Regional Treasurer is to ensure that cash limits are adhered to
0.5125	The work produced by SPG has considerable influence on DSAs.

<u>Grid 3</u>		<u>Variance</u>
<u>Component</u>		<u>of component</u>
First	Service planning needs investment appraisal and professional judgement to interpret information.	34.49%
Second	Quarterly progress report information aids control of capital resources.	16.18%
Third	Treasurers must see that cash limits are adhered to	14.40%
	Total	65.07%

Although the senses of the first two components are similar to those of the first two grids, the constructs are more complex in their content. In addition to this the sense of the third component is also clearly in the realm of financial management. From these indications of an increase in the complexity of the financial constructs it could reasonably be expected that there has been a narrowing of understanding in construing. In fact the variance of the first component has increased for the second time, indicative of the construct system broadening, whilst the variance of the first three components is again almost unchanged.

The constructs

There are six descriptive-propositional and seven functional-pre-emptive financial constructs on this grid. Over the course of the study the descriptive-propositional constructs have remained at about the same number but the functional-pre-emptive constructs have increased. The constructs are more complex than those on the previous two grids. The plot of the constructs provides a pattern which is different to those of the first two grids, and is indicative of some changes occurring in the construing of the individual. The constructs have moved from the

position on the second grid where they are mostly clustered around the centre of the plot, to being separated towards the extremes of the horizontal poles. Towards the positive horizontal pole are constructs concerned with regional planning and capital planning, both of which are affected by the close-by constructs concerned with cash limits and services. Towards the negative horizontal is the subject's role in service planning and issues of influence and power, which are close to constructs concerned with qualitative judgements in appraisal, that is patient care. Towards the positive vertical pole are constructs concerned with monitoring positions.

The elements

The plot of the elements reveals a shape similar to that of the first grid, but the elements appear in four areas of the plot. It is interesting to note that now the tip of the arrow is headed by the element "myself", so that the individual construes himself quite definitely in and amongst the other elements, as opposed to being on the periphery in the two previous grids, and more clearly associated with the sense of the horizontal component, service planning. Immediately on one side of "myself" are the elements "service planning information", "investment appraisal" and "professional judgement", and on the other, "the regional strategy", "the strategic planning group", "the District Health Authorities". These appear to be the subject's ingredients for service planning and form one area.

At the opposite pole with second area are the elements "quarterly progress reports" and "doctors & nurses". These could be considered to be the product of the planning process. Between these poles and lying along the vertical is a third area. Three elements "Regional Team of Officers", "Capital Programme Committee" and "quality of care of patients" are quite close to the centre of the plot, and indicate that these do not enter into the individual's construing in this respect, whilst a fourth "immediate boss" is further away. Finally three elements "cash limits", "capital budgets" and "revenue budgets" are towards the sense of the vertical pole "Quarterly progress report information aids control of capital resources". On this last grid the "revenue budgets" are associated with the two other elements for the first time presumably indicating more integration of these three information elements.

Post-grid comments

The subject observed that his associations were different to the way in which the elements were normally associated at Regional level. He provided as an example that patients were not seen in the Regional office, so that the quality of care was a very different thing to capital and revenue budgets and cash limits.

He observed that the financial reporting had improved with exception reports; that investment appraisal had improved and the regional schemes were now conducted through the Regional Treasurer's department as well as checking those prepared by the District Health Authorities. The financial information was of a better quality than at the start, so that the Committee could "separate the wheat from the chaff".

The subject considered that the Committee was much the same as at the start of the study, although there was some uncertainty about its future. As a member of the Strategic Planning Group he knew that the Regional Strategy was in draft form and should be available to the Committee.

The construct "I have power over"

The individual had an increased amount of information available over the study, but the elements ticked on the supplied construct "I have power over" are the same on the first and third grids. These are "myself", "service planning information", "investment appraisal" and "professional judgement", and on the second grid "investment appraisal", "professional judgement" and "Regional Strategy". Apart from power over himself the individual has power over inanimate elements of information. On the plot of the elements on the third grid these four elements form one part of the tip of the arrow shape and is indicative of where the individual exercises power in decision-making.

The construct "As I influence"

On the first grid there are 9 elements ticked, and these same 9 are included in the second and third grids where there are 10 elements. This core of 9 elements are "immediate boss"; "Capital Programme Committee"; "Strategic Planning Group"; "Regional Team of Officers"; "service planning information"; "investment appraisal"; "District Health Authorities"; "Regional Strategy" and "professional judgement". The tenth element on the second grid is "cash limits", but on the third grid is "revenue budgets". It appears that the subject influences people and groups, rather than inanimate elements. On the plot these elements are around "myself", with the exception of "immediate boss" and "Regional Team of Officers".

The construct "As I would like to influence"

This construct has a similar stability over the three grids. The same elements were ticked as the construct "As I influence", but also on each grid "the quality of patient care". When this is viewed in the context of the comments from the third post-grid session, it would appear that this consistent desire to influence

patient care would be a way of dealing with the schism between care and funding which appears to exist for this individual.

The number of elements construed

There is an increase in the total number of elements ticked on each grid, increasing successively from 128 through 138 to 145. This is indicative of a broader understanding of the grid elements. The information elements also show a similar consistent increase, though there are variations in their movement. Those with increases in use are "capital budgets", "revenue budgets", "service planning information" and "investment appraisal". The only element which occurs with the same frequency is "cash limits", and perhaps indicates the constancy of a constraint. The frequency of "the quarterly progress report" occurs once on the last grid and would seem to indicate the lack of relevance of this document.

Conclusions

The individual has understanding of the financial information elements presented in the grid, since there are financial constructs on all three grids. Over the course of the study the number of financial constructs increases from 10 to 13. The number of descriptive-propositional constructs has decreased from seven to six, whilst the functional-pre-emptive constructs have increased from three to seven. This suggests that the descriptive-propositional constructs are fairly constant in his construing, but the increase in the functional-pre-emptive constructs has increased his repertoire of constructs available for financial decision-making.

At the same time these constructs become increasingly more complex which suggests a deepening of the understanding of financial information, however, the increases in both the variance of the first principal component and the number of elements construed on the grids suggests a broadening of understanding. In fact there is no definitive way of knowing which of these movements is correct. Perhaps the complexity of the constructs is the indication of the broadening of understanding rather than deepening. The constructs appear to have changed in relation to service planning.

The supplied constructs appear to show that there is a clear difference between power, actual influence and desired influence. Although there is less difference between the influence constructs desired influence contains the most elements and power the least. Power appears to be construed over information elements and the individual, whilst influence is upon people or groups of people.

The changes in the constructs and understanding have been accompanied by some changes in the meaning of the elements. The individual is more prominent and

central to a number of the elements, and would seem to more clearly bind them together towards service planning. The information elements "capital budgets", "revenue budgets" and "cash limits" are more integrated on the third grid than on previous grids. On all three grids there is the consistent notion that "quarterly progress reports" and "doctors & nurses in the districts" are not part of this individual's construing of these elements, whilst some other elements are almost indifferent to the individual's construing.

The occurrence of elements on each grid

<u>The elements</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>
<u>As I influence.</u>																
First grid			S	S	S	S				S		S	S		S	S
Second grid			S	S	S	S		S		S		S	S		S	S
Third grid			S	S	S	S		S		S		S	S		S	S
<u>As I would like to influence</u>																
First grid			S	S	S	S		S		S	S	S	S		S	S
Second grid			S	S	S	S		S		S	S	S	S		S	S
Third grid			S	S	S	S		S		S	S	S	S		S	S
<u>I have power over</u>																
First grid		S								S		S				S
Second grid												S			S	S
Third grid		S										S	S			S
<u>Number of information elements</u>																
First grid							7	4	9	3	9		9			9
Second grid							8	4	9	4	9		10			14
Third grid							8	6	9	1	12		12			13

IK First Grid

1	and control of money My job is essentially concerned with the use of resources	F	service planning information
2	The regional strategy involves DHAs		Doctors and Nurses in Districts
3	Proposals for capital investment must be approved	D	quarterly Progress reports
4	Professional judgement is required to interpret service planning information	F	cash limits
5	SPG decides capital strategy, CPC implements it	D	Doctors and Nurses in Districts
6	As I influence		Quality and care of patients
7	As I would like to influence		Quarterly Progress reports
8	^{the district} Service planning decisions ultimately influence progress	D	Investment appraisal of projects
9	The QPR is the means by which CPC reports progress	D	Regional strategies
10	Professional judgement is an inherent part of my job		Quality and care of patients
11	My immediate boss is concerned with the control of Resource Budgets	D	Doctors and Nurses in Districts
12	SPG produce strategy to consult with DHAs		QPR
13	^{the quality of care of patients} Ultimately decisions made by CEO will influence		QPR
14	No major capital projects are approved unless specialist is undertaken	D	SPG
15	QPR reports progress of schemes & spending	D	Quality of care of patients
16	cash limits for DHAs CPC either approves or recommends for approval	F	Regional strategies
17	I have power over		My immediate boss

1	Major area of the work I am concerned with	F	service planning information
2	The regional strategy determines the direction in which DHAs plan		Quarterly Progress reports
3	Major capital investment must be approved before inclusion within the programme	D	Quarterly Progress reports
4	Professional judgement is necessary in the interpretation & use of service planning information	F	Cash limits
5	The two groups must interrelate if planning is to be effective		Revenue budgets
6	As I influence		Quarterly progress reports
7	As I would like to influence.		Quarterly progress reports
8	Ultimately service planning information should influence revenue budgets	D	Quarterly progress reports
9	GPRs are the means by which capital budgets are monitored	D	Doctors & nurses in the districts
10	Major area of my work	F	Doctors & nurses in the districts
11	Finance dept. is largely responsible for formulating revenue budgets	S	The quality of care of patients
12	The SPC influence DHAs via the regional strategy		Quarterly progress reports
13	Investment appraisals are concerned with qualitative aspects as well as quantitative	D	Quarterly progress reports
14	As 3 above	D	Quarterly progress reports
15	Capital limits are monitored and controlled by GPR.	F	Strategic planning group
16	Finance dept. is responsible for the control of capital programme.	F	Doctors & nurses in the districts
17	I have power over		my immediate boss

1	Cash limits are the constraint within which we work.	F	Doctors & nurses in districts
2	The Regional Strategy is the framework within which DfTs must plan their services	D	Quarterly Progress reports
3	No schemes are accepted into the capital program without an investment appraisal	D	Doctors & nurses in districts
4	Service planning also involves qualitative judgement as well as quantitative	D	Capital budgets.
5	The two groups are inextricably linked as the Regional Strategy is the corporate objective	F	Doctors & nurses in districts
6	As I influence		The quality of patient care.
7	As I would like to influence.		Quarterly progress reports.
8	The quality of information is vital in the planning of services	D	Cash limits
9	QPR are the reporting mechanism for capital budgets	D	Service planning information
10	My prime job is very involved with the Regional Strategy	F	Capital Programme - Committee
11	Ultimately service planning information must influence revenue budgets	F	Doctors & nurses in districts.
12	The work produced by the SFB has considerable influence on DfTs		Quarterly progress reports
13	Investment appraisal must consider non-financial benefits	D	Quarterly progress reports
14	Investment appraisal will determine whether money is allocated for a scheme	F	My immediate boss
15	A prime function of the Regional Treasurer is to ensure that cash limits are adhered to	F	Doctors & nurses in districts
16	The CPC is similar to the SFB in the quality of information its requires	F	Doctors & nurses in districts
17	I have power over		

TK. Output Used from INGRID 72 with the Third Grid

THE COMPONENT-SPACE IS LIMITED TO 15 DIMENSIONS

COMPONENT	ROOT	AS PER CENT
1	5.5179	34.49
2	2.5882	16.18
3	2.3042	14.40
4	1.4820	9.26
5	0.9899	6.18
6	0.9184	5.74
7	0.8084	5.05
8	0.4528	2.83
9	0.3377	2.11
10	0.2321	1.45
11	0.1856	1.16
12	0.0977	0.61
13	0.0620	0.39
14	0.0181	0.11
15	0.0059	0.04

COMPONENT 1

ELEMENT	VECTOR	LOADING	RESIDUAL
1	-0.2673	-0.6279	0.4306
2	0.1285	0.3020	1.2783
3	0.0763	0.1792	0.3019
4	-0.2369	-0.5565	0.2501
5	-0.0607	-0.1425	1.0137
6	0.1334	0.3134	0.8766
7	0.1734	0.4074	0.5578
8	0.0854	0.2006	1.0028
9	0.5591	1.3133	0.2210
10	-0.2551	-0.5992	0.3674
11	0.0323	0.0759	0.7540
12	-0.1997	-0.4692	0.6048
13	-0.2141	-0.5028	0.5827
14	0.4734	1.1237	0.4648
15	-0.2628	-0.6172	0.2106
16	-0.1702	-0.3999	0.7650

CONSTRUCT			
1	-0.1678	-0.3943	0.8445
2	-0.1982	-0.4656	0.7832
3	-0.3302	-0.7756	0.3985
4	-0.3054	-0.7174	0.4854
5	-0.3179	-0.7468	0.4423
6	-0.2245	-0.5274	0.7219
7	-0.2359	-0.5542	0.6928
8	0.1155	0.2714	0.9264
9	-0.2912	-0.6840	0.5322
10	-0.2363	-0.5550	0.6919
11	-0.3194	-0.7502	0.4371
12	-0.3213	-0.7567	0.4335
13	-0.3179	-0.7406	0.4423
14	-0.0169	-0.0351	0.9988
15	-0.1205	-0.2831	0.9198
16	-0.2193	-0.5152	0.7346

POLAR CO-ORDINATES

CONSTRUCT	H	V	R
1	123.17	-14.92	0.75
2	145.01	-31.83	0.67
3	173.99	6.06	0.78
4	-168.70	17.37	0.77
5	148.05	-20.12	0.94
6	-139.84	16.86	0.59
7	-131.99	24.10	0.91
8	67.88	33.25	0.86
9	-162.31	32.75	0.85
10	135.32	11.19	0.80
11	-173.47	34.17	0.91
12	-157.29	-22.86	0.89
13	148.05	-20.12	0.94
14	96.22	68.37	0.83
15	-139.24	-45.49	0.53
16	-160.83	-19.40	0.70

PROJECTIONS FOR ELEMENTS

ELEMENT	H	V	R
1	-168.70	-19.27	0.75

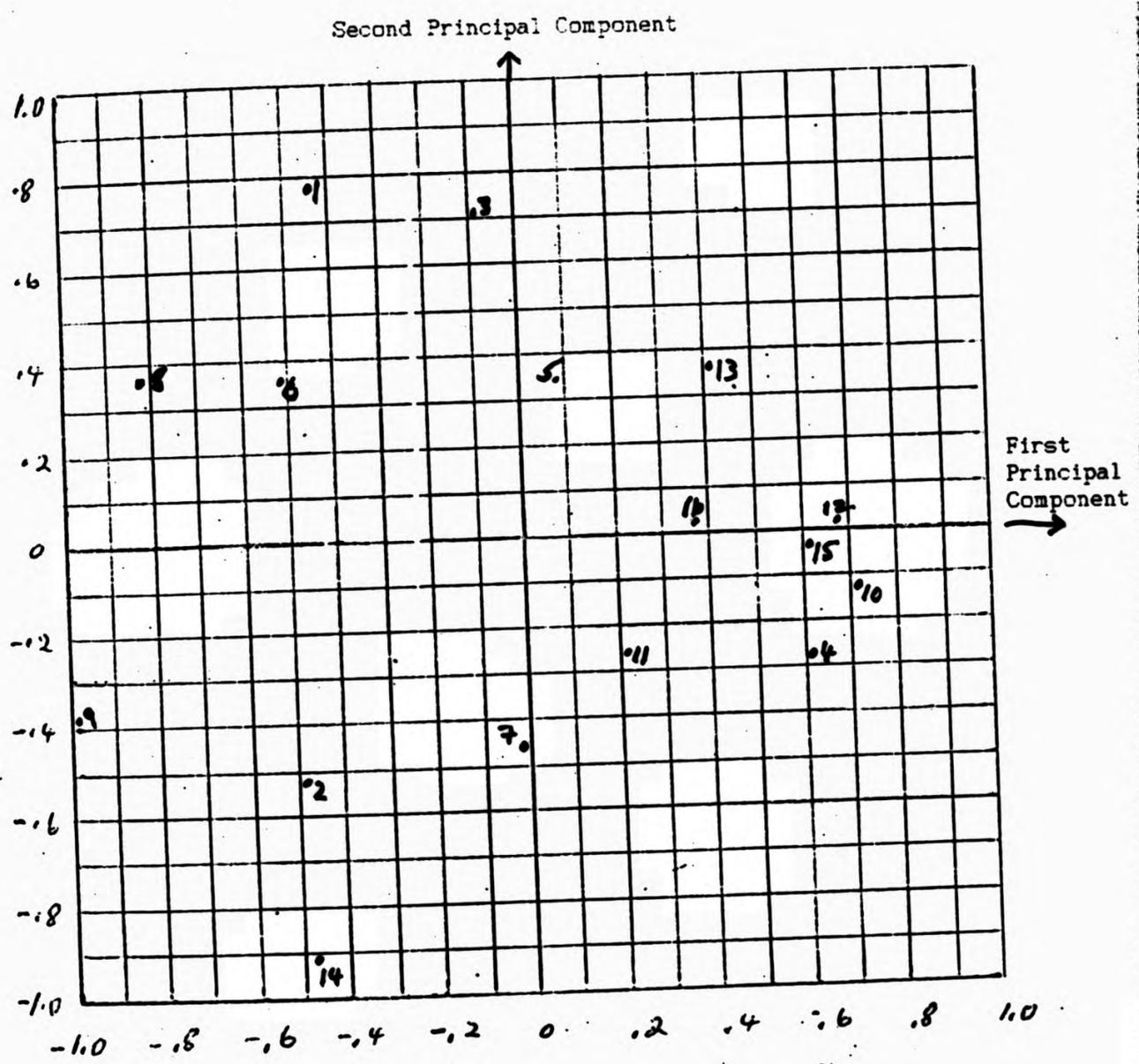
COMPONENT 2			COMPONENT 3		
VECTOR	LOADING	RESIDUAL	VECTOR	LOADING	RESIDUAL
-0.0780	-0.1254	0.4149	-0.1475	-0.2239	0.3647
-0.3186	-0.5126	1.0155	0.3662	0.5559	0.7065
-0.0339	-0.0545	0.7989	-0.3951	-0.5998	0.4332
0.0244	0.0392	0.2486	0.0324	0.0492	0.2462
0.1076	0.1732	0.9837	0.5533	0.8399	0.2782
0.4314	0.6941	0.3949	-0.2543	-0.3861	0.2458

0.2810	0.4521	0.6534	-0.2656	-0.4047	0.4896
0.5337	0.8585	0.2657	0.1485	0.2254	0.2149
-0.0705	-0.1134	0.2091	0.0806	0.1223	0.1932
-0.1856	-0.2986	0.2783	0.0155	0.0235	0.2777
-0.1037	-0.1669	0.7262	-0.2137	-0.3244	0.6209
-0.1984	-0.3192	0.5029	-0.1936	-0.2938	0.4165
0.2353	0.3786	0.4394	0.3478	0.5280	0.1606
-0.3379	-0.5436	0.1692	0.0567	0.0861	0.1618
-0.0231	-0.0372	0.2032	-0.0507	-0.0770	0.2033
-0.2637	-0.4242	0.5850	-0.0795	-0.1206	0.5705

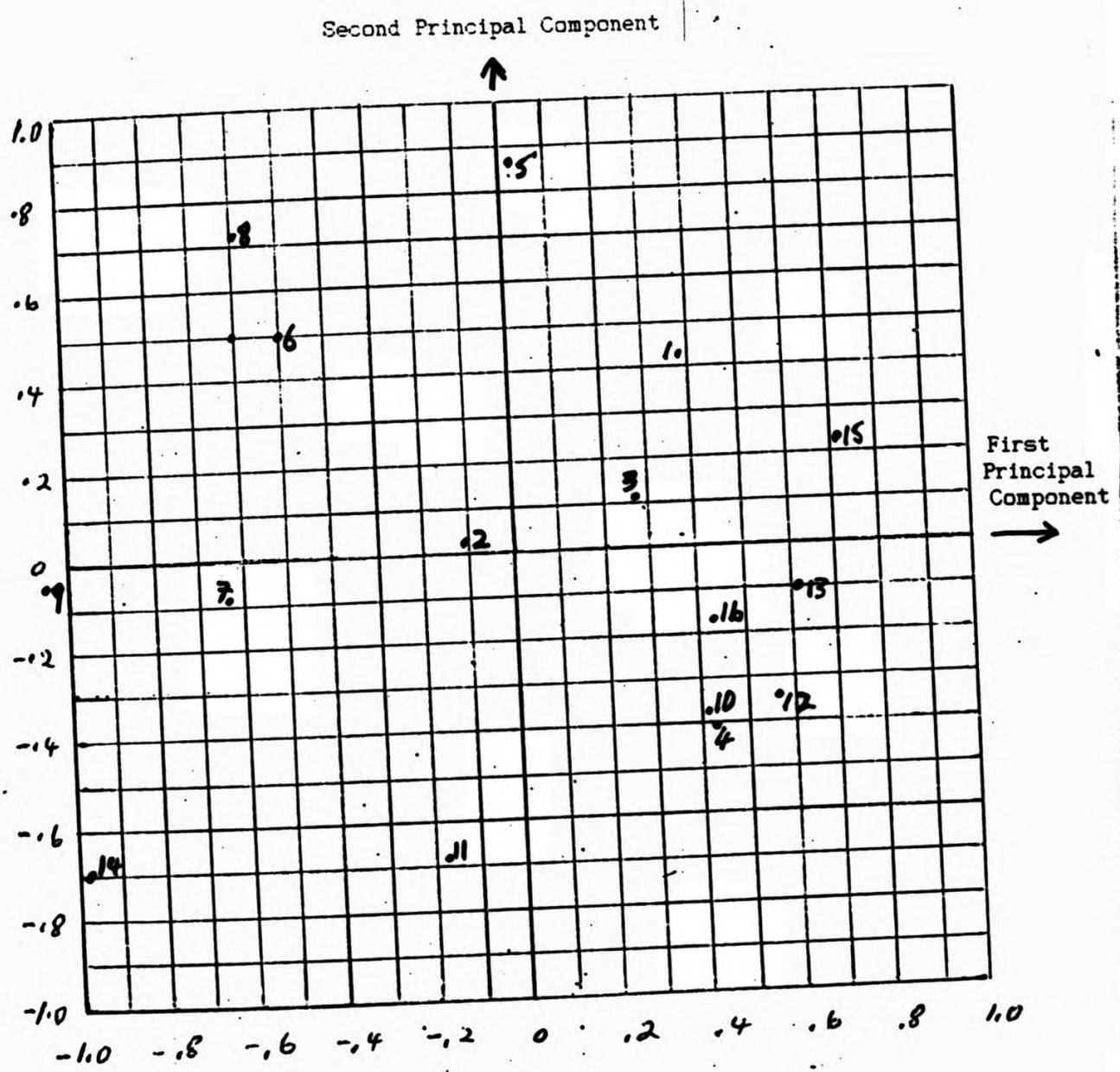
0.3749	0.5031	0.4808	-0.1265	-0.1920	0.4439
0.2026	0.3259	0.6770	-0.2324	-0.3528	0.5525
0.0507	0.0816	0.3918	0.0546	0.0828	0.3850
-0.0891	-0.1434	0.4648	0.1507	0.2288	0.4125
0.2895	0.4657	0.2254	-0.2124	-0.3225	0.1214
-0.1204	-0.1936	0.6844	0.1122	0.1703	0.6554
-0.3828	-0.6158	0.3136	0.2441	0.3705	0.1763
0.4149	0.6675	0.4808	-0.3112	0.4724	0.2576
-0.1356	-0.2182	0.4845	0.3042	0.4617	0.2713
0.3412	0.5490	0.3906	0.1017	0.1544	0.3667
-0.0534	-0.0859	0.4297	0.3376	0.5125	0.1671
-0.1963	-0.3158	0.3307	-0.2272	-0.3449	0.2118
0.2895	0.4657	0.2254	-0.2124	-0.3225	0.1214
0.2003	0.3222	0.8950	-0.5385	0.8175	0.2267
-0.1517	-0.2440	0.8603	-0.2505	-0.3802	0.7157
-0.2604	-0.4190	0.5590	-0.1541	-0.2338	0.5043

TK. Output Used from INGRID 72 with the Third Grid

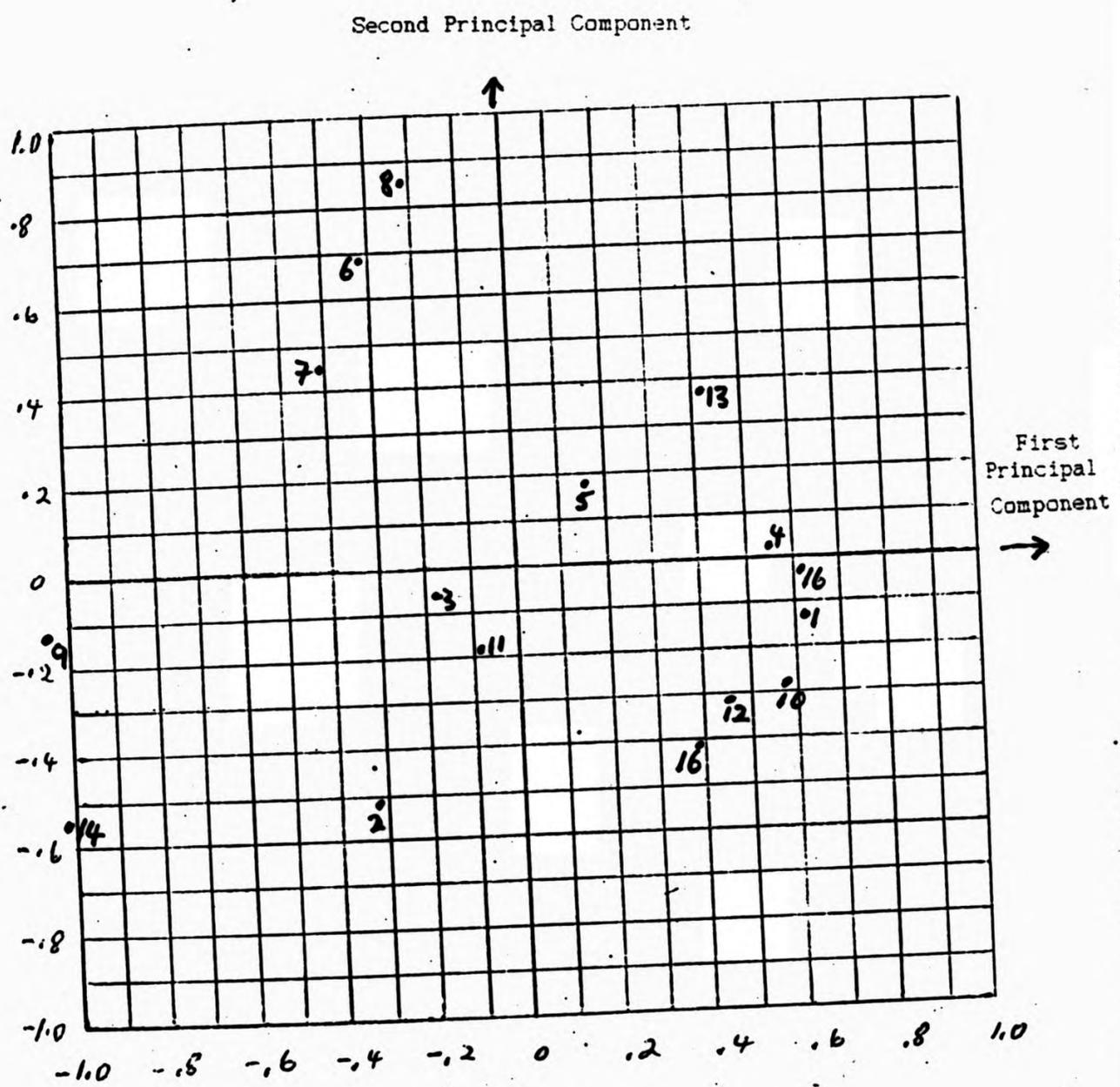
IK. The Plot of the Elements in the Construct Space - First Grid



IX. The Plot of the Elements in the Construct Space - Second Grid

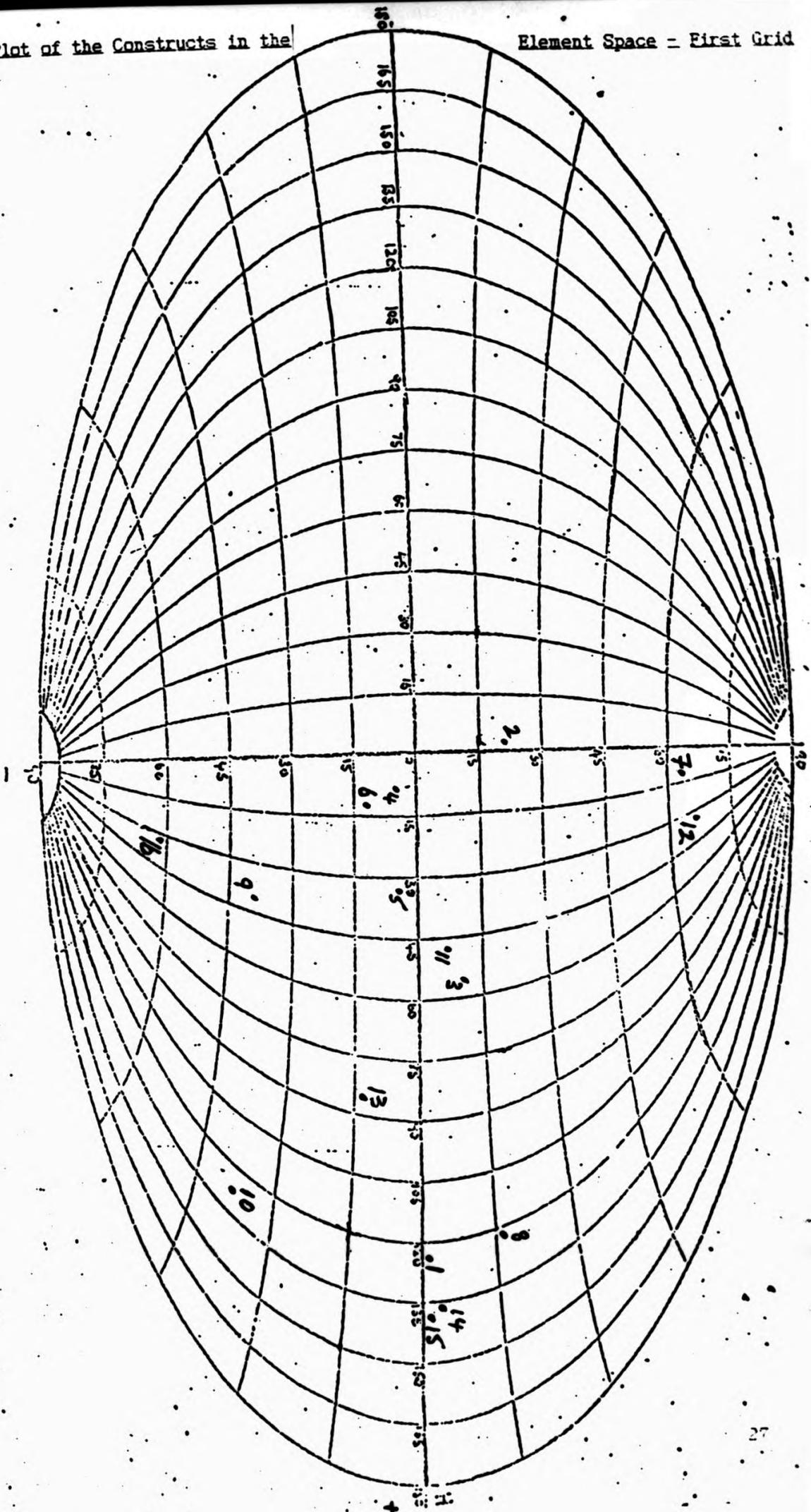


IK. The Plot of the Elements in the Construct Space - Third Grid



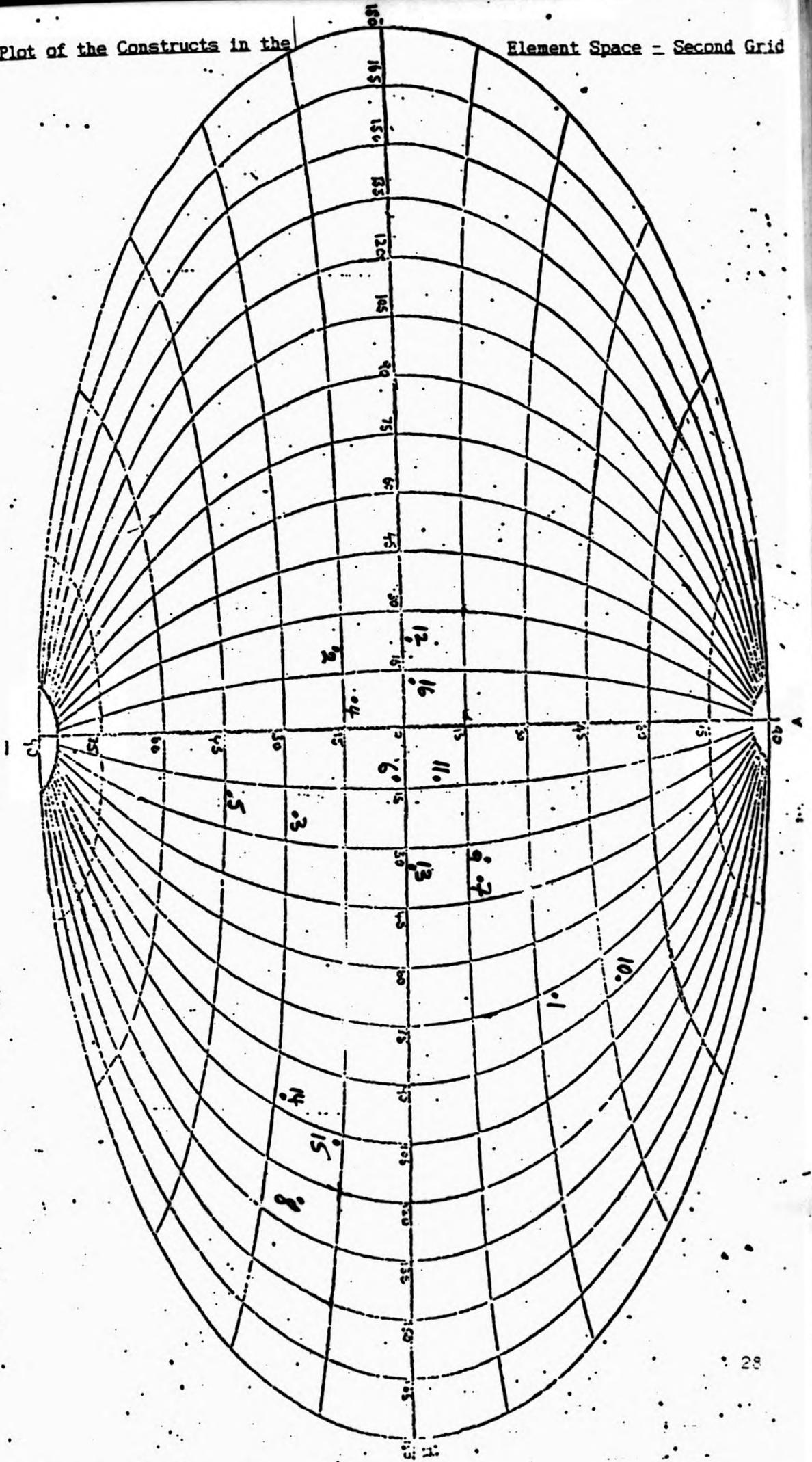
TK. Plot of the Constructs in the

Element Space - First Grid



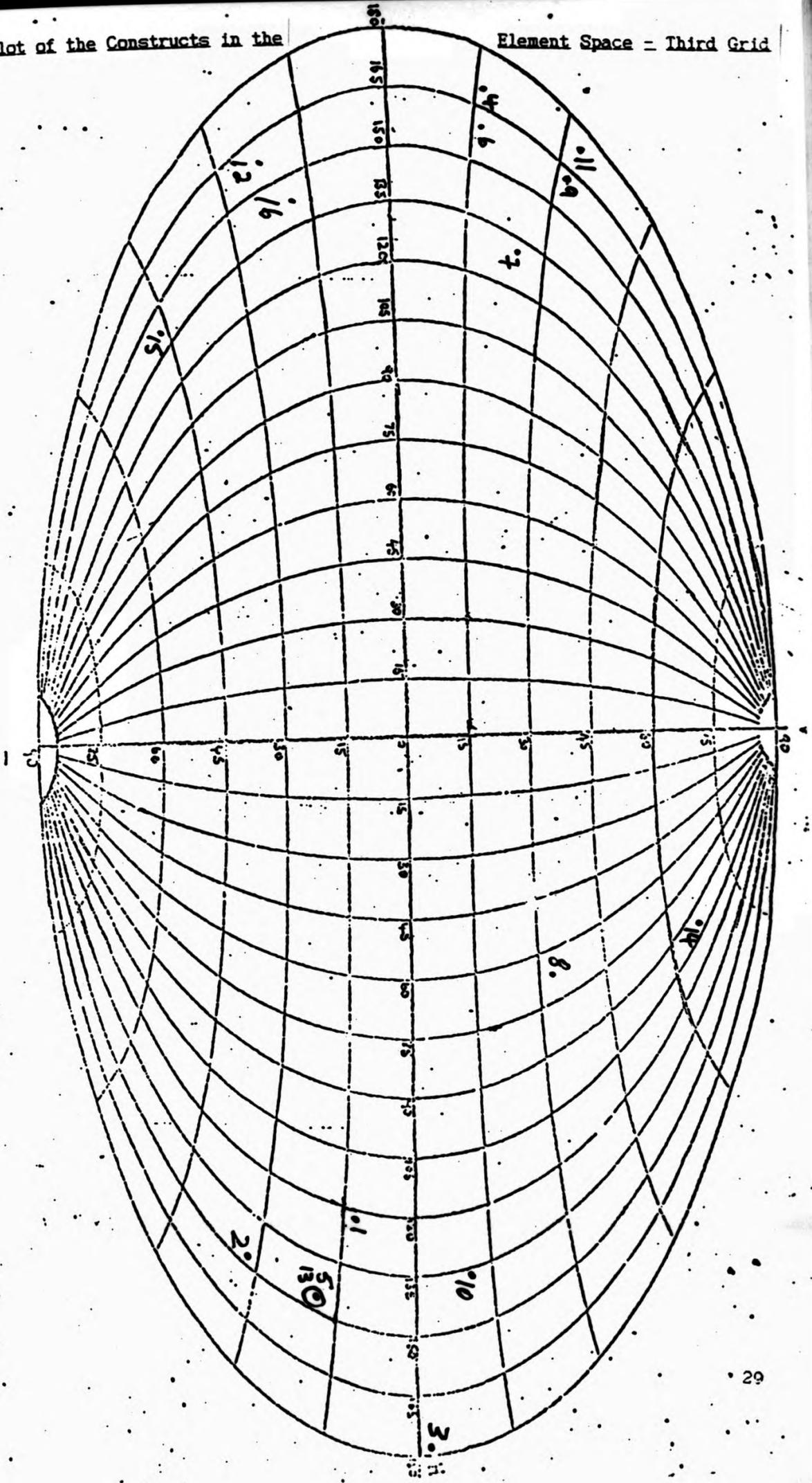
TK. Plot of the Constructs in the

Element Space - Second Grid



TK. Plot of the Constructs in the

Element Space = Third Grid



Appendix IV
The senses of the first three principal components of the participants
from the Regional Health Authority

<u>Irregular User Group</u>	<u>Second grid</u>	<u>Third grid</u>
<u>First grid</u>		
<u>First component</u>		
CU No cash-no service.	To provide patient care requires money.	Work within cash available.
CR Information.	People.	Not data.
TH Administration.	Administration.	I have power over projects
<u>Second component</u>		
CU Strategy evolves from R.T.O.	Information required for decision-making.	Building programme has to be within Regional Strategy.
CR Authority not required.	No quality judgement.	Not quality judgement.
TH Private beds.	Management.	Estimating.
<u>Third component</u>		
CU Information needs knowledge to use.	Information requires interpretation.	Influence & professional judgement.
CR Previously determined.	Waste.	No constraints.
TH Monitoring.	Regional care.	Hospitals.
<u>Regular User Group</u>		
<u>First component</u>		
KA Not financial information.	Sets of quantitative data. Not imposing cash limits.	
SP Planning expenditure on health.	Uncontrolled costs.	Uncontrolled development.
TK Professional judgement required to interpret service planning information.	Information requires interpretation before decision made.	Service planning needs investment appraisal and professional judgement to interpret information.
<u>Second component</u>		
KA I do not have power.	Lack of management.	Inability to influence.
SP The lack of planning for capital expenditure.	Unrelated development-unplanned service.	I impartially decide for cost control.
TK Reporting & the appraisal of projects aids control of capital resources.	Quarterly progress report aids control of capital resources.	Quarterly progress report information aids control of capital resources.

First grid	Second grid	Third grid
Third component		
KA As I influence.	No decision-making.	R.T.O. responsible for strategy preparation.
SP As I influence.	R.T.O. has more power than C.P.C.	Not meeting patients' needs.
TK My immediate boss has power to affect patient care.	Revenue budgets formulated by finance department.	Treasurers must see that cash limits adhered to.

Appendix V

An example of a set of three completed grids for one individual in the Retail Co-operative, together with the output of the INGRID 72 Program, and the attendant analysis

The subject, CU is the branch manager of a Community Store. He had been a branch manager for 9 months although he had worked for the Co-op for 20 years. His job, as he saw it at the start of the study, was to control the whole shop, staff, money and leakages, and to get the highest turnover with good profits for the Co-op, whilst looking after the staff.

He observed that since he had become manager of this branch he had tidied up the shop, and although there was a lot of stealing, he had increased turnover by over £3,000 per week.

At the start of the study he considered that information was mostly a matter of commonsense from the weekly newsletter. He was able to explain the terms sales, sales target, cost and retail values. He wanted to know more about personnel costs and the figures for the other shops, but otherwise considered that the financial information he had was adequate in both amount and kind, although information about special offers, promotions, was often late.

It was anticipated before the analysis that the individual would have little understanding of financial information and therefore limited meaning. It was anticipated that if there was limited meaning this could be shown by the bunching together of the financial information elements. If the training had been successful then this bunching would tend to disperse.

Grid analysis

The following analysis is directly from the three completed grids, the output of the INGRID program and the plots of the constructs and elements.

The loadings and the sense of the first three components on the first grid

<u>Loading</u>	<u>The constructs</u>
<u>First component</u>	
0.9477	I have power over.
0.8937	As I influence.
0.8636	To turn in a good stock leakage.
<u>Second component</u>	
0.8411	All down to Head Office.
0.6252	Work well together.
<u>Third component</u>	
0.8069	All down to Newport Pagnell.
0.5658	To have the goods in the right place at the right time.

<u>Grid 1</u> <u>Component</u>		<u>Variance</u> <u>of component</u>
First	I have power and influence.	33.25%
Second	Head office responsibility.	12.91%
Third	Distribution centre.	<u>12.06%</u>
	Total	<u>58.22%</u>

There are no financial management terms in the sense of the first three components, which indicates that he is not thinking in terms of financial management. The variance of the first and first three components is smaller than anticipated.

The constructs

This grid contains three functional-pre-emptive financial constructs. The subject's written constructs were quite short. Many of the constructs are concerned with the employees working together and these are located towards the centre of the plot of the constructs on the elements space, and are adjacent to constructs concerned with "manager", "my job", "As I influence", "I have power over" and "manager and staff".

He construes that "to run the store the best I can" is associated with the construct "to make money for store". Opposite to these constructs are the problems with the stock, the distribution centre does not provide him with the right goods at the right time.

The elements

The plot of the elements in the construct space shows that the elements appear to be separated by the sense of the second component "Head office responsibility". The individual has power and influence in the sense of the first component and 5 elements are quite clearly associated with this. These are "the store", "myself", "personnel problems", "personnel costs" and "leakage & surplus", and weakly associated are "stock problems" and "actual sales". These last four constructs are also construed in the sense of the second component.

In the opposite sense to the first component are the rest of the elements, mainly in a narrow band

Post-grid session

His comments related to the content and style of the weekly branch newsletter. The author of this had changed and the content was considered to be superficial and the style authoratative.

The loadings and the sense of the first three components on the second grid

	<u>Loading</u>	<u>The constructs</u>
<u>First component</u>		
	0.7318	(I have power over.)*
	0.7038	(As I influence.)
	0.6924	(Without reaching gross profit it is not worth opening up.)
<u>Second component</u>		
	0.8713	Happy store & manager, good staff & boss makes it all worth doing
	0.7502	Myself & boss are in charge.
<u>Third component</u>		
	0.7705	To get information on promotions in advance can start selling at correct time.
	0.6419	All of these make a good leakage account.

* The constructs in brackets indicate a negative loading, but the constructs are the constructs which are emergent in the individual's construing. Since most individuals could not or did not supply a contrast to their emergent constructs the emergent constructs have been used. Thus it is construed that the first construct above could be taken to be 'I have not power over'.

Grid 2

Component

		<u>Variance of component</u>
First	I do not have power and influence.	20.38%
Second	A happy store and good staff make it worth doing.	17.58%
Third	Need information early to sell at correct time.	13.19%
	<u>Total</u>	<u>51.15%</u>

There are no financial management terms in the sense of the first three components, although it is clear that the notion of gross profit is not far from being a main way of thinking with the first component. The variance of the first and first three components is smaller than the first grid. This indicates a deepening of understanding even though the variance of second component has increased.

The constructs

This grid contains nine functional-pre-emptive financial constructs, an increase of six on the first grid. The subject's written constructs were not only more oriented towards financial management, but also much longer and with more complex phrases than those of the first grid. On the plot of the constructs, the constructs are no longer concentrated around the centre but have moved out towards the edges of the hypersphere. The constructs of influence and power are clustered together with the need to make a gross profit at the positive horizontal pole. The notions about staff relations are still present but not used as frequently as before, and these three constructs lie between the first cluster and the centre of the sphere.

On the negative side of the horizontal eight of the nine constructs are concerned with financial management. One widely spread cluster of six constructs is

concerned with the various aspects of stock and the ability to achieve a profit. The grid has more financial awareness about the construing although colloquial terms are used.

The elements

The plot of the elements shows that the elements are more dispersed than the first grid. At the horizontal pole where the sense is that of 'I have power and influence', lies "personnel costs". Between here and the centre of the plot is a cluster of four widely-spaced elements, "leakage & surplus", "gross profit", "profit percentage" and "actual sales". The personnel costs are available in relation to the actual sales and gross profit.

Towards the sense of the vertical pole, "A happy store and good staff make it worth doing" are the elements "immediate boss" and "the store", and around midway from the centre "personnel problems" and almost at the centre "myself". So the elements relating to people and the store are loosely associated.

The remaining elements are elements which the individual cannot influence or has power over, and are not associated with 'a happy store'. The element with the least association, that is in the most extreme of these positions is "problems of stock". Between this and the centre of the plot are two small clusters of elements. The cluster closest to "problems of stock" contains "sales target", "retail value", "product breakdown" and "timeliness of information". Without sufficient information at the right time there could be stock problems which could mean not reaching the sales target. The second cluster is "gross profit percentage", "cost value" and "sales percentage". It would appear that the financial information elements have a more pervasive understanding for the individual than on the first grid because they are more differentiated through the grid.

Post - grid session

The subject was clearly disgruntled about the way that things were running in the Co-op. The grid was completed in the stockroom because he wanted to get away from the constant problems in the store, yet even so was interrupted by four telephone calls during his completion of the grid. His comments noted that the new Food Trades Officer expected unreasonable things from branches. Eight staff had been lost, a stocktake was conducted on a Bank holiday, he had an enlarged job and no wage increase for eighteen months, and finally quite urgent repairs reported to head office were still not started. He considered that there was a lot more information now, and now it was received in time to order the special offers.

The loadings and the sense of the first three components on the third grid

	<u>Loading</u>	<u>The constructs</u>
<u>First component</u>		
	0.8230	(As I influence).
	0.7414	(I use the staff at the right time, cut down on everything.)
	0.6625	(Without making a profit you might as well not be in business.)
<u>Second component</u>		
	0.7793	Boss sets personnel costs target for year & hell & high water you have got to keep under if possible.
	0.6837	To get the job right.
<u>Third component</u>		
	0.6635	Keep personnel cost down & get sales helps to make higher profit.
	0.6072	If you are doing your share of the trade as you should be, then you reach your sales target & sales percentage.

<u>Grid 3</u>		<u>Variance of component</u>
<u>Component</u>		
First	I cannot influence costs to make profit.	25.67%
Second	To achieve personnel costs target.	16.88%
Third	Low staff costs help profit.	13.12%
	Total	<u>55.67%</u>

There are now three financial management terms in the sense of the first three components, which indicates that he is now thinking in terms of financial management. The issue of power, which occurred on the first component on the first two grids, does not occur here. Thus there is a reduction in the salience of power. The variance of the first and first three components have now increased a little towards their initial values. This would indicate a broadening of understanding.

The constructs

This grid contains eleven functional-pre-emptive financial constructs, and this is the second successive increase. The subject's written constructs are not only more financially oriented but also the longest and most complex of the three grids. The constructs have moved further from the centre for the second occasion, indicating that they are more definite. The constructs are not so widely dispersed as on the second grid, and they are predominantly on the positive side of the horizontal, with many close to its axis.

The negative side of the horizontal contains three constructs whose notions are concerned with making profit, reducing costs and not having stock loss. In the vertical area are two constructs concerned with the ability to achieve the targets set. There are seven constructs in the positive quadrant which in total appear to amount to the process of selling; that the price has to be reasonable and competitive; problems occur with the incorrect holding of stock; that selling is

trying to achieve the target set by the boss and the store must try to avoid a leakage.

On the other side of the horizontal the influence and power constructs are still quite closely associated, and also close to getting the staff working as a team, and getting the job right. Outside of this cluster is a construct considering that there are constant personnel problems, and this appears to be a counter-balance to the construct keeping personnel costs down

In total there has been a change in the construing of the grid elements over the course of the study with an increase in financial management notions.

The elements

The elements, especially the financial information elements, are now more widely dispersed on the plot. The banding together of the financial information elements as on the first grid is not present, and so these would appear to be more integrated into the individual's thinking. In comparison with the first two grids power is absent from the sense of the first component, but influence still occurs. In this respect the individual's influence would appear to be at its highest as there is the largest number of elements of the three grids in this sense. There is a loose cluster of five elements towards the pole of "I influence costs to make a profit". These are "leakage and surplus", "personnel costs", "personnel problems", "actual sales" and "gross profit". There is then a line of three elements close to the vertical axis, indicating some weak influence, "profit percentage", "myself" and "stock problems". The presence of "myself" here almost at the centre of the plot suggests that the individual does not have much influence over his own actions even though he construes that he does influence elements. Finally towards the pole "To achieve personnel costs target" lies "the store", so that the individual construes his influence upon nine elements.

The remaining eight elements he does not influence. Four of these elements form a cluster towards the sense of the second component, and are "retail value", "timeliness of information", "product breakdown" and "immediate boss". Although the individual cannot influence these elements they do contribute to achieving the personnel costs target. Of the last four elements "sales target" is almost at the centre of the plot indicating the lack of relevance of the element to the individual's construing. Towards the extreme opposite of the second component lie "cost value" and "gross percentage", which are coincident on the same point, and associated with them "sales percentage". These three elements would appear to hold little positive meaning for the individual.

The post-grid session

The subject reported that he had enjoyed working through the grid this time, and this was something which he had not felt before.

The subject noted that he understood a lot more about the elements, and more of the things that had happened such as the provision of more information, which had made him more determined to do well. At the same time the attitude of the new Food Trades Officer was such that if there were two successive bad leakages then the manager lost his job. Because of there was no longer any respect for the people working in the stores the subject's loyalty to the Co-op had gone.

He did not consider that he had received any training. The quality, quantity and timing of information were the best that they had been, but there was more paperwork to send to head office. No further information was desired.

The construct "I have power over"

The number of ticked elements on this construct have remained the same over the course of the study, although there were fewer on the second grid. This seems at variance with the earlier analysis which found a reduction in the salience of power. Of course not all elements are of the same quality and thus a reduction in power does not necessarily show itself in the number of elements. It is of note that it is only on the first grid that the element "myself" was ticked. Common to all three grids are "the store", "personnel problems", "personnel costs" and "leakage and surplus". His power over actual sales and himself which occurred on the first grid, have given way to "retail value" and "profit percentage", whilst "problems of stock" occurred on both the first and third grids. Thus power has been adjusted.

The construct "As I influence"

The number of elements increases by one over the first and third grids, although on the second grid there is a decrease of one element. On the first and third grids the eight common elements ticked are; "myself", "the store", "personnel problems", "problems of stock", "personnel costs", "actual sales", "gross profit" and "leakage and surplus", and the additional element on the third grid is "sales target".

The construct "As I would like to influence"

The pattern here is similar to the previous construct in that the number of elements which the individual would like to influence increases by one over the first and third grids, although on the second grid there is a decrease of eight. On the first grid there are four elements which are unticked, "immediate boss", "sales target", "cost value" and "retail value", but on the third grid the two elements unticked are; "sales percentage" and "profit percentage", so that the individual has a

desire to influence more elements. There is desire to influence more elements than are actually influenced on all three grids.

The number of elements

The total number of elements ticked on each grid has increased from 90 on the first grid through 75 on the second to 125 on the third. At the same time the number of financial information elements has increased from 51 to 77. Both of these indicate a broadening of construing.

Although there has been an increase in the total number of financial information elements, by the third grid the "cost value" and "sales percentage" elements are unticked, suggesting a lack of relevance, and "actual sales" have remained constant. There is an especially increased saliency to the "sales target", "retail value", "gross profit", "sales percentage" and "product breakdown".

Conclusions

There is an increase in the number of functional-pre-emptive financial constructs from three on the first grid, nine on the second to eleven on the third. The increase in this type of constructs suggests that he is more prepared to take financial decisions. At the same time as the number of financial constructs have increased the length of the constructs have increased and have become more complex. Thus the financial understanding of the individual appears to have increased. Concurrently the financial information elements have also altered their meaning. On the first grid the financial information elements were quite closely banded together, but through the course of the study these have become more widely dispersed and quite distinctive in their meaning with respect to the first two components. The variance of the components decreases a little and indicates a deepening of construing whilst the increase in the number of elements indicates a broadening of construing.

The individual's power has become less salient to him, but his influence upon elements has persisted and even increased, as has the desire to influence elements.

The occurrence of elements on each grid

<u>The elements</u>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
<u>As I influence.</u>																	
First grid	\$	\$	\$	\$	\$	\$	\$	\$				\$					\$
Second grid			\$	\$			\$	\$				\$					\$
Third grid	\$	\$	\$	\$	\$	\$	\$	\$	\$			\$					\$
<u>As I would like to influence</u>																	
First grid	\$	\$	\$	\$	\$	\$	\$	\$	\$			\$	\$	\$	\$	\$	\$
Second grid		\$				\$	\$		\$		\$						\$
Third grid	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$			\$	\$
<u>I have power over</u>																	
First grid	\$	\$	\$	\$	\$	\$	\$										\$
Second grid		\$	\$			\$						\$					\$
Third grid		\$	\$	\$	\$					\$				\$			\$
<u>Number of information elements</u>																	
First grid							11	8	5	2	3	5	1	2	2	1	11
Second grid							10	6	3	0	5	6	2	1	5	5	7
Third grid							12	8	8	0	7	8	0	5	9	8	12

Myself	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
My Immediate Boss	⊗	⊗	✓	✓	✓	✓	✓	○	✓			✓					✓
The store			⊗		○	⊗	✓				✓	⊗			✓	⊗	⊗
Personnel Problems				○			✓			⊗		✓					✓
The timeliness of information about promotions (special offers)					⊗		✓			✓		✓					✓
Problems of Stock						⊗	✓			○	✓	✓				⊗	✓
Personnel Costs							✓	⊗									✓
Actual Sales							✓	⊗									✓
Sales Target							✓		⊗								✓
Cost Value							✓			○	✓	✓					✓
Retail Value							✓			○		✓					✓
Gross Profit							✓					✓					✓
Gross Percentage							✓					✓					✓
Sales Percentage							✓					✓					✓
Profit Percentage							✓					✓					✓
Product Breakdown							✓					✓					✓
Leakage & Surplus							✓					✓					✓

CV First Grid

40

1	Both in exchange
2	To Make Money For Store F
3	Goods
4	Good Manager & STAFF
5	To Turn in a Good Stockholder ^F
6	As I influence
7	As I would like to influence
8	To work well together.
9	All Down To Newport ^{FOODS} ^{SALES} ^{MANAGER} ^{MANAGER}
10	All Down To Manager
11	All Down To Manager & STAFF
12	To Have Goods in the market. ^{ANYONE} ^{TIME} ^{MANAGE}
13	All work together.
14	To Run THE STORE THE BEST I CAN.
15	My Job. on the line
16	All Down To Head OFFICE
17	RIGHT PRICES WILL BRING SALES. F ^{GOODSTONE STAFF}
18	I have power over

Myself	My Immediate Boss	The store	Personnel Problems	The timeliness of information about promotions (special offers)	Problems of stock	Personnel Costs	Actual Sales	Sales Target	Cost Value	Retail Value	Gross Profit	Gross Percentage	Sales Percentage	Profit Percentage	Product Breakdown	Leakage & Surplus
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
⊗	⊗	✓					○									
		⊗		○		✓					⊗			✓		
					⊗				○						⊗	
⊗			○			✓		⊗		✓	✓				✓	⊗
		✓	✓			✓	✓			⊗	✓				✓	✓
		✓				✓		✓		✓	✓				✓	✓
	⊗	○										⊗		✓	✓	
			○	○	⊗		✓						⊗			
	⊗		○			⊗	✓						⊗	⊗		
	✓	⊗	⊗			✓	○			✓			○		○	⊗
⊗				✓		✓	✓			✓	✓	⊗		⊗	○	✓
	⊗	✓		✓		⊗	✓		○	✓	✓			✓	✓	⊗
				✓		✓	✓			⊗	✓				○	✓
		✓				✓		⊗		⊗	✓				○	✓
		✓				✓		⊗			✓				○	✓

- 1 Both in and on the
- 2 without ~~loss~~ ^{loss} ~~gross profit~~ ^{gross profit} ~~over~~ ^{to not} P.F.
- 3 ^{OUT OF} STOCK AND ^{TO} BREAK DOWN ^F Are you a good Mx. For Profit Tech
- 4 All make up to a good stock ^F
- 5 How you use your staff and running of shop
- 6 As I influence
- 7 As I would like to influence
- 8 All ^{lost} ^{from} ^{hand} ^{of} ^{people}
- 9 ^{keeps} ^{people} ^{away} ^{from} ^{store} ^{OUT} ^{OF} ^{STOCK} ^{NO} ^{SALES} ^{NO} ^{JOB}
- 10 ^{TO} ^{KNOW} ^{ONE} ^{HELD} ^{THE} ^{OTHER} ^{TAN} ^{BET} ^F
- 11 IF I DON'T GET IT RIGHT ¹⁴ ^{OUT} ^{OF} ^{WORK} ^{TO} ^{GET} ^{PROVISIONS} ^{ONE} ^{OR} ^{TWO} ^{WEEKS}
- 12 ^{AREN'T} ^{YOU} ^{CAN} ^{START} ^{ON} ^{MY} ^{MONTH} ^{START} ^{AND} ^{NOT} ^{LOSE} ^{THE} ^{AS} ^{IT} ^{THE} ^{SEEN} ^{IN} ^{THE} ^{LO}
- 13 ^{HAPPY} ^{START} ^{AND} ^{MEMBER} ^{AND} ^{GOOD} ^{BOSS} ^{MAKES} ^{IT} ^{ALL} ^{WORTH} ^{PAINT}
- 14 ^{Break} ^{down} ^{of} ^{all} ^{these} ^{make} ^A ^{Money} ^{making} ^{SHOP}
- 15 ^{AT} ^{THE} ^{END} ^{OF} ^{THE} ^{DAY} ^{WHEN} ^{THESE} ^{MAKE} ^A ^{GOOD} ^{KE} ^{AT} ^{THE} ^{PERSON}
- 16 ^{PERSONNEL} ^{COST} ^{ARE} ^{THE} ^{HARDEST} ^{THING} ^{TO} ^{KEEP} ^{YOUR} ^{THE} ^{FROM}
- 17 IF ^{THESE} ^{ARE} ^{ALL} ^{THE} ^{REASONS} ^{TO} ^{LOSE} ^{SOME} ^{TANTIES}
- 18 I have power over

Grid 75

1 TO GET THE JOB RIGHT

2 WITH OUT MAKING PROFIT YOU CANT BE IN BUSINESS
IF YOU HAVE NOT GOT THE RIGHT PRODUCT

3 BREAK DOWN THIS WHEN STAFF PROBLEMS START
IF THE STAFF ARE NOT DOING THERE JOB RIGHT ON THE MANAGER AND WORKING AS A TEAM

4 TO USE THE STAFF AT THE RIGHT TIME
5 TO CUT DOWN ON EVERYTHING WHERE YOU CAN

6 AS I influence

7 AS I would like to influence

8 AS SET DOWN IN THE SHOP MANUAL
9 OF RUNNING THE STORE

10 IF WE DONT GET THE RIGHT INFORMATION AT THE RIGHT TIME ABOUT SPECIAL OFFERS ETC WE DONT MAKE SALES TARGETS

11 TO KEEP PERSONNEL CUT DOWN AND GET SALES A TARGET TO MAKE HIDDEN PROFIT

12 LEAKAGE IS A MATHS NIGHTMARE
IF YOU HAVE A LEAKAGE NO JOB

13 IF YOU ARE GOING YOUR SHARE OF THE TRADE AS YOU SHOULD BE FROM THE TIME THE STORE OPENS

14 PERSONNEL PROBLEMS START STAFF TO GET PROFIT INCREASE SALES

15 PERSONNEL COST ETC AS THE SAME IN NO. 11.

16 HE GETS A TARGET FOR THE YEAR AND TELL AND HIGH WATER YOU HAVE TO GET THE RIGHT SALES PRICE MUST BE

17 IF POSSIBLE AND THE BEST TO GET

18 I have power over

AS WELL NO

BE IN

PRODUCTION

STAFF

WORKING

AS A TEAM

TO USE THE STAFF AT THE RIGHT TIME

TO CUT DOWN ON EVERYTHING WHERE YOU CAN

AS I influence

AS I would like to influence

AS SET DOWN IN THE SHOP MANUAL

OF RUNNING THE STORE

IF WE DONT GET THE RIGHT INFORMATION AT THE RIGHT TIME ABOUT SPECIAL OFFERS ETC WE DONT MAKE SALES TARGETS

TO KEEP PERSONNEL CUT DOWN AND GET SALES A TARGET TO MAKE HIDDEN PROFIT

LEAKAGE IS A MATHS NIGHTMARE

IF YOU HAVE A LEAKAGE NO JOB

IF YOU ARE GOING YOUR SHARE OF THE TRADE AS YOU SHOULD BE FROM THE TIME THE STORE OPENS

PERSONNEL PROBLEMS START STAFF TO GET PROFIT INCREASE SALES

PERSONNEL COST ETC

AS THE SAME IN NO. 11.

HE GETS A TARGET FOR THE YEAR

AND TELL AND HIGH WATER YOU HAVE TO GET THE RIGHT SALES PRICE MUST BE

IF POSSIBLE AND THE BEST TO GET

I have power over

F

F

F

F

F

F

F

F

F

F

F

F

LEAKAGE ON THIS FIRM MEANS NO J

YOUR SALES TARGET AND PERCENTAGE

TURNING IN ETC

DO NOT KEEP TO HOT UNDER FLOSSIE

SHINE WITH OTHER COMPANY ETC

BE RIGHT MIX OF GOODS IN THE S

CV. Output Used from INGRID 72 with the Third Grid

THE COMPONENT-SPACE IS LIMITED TO 16 DIMENSIONS

COMPONENT	ROOT	AS PER CENT
1	4.3642	25.67
2	2.8695	16.88
3	2.2312	13.12
4	2.0035	11.79
5	1.5803	9.30
6	1.1326	6.66
7	0.8278	4.87
8	0.6759	3.98
9	0.4133	2.43
10	0.3093	1.82
11	0.2625	1.54
12	0.1929	1.13
13	0.0793	0.47
14	0.0497	0.29
15	0.0076	0.04
16	0.0000	0.00

8

10 COMPONENT 1

12 ELEMENT	VECTOR	LOADING	RESIDUAL
1	-0.0695	-0.1451 ✓	0.7539
14 2	0.3746	0.7826 ✓	0.3943
3	-0.1158	-0.2419 ✓	1.3660
16 4	-0.2737	-0.5718 ✓	0.8963
5	0.2350	0.4910 ✓	0.9410
18 6	-0.0229	-0.0478 ✓	0.9318
7	-0.3173	-0.6528 ✓	0.4971
20 8	-0.2830	-0.5912 ✓	0.5869
9	0.0458	0.0957 ✓	0.7229
22 10	0.2191	0.4577 ✓	0.7095
11	0.2706	0.5652 ✓	0.6137
24 12	-0.2500	-0.5223 ✓	0.5450
13	0.2191	0.4577 ✓	0.7095
26 14	-0.0851	-0.1777 ✓	0.9303
15	-0.0559	-0.1158 ✓	1.0946
28 16	0.3462	0.7232 ✓	0.7019
17	-0.4074	-0.8512 ✓	0.2409

30 CONSTRUCT

32 1	-0.1282	-0.2678	0.9283
2	-0.3171	-0.6625 (3)	0.5611
34 3	0.2553	0.5334	0.7155
4	-0.3112	-0.6502 (4)	0.5773
36 5	-0.3549	-0.7414 (5)	0.4503
6	-0.3940	-0.8230 (6)	0.3226
38 7	0.1822	0.3836	0.8552
8	0.2865	0.5936	0.6417
40 9	-0.1172	-0.2448	0.9481
10	-0.1300	-0.2726	0.9262
42 11	-0.0536	-0.1119	0.9875
12	-0.1404	-0.2932	0.9140
44 13	-0.2940	-0.6141	0.6229
14	-0.2027	-0.4234	0.8208
46 15	-0.1279	-0.2672	0.9286
16	0.2830	0.5912	0.6505
48 17	-0.2176	-0.4566	0.7934

50 POLAR CO-ORDINATES

52 CONSTRUCT

	H	V	R
1	111.39	-17.37	0.77
54 2	-164.13	32.37	0.82
3	46.02	2.30	0.77
56 4	157.41	-1.16	0.70
5	-156.48	20.77	0.86
58 6	163.40	-15.50	0.89
7	55.59	36.38	0.84
60 8	8.23	39.77	0.79
9	136.49	67.23	0.75
62 10	-166.61	42.58	0.38

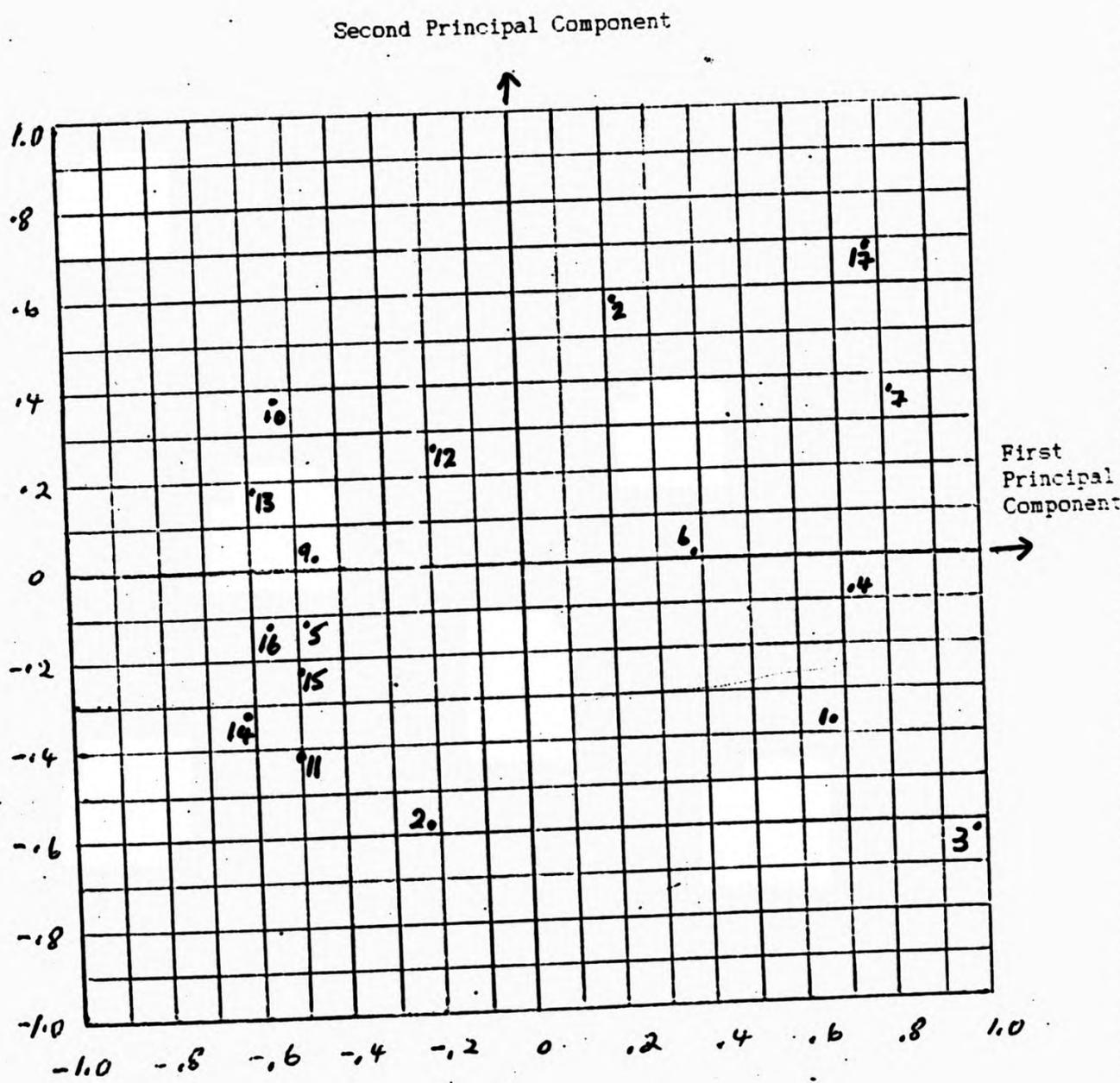
2

11	-127.31	73.39	0.63
4 12	127.40	-43.39	0.72
13	160.13	-23.74	0.74
6 14	149.59	3.62	0.49
15	108.93	2.57	0.82
8 16	67.99	13.30	0.90
17

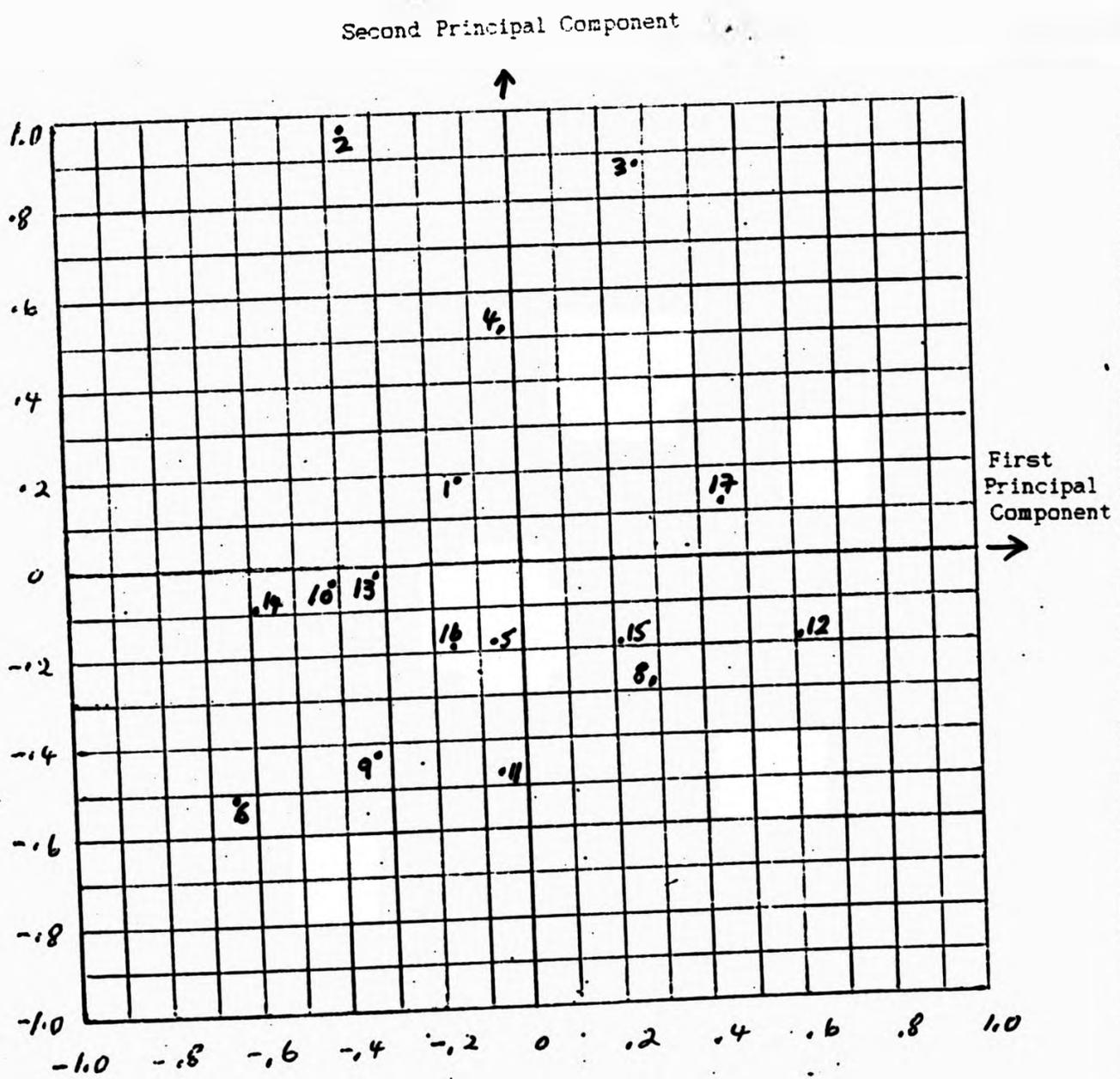
COMPONENT 2			COMPONENT 3		
VECTOR	LOADING	RESIDUAL	VECTOR	LOADING	RESIDUAL
-0.0095	-0.0161	0.7536	-0.1371	-0.2048	0.7117
0.2381	0.4034	0.2316	-0.0156	-0.0233	0.2310
0.3749	0.6351	0.9627	-0.2560	-0.3824	0.8164
0.1366	0.2280	0.8443	-0.4586	-0.6850	0.3751
0.3774	0.6332	0.5324	0.1533	0.2289	0.4800
0.1561	0.2644	0.8619	-0.3351	-0.5005	0.6114
0.1095	0.1854	0.4627	0.2916	0.4355	0.2730
-0.0818	-0.1385	0.5677	0.0493	0.0737	0.5623
-0.0320	-0.0542	0.7200	0.0852	0.1272	0.7038
-0.3624	-0.6139	0.3327	-0.2988	-0.4463	0.1335
0.0474	0.0803	0.6073	0.1543	0.2304	0.5542
-0.2849	-0.3470	0.4246	0.0882	0.1318	0.4072
-0.3624	-0.6139	0.3327	-0.2988	-0.4463	0.1335
-0.4710	-0.7979	0.2936	0.1650	0.2465	0.2328
-0.1670	-0.2830	1.0146	0.3653	0.5457	0.7168
0.1950	0.3303	0.5928	0.2656	0.3967	0.4354
0.0591	0.0934	0.2312	0.1823	0.2724	0.1570
0.4036	0.6837 (2)	0.4608	-0.1594	-0.2382	0.4041
-0.1112	-0.1884	0.5257	0.2922	0.4365	0.3351
0.3262	0.5527	0.4100	0.0261	0.0390	0.4085
0.1597	0.2705	0.5041	-0.0096	-0.0143	0.5039
-0.1905	-0.3227	0.3461	0.2053	0.3067	0.2521
0.1449	0.2454	0.2624	-0.1595	-0.2382	0.2057
0.3279	0.5555 (4)	0.5466	0.3395	0.5071	0.2895
0.0511	0.0866	0.6342	0.3370	0.5033	0.3808
0.1471	0.2492	0.8779	0.4442	0.6635 (1)	0.4377
-0.0382	-0.0646	0.9220	0.1724	0.2575	0.8557
-0.0867	-0.1468	0.9659	0.4065	0.6072 (2)	0.5972
0.2264	0.3836	0.7669	-0.3601	-0.5379 (3)	0.4775
0.1310	0.2219	0.5736	0.2397	0.3581	0.4454
0.1467	0.2485	0.7590	0.0036	0.0053	0.7590
0.4600	0.7793 (1)	0.3213	0.0258	0.0385	0.3199
0.3874	0.6562 (3)	0.2199	0.1074	0.1605	0.1942
0.2076	0.3516	0.6697	-0.0186	-0.0277	0.6689

CU. Output Used from INGRID 72 with the Third Grid

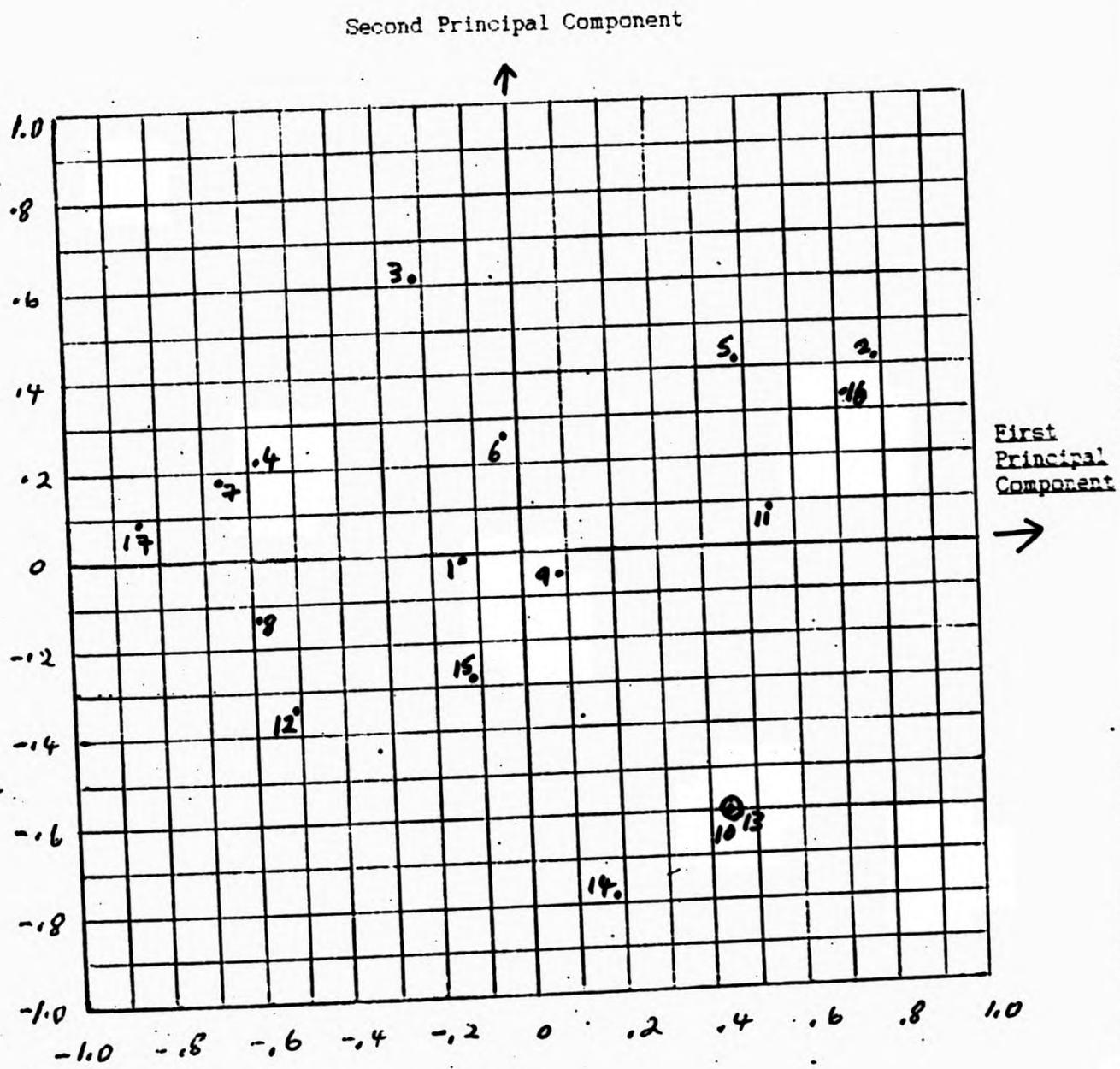
CU. The Plot of the Elements in the Construct Space - First Grid



CV. The Plot of the Elements in the Construct Space - Second Grid

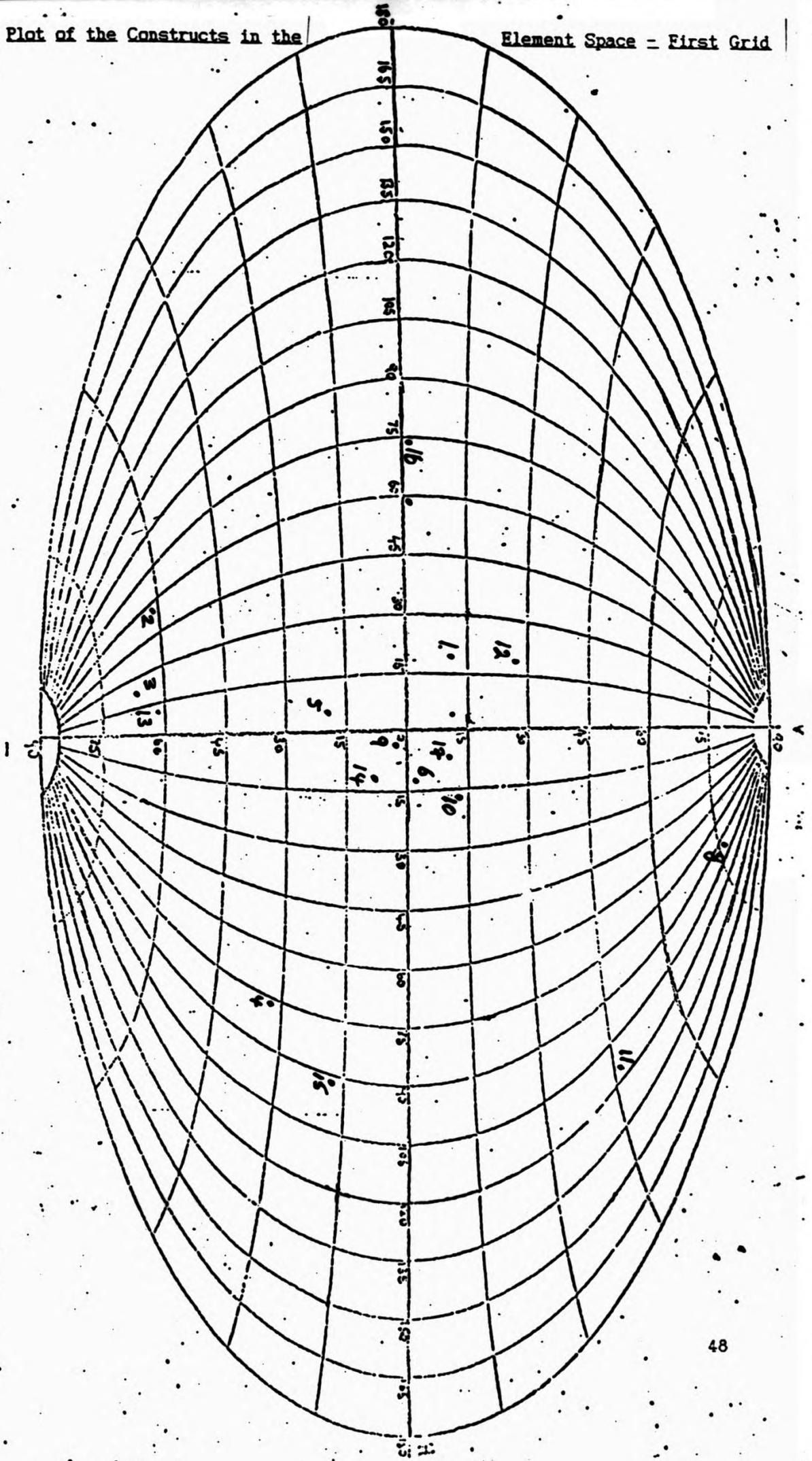


CUL The Plot of the Elements in the Construct Space - Third Grid



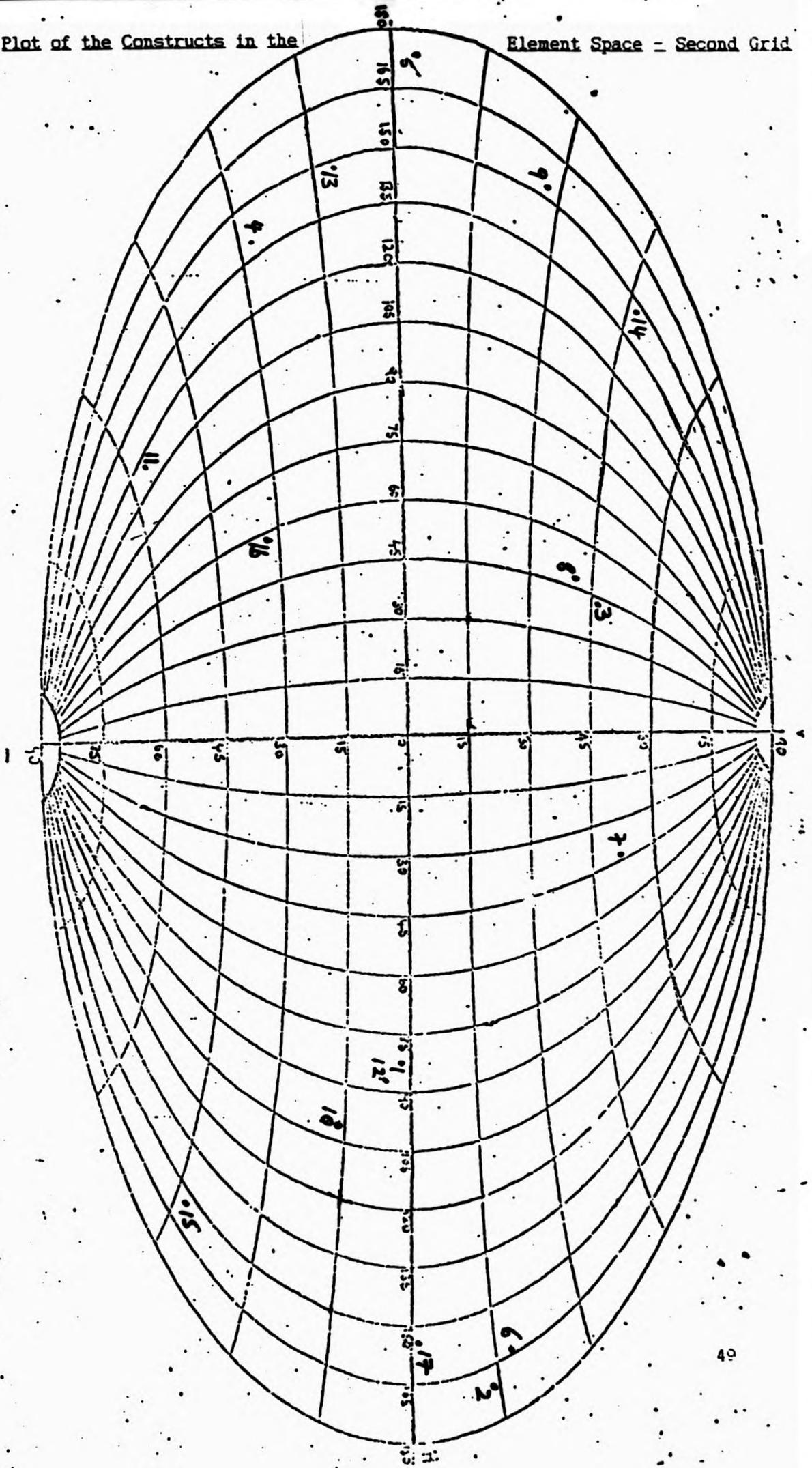
CU. Plot of the Constructs in the

Element Space - First Grid



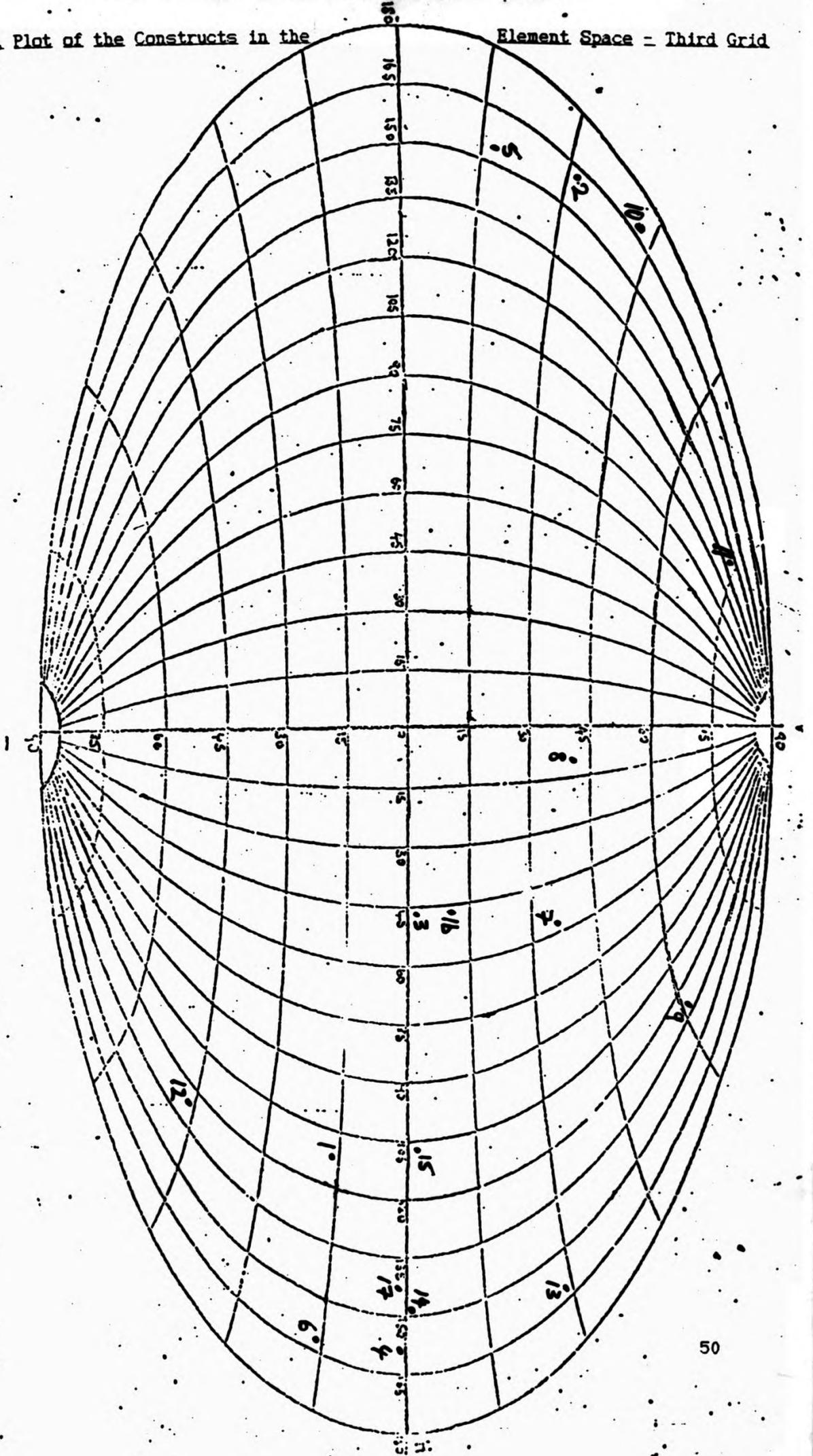
CU. Plot of the Constructs in the

Element Space - Second Grid



CUL Plot of the Constructs in the

Element Space - Third Grid



Appendix VI

The senses of the first three principal components of the participants from the Retail Co-op

<u>First grid</u>	<u>Second grid</u>	<u>Third grid</u>
<u>Withdrawn Group</u>		
<u>First component</u>		
WE Providing customer service makes customers happy.	What boss orders is in the store.	I do not influence.
JOR	Store and figures.	Figures not people.
GA	Stocktaking.	Price correctly or losses on retail.
<u>Second component</u>		
WE Goods in store.	Selling stock.	
JOR	Promotions affect sales percentage.	Promotion may affect stock & gross profit.
GA	Gross profit keeps store running.	Boss & self employed in the store.
<u>Third component</u>		
WE Beginning of week.	Find out what customer wants.	I do not have power over.
JOR	Personnel.	People.
GA	Time consuming.	Keep down leakage.
<u>Untrained Group</u>		
<u>First component</u>		
JOH Myself & immediate boss dictate how store is run.	The store manager.	Results & required performance.
NI People.	Sales & product mix.	People at work.
COL Personnel problems affect leakage & surplus.	Good store is busy and profitable.	Timely information is needed to help sales.
MO	To do with money.	Gross profit on sales.
<u>Second component</u>		
JOH Personnel are the tools of my job.	Influence & power.	As I influence.
NI Merchandising.	Leakage.	Ordering.
COL Boss controls sales.	Staff problems must be right.	I care about people and stock presentation.
MO	People.	I do not influence.

<u>First grid</u>	<u>Second grid</u>	<u>Third grid</u>
<u>Third component</u>		
JOH As I influence.	Affect & achieve the necessary sales.	Stocks are important.
NI Ordering stock on special offer.	Employing staff.	I do not have power.
COL Keeping costs down helps selling price.	My best service reflects on other staff & sales.	Boss should influence sales.
MO	Stock sold makes money.	Boss responsible for personnel cost at the correct level.
 <u>Trained Group</u>		
<u>First component</u>		
SM	People.	Boss & myself influence the store.
HI Work together correctly. We try to make sales.		Low staff cost means goods wrongly priced & causes leakage.
LI People.	I do not have power over running the store.	Figures.
CU Power and influence.	I do not have power and influence.	I influence costs to make profit.
HE I influence costs & sales target.	Personnel issues depend on staff costs.	Staff & performance go together.
TI My work is valuable.	Overstaffing.	Well-run store.
<u>Second component</u>		
SM	Things I can't influence.	Timely information for proper stock control.
HI Goods need correct prices.	Need staff to stock shop.	Insufficient staff.
LI Timing of information & stock problems.	Timing of information & stock problems affect the sales percentage.	Concern people.
CU Head office responsibility.	Happy store & good staff make it worth doing.	To achieve the target.
HE Achieving sales target	Achieve return on sales.	Net profit.
TI I have power over.	Untrustworthy.	Cost effective & planned.

	<u>First grid</u>	<u>Second grid</u>	<u>Third grid</u>
<u>Third component</u>			
SM		Cost prices.	Boss controls staff levels.
HI	I influence correct working.	Problems stocking the store.	Others cause time-wasting.
LI	Involves figures.	Boss & gross percentage they stand.	Problems.
CU	Distribution centre.	Need information early to sell at correct time.	Low personnel costs help profit.
HE	No sales promotions.	Right retail value.	Boss sets personnel costs.
TI	I control.	I am under control.	Poor stock control.
<u>Trained Butchers Group</u>			
<u>First component</u>			
EP	Actual sales.	Good promotion price achieves sales target.	Right selling price, low costs gives good profit.
MU	Responsibility.	Power & responsibility to make a profit.	I have power & responsibility for leakage.
<u>Second component</u>			
EP	Boss	Stock.	I do not have power over.
MU	Sales & profitability.	I require timely information.	I require timely information for profit.
<u>Third component</u>			
EP	I do not have power over.	Boss keeps personnel in order.	I influence product breakdown.
MU	Buy meat at right price.	Boss buys meat correctly.	Boss buys meat correctly.

Appendix VII

An example of a set of two completed grids for one individual in the Printing Co-operative, together with the output of the INGRID 72 Program, and the attendant analysis

The subject, AS, is a typesetter who worked in the Co-op for three weeks before completing her first grid. She observed that as soon as she started working she was handed a copy of the accounts and the "coming and going expenses of where the money goes". She had been given the accounts without asking for them, had not made any efforts to understand them although they were useful. At the start of the study she said that she partly understood the accounts but had not had the time to look at them, although this was partly her fault. At this stage, there was no other information that she required.

She observed that since she had been working in the Co-op her life had been very difficult because she was trying to clear a backlog of work, was working very long hours and consequently felt tired.

She attended the training sessions and so it is anticipated that the subject will not have many financial constructs or the financial information elements have much meaning for her initially, but that by the end of the study this will have altered so that she has understanding, financial constructs, and some of the financial information elements will have meaning.

Grid analysis

The following analysis is directly from the two completed grids, the output of the INGRID program and the plots of the constructs and elements.

The loadings and the sense of the first three components

	<u>Loading</u>	<u>The constructs</u>
<u>First component</u>		
	0.8920	(I have power over).*
	0.8889	(As I influence).
	0.7505	(Profit).
<u>Second component</u>		
	0.8328	Exist.
	0.7436	Business.
<u>Third component</u>		
	0.7031	Tired.
	0.6230	I have power over.

* The constructs in brackets indicate that there is a negative loading and the constructs are the emergent constructs. Consequently these constructs could be construed to mean for example, 'I do not have power over'.

Grid 1		Variance
Component		of component
First	I do not have influence and power over.	22.18%
Second	Exist.	16.38%
Third	Tired.	13.09%
Total		51.65%

Clearly there are no constructs concerned with financial management of sufficient salience to the individual to occur in the sense of the first three components. The variance of the first and even the first three components is not as high as that found in the work of others.

The constructs

There is one descriptive-propositional financial construct on this grid. The subject's written constructs are all single words with the exception of three constructs. The plot of the constructs in the element space shows that they occur in clusters. At the negative horizontal pole is one cluster with the constructs "I have power over", "As I influence" and "Profit". A little distance from this cluster also at the edge of the sphere is "Tired". Towards the centre of the sphere, but quite close to the negative horizontal, is a cluster which appears to relate to her desire to appreciate the financial information. The constructs are "discrimination", "time", "interested" and "like to know more". Thus the subject would appear to have weak associations between these clusters.

On the positive side of the horizontal towards the negative vertical are two clusters which appear to relate to participation in the Co-op, with the constructs "Why?" and "get involved", and the other cluster "helpful" and "get involved". Around the middle of the positive horizontal are the constructs "Exist" and "Business", whilst towards the positive vertical pole "Demands" and "Power". Thus with the exception of "Profit" there are no other constructs concerned with financial management.

The elements

The plot of the elements in the construct space shows a number of elements encircling the centre and others in small clusters. At the pole with the sense "I have power over" is the element "monthly meeting", whilst at the centre of the plot in the same sense is "myself". The subject appears to construe that she exists, weakly, and also has influence and power over herself, weakly, but quite strongly influences and has power over the monthly meeting. She also has similar influence and power over "hours worked", then to a lesser extent on "structural problems" and weakly on "capital budget".

Towards the sense "Exist" are the elements "the employees" and "the Co-op", then towards the centre "time to study financial information" and "cash balance". The remaining elements are in the implied senses of 'I do not influence or have power over' and 'not exist'. These are all financial information elements, except "member of the Co-op", so that there appears to be little meaning in the majority of financial information elements for the subject.

Post-grid session

The subject observed that she had a headache after completing the grid. During the course of completing the grid and after she had finished the subject repeatedly wanted assurance that the grid would not be shown to any others in the Co-op.

The second grid

The loadings and the sense of the first three components

	<u>Loading</u>	<u>The constructs</u>
<u>First component</u>		
	0.9911	I rather have creditors outstanding than debtors.
	0.9911	If I have more time to study financial information I will put less pressure to spend more money on capital purchase.
	0.8985	Balance sheet shows us exactly what is our net profit.
	0.8926	An up to date cash balance will prevent us having outstanding creditors.
<u>Second component</u>		
	0.7302	(Lack of time to study financial information).*
	0.7145	(Simply don't have time to study and understand the accounts).
<u>Third component</u>		
	0.6790	(Capital purchases affect the net profit).
	0.6749	(As I influence).

* The constructs in brackets indicate that there is a negative loading and the constructs are the emergent constructs. Consequently these constructs could be construed to mean for example, 'I do have time to study financial information'.

Grid 2

<u>Component</u>	<u>Variance of component</u>
First The uses of financial information.	50.75%
Second (I lack the time to study and understand the accounts).	10.64%
Third (I influence the capital purchases which influence the net profit).	9.63%
Total	71.02%

Clearly there are constructs concerned with financial management of sufficient salience to the individual to occur in the sense of the first three components. This is in contrast to the first grid where there were none. There is now a salience for financial management. The variance of the first and even the first three components has increased and this indicates a broadening of construing and understanding.

The constructs

There are six functional-pre-emptive and one descriptive-propositional financial constructs on this grid. The functional-pre-emptive constructs have all occurred since the first grid. Again this contrasts with the single word construct which was the only financial management construct on the first grid. At the same time the subject's written constructs are no longer the single words found in the first grid, but quite fulsome and complex constructs. The plot of the constructs in the element space shows that the numerous clusters of the first grid are gone and that there is a quite large cluster of constructs at the centre of the sphere. This central position suggests that they are less definite than constructs at the periphery. However, the cluster is concerned with notions of financial management and financial information elements. These constructs range through the notions that "the balance sheet shows us exactly what is our net profit", that the subject would "like to know the actual figures for accounts than the budget figures", and "I rather have creditors outstanding than debtors outstanding". Also the subject notes that "if I have more time to study the financial information I will put less pressure to spend more money on capital purchase", and "an up to date cash balance will prevent us having outstanding creditors", and "the balance sheet is up to date and there is no debtor outstanding", whilst "capital purchases will affect the net profit" and that "we can only know our net profit if we are clear about the budget". Taking a wide interpretation of these constructs one or two of them suggest that the subject is not quite correct and that this lack of correctness may be associated with the position of the constructs and that they are less definite. There is a marked difference between the constructs on this second grid and those on the first.

The more definite constructs at the periphery include at the positive horizontal "the Co-op is still my employer - as a non-member" and "employees have not much power to change the problems", and associated with these "As I influence". At the negative horizontal pole is the construct "Because I am the one doing the hours" and "I like to spend more time socially - long working hours affecting my social life" and associated with these "I have power over my department - typesetting" and "lack of time to study financial information"

The elements

The plot of the elements in the construct space has changed because now the elements are divided into two broad types, those financial information elements and the time to study element are ranged along the vertical and close to the sense of

the first component, whilst the other elements are mainly in an arc around the contrast to the sense of the first component.

The sense of the first component is "the uses of financial information" and the second component "I lack the time to study and understand the accounts". Between these two components are the elements "time to study financial information" and "actual profit & loss account". The remaining seven financial information elements are only in the emergent sense of the first component. Thus all of the financial information elements now have a clear meaning for the subject, in terms of using financial information, as opposed to the position on the first grid where there was no obvious meaning. However, the financial information elements are clustered somewhat and there are two pairs of coincident elements one "budget profit & loss account" and "cash balance", the other "the debtors outstanding" and "the balance sheet".

These findings could indicate again the lack correctness of the subject's assertions and understanding of the financial information, but nevertheless within the sense of the first component it could be possible for two financial information elements to have coincident meaning.

Due to the separation of these two types of elements it would seem that the subject has not reached a stage in her construing when the financial information elements are integrated into her thinking with the other elements.

The post-grid session

The subject observed that she found the ticking of the grid confusing and would have preferred direct questions, but hoped that the results of the work would bring more participation and understanding of each other's position into the Co-op. She considered that the quantity, quality and timing of the financial information was suitable for her, but wanted more information to know how the typesetting department was doing. She noted that when she studied the information she understood it and on the occasions that she did not understand then she asked and then understood.

The construct "I have power over"

There is only one element common to both grids "the number of hours worked". Other than this the issue and construing of power changes. It does not move into the area of the financial information elements and it is would appear that if anything the subject has broadened her exercise of power.

The construct "As I influence"

Over the course of the study there has been an increase in influence upon and including the two elements on the first grid "monthly meeting" and "the number

of hours worked". The subject construes that she influences the "net profit" and the "employees of the Co-op" and the "structural problems of the Co-op".

On the first grid, where the subject construed herself to be without influence and power, these two constructs were close together, but on the second grid, where these were not main issues in her thinking, they were almost diametrically opposite each other.

The construct "As I would like to influence"

Although there are four elements which are common to both grids the subject would like to influence less elements, including "the budget for a capital purchase" and "the net profit". She would like to influence more of the organizational aspects of the Co-op. Despite the decrease in desired influence she still would like to influence a larger number of elements than she actually influences.

The number of elements construed

On the first grid there were 47 elements and on the second 91 elements, indicating a broadening of construing. This broadening has occurred mainly in the construing of the financial information elements since these have increased from 19 elements to 53. All of the financial information elements show increases in use with the most salient being "net profit", followed by "the actual profit & loss account", "the outstanding debtors" and "the balance sheet".

Conclusions

Over the course of the study the construing of the elements presented to the subject has altered. The number of financial constructs has increased from one on the first grid to seven on the second grid. The increase is made up solely of functional-pre-emptive constructs and suggests that she is more prepared to take financial decisions. It appears that her understanding of the financial information elements has developed notions of financial management, and that her understanding has broadened, as shown by the increased number of elements construed and the increase in the variance of the first and the first three components. The construing of the financial information elements has altered at the same time from essentially no meaning on the first grid to at least an identification that financial information can be used in various ways.

The subject generally construes more elements that she desires to influence than she actually influences, and this is larger than the number which she has power over. When she construes herself to be without both power and influence then these constructs are close together, but when this is not the case then these constructs are apart.

The occurrence of elements on each grid

The elements	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<u>As I influence.</u>																
First grid					s	s										
Second grid		s		s	s	s						s				
<u>As I would like to influence</u>																
First grid	s	s	s	s	s	s	s	s				s				
Second grid	s		s	s	s	s	s	s								
<u>I have power over</u>																
First grid					s	s	s									
Second grid	s		s		s											
<u>Number of information elements</u>																
First grid									2	2	3	3	2	1	3	3
Second grid									6	7	6	9	6	7	5	7

AS First Grid

61

1	Tired	
2	get involved	
3	discrimination	
4	Exist	
5	like to know more	
6	As I influence	
7	As I would like to influence.	
8	Why?	
9	Profit.	D
10	Business	
11	Time	
12	Demands =	
13	interested	
14	get involved	
15	helpful	
16	Power.	
17	I have power over	

Total 55
47

- 1 Because I am the one who is doing the hrs.
- 2 simply don't have time to study and understand the Accounts.
- 3 Capital purchases will affect the Net Profit. F
- 4 The Co-op. is still in my employer - as a non-member.
- 5 the Balance sheet is up-to-date and there is no debtors outstanding. F
- 6 As I influence
- 7 As I would like to influence.
- 8 An up-to-date cash Balance will prevent us having out-standing ^F creditors.
- 9 I like to spend more time - socially - long waiting hrs affecting my social ^F life.
- 10 We can only know our Net Profit if we are clear about of the Budget ^F figures.
- 11 I rather have creditors outstanding than the debtors outstanding ^F.
- 12 if I have more time to study the Financial Information I will put less pressure ^F to spend more money on Capital purchases.
- 13 Balance Sheet Shows us exactly what is our NET Profit. ^F
- 14 Lack of time to study the financial information.
- 15 I like to know the Actual figures for Accounts than the Budget figures.
- 16 Employees has not much power to change the problems.
- 17 I have power over my Department - Type-setting. ^F

AS. Output Used from INGRID 72 with the First Grid

THE COMPONENT-SPACE IS LIMITED TO 15 DIMENSIONS

COMPONENT	ROOT	AS PER CENT
1	8.1204	50.75
2	1.7025	10.64
3	1.5402	9.63
4	1.2665	7.92
5	0.9234	5.77
6	0.8684	5.43
7	0.5310	3.32
8	0.4321	2.70
9	0.2694	1.68
10	0.1313	0.82
11	0.1124	0.70
12	0.0394	0.56
13	0.0131	0.08
14	0.0000	0.00
15	0.0000	0.00

ELEMENT	VECTOR	LOADING	RESIDUAL
1	-0.2696	-0.7672	0.3718
2	-0.2430	-0.7657	0.5671
3	-0.3080	-0.7622	0.5490
4	-0.2908	-0.7615	0.5741
5	-0.2583	-0.7190	0.4649
6	-0.2557	-0.7256	0.8772
7	-0.3407	-0.7718	0.2375
8	0.2314	0.5170	0.9328

9	0.2040	0.7077	0.8347
10	0.2558	0.7249	0.4124
11	0.2250	0.5410	0.1039
12	0.1811	0.5190	0.8957
13	0.2250	0.5410	0.1039
14	0.2619	0.7453	0.3868
15	0.1697	0.4833	0.2812
16	0.2619	0.7453	0.3868

CONSTRUCT			
1	-0.2657	-0.7600	0.4224
2	0.1160	0.3305	0.5908
3	0.1024	0.2917	0.79149
4	-0.1908	-0.5437	0.7044
5	0.1389	0.3959	0.8432
6	-0.1850	-0.5272	0.7222
7	0.3132	0.3923	0.2033
8	-0.3037	-0.3654	0.2511
9	0.2677	0.7629	0.4180
10	0.3478	0.9911	0.0177
11	0.3478	0.9911	0.0177
12	0.3153	0.8955	0.1928
13	-0.0553	-0.2455	0.9396
14	0.2101	0.3815	0.2194
15	-0.2731	-0.7157	0.3811
16	-0.1766	-0.5089	0.7411

POLAR CO-ORDINATES

CONSTRUCT	H	V	R
1	-173.07	-1.00	0.76
2	-55.17	-1.73	0.79
3	50.00	-1.12	0.90
4	148.30	-4.93	0.69
5	20.00	-4.93	0.59
6	170.71	-51.97	0.86
7	29.93	-1.12	0.95
8	-173.55	-5.45	0.87
9	-4.93	11.12	0.82
10	0.71	-3.94	0.99
11	0.71	-3.94	0.99
12	-0.29	-7.43	0.91
13	-108.61	-11.73	0.86
14	-11.73	-11.73	0.92
15	155.31	19.71	0.86
16	-173.37	29.52	0.57

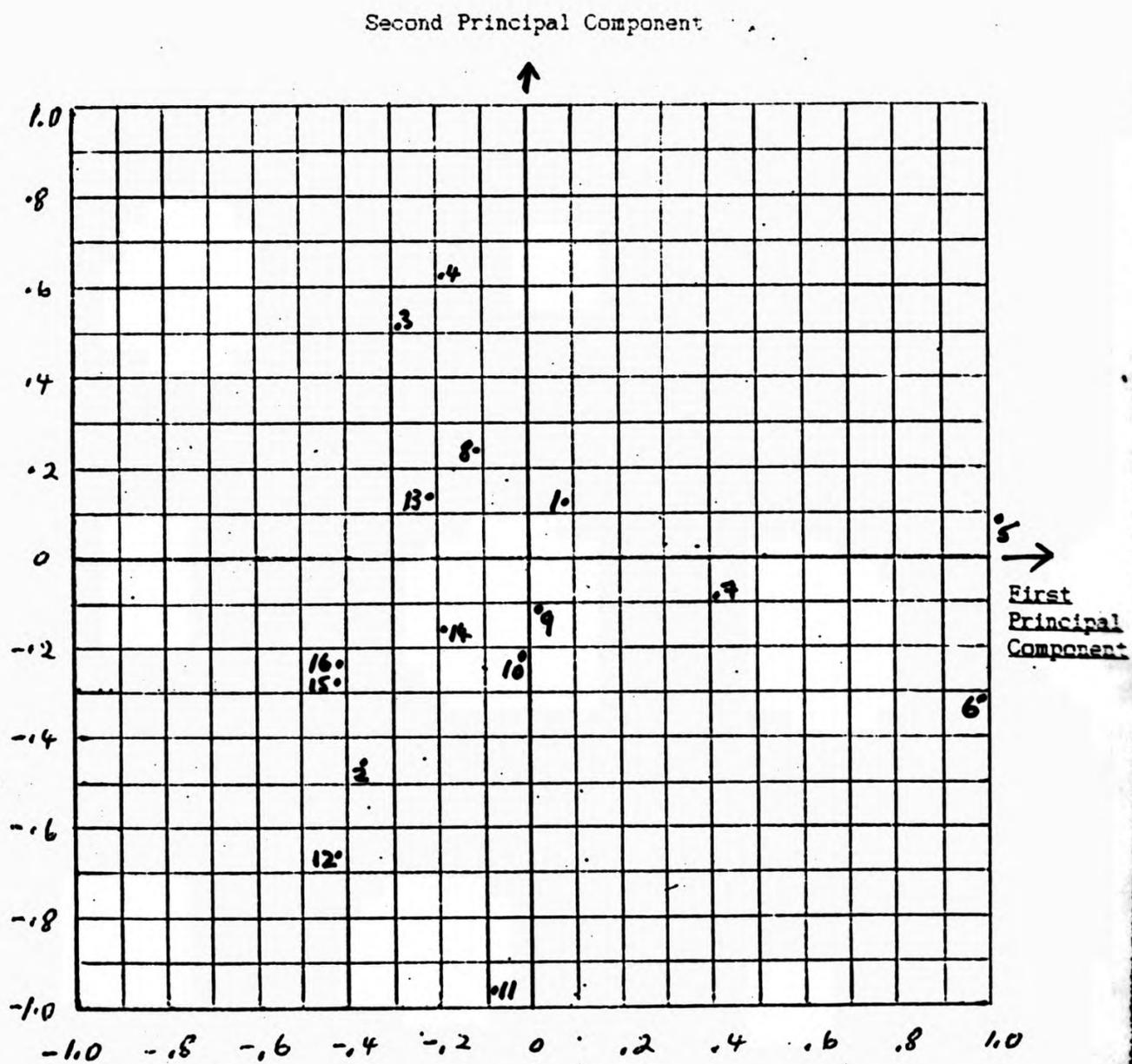
PROJECTIONS FOR ELEMENTS

ELEMENT	H	V	R
1	177.21	17.59	0.82
2	167.10	11.10	0.72

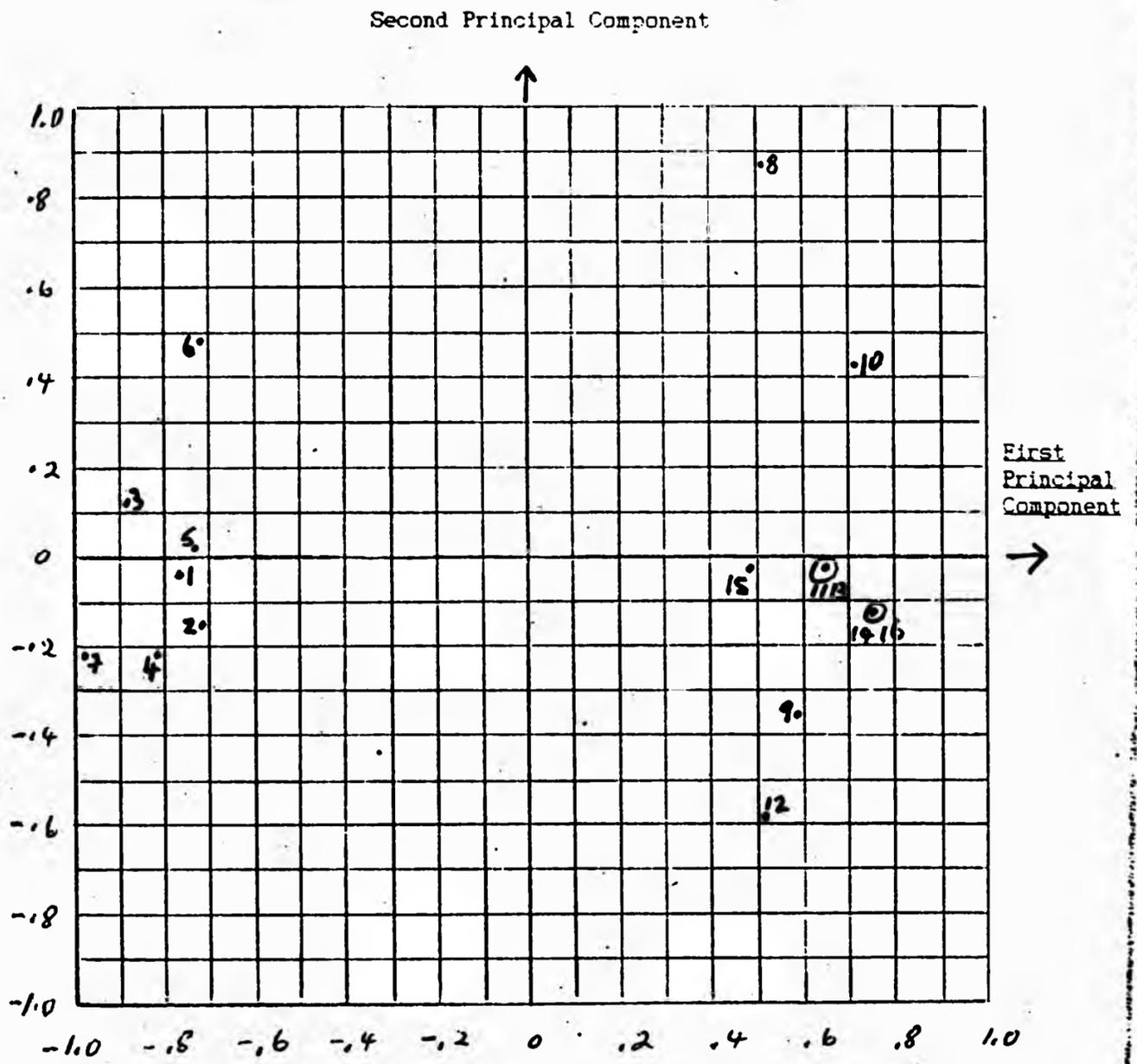
COMPONENT 2			COMPONENT 3		
VECTOR	LOADING	RESIDUAL	VECTOR	LOADING	RESIDUAL
0.0236	0.0374	0.3704	0.1977	0.2453	0.3102
0.1233	0.1608	0.6612	0.3532	0.4383	0.4691
-0.1001	-0.1307	0.5319	-0.2378	-0.2952	0.4446
0.1642	0.2142	0.5282	0.2861	0.3551	0.4021
-0.0271	-0.0334	0.4436	-0.1353	-0.1697	0.4148
-0.3797	-0.4955	0.6317	-0.2575	-0.3135	0.5296
0.1655	0.2172	0.1903	-0.0798	-0.0990	0.1805
-0.6602	-0.3614	0.1907	-0.0910	-0.1129	0.1779
0.2733	0.3631	0.5028	-0.3587	-0.4452	0.3046
-0.2850	-0.3716	0.2741	0.0596	0.0740	0.2686
0.0323	0.0421	0.1021	0.0713	0.0835	0.0943
0.3966	0.5175	0.6278	-0.5395	-0.5695	0.1796
0.0323	0.0421	0.1021	0.0713	0.0895	0.0943
0.0932	0.1231	0.3703	0.2753	0.3429	0.2528
0.0336	0.0439	0.2793	0.1093	0.1357	0.2609
0.0962	0.1251	0.3703	0.2753	0.3429	0.2528
-0.0137	-0.0258	0.4213	0.0042	0.0053	0.4218
-0.5476	-0.7145	0.3803	-0.0191	-0.0237	0.3797
0.3910	0.5102	0.5546	-0.5471	-0.6790	0.1936
0.3102	0.4047	0.5406	-0.0947	-0.1175	0.5268
0.1138	0.1435	0.8212	0.3366	0.4177	0.6467
0.0232	0.0303	0.7213	-0.5439	-0.5749	0.2657
0.2623	0.3423	0.0861	-0.0137	-0.0171	0.0858
-0.0746	-0.0974	0.2416	-0.0670	-0.0832	0.2347
-0.0505	-0.0658	0.4137	0.2333	0.2957	0.3252
0.0094	0.0123	0.0176	-0.0508	-0.0631	0.0136
0.0094	0.0123	0.0176	-0.0508	-0.0631	0.0136
-0.0035	-0.0046	0.1927	-0.0945	-0.1172	0.1790
-0.5597	-0.7302	0.4053	-0.3026	-0.3755	0.2653
-0.1406	-0.1835	0.1857	-0.1592	-0.1976	0.1457
0.1581	0.2053	0.3335	0.2257	0.2801	0.2600
-0.0453	-0.0591	0.7376	0.1971	0.2446	0.5778

AS. Output Used from INGRID 72 with the First Grid

AS. The Plot of the Elements in the Construct Space - First Grid

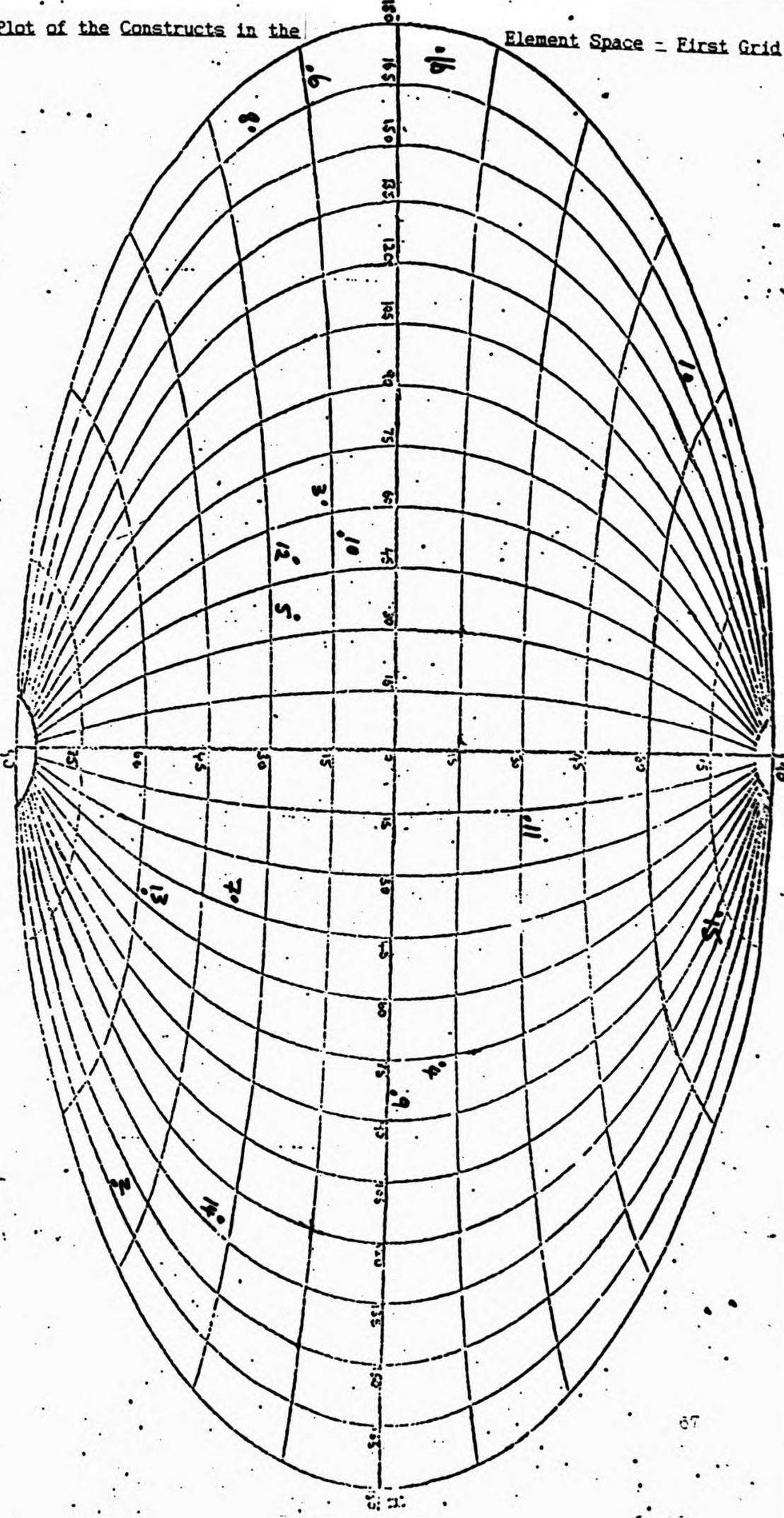


AS. The Plot of the Elements in the Construct Space - Second Grid



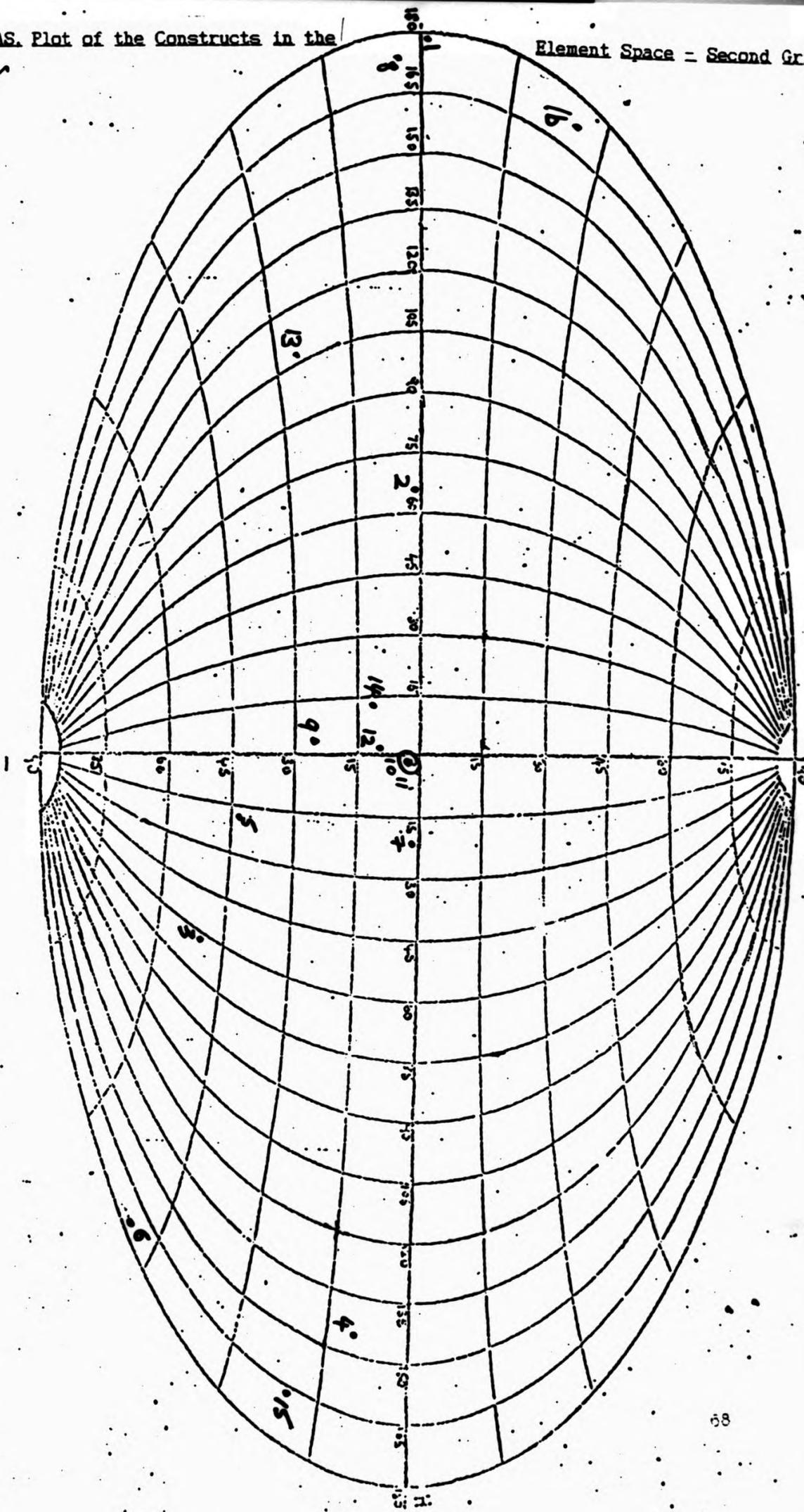
AS. Plot of the Constructs in the

Element Space - First Grid



AS. Plot of the Constructs in the

Element Space - Second Grid



Appendix VIII
The senses of the first three principal components of the participants
from the Printing Co-op

First grid
Printers group

Second grid

First component

- | | |
|---|--|
| BA Compare budget profit & loss with actual. | Compare actual profit & loss with budget. |
| BI My influence in the co-op. | Increased efficiency. |
| KE Co-op needs up to date cash balance & creditors influence this. | My contribution to & influence on the co-op. |
| PR Structural problems should be discussed properly before any finance. | Profit made determines the co-op's future structure. |
| XA I work a certain amount of hours. | Applied to me immediately-hours worked. |

Second component

- | | |
|---|---|
| BA Self & hours worked directly influence production. | Without a profit budget for capital expenditure difficult. |
| BI Co-op & its employees connected by job. | Members working hard. |
| KE Hours I & others contribute to Co-op affects trading figures. | Debtors & creditors affect balance sheet & net profit. |
| PR Debtors & creditors will influence the end figures. | Figures won't balance without full payment. |
| XA Monthly meeting is time when actual figures for trading, profit etc., are presented. | Structural problems are usually arrived at through the employees. |

Third component

- | | |
|---|---|
| BA Never enough time to work & study financial information. | Time spent affects profitability of work. |
| BI Profit making. | Sort out problems. |
| KE Debtors & creditors affect profit of the Co-op. | (No written construct). |
| PR As I influence. | Update on the financial situation of the Co-op. |
| XA Net profit is what is budgeted & hoped for. | Debtors are a structural problem of the Co-op. |

First grid

The Rest group

First component

- AR Employees could have influence over Co-op problems.
- LY Keep control of creditors balances.
- NO Compare budget & actual profit & loss can see how well business doing.

PE Debtors & creditors are crucial elements in the profit & loss account.

RE Financial facts.

Second component

AR Financial position of the Co-op.

LY My understanding the layout of accounts.

NO How well the Co-op is doing determines the capital budget.

PE Budget figures need the involvement of the full Co-op.

RE Financial information related to planning.

Third component

AR Hours I worked.

LY Capital expenditure affects profits.

NO As I influence.

PE Setting a budget involves time.

RE My influence.

Second grid

I have power over.

Hours affect profit & loss.

Hours worked affects performance reflected in the profit & loss & will influence my future predictions

If debtors control out of hand could reflect structural problems.

Part of the balance sheet.

Time to study financial information gives an idea of the capital budget.

I have power over.

Capital budget may not truly reflect the work of the company.

I have power over.

I have power over.

Number of hours worked affects profit & loss.

Important to discuss figures at meetings.

Long hours do not allow time to study, interpret and discuss financial information.

Subject to stress, involvement and understaffing.

Co-op meeting controls budgets and problems.

First grid

Trained group

First component

- AS I do not have influence & power over.
- BL Financial information.
- HA Co-op needs profits to exist.
- MA Figures need circulating before monthly meeting.
- TO Balance sheet shows expenditure and net profit.

Second component

- AS Exist.
- BL Time is one of the problems.
- HA As I influence.
- MA Creditors payment never been a problem.
- TO You spend money according to what you have.

Third component

- AS Tired.
- BL Figures can't be added in yet.
- HA Expansion creates large structural problems.
- MA Paper and people.
- TO Members & employees have a say in how the money is spent.

Second grid

- Rather creditors than debtors.
- Information needed.
- Good planning results in profit.
- Essential financial information.
- Balance sheet contains profit, debtors & creditors, & these can distort it.
- I lack time to study & understand the accounts.
- Need for up to date balance.
- The future of the Co-op interlinks with those who work in it.
- Administration staff claim problems in keeping on top of financial reporting.
- Hours worked, Co-op meeting & time to study information should be related, but are not.
- I influence the capital purchases which influence the net profit.
- Time for anything is a problem.
- Good financial information is important.
- As I influence.
- Hours worked should relate to profit or loss.

DX

170590