Information-efficient or decision-oriented teams. A team composition paradox.

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Abstract

1. Introduction

Integration and diversity are both words of prestige. Team leaders are urged to integrated their multi-task project based teams and at the same time recruit new members in order to supply diversity within the organization. (e.g., Baker 199)

Both integration and diversity have advantages as well as drawbacks. Integration has the advantage of creating team spirits and reliability among its members (ref). Diversity or differentiation is valuable because it secures an inflow of novel information that in turn enables a team to identify threats as well as opportunities for business projects (Freidkin 1980).

On the other hand members of integrated teams tend to join forces to resist or ignore important signals from the outside (e.g. Festinger 1957). Members of a team characterized by diversity, have difficulties in reaching consensus and join in actions for a common mission.

The reason for the differences in capacity of the two types of groups are that the underlying social mechanism fostering the group characteristics differ. In the present paper I argue that integration of diversity are contradiction in terms and that the underlying social mechanism creating integration is incompatible with that of diversity. Two main propositions are posed:

The social mechanisms that make up integration are contrary to the mechanisms fostering differentiation in teams?

Integrated team members restrict novel information directly by restricting signals of novel information and indirectly by restricting access and size of external resource networks.

The propositions are empirically tested by Lisrel-analyses on executive management teams. The data set contains information from 28 publicly-traded firms on the Swedish Stock Exchange that during 1985 were confronted with a negative signal at the stock market. Members of the executive teams of these firms were interviewed about their situation in 1985 concerning individual characteristics such as demographic characteristics and social relationships to other team members and to professional relationships outside the firm.

Organization of the paper

In the first section I make a distinction between homogeneity and integration and argue that homogeneity is a satisfying prerequisite for the establishment of integrated groups. The second section contain a presentation of the idea that while integrated groups are efficient in reaching consensus they restrict novel information reaching the group through three processes. The first is through the social mechanism of cognitive dissonance shutting out information in opposition to established consensus. The second social mechanism derived from balance theory implicates that the team's total number of external ties will be overlapping hence restricting novel information reaching the team. Finally, time constraint will diminish the reach of external ties and hence diminish the size of the external network.

An empirical test of generated hypotheses is carried out in the third section. The empirical results support the ideas that homogeneous team members create integrated teams, that integrated team members develop strong ties that are overlapping external to the firm and that integrated teams are connected to a smaller external network compared to a differentiated team. In the concluding section the most important results are discussed and where one is that integrated teams are less information efficient than differentiated teams.

2. Homogeneity prerequisite for integration

When an operational executive team is assigned the task of making decisions, it must be able to reach agreements. It is important that a decision-making body finds ways to decide on issues quickly, and then be able to obey the plan decided upon.

Research on small groups suggests that the more similar the members are, the easier they reach consensus decisions (Moreno 1934; Rogers 1962). "*When the source(s) and receiver(s) share common meanings, attitudes, and beliefs, and a mutual code, communication between them is likely to be more effective*" (Rogers and Bhowmik 1969, 528).

Scholars argue that when an individual is free to select whom he works or socializes with, he typically chooses similar others (McPherson and Smith-Lovin 1987; Feld 1981; Kandel 1978; Cohen 1977; Laumann and Pappi 1976; Berscheid and Walster 1969;

Rogers and Bhowmik 1969; Homans 1965; Lazarsfeld and Merton 1954).

The research on the attraction to similarity is often discussed in the context of friendship choices. Empirically, tests have often been performed on children and young adults (Verbrugge 1977; Kandel 1978; Cohen 1977). Although there exist research on the attraction to similarity in adult, work groups (Fischer et al. 1977; McPherson and Smith-Lovin 1987). Both Kandel (1978) and Cohen (1977) showed prior similarity on a variety of behaviors and attitudes to be a determinant in interpersonal attraction and association. Friendship further increases as the two individuals relate to each other, since an influence upon each other is a result of the continued association.

The term similarity is given various meanings by different scholars. Some use similarity to describe individuals thinking in the same way or sharing the same goals (Lazarsfeldt, Berelson and Gaudet 1944; Simon 1976). Others understand similarity in the sense of observable attributes such as similarity in education, age and other typical demographic aspects (Wagner, Pfeffer and O'Reilly 1984). Homophily is a related concept that refers to the tendency of people in friendship pairs to be similar in various respects such as beliefs, values, education and social status (McPherson and Smith-Lovin 1987; Rogers and Bhowmik 1969).

In the present discussion a group is defined as a homogeneous unit if it consists of members with similar observable attributes such as age, social background, marital status and education. Members of a homogeneous unit thus defined do not automatically share the same values and do not necessarily reach unanimous decisions.

Similarity in attributes such as age and socio-economic status is argued to be conducive to group cohesion or integration (Hoffman 1985; Ward, La Gory and Sherman,1985; Tsui and O'Reilly 1989; Wagner, Pfeffer and O'Reilly 1984). As mentioned above, relationships formed at the workplace are likely to be homogeneous in socio-economic status (Fischer et al. 1977; McPherson and Smith-Lovin 1987). Individuals who are similar with respect to age and other demographic characteristics tend to communicate and understand each other better than dissimilar individuals (Rogers and Bhowmik 1969).

In the present discussion an integrated group is defined as a group characterized by strong group consensus. Members of an integrated group share the same goals and the group has an important influence on its members' values and actions. Members of a differentiated group, on the other hand, do not share common goals and therefore the group is not cohesive and has less influence on its members' behavior.[1]

Our first question to be empirically addressed is

H1. A homogeneous membership is likely to result in an integrated team.

Heterogeneous membership is likely to result in a differentiated team.

The number of members in a team is suggested to influence integration since it is plausible to assume that large groups have more difficulty in reaching consensus, ceteris paribus. Hence,

H2. Teams that are integrated will be smaller than teams that are differentiated.

3. Integrated groups restrict novel information

Two processes restricts novel information; one direct and another an indirect way.

A known factor likely to limit information accrual in cohesive groups is cognitive dissonance (e.g. Festinger 1957). According to the theory of cognitive dissonance, individuals are more willing to expose themselves to information that is consistent with their beliefs or decisions than they are to information that conflicts with their beliefs or previous decisions. Information that disturbs the consensus of the group's basic perception of reality is likely to be rejected. If there is a collision between an individual's values and those of her group the individual will handle the situation and avoid

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1 Pursuing heterogeneity in human demographic traits such as gender and race can be a way of building a foundation for diversity but it is not enough of a condition to stabilize diversity in the long run. Once integration or consensus has been achieved a common image of reality and values is in place preventing an active appraisal of any incoming information that runs counter to this consensus. Individuals either become committed to the common cause or they leave.

experiencing cognitive dissonance by adjusting his values.[]

The idea of cognitive dissonance preventing information accrual is not always easy to access. Another way of analyzing team composition effects on information accrual is to use emerging relational patterns within a group as an indicator of cohesion, what here is characterized as the indirect way of team restriction of novel information.

Information and social networks

Granovetter (1973) suggests a way in which cohesion restricts information accrual in groups by referring to the study of relational patterns within a group. Granovetter claims that what makes a small group cohesive is strong ties. Granovetter suggests that "... *the strength of a tie is a (probably linear) combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the ti*e" (Granovetter 1973, 1361). According to Granovetter more intensive dyadic interaction ultimately leads to the formation of a dense, close-knit network in which most members directly interact with each other while weak dyadic ties produce a loose-knit network in which many of its members do not interact directly with each other. As a result, a highly cohesive network tends to become exclusively self-sufficient and increasingly isolated from the rest of society. The network becomes more or less closed to outsiders and the boundary between members and non-members becomes rigid.

As a consequence, suggested by Granovetter, individuals in loose-knit networks are more likely to be exposed to information sources that provide novel information compared the opposite type of network.

Granovetter presented the thesis that a specific type of weak tie, the bridge tie, is more instrumental for access to novel information than strong ties (Granovetter 1973).

[]An illustration of cognitive dissonance is given by Gilad, Kaish and Loeb (1987). They found that poorly performing business acquisitions are often not divested until the senior executive responsible for the acquisition leaves the firm. This suggests the biasing effect of strongly held beliefs on the ability to cope with contradictory information, and to arrive at an important decisions such as that to divest. (For further elaboration of cognitive dissonance see Frey 1982; Festinger 1957.)

Granovetter defines a bridge tie as a tie that links two networks with each other that otherwise would not be connected. The bridge tie is typically weak since the process of cognitive balance (see Heider 1958) tends to eliminate unbalanced triads that make all three persons interconnected (Granovetter 1973, 1364-1365).
In contrast to Granovetter's idea Burt (1990) defined efficient network by the total number of people one can reach through primary contacts (people to whom an individual is connected through nonredundant ties, i.e., non-overlapping ties) and by the reach or access to new spheres of circles. Burt also introduces the concept of effectiveness. The effectiveness of a network is defined by the total number of contacts reached with primary contacts which yield the largest size of a network (Burt 1990, 10).
Definitions given by Granovetter and Burt differ in their characterization of the efficient tie making up instrumental networks for information accrual. Unlike Granovetter Burt suggests that an efficient tie is strong and nonredundant, whereas Granovetter's idea is based on the notion that an efficient tie is a bridge tie, which is by definition weak and nonredundant.

Burt's definition of nonredundant ties is similar to Granovetter's definition of a bridge tie. According to Burt "Nonredundant contacts reach diverse groups of people. Two contacts are redundant to the extent that they lead you to the same people, and the same network benefits" (Burt 1990, 6).

In order to reduce the confusion due to all the network concepts used Table 2 can clarify the distinctions.

Table 2. Concepts used by Burt and Granovetter

Burt (1990) contends that an ideal contact network is high in velocity, trust, size and diversity.[] Trust, according to Burt, refers to "*your confidence in the information passed and the care with which your contacts look out for your interests"* (Burt 1990, 6). According to Granovetter the bridge tie, the weak nonredundant tie, is the element that increases the reach to new networks, i.e., that increases the diversity and the size of the network. Burt on the other hand claims that the tie conducive to increasing reach ought to not only be strong but also nonredundant. I argue that Burt's two first characteristics of ties, namely velocity and trust, are not conducive to network diversity and increasing the size of networks but rather a contradiction in terms. And my arguments are in

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nonredund

[]Velocity refers to the rate at which information circulates through the contacts. Network benefits depend on contacts actively communicating with one another.

accordance with Granovetter's and go as follow.

The first argument is that active communication, extensive contacts, trustworthiness (i.e., having confidence in and a care for the one you communicate with) are probable characteristics of a strong tie. If the network is made up of strong ties, each person can entertain fewer ties than when the network is made up of weak ties. Strong ties take more time to maintain, hence given a time constraint it is possible to maintain more weak ties than strong ties. Consequently, if the network consists of strong ties, the network size, as well as its reach is restricted.

The second argument is that strong ties in a network tend to become overlapping ties, over time. This argument is derived from the concept of cognitive balance Cognitive balance theory postulates that if a and b are connected by strong ties and a and c interact intensively, b and c also will interact (the transitivity argument). However, it is possible to find examples of how a person learns to live with, or even learns to prefer, imbalanced triads especially in larger structures. While there is no doubt that "... *structural balance theory has received impressive corroboration in empirical research ... transitivity is certainly not expected to occur as a matter of course in political networks, in fact imbalance triads are very common in politics*" (Anderson, 1979, 455-456).

Building strong ties involves more time commitment (Granovetter 1973). The more cohesive the group gets, the greater amount of interaction it demands, and vice versa. Ties external to the network will be less entertained. See figure 1.

[Figure 1 about here]

Anderson further states that a friendship relation is in practice often intransitive as well.[]
A strong tie between two individuals increases the likelihood that their other contacts, such as friends, will be introduced to each other (see Granovetter 1973). Hence, you cannot have it all both velocity, trust and diversity, large networks reaching other networks.

Apart from the theoretical conjecture that weak ties increase the number of nonredundant ties, existing empirical research suggests that instrumental nonredundant ties tend to be weak. For instance, Granovetter's own empirical investigation shows that the most efficient way to get a new job is through bridge ties (Granovetter 1973, 1974, 1995). Freidkin's (1980) test of the Granovetter thesis also showed that *novel* information tends to flow through bridge ties (weak nonredundant ties) and not through strong or weak redundant (overlapping) ties.

Strong ties are less conducive to carrying novel information than are weak nonredundant ties. On the other hand, strong ties re-enforce cohesion. For instance, cohesive groups create norms that affect the individual's choice of action, but also their choice of refraining from action (Coleman 1988; Pinard 1968; Merton 1968; Granovetter 1973, 1974; see also Meyerson 1992 chapter II).

I propose that, at the team level, if the team members' internal relationships are based on strong ties, i.e., integrated groups with strong consensus, their external network is made up of strong ties. *In order to prevent cognitive dissonance the individual team member will avoid any external ties that sends messages not congruent with team consensus*.

The theoretical ideas and the empirical results presented above imply that a differentiated team is connected to its external network mainly by weak ties. The differentiated team's

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[] Meanwhile, research points to the fact that individuals dissimilar to the rest of the team members tend to exit the team (Wagner, Pfeffer and O'Reilly 1984) and groups marked by internal differences are most likely to dissolve (Newcomb 1961; McCain, O'Reilly and Pfeffer 1983).This empirical fact points to the idea that over time differentiated teams will always become integrated unless some external force such as competition on a market preventing individuals to esisly entry and exit the team.

members are not connected to each other by strong ties, hence team members have no group consensus to protect.

Therefore, they are free to establish external ties without any restriction set by the team, nor by consideration to the other team members. An integrated team consists of team members connected through strong ties. According to the ideas presented above, these members are not likely to choose external ties without considering the consensus of the team, and the opinions of the other members.[*] Hence,

H3a: An executive team's degree of integration is likely to decrease the team members' access to weak external ties.

Balance theory and overlap in external ties

Moreover, from balance theory, Heider 1958, a member "a" will introduce to the close colleauge "b" her external contact "c". In order to prevent imbalance triads "c" must be a positive contact both to "a" and "b" else "c" will be dismissed, disregarded as an external contact. Consequently these external strong ties will in turn become overlapping vis-a-vis the team. See Figur 2.1.

[Figure 2 about here]

Hence, we should expect that integrated team members introduce their external contacts to the other team members. Friends introduce their friends as integrated team members introduce their external strong ties to the other team members. The network is cohesive, having the potential to both restrict and provide opportunities for joint actions. An individual in the network who falls out of the expected and desired behavior will confront a cost that hurts him, i.e., he receives a bad reputation that may lead to exclusion. Differentiated team members with weak external ties and with the ambition to accrue information do not have the motivation to introduce their external contacts to the other

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[*] I also believe that the members of a differentiated team have no one to protect them (allies) in case of an unfriendly takeover or an undesired change of control owner. Hence, it is of vital interest for them to develop a network of their own with a reach and access to different resources such as information about new job openings (see chapter I for the discussion about leadership organization and its effects on the labor market for managers).

team members. Thus the team's external network will be based on weak and nonredundant ties (i.e.,bridge ties). Se Figure 2.2.

[Figure 2.2 about here]

Hence,

H3b: The degree of team integration increase the degree of overlap in team members' external ties' network.

Strong ties, time constraint and size of external networks

The efficiency of an executive team's external network is a question of size. Burt's last two variables for creating opportunities through networks are diversity and size. It was suggested above that weak nonredundant ties (bridge ties) create diversity. Additionally, weak nonredundant ties by definition increase the size of a network.

Individuals with a large number of ties and large networks are better off in their access to resources than are individuals with few ties and small networks (Laumann and Pappi 1976; Berkman and Syme 1979). However, there are limits to how large a network can grow. Granovetter (1973, 1974, 1982) proposes that a network based on strong redundant ties does not expand as much as does a network based on weak nonredundant ties/bridge ties. It is also assumed that size is positively correlated with the frequency of nonredundant ties (Burt 1990, 7).

The integrated team members would want as large an external network as the differentiated team members. However, the cost associated with an external network based on strong and overlapping ties restricts the number of ties it is possible to maintain in the network.

Hence, executive teams having external networks based on weak nonredundant ties ought to have larger networks than teams with networks based on the opposite type of structure. However, in accounting for this the number of team members ought to be considered.

The whole of a team member's social network, not only the external network, but also the internal network, has to be considered. A team with many members takes time away from an individual's exploration of external ties, though each tie and each team member is given little attention. A team with few members may contain individuals who give their colleagues a lot of attention, however, they are so few that they also have time to engage in several outside relationships. Nevertheless, the fact that the external network will be based on strong overlapping ties if the team is integrated implies that the network reach is restricted.

H4: The number of external weak ties tends to decrease the team's number of redundant ties.

and

H5: Integrated teams have smaller external networks than differentiated teams have.

4. Results from the empirical investigation

Variables and sample selection

The selection criterion was motivated by an earlier study where this particular data was used to study recovery from a crisis situation at the stock market.The population of public firms in existence both in 1980 and in 1985 was ranked by their most negative abnormal return (AR) for any month during 1985. Abnormal return is defined as the difference between the actual and the expected return on investment. The expected return is linearly related to the expected return on the market portfolio. The strength of this relationship depends on the degree of covariation with the market portfolio, such as the Swedish General Index. [] The list contains only those firms with a negative abnormal return greater than one standard deviation from the mean (0) of the sample (see Appendix 1). From this list, the 32 firms with the lowest abnormal return were selected. Three of the 32 teams refrained from participation; hence, 29 firms are analyzed. For reasons of confidentiality the names of the firms cannot be published.

Since this sample of managers was not randomly drawn from the total number of executives in leadership teams, the results should be carefully interpreted. However, the

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[] To secure that the sample selected represented a group of firms in a crisis situation, the accumulated monthly AR for the sample from the first of February 1985 to the first of July 1988 was compared to the population of firms from which the sample was drawn. The result shows that the sample was more of a crisis group than the "normal" group (see Meyerson 1992).

firms in this study do not differ in any significant way from the rest of the population of publicly trade firms in 1985 in terms of important characteristics such as ownership structure, size of the market value and the number of employees. (For a more elaborate discussion of the sample see Meyerson 1992 chapter 1.) The population of publicly traded firms can be characterized by three different dimensions: ownership structure, market size and performance. The first two dimensions are well represented in the sample, i.e., the sample contains both private and institutional, concentrated and dispersed ownership and large and small firms. The third dimension, however, the performance measured by the abnormal return is not. Hence, there is a selection bias of firms poor performance in the sample. Consequently, the results can only be generalized to firms experiencing a negative abnormal return.

29 leadership teams participated in the interview about human capital and social capital. Consequently, there are 147 executive team members in the original sample.

Finally, there may be a measurement errors involved in the technique of individual self-reporting about their own compensation. An executive may give a biased description of the level of pay. It is unclear, however, how that bias would work in any systematic way. The measurement problem can also entail memory failures such as forgetting important details in the contracts this a problem we have to live with.

The structural relationships between the variables in the hypotheses are investigated by two covariance structural models. The testing and the estimation of the models are performed by SIMPLIS. SIMPLIS is a program for the analysis of covariance structural models such as LISREL models (Jöreskog and Sörbom 1986). A LISREL model contains two main elements: a structural model and a measurement model and is a combined path analysis and a factor analysis (LISREL VI 1984). In the proceeding, the structural model is the focus of the analysis. The structural model is based on the assumption of relationships existing between the unobserved variables (latent variable(s)) represented by the concepts in the conceptual path model. The parameters that measure these relationships are analogous with standardized regression coefficients. The measurement model creates the latent variables used in the path analysis. Direct measurable indicators are assumed to be caused by a latent variable. The correlation between the indicators therefore are explained by this common factor, expressed by the latent variable.

The input in the statistical LISREL analysis is a correlation matrix. A comparison is made between the correlation matrix and the matrix produced by the theoretical model to see if the specified model fits the data (for more elaborate information on LISREL, see Jöreskog and Sörbom 1987; Loehlin 1987; Colbjörnsen, Hernes and Knudsen 1984).

The first LISREL model, sub model 1:1, tests the hypothesis H1 and H2. Sub model 1:1 is captured in the conceptual path model shown in Figure 3.

[Figure 3 about here]

In order to show the net effect of the explanatory variables for each of the discussed hypotheses, a LISREL analysis is performed. A LISREL analysis is preferred to the regression analysis because there is the possibility to consider measurement errors in estimating the regression coefficients. Including a measurement model with several indicators gives the option to estimate the structural relationship between “true” latent variables.

The measurement model for the degree of heterogeneity is a one-factor model measured by the four indicators of dissimilarity. When the endogenous latent variable has a measurement model the coefficient of determination will be higher compared to when a measurement model is lacking. (see a discussion on disattenuation in Jöreskog and Sörbom 1981, 132).

Sub model 1: The degree of heterogeneity affects the degree of integration

The hypothesis 1 to be investigated is that a homogeneous membership is likely to result in an integrated team. A heterogeneous team membership is likely to result in a differentiated team. The explanatory variable in the test of this hypothesis is heterogeneity. The four indicators measuring heterogeneity are based on a dissimilarity index reaching from 0 Low dissimilarity and 1 high dissimilarity between members with respect to education (EDUiqv), age (AGEiqv), socio-economic background (SEIiqv) and geographic place of adolcence (ADOiqv). (See Appendix 2 for a more detailed description). Team size is also considered in the analysis since it is plausible to assume that large groups have more difficulty in reaching consensus, ceteris paribus.

The explained variable, degree of integration, is measured by three indicators: integration with respect to mutual values (GV), to discussing personal matters (GP) and to socializing privately (GS). The survey questions posed to each team member were "With whom do you, within the team, (1) socialize (family wise)? (2) discuss private and personal matters? and (3) share common values about business and life?"

A relation matrix showing each team member's relationship to all the other team members in all the three dimensions of integration is constructed. From the matrix a cohesion index is constructed for each aspect of integration. The index G divides the number of mutual choices in a binary matrix of directed ties by the maximum possible number of such choices (Knoke and Kuklinski, 1983, p. 50). Only the symmetric ties are counted, i.e., only when both respondents claim to relate to each other in a certain integration aspect is the tie counted. The cohesion index ranges from 0 to 1. A large G value indicates that a greater proportion of the team members is related in a certain way, for instance that they socialize. For illustrative purposes an index with all the cohesion indicators is constructed and labelled INTEGR. (For a technical description see Appendix 2.)

In order to sort out the net effects of the explanatory variables and to determine whether the heterogeneity variable has a direct effect on integration over and above the effect explained by the size of the team, sub model 1:1 is constructed (see figure 4).

[Figure 4 about here]

The model fits the data. The chi-square is 23.2 with 18 degrees of freedom and the probability value is .182. The coefficients of determination are large (.41 and .59 respectively) in this model compared to sub model 1.[] Hence, the data support the first hypothesis 1. The degree of heterogeneity has a strong negative effect on the degree of integration for a team (-.89). The effect of the size of the team on the degree of

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[] This is partly due to the fact that measurement errors are considered, since both the explanatory factor and the explained variables have measurement models. The estimates give the "true" structural relationship, a disatennuated relationship (structural relationship where measurement errors are controlled).

integration (.22) is not significant.

Test of integration influence on external networks

Next step is to test empirically the suggested relationships between the team's degree of integration and the size and the structure of its external network, i.e., the relationship between team composition and the prerequisite for efficiency of information accrual. A path model of the suggested hypotheses is presented in Figure 5.

[Figure 5 about here]

The structural relationships between the variables in the hypotheses H3, H4 and H5 are investigated by a LISREL model. Hypothesis H3a is tested by a regression analysis.

What now follows is a A LISREL analysis of the hypotheses H3, H4 and H5

The three hypotheses are simultaneously tested by two LISREL models, one where team size is considered and one where it is not.[] The LISREL models contain one explanatory variable: the degree of integration. The degree of integration is measured by three indicators: cohesion index for socialization (GS), cohesion index for mutual confiding (GP, discussing personal issues), and the cohesion index for sharing mutual values (GV) (a more elaborated discussion in Meyerson 1992 chapter II).

The explained variables in the LISREL model are the number of weak ties per team, the number of nonredundant ties per team and the number of external ties reported per team. The three questions were based on the question: With whom do you have regular contact outside the team and the firm regarding issues such as legal matters, media matters, political matters, financial matters, discussion partners?

To distinguish between strong and weak ties, the respondents were asked if they socialize with and/or discuss private and personal matters with (i.e., confide in), the persons they are connected to. If the respondent is neither socializing with nor confiding in the contact, the tie is to be considered weak.[] The variable weak ties is measured by two observed

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[]For a more elaborate description of LISREL analysis see the empirical section in chapter II.

[]Numerous measures for the strength of ties have been used in the aftermath of Granovetter's first article on the strength of ties. The most common measure used has been the indicators "closeness of a relationship"; thus close friends are coded as variables. The first is the sum of weak ties per executive team (WEAK). The second variable is standardized for team size and is computed by the number of weak ties per team divided by the number of individuals in the team (STANWEAK).

The explained variable in the second hypothesis, the number of nonredundant ties, is computed in two ways. The first measure is the number of unique external ties per team (NONRED). A tie is defined as unique if only one of the team members is connected to the tie. The second measure is standardized for team size. The number of nonredundant ties is summed over all team members and divided by team size (STANNRT).

The explained variable, the size of an executive team's external network, is measured by two observed variables; the sum of the team members' external ties (TOTEXT) and a standardized measure where the team's total external network is divided by team size (EXT).

In order to consider the standardized measures, two LISREL models are tested, one with nonstandardized measures and the second with standardized measures. Nevertheless,

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strong ties while acquaintances are weak ties. Other measures are not only the closeness of two parties but also the source of the tie, such as relatives or neighbors. Granovetter (1973, 1982) has used frequency of contact in combination with closeness. Friedkin used mutual acknowledgement of contact as a measure of strong ties in a scientific community. Marsden and Campbell (1984) came to the conclusion that closeness or emotional intensity of a relationship is on balance the best indicator. The measures duration and frequency of contact were badly contaminated by the foci around which ties may be organized. These two measures are suggested by Marsden and Campbell (1984) to be avoided. The measure personal confiding is little used as a measure of tie strength and hence cannot be well evaluated in the Marsden and Campbell study. In this study the three indicators of strength are all aspects of closeness, socializing, mutual confiding, i.e., the respondents opinion on the degree of intimacy he entertains with the party.

There may be a problem with the link between reported primary contacts of the team members (a primary contact is someone to whom you are connected through a weak nonredundant tie) (Burt 1990). The primary contacts may know each other and hence limit the uniqueness of these contacts. This we do not know from the collected data.

team size is controlled for in both versions. It is plausible that team size has an effect over and above the standardization. The fact that a team member is part of a large team may have an effect on the frequency of weak ties.

The structural model containing the latent variables described above and their relationship is described in the path model given in Figure 5. The measurement model for the degree of integration (Degree of Integration 2) is a one-factor model measured by two indicators, Gpersonal and Gsocializing. Hence, the latent variable Degree of Integration 2 differs from the previous latent variable Degree of Integration. As will be shown, the reason for the modification is, that the cohesion indicator for sharing values goes in a different direction with respect to its effect on the structure of a team's external network, as compared to the other two indicators. Consequently, a new latent variable is constructed by the cohesion index for values (GAL).

The two LISREL models: the LISREL model 1:2 with no standardized indicators is depicted in Figure 6 and the LISREL model 1:3 with standardized indicators is depicted in Figure 7. The size of the team is considered in both models.

The outcome of the statistical test is presented with the standardized solution. The estimates of the parameters are based on the assumption that the latent variables (circled) have a variance equal to 1. The partial regression coefficients can then be compared with each other. (The standard errors are depicted within parentheses.) Apart from the modelled relationship only significant structural parameters are presented in the Figures 6 and 7. Since the sample is small, and the number of parameter estimates in these two models are large, the result has to be interpreted with caution.

[Figure 6]

The test for the fit of the model is acceptable with a chi-square equal to 11.4 and with 9 degrees of freedom and a probability of .24. The LISREL analysis shows that the hypotheses cannot be rejected. The more integrated a team is, the fewer are the weak

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The modification indices may indicate strong relationships not considered in the original hypotheses. If these relationships give significant results in the LISREL analysis they are reported in the LISREL models below.

nonredundant ties and the smaller is the size of the external network. The latent variable "sharing values" have, contrary to the latent variable degree of integration 2, a significant and positive effect on the number of weak ties. Team size plays an important role both for the access to weak ties, to nonredundant ties and for the total number of ties. Hence, the larger the team, the more weak nonredundant ties are connected to the team. Furthermore, the larger the team, the larger is the size of the external network. However, the individual member's tendency to develop a large external network made up of many weak and nonredundant ties is of interest. How does the fact that one belongs to an integrated team affect the individual member's external network?

Two direct effects on the size of the external network of a team are worth noting. The first direct effect is caused by the latent variable sharing values (.13). The second direct effect stems from the number of weak ties (.18).

The LISREL model 1:3 standardize for team size is shown in Figure 7.

[Figure 7 about here]

The test for the fit of the model is acceptable with a chi-square equal to 12.2 and with 8 degrees of freedom and a probability of .14. The hypotheses cannot be rejected by the test of the LISREL model 2b. However, some interesting changes of team-size effects occur on the structure of network. The fact that someone belongs to a large team does not affect the size of his total network when factors such as the effect of team-size on weak and nonredundant ties have been accounted for. When all other factors have been accounted for, the effect of the team- size on the number of weak and nonredundant ties is negative, i.e., belonging to a large group tends to restrict the members' access to weak and nonredundant ties. Furthermore, the effect of the cohesion index for sharing values yields no significant results. The effect of sharing values on the endogenous variables not shown in the Figure 6, but which can be found in Figure 7, are not significant in the standardized model. Though the latent variable sharing values loses its effect, both on the number of weak ties per team member and on the size of the external network per team member, the effect of the degree of integration is stronger on the number of weak ties (-.72) compared to the non standardized model (-.69). However, the coefficient of determination is slightly lower for the standardized version (.48) than for the nonstandardized relationship (.53). Still, the overall coefficient of determination is not changed in the standardized model. Finally contrary to the non-standardized model the standardized model showed a significant direct effect by the degree of integration on the number of external ties per team member.

The hypothesis H3a, the more integrated an executive team is, the more likely the team is to have a network conducive to the mobilization of strategic resources. As shown above, there is a negative and significant relationship between the degree of integration and the number of weak and nonredundant ties. However, a mobilizing network can also be captured by the degree of overlap in each team member's external network, labelled by Coleman as the degree of closures in each team member's external network (Coleman 1988). Unfortunately, no information is available on the type of relationship the external individuals have to each other, whether they are close friends or if they confide in each other. The only available information at our disposal is the team members' awareness of whether or not his contacts are acquainted.

Hence, the explanatory variable is the degree of integration measured by the two indicators: cohesion index for socializing and cohesion index for mutual confiding. The cohesion index for sharing values, GAL, is treated as a separate variable. The explained variable is measured by the degree of overlap in the team member's external network (KONTAND).

Path model H3:1. The degree of overlap explained by degree of integration

Degree of overlap (KONTAND) = .81 * integ2 - .18 * GAL + .02 * TEAM

	integ2	GAL	TEAM
Standard errors	.42	.29	.23
T-values	1.92	-.64	-.12
Significant	barely	no	no

The explained variation of degree of overlap in team member's external network is .39. Belonging to an integrated team (measured by the two indicators: the degree of socializing and the degree of mutual confiding) increases the likelihood of there being a high degree of overlap in the members' external network, i.e., that the individuals in the external network are acquainted. However, the standardized path coefficient (.81) is barely significant partly caused by the small sample size. Notable is that if the degree of overlap is explained in terms of all three integration indicators separately in a path analysis, the path coefficient for the indicator degree of socialization is significant.

5. Conclusions and discussion

The present study shows that team cohesion and the team's ability to receive and process novel information are incompatible traits. This incompatibility is due to a compositional paradox inherent in the fact that the social mechanism creating team cohesion is the opposite from the social mechanism creating information orientation of a team.

The obstruction of information is suggested to be caused by three different but interdependent processes: cognitive dissonance, balance theory and time constraint in entertaining relationships.

Members within an integrated team have a strong consensus to protect and according to the idea of cognitive dissonance will block information that distorts the consensus. Members in a differentiated team do not have to protect consensus. Consequently an integrated team member will relate to to others that provide them with information in accordance with the team's consensus.

Strong ties reinforce cohesion, consequently, integrated team members refraining from experiencing dissonance will develop strong ties both within and outside the team.

In accordance to balance theory integrated team members will be introduced to each other's external ties. Consequently there will be a strong degree of overlap between the integrated team members' external ties compared to the differentiated team members'.

Strong ties are more time consuming to entertain than weak ties hence, the time constraints argument implies that members in integrated teams will have fewer external ties than differentiated team members and consequently integrated teams will have smaller size of their external networks than differentiated teams.

The empirical result confirms the argument that integrated teams are most likely to be composed by homogeneous members. Heterogeneous members, diversity of team members, on the other hand, create differentiated teams (Hypothesis 1). It is also shown that integrated teams tend to be smaller than that of differentiated teams (Hypothesis 2). It is furthermore shown that an executive team's degree of integration affects the structure of the team's external network; The degree of integration affects the number of weak ties the members have access to, irrespective of whether the explained variable is standardized for team size or not. Integrated teams have access to fewer weak ties than more differentiated teams (Hypothesis 3).

It was also confirmed that access to weak ties eases access to nonredundant ties. Teams with access to weak ties increase their access to nonredundant ties. The significant positive relationship remains even when team size is considered (Hypothesis 4).

Hypothesis 3a was supported by data. The degree of integration increases the likelihood of a high degree of overlap in the individual member's external network.

The results from the testing of hypothesis 5 are that the size of a team's external network is explained by the type of ties in the network and the size of the executive team. An executive team's external network grows with the number of nonredundant ties.

Apart from the effect that belonging to an integrated group has on restricting the team member's external network, there is a team size effect working in the opposite direction. In the standardized LISREL version, the team size factor exhibits an effect on the structure of the team member's network over and above the number of individuals. The fact that a member belongs to a large team implies that she has fewer external ties than a member who belongs to a small executive team. Belonging to a small team increases the individual team *member's* external ties. Hence, one conjecture to this contradictory result is that integrated team members, although they devote a lot of time to their team colleagues, have time over to develop outside ties. Yet, members of large teams have many colleagues to spend time on, and hence they have less time to spend outside the team developing external ties. Another conclusion could be that the integrated team members use their external network in a way in which the bulk of the external ties are important individuals, whereas the differentiated team members use their external environment in a more exclusive manner, so that size does not matter. Whatever the explanation, group size ought to be more carefully studied as an artefact.

The general conclusion remains that team composition affects the structure of the external network. The definition of the latent variable integration remains to be more thoroughly investigated. The fact that the factor analysis in the LISREL analysis in the first lisrel model (Hypothesis 1) accepted the construction of the latent variable degree of integration by the three cohesion indices but did not so in the analysis in second lisrel model (Hypothesis 3) suggests that the typical measure of integration should be more fully investigated.

APPENDIX 2. Abnormal return

Abnormal return (AR) is a measure taken from the field of financial theory. It is postulated that individuals make consistent and rational decisions, and that all expectations are realized since no one acts on the wrong premises (Hansson and Högfeldt 1988, 636). Financial theory analyzes the economic effects of both time and risk on resource allocation and gives a rational economic explanation for seemingly random changes in stock prices using stochastic theory. Three major ideas are incorporated in financial theory: information efficiency, diversification and arbitrage principles. The idea of information efficiency is of relevance in our study.

From Hansson and Högfeldt (1988) the following description on the information efficiency assumption is drawn: When new information enters the market, investors evaluate it and change their portfolio to exploit potential profits from the new knowledge. The new equilibrium prices therefore contain the information. Prices are an efficient information bearer and price changes reflect the market's joint evaluation and response to new information. This implies that investors base their decisions only on the information that has already been exploited by the market. This intuition is called the market efficiency hypothesis; market prices reflect all relevant information. The analysis testing the hypothesis shows that the Swedish market is at least semi information-efficient.

It is assumed that the investors not only base their actions on historical information (weak information efficiency), but also on economic information that is accessible to the public. For example, announcements made revealing a firm's specific information are easily and quickly processed by the actors, and the stock market prices reflect this process.

However, empirical analysis shows that insider information is not reflected in the stock prices. Trading with insider information may give abnormal returns. In general, previous studies have been interpreted to support the information efficiency hypothesis because insider information cannot give an ongoing abnormal return for long, since other investors will discover the abnormal returns and try to exploit them.

The expected rate of return is given by the CAPM approach, Capital Asset Pricing Model (Sharpe 1964) or the more general model of APT, the Arbitrage Pricing Theory (Copeland and Weston 1983). The CAPM predicts that security rates of return will be linearly related to a single common factor, the asset's systematic risk. The APT is based on similar intuition but it is more general. CAPM can be viewed as a special case of the APT when the market rate of return is assumed to be the single relevant factor.

Investors put together portfolios by evaluating the stock's expected rate of return and its risk. Risk is defined as the volatility in the returns. A share with high variability is classified as a share with high risk and vice versa. Because the variability of risk for different shares is not perfectly correlated, investors may reduce risk by diversifying their portfolio. Risk may be divided into unsystematic (or firm-specific alfa) risk and systematic risk (variation due to the market return, beta). The latter is compensated for by investors diversifying their portfolio (Hansson and Högfeldt 1988).

The market model is easy to compute. Furthermore, according to Burnt (1991) the CAPM and the market model contains the same fundamentals. A data set of firms on the stock market during the period of 1980 - 1985 already exists, as well as does a program for computing abnormal return values based on the market model, Also there is evidence that the output from the two models, the market model and the CAPM yield the same results (DeRidder 1988).

Abnormal return for a particular share is defined as the difference between the actual and the expected return. A share's expected return is given by the CAPM as:

$R_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t}$

where

$R_{i,t}$ = the share i's return in period t

$R_{m,t}$ = return of the market portfolio, R_m, at the period t

□$_{i}$,□$_{i}$ = the share specific parameters

□$_{i}$ = error term with the expected value of zero

The expected rate of return given by model is determined by the unsystematic risk, alpha, and the product of □$_{i}R_{m,t}$, determined by the market. The market factor beta indicates how much a share's return is expected to change given a certain change in the market portfolio (approximated by Affärsvärldens "general index"). Given the use of the model the abnormal return is expressed by

$ar_{i,t} = R_{i,t}$ - (□EQ \O(_,ˆ)□$_{i}$ + □EQ \O(_,ˆ)□$_{i}R_{m,t}$)

where □EQ \O(_,ˆ)□$_{i}$ and □EQ \O(_,ˆ)□$_{i}$ is estimates of the share specific parameters. □EQ \O(_,ˆ)□$_{i}$ is defined as the covariance between R_i and R_m divided by the variance of the market portfolio

□EQ \O(_,ˆ)□$_{i}$ = Cov (R_i,R_m) / var(R_m)

Summing all the single observations of AR and dividing by the total gives us an average abnormal return AR_t.

Some shortcomings of the selected measures and computation are a) abnormal return and information efficient markets, b) the problem of estimating betas, and c) the problem of thin trading. (DeRidder 1988; Hansson and Högfeldt 1988; Claesson 1989; Berglund et al. 1989) The problem with adjusting betas is especially worth noting. A crisis signal as defined here, as some radical new information appearing, which of course could change the risk of the firm's share, i.e., the true beta. However, this is not taken into account in our estimation, which is a drawback.

APPENDIX 2. Definition of variables, their transformation and the characteristics of the univariates.

The selection criterion of a public firm confronting a crisis signal from the stock market was a strong negative abnormal return. The 106 public firms on the stock market both in 1980 and in 1988 were ranked according to their strongest negative abnormal return any month during 1985. From that list 32 firms were selected. The characteristics of the univariate distribution of the 106 firms and 32 firms are shown in Table A1:1.

Since no assumption is made about the variable being normally distributed, a complement to the mean (Mean) and the standard deviation (Sd) is given by the median (Md), the skewness (Skew) Kurtosis (Kurtos) and the minimum (MIN) and maximum (MAX) values.[1]

Table A1:1. Characteristics of the univariate distribution for the variables abnormal return for 106 firms and abnormal return for 29 firm

	Mean	Sd	Md	Skew	Kurtos	MIN	MAX
Abnormal return (106 firms)	-.124	.091	-.112	-2.605	12.607	-.684	.0.12
Abnormal return (Sample of 29 firms)	-.222	.103	-.187	-3.164	12.509	-.684	-.148

The ownership concentration is measured by the concentration ratio (CR) which is the largest shareholder's percentage of votes. The univariate description of ownership concentration for the sample is shown in Table A1:2.

Table A1:2. Univariates of the variable ownership concentration

N=29	Mean	Sd	Md	Skew	Kurtos	MIN	MAX
Ownership Concentration (CR)	44.25	16.55	45.6	.14	-.54	15.6	82.2

The distribution of ownership concentration shows similar traits with a normal

[1] Under the normal distribution assumption skewness is equal to 0 and kurtosis is equal to 0 (see definition and computation of kurtosis in SAS Elementary Statistics Procedure p. 11 from SAS Procedures Guide. Release 6.03 Edition).

distribution. The distribution is more flat than the normal distribution which is natural since a public company cannot be owned by one single owner to 100%. The distribution is almost symmetric, although slightly skewed to the right (skewness of .14 compared to the normal distribution of 0). This is also natural, since even a public company has to be owned by someone.

Two indicators of <u>firm size</u> are computed. The first is the market value of the firm (MV) and the second is the number of employees (EMPLOY) in the firm (total figure irrespective of location).

Table A1:4. Characteristics for the univariate distribution for the control variables

N = 29	Mean	Sd	Md	Skew	Kurtos	MIN	MAX
Number of Employees	6090	13763.99	2157	4.663	23.419	10	74320
Market value (MSEK) [*]	990.29	1469.50	504	3.039	10.424	15.00	7052

The size of the firm, whether measured by the number of employees or by the market value, varies considerably.

The indicator <u>team size</u> is the number of individuals in the executive team (TEAM).

Table A1:5. Characteristics of the univariate distribution of team size

	Mean	Sd	Md	Skew	Kurtos	MIN	MAX
Team size	5.00	2.26	4	.63	-.77	2	9

Table A1:5 shows a relatively large variation in the size of the executive team, and a mean not very different from the median. The distribution implies that the size of the team is more often large than small.

Dissimilarity measure of demographic characteristics

There are several measures one can use to capture the degree of similarity in and executive team with respect to different individuals' attributes. One simple way to choose

[*] The figures of a firm's market value are divided by 100 000 in the statistical analysis.

a measure is to use what is already applied in the research. However, the measure used for instance by Wagner, Pfeffer and O'Reilly (1984) is a measure of the relative isolation of an individual vis-à-vis the rest of the team members in order to predict the probability of the individual to leaving the team. The purpose of the present investigation is different. Allison states "... *the choice of an inequality measure is properly regarded as a choice among alternative definitions of inequality rather than a choice among alternative ways of measuring a single theoretical construct"* (Allison 1978, 865). In this study the object is simply to describe the overall similarity or dissimilarity of the team members and then compare executive team's degree of heterogeneity with each other.

Allison suggests using the scale of invariance as the basic criterion for measuring inequality (e.g. income) which means that multiplying everyone's income by a constant leaves the degree of inequality unchanged. The relative difference has not been changed by this operation. One measure with such a quality is the coefficient of variation (V), (Allison 1978, 867). This measure would suit our purposes if all our variables were ratio scaled, i.e., has a true zero point as its origin (see Allison, 1978, 870). However, most of our variables are nominal or ordinal scaled. Hence, a dissimilarity measure for this type of scaled variable has to be applied. Even the V could be applied in some of the cases below for the case of uniformity the Dissimilarity index is applied for all variables. (Bohrnstedt and Knoke 1982.)

Dissimilarity index (IQV) is the standardized version of Index of diversity (D) where and where p_i is the proportion of the i^{th} category divided by the total number and where k is the number of categories. When D approaches one, the diversity of e.g. members increases. When D approaches zero, the diversity of members decreases. Since D is dependent on the number of categories of the variable, e.g. team size, as in this particular case, a standardized version of D is applied called the Index of Qualitative Variation.

As for D when IQV approaches one, the diversity in this context for the team members, increases. When IQV approaches zero, the diversity of members decreases, when controlling for the number of categories of the variable. Hence, an executive team with members sharing the same attributes such as social background, the IQV approaches zero. However, if the members are different in the various demographic respects, the IQV approaches one, i.e., diversity increases. All the demographic variables are transformed by the dissimilarity index IQV.

Place of adolescence, $IQV_{ado.}$ The place of adolescence (upbringing) was first categorized as follows:

(01) Upbringing in various places, mixed places for adolescence
(02) Large city (Stockholm, Gothenburg or Malmö)
(03) Town with 10 000 - 15 000 inhabitants excluding Norrland
(04) Town with 5 000 - 10 000 inhabitants -“-
(05) Town with 500 - 5000 inhabitants -“-
(06) Town with less than 500 inhabitants -“-
(07) Abroad
(33) Town with 10 000 - 15 000 inhabitant Norrland
(34) Town with 5 000 - 10 000 inhabitants -“-
(35) Town with 500 - 5000 inhabitants -“-
(36) Town with less than 500 inhabitants -“-

These categories are further partitioned into four new categories:
The categories 03 - 07 are merged into the new category 3
“- 01 -“- 1
“- 02 -“- 2 -“- 33 - 36 -“-
4

Dissimilarity of Education, $IQV_{edu,}$ is based on the following constructions:

The members' responses of where they lived during their upbringing were coded according to the SCB Year book for the Swedish Administrative Communities (kommun) 1950. Hence, a town that was small at the time of their upbringing may have a large population today.

The first step of education categories are reduced to the following categories.

(01) No academic degree, transformed to code 1

(61) Law degree, transformed to code 2

(62) M.Sc in engineering, transformed to code 3

(63) B.A./B.S. in commerce/economics, transformed to code 4

(64) Degree in forestry, transformed to code 5

(65) Degree in other discipline, transformed to code 6

Uncompleted Ph.D. degree, transformed to code 7

(82) Ph.D. in engineering, transformed to code 8

(83) Ph.D. in economics, transformed to code 8

(84) Ph.D. in forestry, transformed to code 8

(85) Ph.D. in other subject, transformed to code 8

(09) More than one academic degree, transformed to code 9

Dissimilarity of social background IQV_{sei}

Information about the respondent's social background was traced by asking about the father's occupation at the time for the respondent's upbringing. The SEI classification was used, i.e., the socio-economic classification (the SEI classification, 1984). The SEI classification of persons in the labor force is based primarily on their occupation. Distinctions between self-employed persons and employees, and between employees with and without subordinates must, however, be based on additional information which is not available in the present study.

Blue collar workers: Coded 11 -12 non skilled workers

21 -22 skilled workers

White collar workers: coded 33 - 36 lower ranked white collar workers

44 - 46 middle ranked -"-

54 - 60 higher ranked -"-

Businessmen, e.g., Self employed: coded 60 - 78

Farmers: coded 86 - 89

(see SCB MIS, 1982:4, 1984, 9)

Dissimilarity of birth, AGE_{sd}, for each team is computed by the standard deviation of birth year for the team

Table A1:8. The univariate distribution of the four heterogeneity indicators and the composite index heter

	Mean	Sd	Md	Skew	K	Max	Min
AGEsd	6.45	3.00	6.74	-0.13	0.25	13.31	0
SEIiqv	0.61	0.21	0.67	-1.56	3.14	.893	0
EDUiqv	0.58	0.21	0.65	-1.27	2.10	.874	0
ADOiqv	0.63	0.23	0.67	-1.45	2.14	.894	0
HETER	2.51	0.69	2.51	-1.10	1.50	3.40	.53

Indicators of team cohesion

Degree of integration is measured by three indicators:

1. mutual values (GV),
2. personal confiding (GP)

socializing privately (GS)

The questions posed to each team member were: With whom on the team do you (1) socialize with (family-wise)? (2) discuss private and personal matters? (3) share common values about business and life? (See Questionnaire in Supplement 1, questions No. C1-5.)

A relation matrix is constructed showing each team member's relationship to all the other team members using all three dimensions of integration. From the matrix a cohesion index is constructed for each aspect of integration. The index G divides the number of mutual choices in a binary matrix of direct ties by the maximum possible number of such choices (Knoke and Kuklinski 1983, 50). Only the symmetric ties are counted, that is, only when both the respondents claim they relate to each other in a certain integration aspect is the tie counted.

The cohesion index is measured by

and where the term (z_{ij} z_{ji}) takes the value of 1 if both elements are 1s, and 0 if either of the elements take on the value of 0. The cohesion index ranges from 0 to 1. A large value indicates that a greater proportion of network relations are reciprocated. A small value indicates that a greater proportion of the network relations are not reciprocated (Knoke and Kuklinski 1983, 50). The cohesion index transforms the binomial indicator into an interval-scaled indicator (at least it is treated as if it were possible to assume interval scale here). The cohesion index for socializing (GS), the cohesion index for sharing values (GV), the cohesion index for personal confiding (GP), and the cohesion index for spending time outside work at sports or other hobbies (GH) are all indicators of integration. For illustrative purposes, an index containing all the cohesion indicators is constructed and labelled INTEGR. INTEGR is computed by summing all the cohesion values for each team, except that for spending time outside work that is not used in the analysis. A univariate description for degree of integration indicators GS, GV,and GP is shown in Table A1:11.

Table A1:11. A univariate description of integration indicators

	Mean	Sd	Md	Skew	Kurtos	Min	Max
GV	0.47	0.28	0.46	0.12	-0.16	0	1
GP	0.32	0.33	0.26	0.95	-0.29	0	1
GS	0.25	0.27	0.16	1.45	1.87	0	1
INTEGR	1.056	.766	.833	1.012	1.132	0	3

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