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TEACHER INTERACTION NETWORKS AND SYSTEM MAINTENANCE

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TABLE OF CONTENTS

	<u>Page</u>
Chapter I THE RESEARCH PROBLEM	
Theoretical Considerations	1
Teacher Satisfaction in an Organisational Context	4
The Scope of the Present Research	9
Chapter II THE REVIEW OF RELATED LITERATURE	
A. Job Satisfaction	
1. Studies on Job Satisfaction in General	12
2. Job Satisfaction in Teaching	16
3. Implications of Job Satisfaction	21
B. Organisations and Staff Interaction Networks	
1. Staff Behaviour in Organisations: Early Studies	23
2. Staff Behaviour in Organisations: Cybernetics	27
3. Antecedents and Consequents of Network Centrality	33
4. Summary	38
C. School Staff Interaction	39
Chapter III THE THEORETICAL MODEL	
A. Staff Interaction Networks: Towards a Theoretical Model	
1. A Conceptualisation of Staff Interaction Networks	45
2. Towards a Theory of Net Centrality	50

	<u>Page</u>
B. A Theory of Job Satisfaction and Staff Retention	56
1. A Theory of Prestige Satisfaction	57
2. Centrality, Satisfaction and Retention	61
 Chapter IV METHODOLOGY	
A. Instrumentation: The Job Satisfaction Scale	64
1. The Theoretical Basis	64
2. The Research Instrument	67
B. Instrumentation: Interaction Nets	
1. The Measure	77
2. Interaction Net Analysis	80
3. Reliability and Validity	83
C. Population	86
D. Data Collection	88
E. Analyses	89
 Chapter V FINDINGS	
A. Zero Order Associations	93
B. Empirical Models of Interaction Nets	96
1. Subject Net 1	98
2. Administration Net 2	101
3. Extra-curricular Net 3	103
4. Informal In-school Net 4	105
5. Informal Out of School Net 5	109
6. Summary	111

	<u>Page</u>
C. Empirical Models of System Maintenance:	
Job Satisfaction and Job Retention	112
1. Job Satisfaction and Retention: Net 1	113
2. Job Satisfaction and Retention: Nets2-5	118
3. Job Satisfaction and Retention: Overall Net Centrality	124
4. Summary	128
 Chapter VI SUMMARY AND CONCLUSIONS	 129
 Principal Findings	 133
1. Job Satisfaction Scale	133
2. Network Centrality	134
3. System Maintenance	135
 Theoretical and Empirical Implications	 137
 Conclusion	 141
 Appendix 1 The Questionnaire	 142
Appendix 2 Fully Defined Path Models	151
References	157

Theoretical Considerations

Since the study of Hoppock in 1935 a great deal of attention has been shown in the analysis of job satisfaction of workers and personnel in a variety of situations within organisations. This concern has important theoretical and pragmatic considerations.

Theoretically, satisfaction is linked to the more general problem of explaining social system persistence and existence. The sociologist is interested to address himself to at least two questions: what were the conditions under which the social system emerged; and under what conditions is it maintained as a viable system? It is the latter question which has particularly concerned the functionalist tradition for the last century. The functionalists - from Durkheim to Parsons - applied the analogy of biological organisations to their explanation of social phenomena. They maintained that even as the biological system has a certain degree of functional interdependence and responsiveness to the external environment so too the social system can be seen as generating structure in response to certain functional problems. They argued, at least implicitly, that the social system was more or less functionally analogous to a biological organism. However there are severe limitations to this argument. Nagel (1961) has argued that any functional analysis must satisfy five criteria: system boundaries are to be specified; the embedding environment must be isolated; the system elements must be specified; the necessary conditions or the system requirements must be understood; and finally a goal state or criterion needs to be established. In biological organisms these conditions are

relatively easily met. The organism is clearly specifiable. Organisms for the most part have clearly clearly designated states which either are or are not maintained. In most cases therefore it is possible to specify with a high degree of accuracy certain components of the organism and its various states. "In consequence, since the system and the state can be clearly defined in biology, it is intelligible to ask, and seek an answer by way of experimental enquiry, whether and by what mechanisms, System S is maintained in State G".

These comments raise the question that has been with sociology since Durkheim and anthropology since Malinowski and Radcliffe-Browne. Is the biological model appropriate to sociological analysis? The answer is in the negative. The reasons include the ex post facto nature of much functional analysis where the existence of an item is taken to indicate its functional necessity; in social systems it is very much more difficult to establish functional requirements; criteria for system maintenance are also evasive (although this is a problem more for societal than organisational analysis). The latter problem also contributes to the inappropriateness of concepts such as equilibrium and homeostasis when applied to social systems. Both of these concepts are based on the assumption that a social system cannot change its structure. Biological organisms have a set genetic code which sets certain limits on the activity of the organism and hence rigidly restricts the possibilities of adaptation. The maintenance of such a system is fixed so that any disturbance will be sufficient to mobilise certain aspects of the organism to return it to its previous state of well being. This is clearly not applicable to social systems. In the first place it makes little sense to think of a dynamic changing system such as a social system returning to a particular state

even if it could. In the second place, social systems can change both their criterion states and functions (within certain broad limits). In this respect the social system can be highly adaptive, is usually negentropic and there is no rigid prescription of structural limitations.

These comments are intimately related to a further limitation of the biological model - a limitation central to the theoretical focus of the present study. The social scientist, unlike his biologist colleague, cannot take the maintenance of the system for granted. One major difference between biological and social systems is that the latter depends on the volitions of the actors (or elements) within the system. It cannot be assumed that the system will function adequately and will automatically satisfy certain requisites. There is no social instinct system. Failure to recognise the latter inevitably leads a theorist like Durkheim into the fallacy of the teleology of the system. One great failure then of the biological model has been to distract the theorist away from asking why actors behave as they do. A satisfactory theory must not only give consideration to emergent properties of the system, but to the reason why the actors in the system act in such a way that the system is maintained.

When this theoretical observation is related to the school or any other organisation it can be seen that a theory of the persistence of the organisation is not only contingent on the adequate functioning of intra-organisational subsystems but on the teleology of the actors within them. It is with respect to this problem which prompted Homan's famous critique of functionalism. Despite many weaknesses in his argument, Homans does argue that at base a theory of any social system is contingent on an adequate theory of actor motivation. It is not only necessary to know why the system (or organisation 'acts' as it does), but is also necessary (though not sufficient) to know why the actors act as

they do.

Job satisfaction is integrally related to the explanation of motivation for it can be argued that satisfaction both results from and is a form of motivation strategic to continued actor involvement in the social system. It is therefore maintained that a good theory of a social system depends on a satisfactory theory of worker motivation. If it can be shown that worker satisfaction depends on a particular set of conditions being satisfied, then it may be partially evident why an actor is motivated to continue in or withdraw from an organisation. Theoretically, then, job satisfaction (and the organisational conditions which contribute to it) is concerned with one of the most fundamental matters in organisation theory in particular and social theory in general.

By the same token it may be also evident why studies of job satisfaction are of pragmatic interest. The conditions which lead to the understanding of why individuals are motivated to stay or withdraw from an activity (such as teaching) are also sufficient to enable the executive or the employer to know why and under what conditions he can retain staff and maintain a viable organisation. Indeed he can also gauge how well the present system is providing sufficient motivation for the continued (active) participation of its members.

Teacher Satisfaction in an Organisational Context.

Despite the above argument very little attention has been given to the school as an organisation and those conditions which might contribute or detract from system persistence. Banks (1968) has maintained that the sociological analysis of the school is in its infancy and Bidwell (1965) asserted that no theories of the school as an organisation had been developed. Yet it cannot be assumed that the school functions in an identical manner

to other organisations where theoretical and empirical study is more advanced. Hornstein, Callahan, Fisch and Benedict (1968) follow Miles by arguing that a school is different in at least three ways to non-people processing organisations. Firstly, it does not appear to have any clear goals by which its performance may be evaluated. It is not known whether its success should be gauged by the number of its graduates who enter university, who are satisfied, or who get the jobs they want. Secondly, teachers perform their tasks by and large out of the vision of their peers and supervisors. Moreover evaluation of their teaching and organisational ability is infrequent. Thirdly, teachers have a good deal of autonomy and freedom in the pursuance of their duties. They are able to exercise a good deal of discretion in the subject matter they teach and in the means they choose to teach it. One other important difference between the school and other organisations relates to research activities. The field of organisational research in general is vast but the majority of such studies have either focussed on clients outside the organisation or the staff within it. The school on the other hand not only has staff within it, but part of its clientele is also contained in the organisation. Sociological analysis of the social system of the school therefore can be concerned not only with staff but with pupils. Indeed inspection of Figure 1:1 indicates that analyses of schools and the interactive behaviour within them can focus on nine possible areas.

The cells off the diagonal represent the possibility of giving attention to interactive relations between the major groups in the school - the staff, the ancillary staff, and the pupils. But there are also research possibilities on the nature of interactive relationships within the groupings (those cells on the diagonal). However the focus of attention in earlier research has not been spread evenly throughout these areas. Of all the nine possible areas of focus

MAJOR SOCIAL GROUPS WITHIN THE SCHOOL

	Teaching staff	Ancillary staff	Pupils
Teaching staff			
Ancillary staff			
Pupils			

Figure 1:1 Potential Areas of Sociological Focus in the School

the bulk of attention has been paid to pupil relations (Coleman, 1961; Stinchcombe, 1958), and teacher-pupil relations. Greenberger and Sorenson (1970) state that "among many studies of the school as a social system, investigations of the student group and the values that characterise it are abundant". They concur with Bidwell (1965) in his statement that "researchers have concentrated on the student society ignoring the teacher colleague group and the modes of integration of these two components of the school's small society. We need to know what form the teacher society may take and how well integrated it tends to be..."

In respect to the preceding argument it is maintained that we cannot necessarily assume that organisations which are people processing will have the same internal structural characteristics as those which are product processing. Secondly, it is obvious that careful analytic and empirical attention is required with respect to school staff behaviour. It is necessary to know what features of the staff behaviour in the organisation contribute to the maintenance of the system as a whole.

These comments raise a series of questions. For example, it might be asked what groupings or networks characterise a school (or other organisation staff for that matter), and how such groupings are stratified. Who are the staff who are central in one or other of the nets and to what extent does

centrality in one imply centrality in another? Moreover, what are the implications of being central or marginal in one or another net? This study focusses on these questions by giving particular attention to the nature of staff interactive relations and their implications. It does so within the context of a wider goal of building an empirical model of system maintenance² using the indicators of job satisfaction and staff retention. In so doing it is intended to contribute both to our understanding of the role of staff relations in organisations and their effects on the persistence of those organisations.

While teacher satisfaction studies are to be reviewed in the following chapter, attention is drawn here to four major limitations of such studies which have stimulated the form of the present study. Firstly, studies in this field have concentrated either on the structure of job satisfaction per se (Coughlan, 1970), or on the endeavour to identify personal or positional attributes related to satisfaction or lack of it (Trusty and Sergiovanni, 1966). The studies reviewed did not attempt to develop the constellation of related variables into a theory or theoretical model, although they did perform a valuable function by pointing out variables which could be part of such a theory. A second limitation has been the mode of statistical analysis used in earlier research. While Coughlan (1970) and the Purdue Questionnaire (1969) form important exceptions, most research has either used a unitary one question measure, and/or has followed that with a series of cross-tabular analyses. However it has become clear that job satisfaction has a multi-factorial structure. And while the crosstabular analyses are valuable in the initial working of the data they do suffer from the disadvantages of most non-parametric statistics - they cannot handle many variables simultaneously (without a very large sample), they give no indication of the amount of variance accounted for in the

dependent variables, or a measure of error. In addition they often fail to use ordinal and interval level data characteristics that add to the strength of the prediction. A third disadvantage of the current literature is the absence of attention to the structural effects of the organisation on the satisfaction and retention of teachers. Although there is at least one exception to this assertion³ no linkage has been made between the theoretical demands of understanding system persistence and the practical research activities of scholars in this field. Yet it has been argued that a satisfactory theory of an organisation such as the school is contingent on the interaction of the structural effects of the institution and the volitions of the actors in it. A failure therefore to account for various organisational effects on teacher satisfaction is a failure to present some empirical evidence to supplement a wider theoretical perspective. Furthermore, neglect of attention to the satisfaction and retention effects of organisational characteristics has at least implied that job satisfaction is an education system characteristic contingent on such things as personal and professional attributes and operates despite particular institutional attributes. Finally, the bulk of job satisfaction studies have been carried out in North America. However, even as it cannot be assumed that satisfaction does not vary from one organisation to another, it cannot be assumed that North American findings hold in New Zealand. There appears, for instance, to be an important difference in the social class systems in the U.S.A. and New Zealand, and inasmuch as job satisfaction is contingent on class, it will be subject to varying national class structures. Moreover the promotion and administrative features of U.S. secondary education systems also vary from their New Zealand counterparts and it might be expected that these too will have an effect on the satisfaction structures of teachers.

In summary, this section has developed the thesis that there are important deficiencies in our understanding of staff interactive relations in organisations (and the school in particular), in our understanding of job satisfaction, and in our awareness of what implications these features of organisational theory have for the viability of this form of social system.

The Scope of the Present Research

Within the theoretical context outlined in the first section this study simultaneously addresses the issue of teacher staff interaction networks and their place in a wider theoretical model of teacher satisfaction and retention. The study has the following general characteristics.

Firstly, it develops a multi-factorial job satisfaction scale on the basis of social exchange and role set theoretical considerations, with particular note to the satisfactions a teacher derives from the members of his role set. Secondly, it analyses five staff interaction nets on the basis of information provided by staff members on their usual staff contacts on various pretexts. Together with a number of other professional and organisational attributes of teachers, the interaction nets are then built into an empirical model which endeavours to explain prestige satisfaction and job retention. In so doing the study takes advantage of recent statistical advances in the field of path analysis. Techniques which enable nominal and ordinal data to be incorporated into such models enable a very powerful technique to be made available for use with variables which are usually considered inappropriate for parametric analyses. The careful use of path analysis enables one at once to analyse who are in the centre of what nets, but also to gauge the effects of the latter while holding a number of other variables constant. Although it does have the disadvantages of any linear additive

kind statistic, it does enable an empirical test of a theoretical model together with the tracing of direct and indirect effects of any independent variable in the model.

The study has a number of limitations. Firstly, it is making use of a relatively small and homogeneous sample of secondary teachers. Considerable caution must therefore be exercised in the generalisability of the findings. A second limitation of the study is concerned with the nature of the job satisfaction measure. The latter concentrates almost exclusively on extrinsic and sociological elements of satisfaction and ignores intrinsic and more psychologically oriented variables. Again however the factorial similarity of this measure to recent measures reported in the literature (Coughlan, 1970) gives some confidence in the validity of the instrument if the purposefully biased nature of the content is kept in mind. A third limitation concerns the interaction networks. For reasons noted in Chapter IV, the analysis of these networks does not go beyond the least squares based analysis of staff members who are at the centre of nets. Fourthly, this study concerns itself only with the most powerful of the five job satisfaction factors - prestige satisfaction. It does so on the grounds that it was considered more theoretically and empirically fruitful to perform a detailed analysis on one job satisfaction criterion, than to do a superficial analysis of all five criteria by merely noting significant correlations between variables. This form of analysis (Rosenberg, 1968) which is characteristic of many studies in this and other areas may be very misleading, as at least one finding in this study indicates. Accordingly, the more intensive analysis of one criterion variable is preferred to the more superficial analysis of several. A final limitation has to do with the statistical treatment. Path analysis is a very powerful means of testing an empirical theoretical model when the causal ordering of the variables has preceded the quantification of the

model. It is not to be taken as a means for deciding on the ordering of variables. In addition it does not handle interaction effects, and the models developed in this study are recursive.

In summary, this study is concerned with: firstly, the conditions under which actors in social systems such as an organisation are satisfied and retained; secondly, it focusses on the structure of teacher interaction networks and their implications for system maintenance; and thirdly, it relates these and other variables into a theoretical model, which is in turn the basis for a mathematical model for the explanation of centrality and system maintenance. This study is therefore submitted as a theoretical contribution to the persistence of organisational social systems, and as a pragmatic contribution to the problem of staff retention.

Footnotes

1. C. Bidwell, 'The School as an Organisation', in Handbook of Organisations J.G. March (ed), Rand McNally, 1965
2. 'System maintenance' is used to refer principally to the education and the school as an organisation. Both job satisfaction and job retention (i.e. within teaching) will have implications for the system and the school.
3. G.S. Fraser, 'Organisational Properties and Teacher Reactions', Unpublished Ph.D. dissertation, University of Missouri at Columbia, 1967