EDITORIAL

Dans ce numéro du *BMS*, nous publions trois articles de recherche et un dernier article "Recherches en cours" sur la session "Les nouvelles technologies en sociologie" du Congrès mondial de sociologie de 1998 à Montréal. Dans "Structures fermées, structures ouvertes, structures stables - Etude de la forme structurale et de la stabilité temporelle des réseaux sociaux informels dans des organisations", Rafael Wittek (Université de Groningen, Pays-Bas), étudie la forme et la stabilité structurelles des réseaux sociaux informels dans des organisations avec un test empirique exploratoire, qui montre que la stabilité du réseau étudié est renforcée par la présence des intermédiaires tiers.

Dans "Facteurs socio-culturels et présentation de soi dans différents contextes d'enquête - Analyse d'un exemple de discordance", Anne Laporte (Institut de Veille Sanitaire, Saint Maurice, France) étudie l'effet de la technique d'enquête sur les réponses individuelles en comparant les réponses à un questionnaire auto-administré et à un entretien face-à-face sur les modes de vie et les réactions au SIDA des hommes homosexuels.

Dans "Une évaluation d'une typologie de répondants avec un modèle logit multiniveau et multinomial", Jan Pickery et Geert Loosveldt (Université de Louvain, Belgique) examine une typologie (basée sur les rapports d'interviewers) des répondants à une enquête, et montre qu'une variabilité significative entre interviewers existe et remet en question la typologie des répondants.

Dans "Nouvelles technologies dans la recherche sociologique - Expérience on-line du BMS, le questionnaire par Internet de l'AIS et les faibles en l'informatique", Karl M. van Meter (LASMAS, Paris, France) présente les résultats et les problèmes d'une enquête par questionnaire sur l'Internet.

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CLOSED STRUCTURES, OPEN STRUCTURES, STABLE STRUCTURES: EXPLAINING STRUCTURAL FORM AND TEMPORAL STABILITY OF INFORMAL SOCIAL NETWORKS IN ORGANIZATIONS

by

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Résumé. Structures fermées, structures ouvertes, structures stables - Etude de la forme structurale et de la stabilité temporelle des réseaux sociaux informels dans des organisations. Les hypothèses qui concernent la forme structurelle et la stabilité des réseaux sociaux informels dans des organisations viennent de la théorie des organisations et de l'analyse dynamique des réseaux. Un test empirique exploratoire de ces hypothèses est fait avec la ré-analyse d'une étude longitudinale d'un réseau de relations de confiance/méfiance réalisée dans un grand magasin aux Etats-Unis pendant les années 1950. On explore deux questions. D'abord, on montre que le degré de fermeture du réseau est une fonction des arrangements de partage tels qu'ils émergent des interdépendances fonctionnelles dans les groupes de travail. On montre aussi que les effets vont en partie contre les processus anticipés par le modèle commun d'équilibre structurel. Ensuite, on examine pourquoi certaines structures informelles de réseau restent stables, même sous des conditions: où leur dissolution est anticipée; où des encouragements formels favorisent fortement la compétition au lieu de la coopération; et où les structures informelles au niveau de choix individuels reflètent un type d'échanges limités au lieu d'échanges généralisés. On démontre que la stabilité du réseau étudié accroit significativement avec la présence d'intermédiaires tiers dans la structure. Les résultats soulignent l'importance des tiers occupant le rôle d'intermédiaires pour la stabilité des réseaux sociaux informels et fournit un nouveau point de vue sur la supposée fragilité des échanges limités prévue par la théorie des échanges. **Réseaux intraorganisationnels, Théorie des échanges, Analyse dynamique des réseaux.**

Abstract. Hypotheses that address the structural form and stability of informal social networks in organizations are derived from organization theory and dynamic network analysis. An exploratory empirical test of these hypotheses is carried out by reanalyzing a longitudinal network study of trust and distrust relations conducted in a retail sales store in the U.S. during the 1950s. Two problems are addressed. First, it is argued that degree of network closure is a function of sharing arrangements as they emerge from the functional interdependencies in work groups. It is shown that the effects, in part, counteract the processes that would be expected under the more common model of structural balance. Second, it is asked why certain informal network structures remain stable even under conditions where one would expect them to be most prone to dissolution: where the formal incentive structure strongly favors competition rather than cooperation, and where the informal structure, at the level of individual choices, reflects a pattern of restricted rather than generalized exchange. It is demonstrated that the stability of the network under study is significantly enhanced through the presence of a position of third-party intermediaries within the role structure of the system. The results highlight the importance of third parties, occupying the role of intermediaries for the stability of informal social networks and put in perspective the exchange theoretical assumption of the fragile nature of restricted exchange. **Intraorganizational Networks, Exchange Theory, Dynamic Network Analysis.**

INTRODUCTION

Since the discovery of the "informal" dimension of organizations there is wide agreement that interpersonal social networks are an important factor in organizational life (Savoie, 1993). Consequently, organizational scholars have long since invested considerable energy in describing these structures and assessing their consequences for the functioning of organizations and the performance of their members. Of the many different structural aspects that have been addressed so far in this literature, there is especially one dimension which has attracted the theoretical interest of researchers in the field: differences in degree of network closure or connectedness. In its simplest form, a network consisting of three nodes is closed if each node is tied to every other node. It is open if at least one of these ties is missing. How far-reaching the implications of this difference between open and closed structures can be was recently brought to the attention of a wider audience by social capital theorists like Coleman (1990) and Burt (1992). For example, Burt (1992) could show that managers, who are embedded in a social network that is characterized by structural holes, have more opportunities for entrepreneurial activities in their firm. This ultimately makes them economically better-off and more successful than their colleagues with closed network structures. On the other hand, Coleman (1990) and others (Ellickson, 1990) have demonstrated that network closure has considerable advantages for the creation and maintenance of effective norms in small groups. While both lines of thought might disagree on some points, both clearly demonstrated, without doubt, that varying degrees of network closure are an important feature of informal networks.

Given the importance of this particular dimension of informal structures for organizational life, two other questions immediately become salient. First, what are the determinants of open vs. closed network structures (Burt, Janotta and Mahoney, 1997)? And second, what are the factors that determine the stability or dissolution of these structures? Since these two questions have not yet received much attention, let alone a satisfying and empirically grounded answer, they will form the focus of the present article.

The article is structured as follows. Since the empirical part consists of a reanalysis of an older research, I will first briefly describe the original study. The second section presents hypotheses and an illustrative empirical test concerning the potential determinants of close-knit or open structures. Here, I argue that besides the well known *principles of balancing and homophily*, it is the type of *functional sharing arrangements* that will have a crucial impact on the degree of network closure. The third section elaborates on the

conditions for network stability. Here, I argue that enduring structures are at least partly due to the presence of a specific *role of third-party intermediaries*. I will conclude with some implications of the findings for future research.

INFORMAL NETWORKS IN A RETAIL SALES STORE

The empirical material for the present reanalysis is taken from an ethnographic study conducted by Cecil French (1963) in a large furniture store in the U.S. from 1954 to 1957. This is also one of the first longitudinal network studies ever carried out in a real-life organizational setting. French's research was explicitly directed towards the investigation of stability of networks (1963:147). But since the major tools of modern network analysis were not available at the time, French's study remained at a descriptive level. These descriptions, however, are very rich in detail, especially regarding organizational context. In addition, this context has some very particular qualities which make it optimally suited for the present purpose of investigating how functional interdependencies interact with structural and cognitive factors in shaping network structure and stability. Of course, reanalyses of this kind generate some problems of their own, especially regarding data quality. But given the scarcity of empirical research on network dynamics in organizations (Nohria, 1992), and the immense diversity of organizational contexts, it is certainly worthwhile to submit French's material to a new exploratory analysis.

French traces the development of "friendship" choices among a group of 25 salesmen over a half year period, providing information on the total friendship network for three points in time, with additional information on the patterns of rejection at the third point in time. Twelve salesmen were Jews. The group formed one department (furniture) within the store, where a total of 65 salesmen were employed. The networks are reproduced in figures 1 to 4.

For all three points in time, salesmen were asked to name those two or three persons they liked best. At t_1 (October 1954), the network consisted of 25 members. When the second network was recorded (December 1954), the person which received the highest number of choices at t_1 (Brim) had been transferred to a branch store in a nearby city for a period of two months. Nevertheless, salesmen were allowed to choose him at t_2. At t_3 (March 1955), four salesmen had left the group (Simmons, Callahan, Morgan and Lerner), while one new colleague had joined them (Beard). At t_3, salesmen were also asked to indicate those colleagues they liked least, resulting in 9 persons receiving a total of 29 negative choices.

The data and subsequent analysis have four major limitations. First, the time period between the first and the third measurement covers only 6 months, reducing the likelihood of change. Second, there is turnover during the period of observation, with four actors permanently leaving, one actor temporarily leaving, and one new actor joining the group. The present analysis will not address this type of change in the network, though it would certainly be important to ask why certain members left in the first place. Likewise, this analysis will also neglect the potential effects of the temporal removal of the most central actor. Third, information on homophily is given only on the aggregate level for t_1, whereas negative choices are given only for t_3. Fourth, the number of choices actors could made was restricted to two or three. Nevertheless, French's account is rich enough for a first exploratory analysis of the substantial questions addressed here. Besides that, the reanalysis becomes especially interesting from the point of view of organization theory, due to some very particular characteristics of the organizational setting.

EXPLAINING THE FORM OF INFORMAL NETWORKS IN ORGANIZATIONS

Theoretical Background

Up until now, most of the attempts to explain the structural form of informal social networks were made in the context of dynamic network analysis. Scholars in this tradition consider structural social and cognitive factors like balancing and homophily as the major determinants of network form. On the other hand, although organizational scholars have repeatedly hinted at the impact of formal control systems, work flow characteristics and functional interdependencies, these aspects have yet to be reincorporated into research on network processes (Lindenberg, 1997). In what follows, I will first discuss the arguments as they were developed by organization scholars. They will be followed by a brief summary of the propositions from dynamic network analysis.

The Organizational Perspective

Organization theorists identified two core conditions pertaining to the formal structure of organizations that are regarded as being conducive for closed trust networks. The first one refers to the system of formal control itself. Strong reliance on bureaucratic

procedures and close supervision have been found to negatively affect the emergence of close interpersonal relationships and solidarity on the shop floor (Hodson *et al.*, 1993:407). Closure is more likely to emerge where coordination is achieved via lateral communication rather than through the use of formal hierarchy, authority and the reliance on rules and plans (Burns and Stalker, 1961; Van de Ven *et al.*, 1976). The second condition concerns work flow characteristics and the pattern of functional interdependencies linking the members of the organization. The most thorough analysis of this argument was done in the context of sharing group theory (Lindenberg, 1982). According to sharing group theory, interpersonal trust relationships (solidarity relationships, in the terminology of sharing group theory) will emerge in so-called sharing groups (Lindenberg, 1982). These are settings where actors join in the production and/or consumption of a good, which implies that they can exert *both* negative and positive externalities on each other. Externalities are harmful or beneficial side effects of actions. Two types of trust relationships are distinguished. They differ with regard to how far individual actors are "allowed" to profit from gains (Ligthart, 1995). Within relations that are framed in terms of strong solidarity, a premium is put on redistribution and mutual sharing. Any activities that would emphasize individual accounts within the group are discouraged. The underlying assumptions closely resemble the concept of generalized exchange. On the other hand, within relationships that are framed in terms of weak solidarity, actors will keep bilateral accounts. As is the case in forms of restricted exchange, actors can claim the share that is calibrated to their contribution to a common good and are allowed to keep bilateral accounts. In both types of solidarity, actors are expected to take into consideration actual or potential losses of their transaction partners. Strong solidarity will be found in settings where the stakes are high and the activities of every individual member have a high damage potential for all the other members in the group. Where relatively little is shared, weak solidarity will govern relationships between actors. This will be the case either when the activities of one person have only slight repercussions for the rest of the group or affect only a small subset of the group; e.g., one other actor.

The two types of solidarity differ in their *consequences* for the resulting network structure. Strong solidarity is a group concept and closely resembles other efforts to reintroduce the "group as a group" (Markovsky and Lawler, 1994) in the structural modelling of solidarity. Such group level conceptualizations of solidarity predict that the network of trust is likely to be densely knit (Ellickson, 1991). On the other hand, one consequence of weak solidarity for the emergent network structure will be a lower amount of positively closed triads (three persons who all have positive ties to each other), because there is no efficiency gain for being the friend of a friend.

Thus, the sharing group hypothesis implies that network closure will be most likely in groups who define their relationships in terms of strong solidarity. This will be the case where the members of work groups are highly functionally interdependent; i.e., where the actions of a single individual can have repercussions for all members of the group. On the other hand, norms of weak solidarity will create open networks. This will be the case where the negative side effects of individual actions affect only one other actor at a time.

The Network Perspective

Network scholars have emphasized two factors responsible for network closure: homophily and balancing. The homophily hypothesis states that the more characteristics actors have in common, the more likely they will develop a relationship (Blau, 1977; Festinger *et al.*, 1950; Lazarsfeld and Merton, 1954). The assumption that similarity breeds interpersonal relationships was also used by researchers of organizational "climates" (Moran and Volkwein, 1992) and "corporate cultures" who see closed networks of trust as a function of shared values and socio-cultural homogeneity. Likewise, it is assumed that in "organic" organizations, management takes an active part in stimulating an atmosphere of trust, both vertically and horizontally. Especially in situations where employees exhibit a considerable amount of homogeneity, with regard to shared beliefs and more visible charactersitics like ethnic origin or sex, relatively slight differences in physical proximity can become crucial predictors for the formation of ties. Actors belonging to the same work unit usually score high on similarity and proximity, resulting in a tendency toward network closure among members of the same work unit, rather than between work units (Krackhardt and Stern, 1988).

The implications of homophily for network closure have been formalized in the so-called similarity/attraction hypothesis (Mazur, 1971). It states that "friends are likely to agree, and unlikely to disagree; close friends are very likely to agree, and very unlikely to disagree" on the choice of a third person. Here, the level of analysis switches from the level of the dyad to the level of the triad, thus calling for more complex structural models. This is the starting point of dynamic network analysis and balance theory, which tries to predict the further development of a social structure from an existing one (Zeggelink, 1993). Four types of processes are predicted by dynamic balance theory: (a) the friends of my friends will become my friends; (b) the friend of my enemy will become my enemy; (c) the enemy of my friend will become my enemy; (d) the enemy of my enemy will become my friend. An implicit assumption in dynamic balance theory is that all four processes take place simultaneously.

In sum, network research stresses the importance of the cognitive and social structural interdependencies of work groups, whereas organization scholars emphasize formal control and functional interdependencies. Furthermore, the processes, as they are specified by sharing group theory, on the one hand, and the balancing and homophily hypothesis, on the other, point in opposite directions. Sharing group theory argues that actors will choose others on the basis of their functional interdependencies, rather than on the basis of similarity of some other attribute or balance consideration. Sharing group theory argues that transitive closure will take place only where social relationships are defined in terms of strong solidarity, whereas, under conditions of weak solidarity, agreement between trusting dyads, with regard to the choice of third parties, will be considerably lower than expected under a balance model.

Empirical Illustration

A closer examination of the course of business in the furniture department reveals a heavy reliance on hierarchical control and the application of rules. Every time a customer entered the store, he or she was approached by the salesman of the furniture department in position one, standing directly at the entrance. In the course of the day, this position was filled on a rotating basis, according to the order of arrival in the morning. The client was then accompanied by this salesman to the furniture department in the first floor. The furniture department, in turn, consisted of different sections (living rooms, dining rooms, etc.). The first salesman was allowed to "follow through" with the client from one section of the store to another only if he succeeded in selling an item in the first section. If this was not the case, he had to turn over the client to another salesman. In contrast to the first one, the second salesman was allowed to "walk the client" through the whole store, even if the client did not buy anything in his section. The second salesman was appointed by the assistant sales manager among the rest of the salesmen who were currently not busy selling, and sat waiting for their next turn in the common meeting room. Every activity of the salesmen (attempted sale, completed sale, "turn over" and "walked sale") had to be noted on a tag and was delivered to the assistant sales manager. Through hidden electronic buttons which activated a buzz on his desk each time sections were crossed, he was constantly informed about every movement in the store, making it hard for salesmen to break the rules and "dodge a turn over". Thus, coordination is achieved mainly through the intervention of the assistant sales manager, the

application of rules and an elaborate technical system of surveillance.

Individual salaries were composed of a fixed weekly base payment, a three-percent commission, if individual sales exceeded a specific quota, and bonuses for individuals selling unattractive or high-profit items. The payment system resulted in a considerable divergence of wages, with individual salaries ranging from $6,000 to $10,000 per year. Besides that, *competition*, rather than trust between salesmen, was explicitly encouraged by management through frequent sales contests with free vacations in the Caribbean and luxurious dinners at management's expense as prizes. Thus, given the strong incentives of tournaments and salaries with commission (Ehrenberg and Bognanno, 1990; Peterson, 1992), the department can be characterized as a highly competitive environment with a strong emphasis on formal hierarchical control. These aspects of the formal control system are generally seen has being detrimental to the development of close informal relationships on the shop floor (Burawoy, 1979).

A different picture emerges when one examines the functional interdependencies on the horizontal level. A test of the sharing group hypothesis requires that one takes a closer look at the functional interdependencies in the group. Furniture salesmen depended on each other in so far as the failure of the first salesman to sell something means a potential benefit for the second salesman, because he gets the opportunity to "walk the client" through the store. Likewise, the success of the salesman in position one deprives the rest from earning money from a specific client. It is obvious that the crucial event in the first case is that the client is turned over to the second salesman. The tight system of technical surveillance and formal control seemed to make it hard for a salesman to get around this rule and "dodge" a turn over. However, there was another regulation, compliance to which could not be enforced through either technical or hierarchical devices. It specified that "should a customer ask for a salesman by name, this salesman was to be given the call, regardless of his place in the rotation system" (French, 1963:150). As clients seemed to ask for specific salesmen rather frequently, and individual performance created large variations in annual income, dishonest salesmen could create serious losses for their colleagues. This pattern seems to justify the characterization of the department as a sharing group (Lindenberg 1982), because through "stealing a trade" or "passing a trade" all salesmen in the department could exert both negative and positive externalities on each other. What is jointly produced is the individual chance of gain with regard to regular customers.

The consequences of "stealing" or "passing a trade" affect only one person at a time. That is, an externality does not have repercussions on the group as a whole. Given the relatively high number of regular customers each salesman has, it can further be inferred that the loss associated with a single "theft" is relatively minor. The sharing group hypothesis predicted that under this condition, norms of weak solidarity will define the relationship. French's material supports this view. He mentions six types of "shalt not" rules that are present within the furniture department (see Table 1).

He observes that most of these rules "were concerned with protecting the members of the group from the depredations of overly competitive individuals. There was complete agreement that stealing personal trade was a serious violation, and, over the four-year period, the salesmen were continually concerned with this problem" (French, 1963:150). Obviously, the rule to pass clients that ask for specific salesmen refers to the negative externality that caused the most serious losses. Its presence can be taken as an indicator of the presence of weak solidarity norms. Every salesman is entitled to make a personal profit from regular customers, as long as he does not steal another man's trade. Thus, solidarity considerations should temper opportunistic gain seeking behavior. The theory specified further that actors will allocate friendship choices according to conformity to solidarity norms, and that these effects will counteract processes of similarity/attraction and balancing.

To examine how far this motive may interfere with structural processes of balancing, a triad census was calculated for the positive choices at t_3. A number of linear combinations of the triad census were computed as test statistics, the weighting vectors expressing the similarity/attraction hypothesis (Holland and Leinhardt, 1976). The weighting vectors are based on the configurations given in the first column of Table 2. The weight of each triad is determined as the number of times that this configuration occurs in the triad. The test statistic τ is the linear combination with these weights, standardized to have mean zero and variance one for a random network (Holland and Leinhardt, 1976). In the case of weak solidarity, one would expect a lower agreement and a higher disagreement within a trust dyad, concerning the choice of third persons. This should result in an over-representation of "open" triads. This hypothesis finds limited empirical support in the data. The predictions implied by the two perspectives and the results of the tests are listed in Table 2.

Of the seven effects, four point in the direction expected on the basis of the similarity/attraction hypothesis: there is a significant tendency for actors involved in a trust relationship (whether reciprocated or not) to agree on trusting a third person. However, in

two of the configurations, the structural pattern expected from the similarity/attraction hypothesis is reversed. (a) Ego chooses two alters who are not connected through a trust relationship and this happens significantly more often than one would expect under a random model. Put differently, there is a significant tendency for actors, with the same trustor, toward *not* trusting each other. (b) Mutual trustors, who agree over not choosing a third person, are underrepresented in the data, although this tendency is not significant. Finally, there is no significant tendency of mutual trustors, who disagree over choosing a third person, toward under-representation in the population, as would be expected from the similarity/attraction hypothesis. Table 2 also shows that the patterns fluctuate through time, with three configurations measuring agreement changing sign twice from t_1 to t_3. This indicates that agreement among trustors, concerning the trustworthiness of third persons, is unstable through time.

The results indicate that the present structure contains configurations that deviate from the pattern that would be expected if it were determined solely by similarity/attraction processes. This does not mean that balancing or homophily were absent. But, as will become evident, the particular pattern of balancing and homophily present is meaningful.

As far as balancing is concerned, French counted 105 choices among the members of the department, and, to his great puzzlement, only three of these choices are directed towards salesmen outside the department. There are 56 balanced and ten unbalanced three-cycles in the network at t_3. Of the balanced cycles, 46 are composed of two negative choices and a positive one, and ten are purely positive cycles. Of the imbalanced cycles, eight are constituted by three negative choices, and two are characterized by two positive choices and a negative one. Balanced and imbalanced cycles were determined following Abell (1968). Analysis was carried out with the program RELATION, developed by Klemm (1994).

These results are revealing for two reasons. First, because the type of triad responsible for most of the imbalance represents a special case of imbalance (the enemy of my enemy is my enemy). Various authors have suggested excluding this configuration from the balance theorem. They argue that balance theory should not make predictions about the type of relations ego should have to the enemies of enemies, because this would imply the existence of negative reference groups (Schwartz, 1977:81). If this assumption is dropped, the number of imbalanced triads, in the strict sense, shrinks to one. If the structure at t_3 is regarded as the final stage of a process, it can be inferred that processes of balancing may have

contributed to shaping the structure at t_3. Second, the meaning of balance in the present system is one of common enemies rather than of common friends. That is, balanced three-cycles do *not* tend towards positive closure (friends of friends becoming friends), but towards negative closure (enemies of friends becoming enemies).

Finally, French discusses two aspects of hommphily: physical proximity and ethnic similarity. As far as physical proximity is concerned, he is puzzled precisely because he regarded physical distance to be the same for all 65 employees of the store. "Had this work group been isolated physically from all others, the phenomenon of in-group choosing would be more understandable, but as it is, one is almost forced to fall back on the notion that the symbol is as effective in erecting social barriers as mere physical proximity or distance" (French, 1963:149). On closer reading, it seems that he may have dropped this variable too hastily. During the day, furniture salesmen took turns in working on the sales floor, with three of them always being active at the same time. The rest sat together in a special waiting area on the first floor, and it seems that this zone was predominantly frequented by furniture salesmen. Although French downplays the role of proximity, it can be assumed that frequent encounters in this area during the course of the day had at least a reinforcing effect. French then tested whether Jews would prefer Jews and Non-Jews would prefer Non-Jews as friends. He discovered that this relationship was highly significant at t_1 (Phi=.45, p=.002, see Table 3), but that it completely disappeared at later stages.

With regard to the high number of ingroup choices, French suggests that another aspect of similarity, membership in the same department, was the major force behind it. In this case, it still remains unclear why the effect of similarity along ethnic lines dropped at later phases, while the effect of membership in the same department remained constant through time. Thus, although there is some empirical evidence in favor of the homophily hypothesis, it also raises new questions: why is it that the members of the department, despite their physical proximity, did develop a negatively closed rather than positively closed network structure? Why did the effect of ethnic similarity dissolve at later stages? Why did the salesmen choose their competitors as friends in the first place, rather than choosing colleagues from other departments?

In sum, the network structure is affected by sharing and by balancing processes: while positive closure takes place in those triads containing a mutual trust choice (as predicted by the balancing hypothesis), there is much more disagreement over choosing and not choosing third persons than one would expect under the similarity/attraction model (as was predicted from the

sharing-group hypothesis). The evidence presented in this section, thus, partly supports the arguments put forward in the context of the sharing-group hypothesis: members of the furniture department form a sharing group where informal relations are defined in terms of weak solidarity in response to a bilateral pattern of functional interdependency. The network is characterized by an open structure, which partly interferes with processes as they were predicted from the hommphily and balancing hypotheses.

EXPLAINING THE STABILITY OF INFORMAL NETWORKS IN ORGANIZATIONS

Theoretical Background

Hypotheses concerning the stability of networks can be classified roughly into micro-level and meso-level propositions. The first level of argumentation refers to individual choices, whereas the second addresses the stability of role structures.

The Micro Level

On the micro level, one of the effects that could be replicated with relative consistency is the so-called reciprocity effect (Hallinan, 1978). It states that mutual choices have a higher chance of remaining stable than asymmetric choices. Other micro-level arguments hint at the importance of third parties for explaining the intensity and stability of trust relationships. Exchange theory (Ekeh, 1974) and balance theory (Abell, 1968) made similar predictions about conditions that are favorable to stable social structures. Exchange theorists claim that patterns of restricted exchange, which is bilateral, tend to be less stable than the different forms of generalized exchange, all of which involve more than two persons (Ekeh 1974). Balance theory argues that change will involve moving from unbalanced three-cycles toward balanced ones. Consequently, balanced triads are predicted to show a higher stability than imbalanced three-cycles (Abell, 1968:347). More recent approaches, especially social capital arguments, made similar predictions about such third-party effects. Using the Newcomb data, Krackhardt (1996) shows that mutually closed triads -- which he calls Simmelian Ties -- are significantly more stable than other triad types. According to Coleman (1990), structures of trust containing intermediaries have a higher potential for stability than isolated dyads. Coleman distinguishes three types of intermediaries: guarantors, entrepreneurs and advisers. He claims that systems of

trust containing intermediaries of the advisor type should be the most robust, because the structure is closed and the trustor puts trust into both the intermediary and the trustee. Finally, Burt and Knez (1996) also showed that third parties will play a crucial role in influencing the maintenance or dissolution of ties among their contacts.

These triad-based approaches have proven to be a very fruitful starting point for confronting the problem of network stability. But, as some authors correctly observed, the focus on the individual choice level involves the risk of neglecting the wider structural context into which individual relationships are embedded (Lazega, 1999).

The Meso Level

These scholars urged not to restrict the study of network dynamics to the individual choice level, but to incorporate stability and change of group and role structures (von Collani, 1985; Fiksel, 1980; Schwartz, 1977). If the network is conceived of as a role structure composed of structural positions (the meso level), the role structure can have a dynamic of its own: members in a position at t_1 can end up in a different position at t_3; ties can fluctuate within a positions; positions can dissolve or merge with another; the relationship of a position with other positions can change (Schwartz, 1977:79). Thus, individual choices may change while the overall structure in which they are embedded remains stable. Up until now, hardly any effort has been made to tackle this problem, although the incorporation of the meso level might actually solve some of the puzzles that organizational scholars faced when analyzing intraorganizational social structures. The most detailed discussion of such a puzzle has recently been offered by Lazega (1999). In a very thorough and ethnographically-grounded analysis, he describes how the competitive forces, that define the micro level of relationships among the partners in an American law firm, are themselves embedded in a broader structure of generalized exchange of cooperation at the meso level. It is this larger system of network roles and positions that accounts for the maintenance of the system as a whole, stimulates performance and prevents small cliques of partners from quitting the firm to start their own business (Lazega, 1999). Thus, although intraorganizational relationships may be characterized by competition and sparse structures at the micro level, the very embeddedness of these relationships, in a wider context of roles and patterns of exchange, can contribute to the maintenance of these inherently unstable relationships.

In sum, based on these observations, it could be fruitful to investigate to what degree network positions influence the stability and change of informal networks. Building on the findings of Lazega (1999), exchange theory (Ekeh, 1974) and Coleman's (1990) analysis of the link between different types of intermediaries and network stability, it can be hypothesized that role structures representing a pattern of generalized exchange will be more stable than structures of balanced exchange. More specifically, it can be argued that the presence of a third-party role of the "advisor" type will especially have a significant effect on the stability of the network structure.

Elsewhere, we have developed the question of reciprocity and balancing, at the micro level, and role structure and third parties, at the meso level (Wittek, 1997 & 1999).

To sum up, although the formal structure of coordination and control is dominated by elements that discourage the formation of closed network structures, structural forces both at the micro and the group level seemed to have a strong impact on the stability of the network. Trustees, intermediaries and outcasts exhibit an increasing tendency to choose other actors who are structurally similar to themselves, indicating that trust choices may be partially determined by group-level properties of the network. The temporal stability of choices between positions is determined by the relationship of the trustors to the intermediaries. What is perhaps the most revealing aspect of this result is that trustors tend to *avoid* choosing trustors, but allocate their trust to intermediaries and trustees who are also regarded as trustworthy by intermediaries.

CONCLUSION

The purpose of this contribution was to address two fairly underdeveloped areas of network research in organizations: identifying factors that account for different degrees of network closure and stability. Drawing on recent developments in sharing-group theory, it was argued that the structure of informal networks is contingent upon the functional interdependencies of the members in a work group. The arguments were submitted to an exploratory empirical test, using the informal networks evolved among the salesmen of the furniture department of an American retail sales store. Despite a formal setup that encouraged competition, rather than cooperation, and relied on hierarchical and technical control, rather than on mutual adjustment through lateral communication, a stable informal structure of trust emerged in the organization under study. This structure is characterized by a pattern of restricted exchange. It was argued that the major trigger for the

observed patterns are processes of social control, characteristic of the regulation of functional interdependencies in sharing groups. The strength and pattern of functional interdependencies will determine the degree to which these networks tend toward closure. These processes were complemented by processes of balancing. Further, it was shown that another aspect, which contributed to the stability of this informal social network, is the presence of third-party intermediaries in the role structure at the group level. Although the empirical analysis was exploratory in nature, it became evident that researchers interested in the determinants and stability of network forms should pay close attention to the institutional setting in which these networks are embedded (Morrill, 1995; Völker, 1995), and the type of functional sharing arrangements that link the members of the group (Lindenberg, 1997).

The results provide strong support for a combined approach to an explanation of network structure in organizations, which builds simultaneously on the cognitive, structural and functional interdependencies between group members (Lindenberg, 1997). It seems likely that interaction preferences in early stages tend to develop along the lines of more visible criteria, such as sex or ethnic background, as stated in the homophily hypothesis. As time goes by, actors have the opportunity to create externalities, detect their producers and modify imbalanced configurations into balanced ones.

Three major implications for further research can be drawn from the present analysis. The first concerns the stability of balanced-exchange relationships and open triads. Contrary to the exchange-theoretical assumption, that restricted exchange is brittle in nature, there seem to be configurations of structural and normative conditions which favour the endurance of such systems. Second, the detected impact of intermediaries on the stability of the trust network reinforces recent emphasis to pay more attention to the role of third parties in processes of social control (Black, 1984; Burt and Knez, 1996; Gibbs, 1981; Lazega and Vari, 1992; Gargiulo, 1993). Third, as membership in specific structural positions, and the choices of individual actors, seem to be interdependent, the analysis of network dynamics and social control should be extended to the group level, a topic that up until now has been largely neglected by structural analysis (von Collani, 1985; Schwartz, 1977).

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TABLES AND FIGURES

TABLE 1: "SHALT NOT"-RULES IN THE FURNITURE DEPARTMENT

Type of Rule	Frequency	%
1. Don't steal another man's personal trade	22	100%
2. Don't snitch to management	7	36%
3. Don't take a short lunch hour or come in early	4	18%
4. Don't dodge a turnover	3	18%
5. Don't avoid small calls	4	14%
6. Don't be noisy when selling	3	14%

Source: French (1963:150)

TABLE 2: RESULTS OF THE LOGLINEAR ANALYSIS COMPARING THE PREDICTIONS OF BALANCING AND SHARING THEORY FOR THREE POINTS IN TIME

Config. (ij ji ik jk)	Description	Prediction		Results		
		Balancing	Sharing	τ at t_1	τ at t_2	τ at t_3
1111	Mutual trustors *agreeing* over trusting a third person	+	-	+7.317*	+5.367*	+4.817*
1100	Mutual trustors *agreeing* over not choosing a third person	+	-	-0.662	+0.307	-0.750
1011/0111	Asymetric trustors *agreeing* over trusting a third person	+	-	+0.737	-0.876	+3.122*
1000/0100	Asymetric trustors *agreeing* over not choosing a third person	+	-	+4.183*	-0.047	+2.464*
1101/1110	Mutual trustors *disagreeing* over trusting a third person	-	+	-0.815	-1.212	-0.213
1010/0101	Asymetric trustors *disagreeing* over choosing a third person	-	+	+7.948*	+1.456	+4.693*
1001/0110	Asymmetric trustors *disagreeing* over choosing a third person	-	+	-3.534*	-1.424	-3.167*

Legenda:
+: positive sign expected (combination should occur more frequent than chance), -: negative sign expected (combination should occur less frequent than chance), shaded area shows the model that finds empirical support in the data; ij: i chooses j, ji: j chooses i, ik: i chooses k, jk: j chooses k; τ: test statistic for the triad census; * = $p<.05$

TABLE 3: INTRA- AND INTERCATEGORY CHOICES AT T_1

		Trustee		
		Non-Jew	Jew	Total
Trustor	Non-Jew	17	4	21
	Jew	7	12	19
	Total	24	16	40

Chi-Square = 6.35 (df=1), p=.012. Unfortunately, French did not delineate for every actor whether he was a Jew or not. Table 1 is reconstructed from his verbal statements.

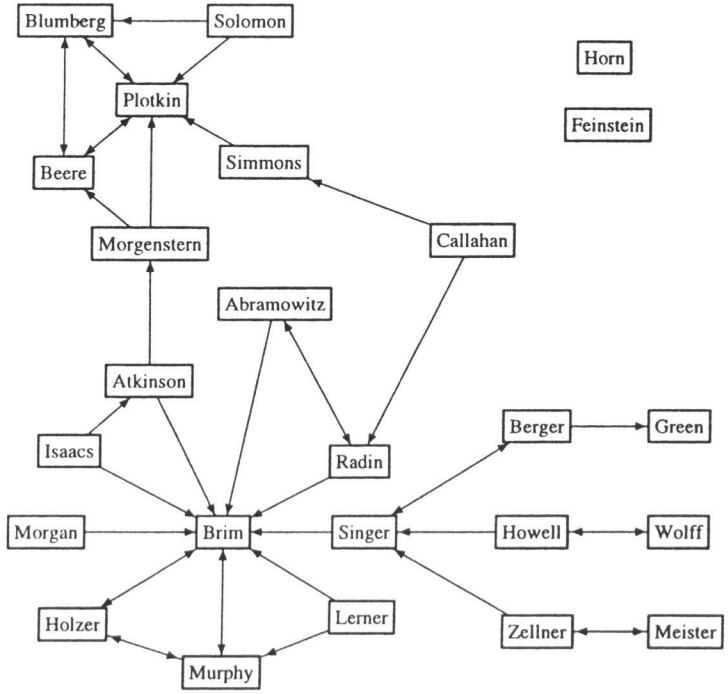

FIGURE 1: NETWORK OF TRUST CHOICES AT T_1

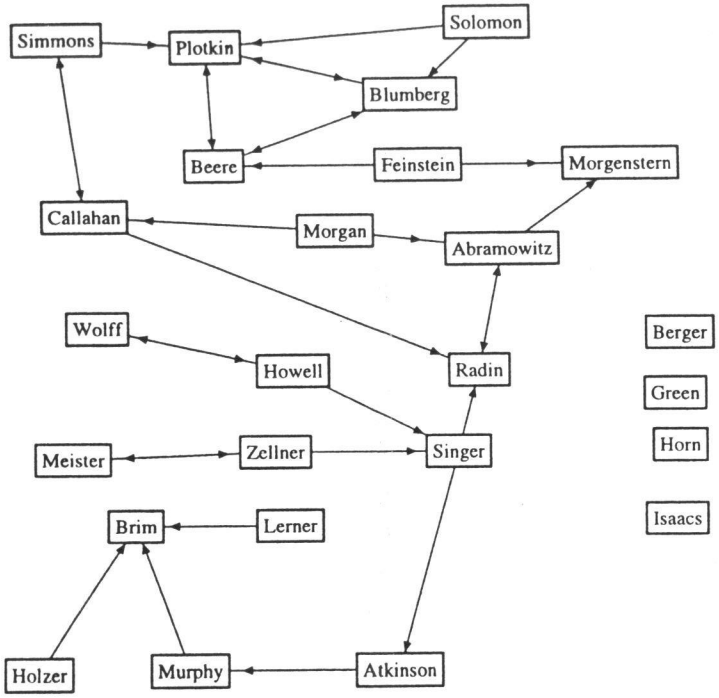

FIGURE 2: NETWORK OF TRUST CHOICES AT T_2

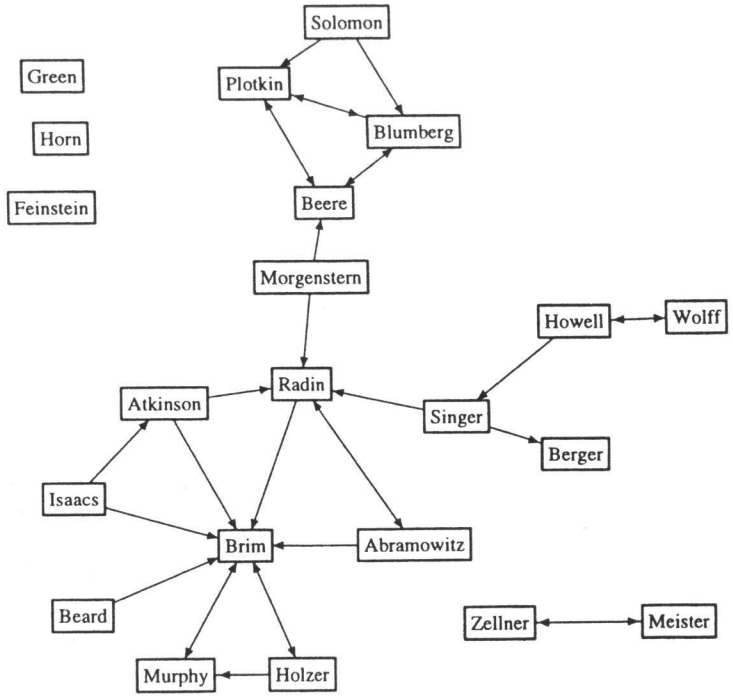

FIGURE 3: NETWORK OF TRUST CHOICES AT T_3

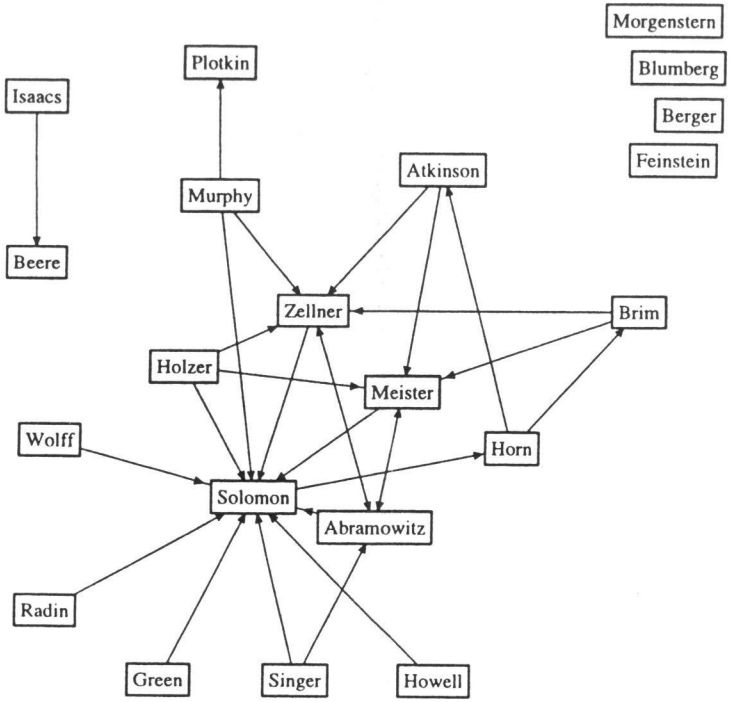

FIGURE 4: NETWORK OF DISTRUST CHOICES AT T_3

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FACTEURS SOCIO-CULTURELS ET PRESENTATION DE SOI DANS DIFFERENTS CONTEXTES D'ENQUETE: ANALYSE D'UN EXEMPLE DE DISCORDANCE

par

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Abstract. Social Cultural Factors and Presentation of Self in Different Survey Contexts: Analysis of an Example of Disagreement. A qualitative study among homosexual and bisexual men, who participated in a quantitative study, allows the author to show the effect of survey technique individual responses. Fifteen homosexual and bisexual men, who participated in the French national *Gay Press 1995* survey on life styles and homosexual men's reaction to AIDS, were chosen on the basis of their declaration of sexual exposure to risks of HIV infection in the survey's self-administered questionnaire. During the interviews, the replies of a subgroup of those selected proved to be different from responses recorded on the self-administered questionnaire. The analysis of the differences and the comparison of the conflicting and coherent responses shows the impact of social cultural factors on the possibilities of self presentation that is more or less independent of survey context. **Survey Techniques, Quantitative/Qualitative Disagreement, Sexuality, Social Cultural Factors.**

Résumé. Une étude qualitative menée chez des homosexuels et bisexuels masculins ayant participé à une enquête quantitative a permis de mettre en évidence un effet de la technique d'enquête sur les réponses des individus. Quinze homosexuels et bisexuels masculins ayant participé à l'enquête nationale presse gaie 1995, sur les modes de vie et les réactions des homosexuels masculins face au SIDA, ont été sélectionnés sur la déclaration d'exposition sexuelle au risque d'infection VIH dans un auto-questionnaire. Au cours de l'entretien, un sous-groupe d'entre eux s'est présenté de façon discordante par rapport à l'auto-questionnaire. L'analyse des discordances et la comparaison des entretiens concordants et discordants a permis de montrer l'impact de facteurs socio-culturels dans la possibilité de se présenter de façon plus ou moins indépendante du contexte d'enquête. **Technique d'enquête, Discordance quantitatif/qualitatif, Sexualité, Facteurs socio-culturels.**

L'influence de la situation d'entretien en face à face sur le discours des individus n'est pas un phénomène inconnu, mais plutôt classique et bien décrit dans les ouvrages méthodologiques sur les techniques d'entretien (Blanchet, 1985). Un certain nombre de techniques de neutralisation ont même été expérimentées par des chercheurs pour réduire la distance sociale avec l'interviewé, notamment par le déguisement.