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**THE RELATIONSHIP BETWEEN COMMUNICATION AND COHESION
IN INTER-COLLEGIATE RUGBY PLAYERS.**

by

Philip Joseph Sullivan

A thesis submitted to the
Faculty of Graduate Studies and Research
through the Department of Kinesiology
in partial fulfilment of the
requirements of the Degree of
Master of Human Kinetics at
the University of Windsor

Windsor, Ontario, Canada

1995

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ABSTRACT

A study was undertaken to examine the relationship between communication and cohesion in inter-collegiate rugby players. Communication in many social systems has been found to be intimately related to other aspects of the group's functionality, including how affiliative or cohesive they are. Certain dimensions of communication are believed to facilitate a cohesive group, including interactions which are honest, supportive, open and direct. This style of communication has been labelled healthy communication. Because of the similarity between sports teams and families and the proven relationship between sport-specific communication patterns and cohesion, it was hypothesized that certain dimensions of communication would be present in rugby teams that would correspond to these healthy patterns in families and that they would be significantly correlated with cohesion.

Fifty five male inter-collegiate rugby players completed the Interpersonal Relationship Rating Scale and Group Environment Questionnaire. The results showed that perceived communication was characterized by six factors: Tolerance, Love, Support, Anger, Effectiveness and Confidence as a sports team. Different combinations of these factors significantly predicted each of the four dimensions of group cohesion. Love and Effectiveness were significant in all four models. These findings suggest that rugby teams communicate much like families and, as in these and other systems, healthy communication is intimately tied to group cohesion.

DEDICATION

I would like to dedicate this to Susan Sullivan, my best friend and my wife.

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I am grateful to the people who made this possible through their time and efforts. I would like to thank the members of the rugby teams of Guelph University, Brock University and the University of Windsor for their cooperation and interest. I must also thank the members of my committee. Dr. John Corlett for his encouragement and wisdom, and just the right amount of push, and to Dr. Frank Schneider and Dr. Patricia Weir for their insight and help. I would also like to thank anyone who contributed to my education, no matter how insignificant and infuriating it may have seemed at the time.

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CHAPTER I

INTRODUCTION

The problem

All social systems are inherently equivalent with respect to several factors. Whether a class, a team, a family or a business, the group will have by definition similar sources of energy in personal talents and interpersonal dynamics, similar recognizable boundaries and relative resemblances in both structure and function. This thesis is concerned with the systemic similarities between families and sports teams. The proposed equivalence is supported in both theoretical and practical research on both groups. If the systems are similar as groups, we would expect a corresponding similarity in certain group processes. Specifically, can the strong relationship between communication and cohesion in families be inferred to sports teams?

Definition of groups

Social scientists find themselves with hundreds of definitions of the term group, ranging from the simple to the extravagant: "We can define a group as two or more individuals who influence one another through social interaction" (Forsythe, 1983, p. 8); "a group is a social unit which consists of a number of individuals who stand in (more or less) definite status and role relationships to one another and which possess a set of values or norms of its own regulating the behaviour of individual members,

at least in matters of consequence to the group" (Sherif & Sherif, 1956, p. 144).

Often a group is defined according to certain criteria. Campbell (1958) stated that groups can be distinguished from mobs by the appearance of three basic principles: a common fate among individuals; behavioral similarity between one another; and the proximity between individuals in the aggregate. Forsythe (1983) offers a more comprehensive list of criteria for groups. Necessary are the mutually influencing interaction between members, a goal for group existence, a sense of groupness - that members see themselves as a group as opposed to a collection of individuals, and the dynamic interdependency between members on such group attributes as developmental changes and altering sequences of stability and disruption. As well, there is the necessity of a group's structure, comprised of agreed upon roles for individuals, behavioral norms and inter-member relations based on authority and communication.

For the purposes of this paper, Zander's (1982) definition of a group will be adopted. A group is, simply and completely, "a collection or set of individuals who interact with and depend on each other". This group will depend on the presence of accepted roles and norms and interactional dynamics.

Social systems theories

The general system theory is based on two principles: the state of organization and energy available to a system, and mutual causation - the concept, in contrast to linear causation, that a given behaviour is not the result of a causal relationship but an artifact of a continuous stream of interaction and activity. A system is the integration of several components which would fall apart under other conditions. Fundamental components of any system include the above mentioned group structure and the goal or function a system must fulfil. For the purposes of this paper, a system will be defined as "a set of elements which form an orderly, interrelated, and functional whole" (Zastrow & Kirst-Ashman, 1987, p.111); within a social system, these elements are the individuals and the relationships between them. Mutual causation and the energy available to the system is understood in terms of the interactional dynamics between individuals and group attributes. Because of this emphasis, systems are constantly in a state of flux and a change in any component of a system will have some effect on related components (Grau, Moller & Gunnarsson, 1988; Hall & Fagen, 1975).

Like groups, there are limits on system membership, a differentiation between members and non-members, a binding force between these individuals and transactions occurring between parts of the system and external parts. Living systems are differentiated based on their use of information: "a living system or its parts can

take in information, assign some meaning to this information and, at some level and in a way which reflects its existing structure, modify itself in order to live in the changed situation as it has defined it" (Montgomery & Fewer, 1988, p. 91).

Social system theorists "view human behaviour in terms of the exchange and handling of information, the context in which the behaviour occurred and the mutual involvement of the actors" (Montgomery & Fewer, 1988, p. 20). Because the reception, management and mode of information is variable, as well as social context and involvement, human behaviour is flexible. This is an example of the systems principle of equifinality, the concept that any situation or action may be obtained through various origins and circumstances, due to the mutual causation and dynamics of systems.

Individual systems must be differentiated from other systems and the environment. This is done through the discrimination of boundaries, limitations placed on a system differentiating members from non-members and the rest of the environment. The placement of boundaries is often arbitrary and depends on the field the observer wishes to validate. For example, one person is a living system on one's own, able to function and handle environmental information, but is also part of several larger systems (e.g. a family, a team or a community). "For a given system, the environment is the set of all objects whose attributes affect the system and also those objects whose attributes are changed by the behaviour of the systems" (Hall & Fagen, 1975,

p.56). While the environment and the system interact and affect each other, only components within the system have access to the handling of information or energy transferred from the environment. This notion of boundaries also introduces sub-systems, which are subordinate systems capable of self-existence but are a part of a larger system.

If the boundaries deem that there is no interaction with the outside environment, then the system is termed a closed system. However, if the system exchanges information or energy with the environment, it is said to be an open system. Open systems are better able to develop and maintain their structure because they have a greater variety of energy sources and will utilize these sources for adaptive, constructive purposes. Strong systems must be internally as well as externally open and capable of self-direction. Closed systems will resist change because they have fewer energy options and are internally more reliant on the power of precedent. A sound balance of relative openness/closeness will promote stability.

Change may occur within a system discretely (in distinct steps) or continuously and may also be defined as deterministic or probabilistic. Deterministic change follows logically based on input and the properties of the system. Probabilistic change may be predicted from these points but is also partly governed by chance.

Any system must balance several forces: the need for stability (homeostasis), the

desire to evolve (differentiation) and the pressure to dissolve (entropy). How systems manage these (potentially) opposing forces depends on the use of information. The more open a system is, the more likely it will experience differentiation. Differentiation may occur through several processes, including the progressive segregation of components through evolution towards independence or division of labour; progressive systematization or progress toward wholeness or group synthesis; or progressive centralization whereby one component comes to play a more dominant role in the system (Hall & Fagen, 1975). Extremely closed systems will eventually succumb to entropy. A system is also subject to forces of change ranging from resistance of change (morphostasis) to continual change (morphogenesis).

Systems analysis

Because of the arbitrary nature of systems, any system to be studied must be defined by the observer for a particular reason. Montgomery and Fewer (1988) list the following characteristics of system analysis. Any analysis of a system is arbitrary in nature because any one system is a narrow focus of a much larger super-system. Any behaviour observed within a system is part of a continuous pattern and must be defined as such. Because all systems are part of larger systems, each component can be differentiated and studied alone on some other level.

Systems, like groups, are defined on the basis of the presence of certain structural

and interactional features, a shared identity and goal, as well as agreed upon norms and roles for members. Systems also stress and extend upon the notion of dynamic interdependency and its effect upon group and individual behaviour. In any system, actions and beliefs may be explained as, not the effect of any one cause, but as part of a continuous interaction process taking into account system and subsystem attributes, social (super-system) demands and possibly chance.

Teams as systems

According to these principles and properties, it is reasonable to view a sports team as a system. Any team will have numerous goals to fulfil as a system (e.g. to win, to ensure playing time for members, to provide a supportive environment) and will possess a structure based on key roles (e.g. captain, coach or owner) and norms. Sports teams are promoted as systems through the maintenance of close proximity of members, shared goals and distinct identity (Carron, 1986). Communication patterns can be based on the formal organization or established upon informal structure focusing on select individuals of pre-eminent status within the group (Yukelson, 1984).

Boundaries offer definition between the team and environment and are evidenced in team culture and paraphernalia. Boundaries between sub-systems are represented by behavioral norms which differ for coaching staff and players or veterans and

rookies. Energy and information is transferred across these boundaries in terms of personnel change, communication or intra-system devices designed to strengthen the systems performance (e.g. training schemes, game plans). As well, sport is an environment which provides constant feedback and demands attention to and manipulation of this information. In correspondence to its social and psychological functions, immediate evaluative feedback by coaches has also been found to increase players feelings of self esteem (Sinclair & Vealey, 1989). Teams differ in terms of relative openness-closeness, but to be successful, teams must be open enough to monitor and respond to several environmental factors such as rule enforcement, or new customs, such as the introduction of free agency. Dynamic interaction within these systems is seen in the effect one person's decision can have on the entire system, whether it is a game situation reaction (i.e. to shoot as opposed to pass) or a personal tendency (e.g. to be inattentive or "slack off").

As systems, sports teams will be subject to various forces. A team's upgrading of player talent and technical knowledge is a reflection of the drive of differentiation. Teams which cannot overcome personality and need differences of players will give in to the entropic pressure of individuals who do not need the team in order to function as living systems. Homeostasis can be seen in the reluctance of some teams to abandon a structure or role relationships which may have proven effective in the past but can no longer perform. Successful performance should follow from how well a team balances these forces and utilizes the energy available in terms of talent,

technical knowledge and interpersonal dynamics. Sport provides possibly the best examples for the processes of equifinality. A given goal (e.g. to win a game) can be fulfilled through a well designed and followed game plan, sheer talent or physical fitness or the oft quoted "lucky bounce".

Most teams fill Lewis, Beavers, Gossett and Phillips' (1976) definition of a functional system as having complex structure relationships in communication and interaction, a highly flexible organization capable of internally driven change, highly autonomous components with minimal constraining inter-relations, considerable intra-system determinism and causality of system and component behaviour, ability to tolerate change within the system, necessity of a continual flow of incoming information and experiences.

Teams and families

As systems, sports teams may have more in common with families than any other social group. Both fulfil the above definition of a group as "a collection or set of individuals who interact with and depend on each other" (Zander, 1982, p.1). The interaction and dependence between members of both systems is evident in common, ritualistic interactions (e.g. practice and shared meals) and the support derived from both teams and families. Likewise, both are similar as systems, consisting of the individuals and relationships which together form an interrelated and functional goal.

The similarity between families and teams can be supported by a brief analysis of some of the defining characteristics of a system, primarily the interrelations (structure) and goal (function) of these systems.

Both systems are partly defined by the social environment which sets certain parameters on roles, norms and structure within these groups. Both are living systems which are composed of relationships which are particular, stable and relatively enduring. It has been noted (e.g. Schindler-Zimmerman, 1993; Schindler-Zimmerman & Protinsky, 1993) that sports teams, with the probable exception of professional teams, tend to take on a family-like structure. Coaches will assume a parental role with respect to both guidance and authority while relationships among players reflect a sibling nature. More experienced members will "show the ropes" to newcomers and this subsystem tends to be characterized by much support and conflict.

The major function served by contemporary North America families is the provision of intimacy to its members (Curran, 1983; Montgomery & Fewer, 1988). This may be seen in the importance of cohesion, or "the emotional bonding that family members have for one another" (Olson, Russell & Sprenkle, 1983, p. 70) in families. While the most obvious function of sports teams is to perform at a certain level, or to win, one of the primary functions of any team, again with the probable exception of professional teams, is to provide a supporting, nurturing environment to its

members. Team cohesion, defined by Carron (1982) is "a dynamic process which is reflected in the tendency for a group to stick together and remain united in the pursuit of its goals and objectives" (p.124). It is apparent that the common desire among athletes and coaches for cohesion (Carron, 1980; Carron, 1986; Gill, 1987) is equivalent to the intimacy function of families. It has been found that group cohesion, including attraction to the group, was the most common predictor of player satisfaction with team goals (Brawley, Carron & Widmeyer, 1993). The sports team has also been noted as a (potentially) exceptionally strong support group for athletes, particularly young ones (Butt, 1987).

Families are also similar to sports teams as systems in the emphasis they must place on feedback and the ability to adapt. While this may be more obvious in terms of a team which must pay constant attention to the abilities and achievements of itself and others, it is also of prime importance to families. "In order to survive, complex, adaptive families must be capable of positive feedback or morphological operations which lead to change in structure, organization or values" (Lewis et al., 1973, p.10). Either system can choose to respond to information through generously expressing it, withholding and selectively expressing or distorting either wilfully or not, and both risk damage to its integrity through mismanagement or neglect of information. Energy or information is available to both systems in the forms of member abilities and interpersonal dynamics.

While family boundaries are more powerfully enforced by social constructs such as marriage and adoption than team membership, both systems provide strong and recognizable differentiation between members and non-members.

Thus both families and sports teams as systems are similar in terms of the availability and utilization of interpersonal energy, structure and function. On other factors, however, a team is quite distinct from a family. Relationships on a team are less permanent than family memberships and one of a team's function (e.g. to win) is under time pressure which is alien to family functioning. However, both of these distinctions represent a qualitative distinction on certain system parameters (environmental constraints and membership). Teams and families, while different are still similar as systems.

Further evidence of the resemblance of teams and families as systems comes from the successful application of family therapy to teams (Grau et al., 1988; May & Brown, 1989; Schindler-Zimmerman, 1993; Schindler-Zimmerman & Protinsky, 1993; Schindler-Zimmerman, Washle & Protinsky, 1990). Family therapy appears to be applicable to sports counselling for a variety of reasons. The approach has been used successfully in areas other than families, including the military (Kaslow, 1986), business (Friedman, 1986) and the clergy (Webber & Wynn, 1986). In terms of role relations and other structural similarities, teams appear to more closely approximate a family than any of these systems (Schindler-Zimmerman, 1993; Schindler-

Zimmerman et al., 1990). As well, sports teams in need of counselling face many of the problems which families do: conflict resolution and management, symptom removal and cohesion (Schindler-Zimmerman & Protinsky, 1993).

Family therapy bases intervention on the systemic relevance of the problem. Any behaviour is seen, not as an individual decision, but as the reflection of a system's pressures and motions. Therapeutic application of family theory is based on certain concepts of assessment. For example, a behavioural problem may be due to an imbalance in the homeostatic desires of the system. Because any system will strive to maintain a balance, any upheaval of this stability can result in individual expressions. Therapists have noted that the vast majority of symptoms within a family become evident within six months of the family moving (Friedman, 1986). Thus, any change in the conventional stability will inflict stress and corresponding symptoms. A second key concept would be an emphasis on communication. This is based in the historical influence of communications theory on family systems theories. Communication family therapy holds that relationships between members are defined by their interactions and these relationships are stabilized by the homeostatic pressures of the family (Nichols & Schwartz, 1991). Therapists have noted that what is important with respect to family functioning is not the particular content of the disagreement, since these are relatively few, but the systemic processes which made this disagreement the focus of family functioning (Friedman, 1986).

Because of the scope of family therapy, its strength lies in its ability to widen the focus of the problem. Intervention will capitalize on this strength by reframing problems from new possible perspectives so that other functions can be attributed to the behaviour. This reframing of a problem from a systemic perspective is referred to as positive connotation (Grau et al., 1988; Schindler-Zimmerman, 1993; Schindler-Zimmerman et al., 1990). The ability of systems perspectives to view problems from different angles allows intervention to proceed from a positive locus. Constructive energy can then be introduced and instill a potential self-fulfilling prophecy through this positive view (Grau et al., 1988). This approach is also beneficial in recognizing the influence of extra-system factors on team related functions and has supplied a broad and flexible intervention technique (May & Brown, 1989).

Specific techniques used in family therapy which could also be used for other systems, including teams, include the use of the therapist as the process leader and effective model of communication. Here, the counsellor directs system communication in therapy so that the interactions defined and upheld by communication patterns are first revealed and then altered. Other communication-centred interventions would be interpretation, or the therapist's explicit interpretations of members' covert interactions and communications; confrontation of quiet members to capitalize on their insight and ensure their inclusion in activities; and boundary-making between members while they are interacting (Nichols & Schwartz, 1991). Interventions which have proven successful with sports teams include backing off, or interrupting a

systemic behaviour which is causing frustration to a particular member; symptom prescription, or assigning a specific schedule for behaviours which are a necessary component of systemic completeness, but may be problematic in their customary timing (Schindler-Zimmerman & Protinsky, 1993).

Benefits of family therapy for groups such as sports teams include the ability to foster a new, more effective mode of leadership and the promotion of easing transitions within and between systems (Friedman, 1986). This view will not prejudge problems in context and the ability of the consultant to either become part of the system to instill change, or remain removed from the system and view the functioning of the entire group (Schindler-Zimmerman & Protinsky, 1993).

Healthy systems

Having established a sports team as a system, more particularly as a system similar to a family, it is a natural progression to examine such systems on the basis of health. Skynner and Cleese (1993) write extensively on the differing level of healthy functioning of any system and summarize seven characteristics of healthy systems. Any healthy system, from a couple or family to a society, will possess an affiliative attitude, secure and emotional independent members, a human authority, open consultation, open and honest communication, a realistic view of the world and the ability to thrive on change. The following discussion of these characteristics will be

exemplified by healthy families, businesses and sports teams in order to support the presence of these characteristics not as system-specific characteristics, but widely applicable social psychological phenomena.

The first property noted by Skynner and Cleese (1993) is that these families show a natural, consistently positive perspective of themselves and others. Members of such systems have an affiliative attitude towards others and are generally accepting without being naive. A concept which encompasses this notion is group cohesion, or the "emotional bonding which [members] feel for one another" (Olson et al., 1983, p.70), a powerful function of various systems as noted above.

Very healthy families communicate with humour and warmth amid an overall tone which is positive and supportive (Beavers, Hampson, Hulgus & Beavers, 1986; Lewis et al., 1976; Olson & McCubbin, 1983), they care about one another equally, give each other a sense of self worth, everyone is expected to love and support and support is realized as different from pressure (Curran, 1983). Healthy businesses will possess a firm belief in decency and respect for and recognition of employees (Rosen & Berger, 1991), and have a genuine affiliative attitude towards customers and employees which facilitates mutual respect (Skynner & Cleese, 1993). Sports researchers have long noted the need for and positive effects of a supporting and affiliative team environment (Horn, 1986; Sarason, Sarason & Pierce, 1990; Smoll, Smith, Barnett, & Everett, 1993; Wankel & Berger, 1990; Weiss & Friedrichs, 1986)

Satir (1988) listed self worth as one of the four critical aspects of a healthy family system. Self worth was defined as the feelings and ideas one has about oneself. It is related to a system's attitude as expressed by Skynner and Cleese (1993) in that the interpersonal transfer of integrity, honesty, responsibility, compassion, love and competence is facilitated by and in turn, facilitates high feelings of self worth.

Thus in various systems, one common feature is that there is a system wide positive attitude towards others based on personal and institutionalized respect for one another. Unhealthy systems are characterized by negative emotions and attitudes (Skynner & Cleese, 1993).

The second characteristic of healthy systems is an emotional independence. Individuals in these systems will have a strong sense of self respect and security so that their commitment will be through choice, not an obligation or a need to cling to each other (Lewis et al., 1976; Skynner & Cleese, 1993). Each partner within a relationship will have a chance to develop as an individual and with their status as an individual being recognized, accepted and understood (Satir, 1988). These systems show a moderate level of cohesiveness which can be described as separated and/or connected (Masselam, Marcus & Stunkard, 1990; Olson et al., 1983).

Healthy families are marked by the ability to maintain the social support of extra-familial relationships (Olson & McCubbin, 1983), a respect for privacy, and individual

differences and a sense of trust which is especially deep between partners (Curran, 1983). Healthy businesses are marked by respect and consideration for each individual. This is commonly done through the use of a non-controlling attitude, small, independent teams to maximize individual input and an established respect for the collective intelligence of the system as opposed to forcing people into roles (Skynner & Cleese, 1993). Likewise, it would prove much more functional for teams to accept members as individuals, not roles so as to promote a greater sense of personal security and individualized attraction to the group as opposed to obligation.

While a very healthy system will possess a genuine respect for individual differences and consequently induce a feeling of security and attraction through choice, unhealthy systems are more likely to show a clinging, possessive dependence (Skynner & Cleese, 1993) and either too much cohesion (enmeshed families) or too little (disengaged) (Masselam et al., 1990; Olson & McCubbin, 1983).

The third and fourth factors to be examined are authority and consultation in systems. Very healthy systems will have a clearly defined and accepted authority which is based on an egalitarian distribution of power and open consultation except in times of crisis (Beavers et al., 1986; Hsu, Tseng, Ashton, McDermott & Char, 1985; Lewis et al., 1976; Rosen & Berger, 1991; Skynner & Cleese, 1993).

Businesses offer an excellent, current example of this style of authority. Empowering

leadership refers to the process of "management [vesting] decision making or approval authority in the employees where, traditionally, such authority was a managerial prerogative" (Gandz, 1990, p.75). This is a psychological as well as an industrial and social process. Empowerment encourages a state of self control and deepened responsibility in individuals and results in enthusiastic and committed employees as well as saving much time and bureaucratic waste, empowerment allows for access to the intelligence of the entire system and facilitates a committed and creative atmosphere. Authority must be flexible due to circumstantial constraints, but is usually accepted because of the delegation given.

Healthy families show a rule system which is flexible, human and appropriate and a leadership based on empathy and trust (Curran, 1983; Olson et al., 1983; Satir, 1988). Empowering leadership will promote the learning of a healthy use of power. Leadership must be flexible; democracy, autocracy and a free wheeling decision style are all effective under different circumstances (Satir, 1988). Parents in healthy systems tend to exhibit a deep emotional tie strongly correlated with an intense belief in shared power (Beavers et al., 1986; Hsu et al., 1985; Lewis et al., 1976; Skynner & Cleese, 1993). This relationship encourages a sense of security in children who then are not afraid to take risks (Curran, 1983; Skynner & Cleese, 1993). The healthy family has also been seen to exhibit a sense of shared responsibility by appreciating the relationship between dependability and self esteem, gearing responsibility to capabilities, recognizing accomplishments and expecting members to live with the

consequences of irresponsibility (Curran, 1983).

While authority is often rigid in sports teams, a certain degree of delegation does take place, particularly with respect to goal setting. Allowing players input into the makeup of their performance goals is a widely promoted and proven method of increasing several pertinent aspects of team functioning (Carron, 1986; Murray, 1986; Schindler-Zimmerman et al., 1990; Yukelson, 1984). Much like an empowering process, members will be more committed and satisfied with their roles. Collective goal setting has also been found to increase players' collective efficacy (Paskevish, Dorsch, Brawley & Widmeyer, 1994) and be an effective team building technique (Spink & Prapavessis, 1994; Widmeyer & Poag-DuCharme, 1994). In contrast, unhealthy systems are characterized by a rigid, usually hierarchical structure which has non-negotiable rules (Satir, 1988; Skynner & Cleese, 1993).

The fifth trademark of very healthy systems is their style of communication. Communication may be defined as the systemic process of transferring information within the system for the purpose of reducing uncertainty. In healthy systems, communication transactions are honest and straight-forward, open, direct and supportive, (Curran, 1983; Lewis et al., 1973; Masselam et al., 1990; Olson & McCubbin, 1983; Olson et al., 1983; Rosen & Berger, 1991; Satir, 1988; Skynner & Cleese, 1984; 1993) and noted as a congruent part of a larger whole (Satir, 1988). Because of a toleration for uniqueness and relative absence of denial, these systems

show little use of unhealthy defense mechanisms such as denial or scapegoating (Lewis et al., 1976) and have few taboos. Any and all subjects are acceptable and treated seriously.

Curran (1983) found in her study that open and honest communication was rated as the most important trait in healthy families. The healthy family will be characterized by a open, communicative relationships, control over interruptions to communication (e.g. television), active listening, recognition of non-verbal messages, encouragement of individual feelings and independent thinking, sensitivity to messages which offend, equal interruption for all members when they are speaking and the development of a pattern of reconciliation (Curran, 1983). Olson et al.'s (1979; 1983) model of family functioning views communication as a facilitator for cohesion and adaptability, the two definite dimensions of healthy functioning. Individuals' ability to be open and honest with their needs and abilities contributes to the family's functionality with respect to adaptability and cohesion.

In businesses, communication between different levels of the system should stress listening and responding as well as being able to empathize with the partner. It is important to be an active listener by avoiding distractions, offering feedback and asking questions (Rosen & Berger, 1991). Healthy companies encourage honest communication and usually only recognize the need for secrecy in areas of personnel, patent and acquisition information (Skynner & Cleese, 1993).

Again, functional sports teams have been noted by their ability to foster such "healthy" communication (Carron, 1986; Schindler-Zimmerman et al., 1990; Sullivan, 1993). As in businesses and families, healthy teams promote communication which includes and supports everyone. Because communication is a process which reflects the structure of a system (Fischer, 1975), effective communication within sports teams can either occur through the formally accepted and defined hierarchy or can be centred around individuals of particularly high status (Yukelson, 1984).

Satir (1988) discussed several patterns of communication. The healthy response was termed levelling. This referred to free and honest relationships with congruity between messages so that communication as a whole is complete and simple. Unhealthy ways include placating - ingratiating so others will not get mad; this is usually a statement of low self worth. Blaming refers to verbal disagreement with non-verbal accusatory statements so one will appear strong. By computing, one is very cool, ultra-reasonable, hiding behind intellectualization and refuses to admit the potential damage of problems. Finally, distracting means being irrelevant or unattached, ignoring any threat. In very unhealthy systems, communication is restricted, ingratiating, vague, dishonest and indirect (Satir, 1988; Skynner & Cleese, 1993). People disregard the feelings and needs of others and avoid contact which is potentially harmful.

The sixth major indicator of health of a system's functioning is how realistic and

practical individuals are. Very healthy systems display a view of the world which is congruent, up to date and accepts personal responsibility. Any system (a person, family or team) will possess a scheme of representations which are based on personal experiences and information which individuals receive. These schemas are useful in filling in information and basing inferences and presumptions when one's knowledge base is suspect in certain situations (Skynner & Cleese, 1984; 1993). These beliefs will be fairly well integrated throughout the system and will go unchallenged by members despite the reality distortions they may imply (Lewis et al., 1973).

In very healthy systems, these are realistic and allow for effective interactions. Healthy families must be based in part on a realistic view of relationships and capabilities both within and outside the family. They must resist the urge to treat people as roles, and accept individuals as they are (Satir, 1988). It would be ineffective for a family to assume the mother is a caring, maternal person when she may be deficient in certain skills and another person (e.g. the father) would be more adept at raising children.

Companies especially must know their own capabilities and their environment well before making any decisions. An unrealistic view could prove disastrous. Perceptions are kept up to date and realistic through open communication, the use of feedback and a sense of self worth capable to admit faults. Like in business, sports teams should use the contributions of their members to maintain a view of

themselves and the environment which is realistic and practical (Horn, 1986). As well, personal and collective satisfaction from sports has been proposed a function of how realistic perceived competence and task challenges are (Wankel & Berger, 1990). Unhealthy systems are based on unclear or unrealistic maps (Skynner & Cleese, 1993).

The final hallmark of healthy systems is the ability to thrive on change. Very healthy systems realize change is part of a natural process and because they are well aware of their needs, they are capable of reacting to changes in circumstances. As well, because of a high sense of self worth and the security and support available, they thrive on the opportunity to deal with change (Satir, 1988; Skynner & Cleese, 1993). If a system is open, the use of information will aid its ability to control its own outcome, and direct creative activity.

Healthy families are adaptable; they are able to change their own structure, roles and relationships in response to environmental and systemic stress (Olson et al., 1979; 1983). These systems admit to and seek help with difficulties and consider problems to be a natural part of family life and develop problem solving techniques (Curran, 1983). In business, change is a natural aspect of the environment. It must be understood, accepted and faced constructively. Healthy companies identify the nature and manage the impact of change by having realistic expectations of resources. Effectively handling change means tailoring your actions to the change (e.g. crises

and gradual change require different approaches) and overcoming personal obstacles in assumptions, perceptions and judgements (Rosen & Berger, 1991).

Sports teams have been found to be quite functional in adapting to change both on an individual (White, McTeer & Vagi, 1991) and team level (Wankel & Berger, 1990). This dimension is particularly important if sports teams are to be competitive or supportive, for they must be able to adapt to any changes in systemic or environmental competence with respect to energy (ability) or structure.

While healthy systems are quite functional when faced with challenging circumstances and could even be said to thrive on change (Skynner & Cleese, 1993), unhealthy systems are characterized by a fear of change (Skynner & Cleese, 1993).

Using these seven characteristics of healthy systems as a framework, it is evident that healthy systems are in a continuous process of increasing their strengths through the intra-facilitating nature of these attributes. For example, a family which is accepting of emotions will tend to communicate openly. Open communication will, in turn, tend to promote realistic perceptions of oneself and others. As another example, sports teams which empower their members will benefit thorough an increase in adaptability and should promote a greater cohesiveness because of this empowerment and flexibility. Thus, these trademarks of a system are constantly self-reinforcing, whether positively or negatively.

CHAPTER II

REVIEW OF THE LITERATURE

Communication and cohesion

This framework of healthy families has been supported by various, prominent family therapists (e.g. Beavers et al., 1986; Lewis et al., 1976; Olson et al., 1979, 1983), and is applicable not only to families but businesses (Rosen & Berger, 1991; Skynner & Cleese, 1993), sport teams (e.g. Carron, 1986; Schindler-Zimmerman, 1993; Wankel & Berger, 1991) and societies (Skynner & Cleese, 1993). It has also been repeatedly found that "healthy" communication is one of, if not the most prominent characteristic of a functional system (Curran, 1983; Satir, 1988). Two of the more renowned models of healthy family functioning, developed by Beavers and her colleagues (e.g. Beavers et al., 1986) and Olson and his colleagues (Olson et al., 1979; 1983) posit a direct relationship between "healthy" communication and cohesion. Because cohesion is such a widely studied phenomenon in team sports (e.g. Butt, 1987; Carron, 1986; Gill, 1986; Widmeyer et al., 1985) this relationship seems the appropriate area to begin the extrapolation of family systems theory to sports teams.

Family systems theories are based in the field of communication theories and have historically reflected this emphasis on communicative interaction and behaviour. The interchange of information and emotions within families defines relationships which

are then held in check via the homeostatic forces within the system. Interpretation and intervention in families focuses on the communication patterns between members. Communication refers to the process of transferring information within a system. This is a purposeful behaviour, designed to reduce the uncertainty within the system. Communication processes reflect the structure (predictable interaction sequences) and complexity (dynamic sequences and growth) of the system (Fischer, 1975).

Healthy communication within systems is marked by how each interaction is part of a larger, congruent communication pattern (Satir, 1988). Such communication is open, honest and direct (Curran, 1983; Lewis et al., 1973; Masselam et al., 1990; Olson & McCubbin, 1983; Olson et al., 1983; Rosen & Berger, 1991; Satir, 1988; Skynner & Cleese, 1984; Skynner & Cleese, 1993). Individuals within these systems feel free to express and respond to messages which are candid and direct. There is no pattern of receiving information from secondary sources and the bluntness of the communication is coupled with a respect for the self and each other which is common in these systems. Members are quite good at active listening and will provide feedback, monitor non-verbal language and listen intently. In unhealthy systems, there is often a double bind between the messages of verbal and non-verbal behaviour, or communication patterns which are incongruent both within individuals and the system as a whole.

Olson and his colleagues (1979; 1983) formulated a model of healthy family functioning in which open, honest communication served as a facilitating factor for the primary dimensions of a family's adaptability and cohesiveness, defined as the emotional bonding between members. The authors felt that "positive communication skills (i.e. empathy, reflective listening, supportive comments) enable couples and families to share with each other their changing needs and preferences as they relate to cohesion and adaptability. Negative communication skills (i.e. double messages, double binds, criticism) minimize the ability of a couple or family members to share their feelings and, thereby, restrict their movement on these dimensions" (Olson et al., 1983 p.71). This link between healthy communication and the cohesiveness or affiliation of a family system is not unique to this theory (Beavers et al., 1986; Lewis et al., 1973; Skynner & Cleese, 1993).

Cohesiveness in sports teams has been conceptualized as composed of four constructs (Widmeyer, Brawley & Carron, 1985). The authors differentiate between group integration, or the perceptions of bonding and closeness, and attraction to group, which refers to the individual's perception of involvement with the group and further delineate between task and social cohesion, yielding the following components. Group integration - task refers to an individual member's feeling about the closeness and bonding within a team as a goal oriented group. Group integration - social is defined as the member's feelings about the bonding and closeness about the team as a social unit. Individual attraction to the group - task entails an individual's feelings

about their involvement with the group's function and productivity. Finally, individual attraction to the group - social refers to the member's feelings about their personal involvement, acceptance by and integration with the team as a social unit. The two social aspects of cohesion appear to be a similar construct to what is termed cohesion in families. They encompass a feeling of closeness and acceptance within the group, much like the emphasis on emotional bonding (Olson et al., 1983), support (Lewis et al., 1973) and warm, positive tone (Curran, 1983) in family theory.

Theoretically, team communication is related to team cohesion in much the same way it occurs in families. Widmeyer et al. (1985) proposed that communication facilitates cohesion in teams. The author's argument, partly based on communication in families, was that individuals benefit from the understanding of roles and expectations and the sense of importance derived from the ability to contribute to the group. Carron (1986) noted that social and task communication increased with cohesion because as groups become more cohesive, they become more open and receptive, talk more and listen better. Williams and Widmeyer (1991) stated that through communication, "team members come to possess similar beliefs, hold similar attitudes and increase the pressures of conformity to the group norms" (p. 568). Thus, in teams, as well as families, it appears that cohesion is intimately related to communication which supports and includes each member.

Communication has been found to be related to team cohesion (Widmeyer &

Williams, 1991; Williams & Widmeyer, 1991; McGowan & Henschen, 1987) and performance (De Armas-Paredes & Riera-Milian, 1987; Williams & Widmeyer, 1991). However, while communication is significantly correlated to cohesion, it is often of minuscule importance and pales in comparison to other factors, such as team performance and member motivation (Widmeyer & Williams, 1991; Williams & Widmeyer, 1991), group size or homogeneity (Widmeyer et al., 1985).

Open, honest, direct and supportive communication is a prime facilitator of cohesion in families (Lewis et al., 1973; Olson et al., 1979; 1983; Skynner & Cleese, 1993) and is a prominent factor of other systems (Friedman, 1986; Kaslow, 1986). As well, sports teams have been noted as equivalent to families (Schindler-Zimmerman, 1993; Schindler-Zimmerman et al., 1990; Schindler-Zimmerman & Protinsky, 1993) and communication has been lauded as a necessary component for teams to perform successfully as well as to survive as social systems (Di Berardinis, Barwind, Flaningam & Jenkins, 1983; Hanin, 1992; McGowan & Henschen, 1987; Smoll et al., 1993; Sullivan, 1993). If families and teams are so similar structurally and functionally, and communication is so important in family cohesion, why then has previous research found it to be only relatively inconsequential with respect to team cohesion?

These distinctions between sport and family research with respect to the relationship between communication and cohesion may be better understood when it is realized that much sport research deals only with task communication, and then only with

quantity of communication. For example, Williams and Widmeyer's studies, which used female intercollegiate golfers as subjects, asked how often they gave each other tips about their play. Family systems theories view healthy communication as open, direct, supportive and warm. These dimensions of communication have not yet been touched upon in sport systems. To fully understand if family system models are applicable to sports teams and their communication, research must examine the role of social communication between members. How often do they give each other supportive statements (both verbal and non-verbal)? What is the overall mood of their interactions? Do they communicate openly and directly with one another, or is there a pattern of receiving information second hand? According to systems theories and previous research dealing with this more complete view of communication, there should be a powerfully significant relationship between this "healthy" communication and group cohesiveness.

In line with the systems theorization and the proposed link between families and teams as systems, the next step should be to examine the relationship between healthy (i.e. open, honest, direct and supportive) communication and cohesion in sports teams. Such communication should be significantly correlated to cohesion. Furthermore, it should be of much greater significance than previous studies have found of task communication (Widmeyer & Williams, 1991; Williams & Widmeyer, 1991). Corresponding to previous research with sports teams (Williams & Widmeyer, 1991) and family theories (e.g. Lewis et al., 1973; Olson et al., 1979; 1983), healthy

communication should be more strongly correlated to the social aspects of team cohesion than the task aspects.

CHAPTER III

STATEMENT OF PROBLEM

The present study will analyze the relationship between communication and cohesion in inter-collegiate rugby players. Cohesion will be conceptualized according to Widmeyer et al.'s (1985) formulation of the construct as it applies to sports teams. Cohesion is depicted along two dimensions: social/task cohesion and attraction to group/group integration. Social cohesion refers to the perceptions of cohesiveness as a social group while task cohesion refers to the perceptions a member has concerning the team as a goal-oriented unit. Attraction to group entails one's perception of personal involvement with and acceptance into the team while group integration involves the member's feeling about the bonding and closeness within the team. The resulting four dimensions have been defined as follows:

1. **Group Integration-Social:** Individual team member's feelings about the similarity, closeness, and bonding within the team as a whole around the group as a social unit.
2. **Group Integration-Task:** Individual team member's feelings about the similarity, closeness, and bonding within the team as a whole around the group's task.
3. **Attraction to Group-Social:** Individual team member's feelings about his/her personal involvement, acceptance and social interaction with the group.
4. **Attraction to Group-Task:** Individual team member's feelings about his/her personal involvement with the group task, productivity and goals and objectives.

(Widmeyer et al., 1985, 17)

Within this framework, the two social components are particularly similar to the notion of family cohesion, or "the emotional bonding that family members have for one another" (Olson et al., 1983, p. 70).

Measures will also be taken of various dimensions of communication. These may be divided into two types: task and social communication. Based on previous studies (Widmeyer & Williams, 1993; Williams & Widmeyer, 1993), it is predicted that task communication will be significantly related to all measures of cohesion. Because various factors of "healthy" communication have been linked to cohesion in families and other systems, it is predicted that different dimensions of social communication will also be significantly related to cohesion.

Specifically, the following hypotheses will be investigated:

1. Specific patterns of communication within rugby teams will emerge which will correspond to the patterns of healthy communication known to exist in other systems (e.g. families, businesses).
2. Communication patterns will also emerge corresponding to sport-specific task communication, as found by Williams and Widmeyer (1991).
3. These dimensions of communication will be significantly related to all measures of cohesion, and more significantly correlated than task communication to these measures.

While the influence of "healthy" social communication has not been studied in sports teams, this prediction is made on two bases: (i) this is the relationship which has been found of the only communication patterns studied in sports teams (Williams & Widmeyer, 1991); and (ii) this is the relationship proposed and supported in the literature of other, equivalent, social systems.

CHAPTER IV

METHODOLOGY

Subjects Subjects were 57 male varsity rugby players. They were recruited from three universities in the Ontario University Athletic Association.

Design This study followed a correlational design with cohesiveness as the dependent variable. This design was chosen because, although the sports literature tends to be somewhat ambivalent regarding the relationship between cohesion and communication, most family and sports research proposes that communication facilitates cohesiveness.

Both variables were operationalized through questionnaires which have been supported as both valid and reliable. The Group Environment Questionnaire (GEQ) (Widmeyer et al., 1985) was used as the measure of cohesion. A copy of this questionnaire is presented in Appendix B. As stated above, it measures cohesion on four dimensions: attraction to group - social, attraction to group - task, group integration - task and group integration - social. It has been proven valid and its development is outlined elsewhere (e.g. Brawley, Carron & Widmeyer, 1987; Carron, Brawley & Widmeyer, 1985; Carron, Widmeyer & Brawley, 1985; Widmeyer et al., 1985). Cronbach's alpha coefficients for the four scales range from .64 to .75 (Widmeyer et al., 1985).

Within this 18 question scale, the four dimensions of cohesion are derived as follows. Questions 2, 4, 6 and 8 are scored inversely for the individual attraction to group - task while individual attraction to group - social is obtained through combining the scores of items 5 and 9 and the inverse scoring of questions 1, 3 and 7. Group integration - task is obtained through the inverse scores of questions 14 and 18 and the scores on questions 10, 12 and 16. Finally, group integration - social is scored by combining the score on item 15 to the reverse scores on questions 11, 13 and 17. Scores for GI-S and ATG-T can be as high as 36, those for GI-T and ATG-S can range up to 45.

Healthy communication was operationalized through a modification of the Interpersonal Relationship Rating Scale (IRRS) (Hipple, 1972) specifically for sports teams. A copy of this questionnaire is presented in Appendix B. The scale was modified so that questions referred to the group as opposed to one individual. For example, item 4 was originally titled "tendency to trust" and one would grade a specific individual on this trait. It was rephrased "tendency to trust each other" and subjects would then grade the group on this trait. This modification enabled an assessment of communication as a team phenomenon, not an individual one. In this way, it was made congruent with both the phrasing of the GEQ and the concept of communication as has been studied. The IRRS is a self administered form which measures 24 dimensions of interpersonal relations on seven point Likert scales. It was designed to measure the attitudes and/or behaviours of individual's relationships

with others in a fashion so that individuals could respond as accurately as possible. Specifically, the questions were formulated to assess overt, observable behaviours which reflect the motivational, emotional and intellectual processes involved in interpersonal relations.

This instrument was chosen for a variety of reasons. Most importantly, it is the most appropriate instrument for the assessment of "healthy" communication as it entails dimensions of openness, responsiveness and supportiveness of communication. It has been previously used with both university students (Hipple, 1972) and athletes (Di Berardinis et al., 1983). Finally, it has also been supported as a reliable and valid (Spearman rank order correlation coefficient of .83; Di Berardinis et al., 1983).

In line with previous research (Widmeyer & Williams, 1993, Williams & Widmeyer, 1993), task communication, defined as the amount of communication members have with each other specifically about the person's skills and techniques as a player, was measured by the following questions: (a) "During practices, how often did you or your teammates give each other tips about your individual play and team performance?" and (b) "During or after games, how often did you or your teammates give each other tips about your individual play and team performance?" Each of these was measured on a seven point Likert scale. See Appendix A for a copy of all questionnaires as they were given to the subjects.

Procedure All subjects were tested in early January, between their competitive season and spring training/tour. All questionnaires were administered by the researcher at the same time of day and ordering of the questionnaires was counterbalanced. Subjects were assured of the confidentiality of their answers and asked to respond honestly with their immediate response to each of the questions. The total time required to fill all questionnaires was not longer than 15 minutes.

Analysis of Data Because of the large number of measures of communication studied (particularly in light of the relatively small number of subjects), these scores were subjected to a factor analysis procedure. The particular procedure chosen was a principle component analysis, with factors orthogonally rotated, using varimax rotation.

A factor analysis seeks to find any underlying dimensions among a collection of measures by examining the relationships of correlations between them. The principle component approach produces a line of factors which explain a certain amount of variation among the scores, in descending order. That is, the first factor will account for the most variance, followed by the second factor which accounts for as much variance as possible of what is still unaccounted for. This process continues until a factor can no longer account for a significant amount of the variation in scores. Because the procedure seeks to attribute as much of the variation onto the first factor as possible, the factors can be orthogonally rotated. This procedure "seeks to

simplify factors by maximizing the variance of the loadings within factors, across variables" (Tabachnick & Fidell, 1989, 630). In other words, while the independence among factors is retained, they are easier to interpret because variables which loaded highly onto it before rotation now load higher while those that loaded lowly, load even lower.

The criterion for a factor to be considered significant was an eigen value of one. The eigen value refers to the sum of squares correlations between each measure and that factor. Eigen values lower than one are considered insignificant because any individual measure will have a sum of squares measure of one because it correlates perfectly with itself. Thus, a factor with a eigen value of less than one will not explain any more variance than any one of the original variables. Factor loadings of greater than .45 were accepted as being significantly loaded onto that factor (Tabachnick & Fidell, 1989). This criterion is high, since usual cutoffs can be as low as .30. However, it was decided that, because several variables loaded onto multiple factors at lower levels, the .45 criterion aided the interpretability of the results.

These factors were then forced into four forward stepwise regression equations, one with each of the cohesion measures as a dependent variable. A forward stepwise regression is a procedure which determines which, if any, of offered variables contributes to the prediction of a dependent variable. The equation begins with no variables entered and they are forced into the model in order of the significance of

their unique contribution (semi-partial correlation) to the prediction. This will continue as progressively less powerful predictors are included until no more remain whose unique contribution improves the model significantly. This procedure has been suggested as appropriate for exploratory or model building research (Tabachnick & Fidell, 1989).

CHAPTER V

RESULTS

Fifty seven subjects participated in the data collection process, but two questionnaires were incomplete, leaving a total sample size of 55. The summary statistics of the all 29 variables are presented in Table 1.

The scores on communication were all moderately high, ranging from an average of 4.26 to 5.95 out of seven. The highest scores (i.e. over 5.75) included level of aspiration, level of physical aspiration, level of self esteem, tendency to trust and degree of versatility. The lowest scores (i.e. below 5.0) included awareness of feelings, level of giving love, reaction to conflict, reaction to comments about behaviour, reaction to opposing opinions, toleration of differences and willingness to discuss emotions. Thus, while these teams appear to communicate freely overall, they are less likely to discuss emotional issues than those pertaining to how ambitious or practical the team was. The teams also appear to be moderately to highly cohesive, with averages ranging from 28.78 out of 36 to 36.38 out of 45.

A factor analysis was performed on the measures of communication and an orthogonally rotated principal component analysis yielded eight significant (eigen value > 1.0) factors. Appendix A provides details of all statistical procedures. Two of these factors were based on two or less items each, thereby found to be unstable

Variable	Mean	Standard deviation
1. Ability to influence	5.76	0.86
2. Anger expression	5.42	1.26
3. Level of aspiration	5.95	0.93
4. Awareness of feelings	4.98	0.99
5. Tendency to build on previous ideas	5.29	1.13
6. Clarity of expressing thoughts	5.27	1.10
7. Tendency to seek close personal relationships	5.49	1.25
8. Degree of independence	5.53	1.22
9. Degree of innovativeness	5.55	1.02
10. Ability to listen in an understanding way	5.07	0.88
11. Level of giving love	4.56	1.27
12. Level of openness	5.22	1.33
13. Level of physical aspiration	5.86	0.91
14. Degree of peace of mind	5.13	1.09
15. Reaction to expression of affection	5.27	1.21
16. Reaction to conflict	4.35	1.19
17. Reaction to comments about behaviour	4.93	1.03
18. Reaction to opposing opinions	4.71	1.12
19. Level of self esteem	5.96	0.74
20. Level of self understanding	5.53	0.84
21. Toleration of differences	4.95	1.08
22. Tendency to trust	5.75	0.80
23. Degree of versatility	5.87	0.88
24. Willingness to discuss emotions	4.26	1.34
25. Amount of task communication	14.93	2.28
26. Attraction to group - social	36.80	6.50
27. Attraction to group - task	29.89	5.36
28. Group integration - social	28.78	5.51
29. Group integration - task	35.55	5.61

Table 1

Means and standard deviations for all variables.

Note: Items 1 -24 scored on a 7 point Likert scale, item 25 is a combined score from two 7 point scales, items 26 and 29 were scored from 0 - 45 and items 27 and 28 from 0 - 36.

(Tabachnick & Fidell, 1989) and dropped from the data analysis, leaving a total of six factors derived from 25 variables. The rule of thumb for this procedure is to expect between one third to one fifth as many factors with eigen values greater than one as there are variables (Tabachnick & Fidell, 1989). Table 2 lists these factors and their variables and eigen values. It should be noted that the eigen values of each factor do not correspond with their position in the extraction hierarchy (e.g. the first factor does not account for the most variance). This is because the factors were ordered before rotation. Therefore the first factor explained the most variation before the factors were rotated. While it no longer accounts for the most variation in communication scores, it is still held as the first factor because this is the order of the factors in the output of the statistical procedures, as can be seen in Appendix A.

Factor	Tolerance	Love	Support	Anger	Effectiveness	Confidence
Variable (Item on IRRS)	reaction to conflict (# 10)	level of giving love (# 15)	tendency to listen (# 1)	level of anger expression (# 22)	level of task communication	level of aspirations (# 18)
	reaction to opposing opinions (# 9)	willingness to discuss feelings (# 12)	awareness of feelings (# 2)	clarity of expressing thoughts (# 23)	ability to influence each other (# 7)	level of physical aspirations (# 19)
	reaction to comments (# 11)	level of openness (# 16)	ability to influence each other (# 7)	level of independence (# 24)	tendency to build on previous ideas (# 6)	degree of innovativeness (# 21)
	degree of versatility (# 20)	tendency to seek close personal relationships (# 5)	tendency to trust each other (# 4)			tendency to trust each other (# 4)
		reaction to affection (# 8)				degree of peace of mind (# 17)
						toleration of differences (# 3)
% of variance	9.689	13.100	8.748	8.377	8.259	13.185
eigen value	2.422	3.275	2.187	2.094	2.065	3.296

Table 2
Variables, eigen values and percentage of variance
of communication accounted for by extracted factors.

Using these criteria, the first factor included reaction to conflict and antagonism, reaction to opposing opinions, reaction to each other's comments and the degree of versatility. (All variables will be listed in decreasing significance with respect to its factor). The underlying dimension appeared to be the tendency to be open within the group; how members could express and react to communication which may be different, even hostile and how versatile they felt they were with each other. This factor was labelled Tolerance. It had an eigen value of 2.4 and accounted for 9.7% of the variation in communication scores.

The second factor to be extracted included level of giving love, willingness to discuss feelings, level of openness, tendency to seek close personal relationships and reaction to affection. Because these variables appear to represent to group's communication of warmth and love, the factor was labelled Love. It had an eigen value of 3.3 and accounted for 13.1% of the variation in communication scores.

The third factor consisted of the tendency to listen to each other, awareness of each other's feelings, ability to influence one another and tendency to trust. Because the underlying dimension appeared to be the closeness and support perceived, this factor was labelled Support. It had an eigen value of 2.2 and accounted for 8.7% of the variation.

The fourth factor to emerge included the tendency to express anger, clarity of

expressing thoughts and level of independence. This factor seems to reflect the ability of individuals to communicate anger and the effect of this openness on the interdependency of members. It was labelled Anger and was found to have an eigen value of 2.1, explaining 8.3% of the variance.

The fifth factor included level of task communication, ability to influence one another and the tendency to build on previous ideas. The underlying dimensions here would appear to be the perception of the group's ability as a task oriented unit. This factor was labelled Effectiveness, had an eigen value of 2.1 and accounted for 8.3% of the variation.

Finally, the sixth factor was composed of level of aspiration, level of physical aspiration, degree of innovativeness, tendency to trust one another and toleration of differences in one another. This factor seemed to express the perceptions of confidence in the group's unity as a sports team (i.e. aspiration, physical aspiration, innovativeness) and as a social unit (i.e. trust, toleration of differences): therefore, it was labelled Confidence. It had an eigen value of 3.3 and accounted for 13.2% of the variation.

These six factors accounted for a combined 61.36% of the variation in communication variables. This total falls between the range of 50% - 75% of explained variance accepted for a significant factor analysis (Diekhoff, 1992;

Tabachnick & Fidell, 1989).

These six factors were then forced into stepwise regression equations with the four measures of cohesion as dependant variables. These regression equations were performed to see if these factors of communication effectively predicted cohesion. For each dimension of cohesion, some combination of these factors explained a significant amount of variation.

ATG-S was significantly predicted by the combined unique contributions of Effectiveness, Love and Tolerance, $F(3, 51) = 3.626, p < .05$. This model accounted for almost 18% of the variation in ATG-S, $r^2 = .176$. Anger, Confidence, Effectiveness, Love and Support combined to predict ATG-T, $F(5, 49) = 3.157, p < .05$. This model accounted for almost 25% of the variation in scores, $r^2 = .244$. With respect to GI-S, Confidence, Effectiveness and Love combined to significantly predict it, $F(3, 51) = 8.433, p < .001; r^2 = .332$, accounting for 33.2% of variance. Finally, GI-T was effectively predicted by Confidence, Effectiveness, Love, Tolerance and Support, $F(5, 49) = 8.136, p < .001$. This model accounted for 45% of the variation in GI-T scores, $r^2 = .454$. Every one of the extracted factors was found to be a significant predictor of at least on dimension of cohesion. Appendix A shows all regression procedures.

CHAPTER VI

DISCUSSION

Communication is a necessity of any social interaction. Groups cannot be formed or maintained without the transfer of information and opinion between individuals. Without being able to express attraction, displeasure or indifference, members would not be solicited and groups would not evolve or dissolve. The interactional dynamics and structural integrity of cohesive groups depend on the ability of members to effectively communicate beliefs, thoughts and emotions. Within the domain of social psychology, sports teams are a special entity. They exist as a special balance of task focus and social cohesion. Since group structure is reflected in communication (Fischer, 1975), examination of communication in these groups should not only show comparability between teams and other groups in terms of communication, but also in terms of group structure.

This study focused on the communication of intercollegiate rugby teams. It was predicted that these teams would possess many of the communication patterns already known in healthy family communication, as well as a more sport-specific task factor of communication. It was also hypothesized that each of these factors would be a significant predictor of all dimensions of cohesion within the team. Social factors were predicted to be more strongly correlated to cohesion than task factors.

Within the reported communication patterns, several social and task communication factors emerged. Labelling of these factors was guided by a combination of theory and interpretability. They are discussed as reflecting not only the individual variables statistically present, but also to ensure continuity with previous research and theory.

Specifically, team interaction appeared to be characterized by several trademarks of communication in other healthy systems. Communication patterns reflected how tolerant members are of various topics (Tolerance), how effectively they express love (Love), how supportive they are of each other (Support), how they deal with anger (Anger), how effective they are as a task oriented unit (Effectiveness), and how confident they are of their abilities as a sports team (Confidence).

These factors were able to support significant models of the following form predicting team cohesion:

Attraction To Group - Social = Effectiveness + Love + Tolerance

Attraction To Group - Task = Anger + Confidence + Effectiveness + Love
+ Support

Group Integration - Social = Confidence + Effectiveness + Love

Group Integration - Task = Confidence + Effectiveness + Love + Tolerance
+ Support

Because of the correlational design of this study, it cannot be concluded that communication facilitates cohesion, only that the two are interrelated and the various

aspects of communication can predict cohesion.

While each of these factors was significantly related to at least one of the measures of cohesion, the most consistently important communication patterns appear to be Effectiveness and Love, both of which significantly predicted all four styles of cohesion.

Factors of healthy communication

Six factors emerged which accounted for 61.36% of the variation of the 25 communication scores. The most powerful of these factors was Confidence, which was loaded onto by six variables and explained 13.2% of the variation. This factor reflected how ambitious and united members perceived their team to be. While this style of communication has not been discussed in the literature of other systems, it may be a sport-specific factor of healthy communication. Families are not under task constraints common to sports teams and businesses do not rely as heavily on members' solidarity in their aspirations. Rugby teams must not only ambitiously pursue objectives, they must do so as a social unit.

The second factor, explaining 13.1% of the variation, was Love. This factor is a relatively straightforward reflection of the amount of love reflected in team communication; how effectively and how often members convey feelings of warmth for one another. This is one of the most common issues discussed in communication

of social systems and has been found to be a basic and essential component of healthy family communication (Curran, 1983; Satir, 1988; Skynner & Cleese, 1993).

The third most significant factor which was extracted, which explained 9.7% of the variance was Tolerance. This factor signified how members perceive group reaction to various statements, ranging from simple comments about one another to open conflict and antagonism. It is a reflection of how open members are with different topics of conversation; how willing they are to engage in them and how responsive they will be. The item of versatility was also included, and this can be an important aspect of how they handle such open communication. This has been found to be a vital asset of group communication in various circumstances (Curran, 1983; Rosen & Berger, 1991; Satir, 1988; Skynner & Cleese, 1993).

The remaining factors each explained about 8% of the variance in the measured communication. In order of significance, these were labelled Support, Anger and Effectiveness. Support, accounting for 8.7% of the variance, encompassed the perceived competence of the group to provide a sympathetic, understanding environment. Members felt they could express their feelings and were confident in the constructive dynamicism within the team. The next most indicative factor was Anger, explaining 8.4% of the communication. This referred to how competent members were at, and how comfortable they were with expressing anger. Both of these factors are very practical assets in healthy communication. How comfortable

individuals feel with expressing emotions is directly related to the fact that they can talk openly about many issues (Curran, 1983; Rosen & Berger, 1991; Satir, 1988).

Effectiveness, covering 8.3% of the variation, represented the ability of members to talk to each other about their individual abilities and use this discussion constructively. One aspect of this factor is the ability of members to discuss individual abilities with each other, which has been found to be important in team cohesion (Williams & Widmeyer, 1991). However, the authors noted that this may be a narrow definition of task communication. The inclusion of this original item with several other variables of communication supported this notion. A factor analysis extracted a more complete dimension of task discussion, including how strongly members influenced each other and how well they built on each other's ideas.

These factors reflect both the already noted characteristics of healthy communication and functional communication specifically with regards to sports teams, or at least rugby teams. To avoid problems, it should be noted that task and social communication are not mutually exclusive; rather task could be viewed as a sub-domain of social communication.

Love, Tolerance, Support and Anger have all been found to be stable trademarks of good communication patterns in other, more extensively studied healthy systems such

as businesses and families (Curran, 1983; Rosen & Berger, 1990; Satir, 1988; Skynner & Cleese, 1993). As in these and other systems, rugby teams' communication is marked by a loving and supportive environment and the willingness to engage in and accept various forms of interaction, including those which may be threatening to certain individuals or perhaps the group as a whole. The importance of this healthy communication is emphasized by the combined effect of these four factors; they account for 39.9% of the variation in measured communication.

Confidence and Effectiveness both relate to the ability of the team to be a constructive, adaptive unit in striving to meet its objectives. Thus, a large part of the team's communication will refer to individual and collective abilities and plans. This should be seen as a very functional aspect of communication in sports teams. Rugby, like any sport, is an influential social process, but is primarily a goal oriented activity, especially at a level as high as inter-collegiate. A social process such as discussing abilities and confidence would be invaluable to any team, and in these teams accounted for 21.4% of the variance in communication measures. This may be an aspect of healthy group communication unique to sports teams. Unlike families, and, to a lesser extent, businesses, sports teams must monitor individualized consideration of abilities and group aspirations. Therefore, the combined effect of Confidence and Effectiveness may be considered a trademark of healthy communication in sports teams. It must be re-iterated that this aspect is still social in nature and not a distinct form of communication.

Differences between cohesions

As discussed above, Widmeyer et al. (1985) defined four dimensions of cohesion.

Again, these constructs were defined as:

1. **Group Integration-Social:** Individual team member's feelings about the similarity, closeness, and bonding within the team as a whole around the group as a social unit.
2. **Group Integration-Task:** Individual team member's feelings about the similarity, closeness, and bonding within the team as a whole around the group's task.
3. **Attraction to Group-Social:** Individual team member's feelings about his/her personal involvement, acceptance and social interaction with the group.
4. **Attraction to Group-Task:** Individual team member's feelings about his/her personal involvement with the group task, productivity and goals and objectives.

(Widmeyer et al., 1985, 17)

A significant, although relatively small, amount of the variation in ATG-S was predicted by the combined effect of Effectiveness, Love and Tolerance. Therefore, a member's perception about his/her involvement, acceptance and interaction within the team as a social unit is solidly correlated to how effective the members communicate specific playing strategies and abilities, how open they are with respect to the expression of various topics, and how well they express love and seek affection.

The relationship between ATG-T and Anger, Confidence, Effectiveness, Love and

Support was more significant than the above correlation. Taking Widmeyer et al.'s (1985) definition into account, it appears that individual involvement with group issues such as productivity and objectives is meaningfully related to how comfortable the members feel with expressing and reacting to anger, their confidence in their collective aspirations and social unity, how well they discuss task oriented abilities, as well as warmth for each other and the empathy and support expressed within the group.

The GI-S dimension of cohesion was significantly related to the tendency to communicate Confidence, Effectiveness and Love. This would mean that members' feelings with respect to similarity and bonding with the social group are strongly related to how secure they are with their ambitions and solidarity, and how functionally they communicate regarding their rugby abilities and emotional warmth for one another.

Finally, the model for GI-T was supported by Confidence, Effectiveness, Love, Tolerance and Support. One's feelings of bonding and similarities around the group's task are intimately related to how confident they are collectively pursuing some goal and how constructively they can communicate this, as well as how loving, supportive and open the group is.

Contrary to predictions, it was not found that all cohesions were significantly related

to all factors of communication. While each of the factors was a predictor of at least one cohesion, only two of the six, Effectiveness and Love, were found in all models. Anger was only significant once. As well, it was not found, as predicted, that communication was more significantly related to social than task cohesion. It may be that these teams were not as significant a social group as was hoped. While they obviously are important for the members socially, as indicated by their social cohesion scores in Table 1, they are a short lived social entity. The longest any one player will remain is five years and team turnover is annual. Rugby at the university level is also a relatively elite competition and as such it would be understandable that their interactions are focused more on task than social factors. It may be that these factors influence the comparability between families and teams. While the relationship between communication and cohesion is as would be predicted by a family-team similarity, the phenomenon may be even more robust with a team participating at a lower level. These teams would place more emphasis on an intimacy or support function, compared to competitive aims.

With respect to individual factors, Effectiveness was defined as the ability of the team to constructively discuss individual abilities and styles of play. It is a sport-specific pattern of communication whose importance in all aspects of cohesion may derive from the function of communication on a rugby team. While rugby is a social as well as task-oriented activity, one of the primary functions of a team, particularly one at the inter-collegiate level, is to perform at a certain level. Players socialize and exist

as a group primarily because of this objective; their interactions and communications will reflect this bias. Much of the "social involvement" between rugby players on a team involves discussing the most recent games and practices, particular teams and players of note and certain skills and conventions. As well, with the nature of rugby in Canada, team meetings not directly involved with play may still be strongly tied to the sport (e.g. fund-raisers, team meetings). Again, it should be noted that "task communication" as used by Williams and Widmeyer (1991, 369) is somewhat of a misnomer. Interactions focusing on specific abilities are still communication regarding one of the central tenets of their friendships, and as such displays the personal concern and interactional dynamics of healthy social communication.

Love refers to the ability of the group to enable and promote the communication of warmth and affection and how effective members are at this. Its importance to sports teams is a direct reflection of findings of healthy communication in other groups. Healthy families and businesses, for example, are prominently characterized by how well they communicate love for each other and how loving and expressive their communicative environments are (Curran, 1983; Rosen & Berger, 1991; Satir, 1988; Skynner & Cleese, 1993). As was hypothesized, this dimension of healthy communication was important in all cohesions. It would appear that how close individuals perceive the group and how strongly they depend on it, whether as a social or functional group, is closely related to how well they communicate their intimacies.

It appears that a thoroughly cohesive rugby team is capable of, and depends on healthy communication. Whether this entails the expression of love and warmth for one another or the constructive discussion of individual abilities, rugby players tend to communicate constructively and sympathetically. As has been supported in systems theory, communication of love is indicative of any healthy group. Members will feel accepted and wanted as individuals. Because individual talents and their subsequent constructive discussion are important aspects to the team's existence both as a task and social unit, it is appropriate that this aspect of team communication is so powerful. Rugby players' tendencies to interact as a constructive, functional group is a unique, but still healthy attribute.

Confidence, defined as how self assured the group was as a task oriented unity, was significantly correlated to three cohesion scores. This is a second, unique, task factor of communication and was closely related to both task cohesions. Perceptions of personal involvement and similarity as a task oriented entity in rugby teams is strongly influenced by how competent members feel they are as a team. Attributes such as degree of aspirations, innovativeness and toleration of differences are important to these teams as groups with important objectives and productivity standards.

Interestingly, Confidence is significantly related to GI-S and not GI-T. Widmeyer et al. (1985) differentiate between perceptions of group integration and individual

attraction to group this way:

Group integration [is] the perception of the closeness, similarity and bonding within the group as a whole; the perception of the degree of unification of the group field ... Individual attraction to group [is] the interaction of motives acting on individuals to remain in the group; the composite of individual member's feelings about the group, desire to be accepted and other group members (p. 16).

It appears that the defining social variables of trust and toleration of differences impinge on Confidence as a factor of social communication. These social items may be more closely tied to how members perceive the solidity of the team than to how much they desire to be accepted by it. Groups willing to tolerate differences in one another and trust each other could be perceived as close groups, but that doesn't mean that individuals desire to be a part of such a team socially.

Surprisingly, support, defined as the tendency of the group to listen, trust, and sense the emotional tone of each other, was correlated with only both task cohesions. These dimensions of cohesion entail the "motivation towards achieving the group's goals and objectives (Widmeyer et al., 1985, 16). It is not surprising that members motivation would be closely tied to the level of perceived support within the group; communication of acceptance and empathy would facilitate incentive towards shared aspirations. However, the non-significance of Support with respect to the "development and maintaining social relations within the group" (Widmeyer et al., 1985, 16) is perplexing. According to theory and research on communication in social groups, this factor should be instrumental in social cohesion (Curran, 1983;

Satir, 1988; Skynner & Cleese, 1993). It may be that the collegiate teams studied in this paper, because of their strong task orientation and ephemeral nature, are not as strong a social entity as was believed.

Tolerance, or the tendency of the group to react flexibly to potentially volatile communication, was significantly related to GI-S and ATG-T. As would be predicted, its relationship to perceived unity as a social entity is based on the vigorousness of a style of communication which fosters an acceptance of any and all topics. Its importance to a team's functional solidarity may extend from the nature of rugby as a sport. Rugby is a dynamic sport, with reactions and strategies depending not only on individual and team abilities, but also the circumstances at hand. Players with different perspectives may have differences of opinion and the ability to deal with this should be important to a team whose members feel involved.

Finally, Anger, or how well the group expressed and reacted to anger, was a significant predictor only of ATG-T. Anger could be more important to the individual's attraction to the group with respect to task rather than social issues because there are less demands on social functionality than winning a game. While players have to tolerate and appreciate differences in a free flowing activity if they want to win or play well, it is not as necessary for the social aspect of the group. In other words, players' communication can be restrictive with individuals they want to bond with, not those with whom they want to win.

Communication in rugby teams

These findings support that rugby teams are capable of quite functional interaction. Members communicate a unity and sense of support with regards to their functions both as a sports team and social group. They feel free to express their honest emotions for one another, ranging from love to anger, and are willing to accept these expressions from their teammates. The interactional environment is characterized by confidence and competence as a team and openness and support with respect to individual expression. This is further support for the equivalence between teams and families espoused by various authors (Grau, Moller & Gunnarsson, 1988; May & Brown, 1989; Schindler-Zimmerman, 1993; Schindler-Zimmerman & Protinsky, 1993; Schindler-Zimmerman, Washle & Protinsky, 1990).

This communication is notably tied to the affiliative attitude members have with respect to one another. Healthy communication in rugby teams, in terms of its facilitation of cohesiveness, involves the ability to clearly express and accept emotional warmth, and the constructive discussion of individual and group abilities and aspirations. The factors of Effectiveness, Love and, to a lesser extent, Confidence all contributed to the complete cohesiveness of these teams.

In terms of this relationship, it is noteworthy that both task cohesion models are more complex than those for social cohesions. The models for ATG-T and GI-T

both are supported by five communication factors. These teams appear to be more dynamic task groups than social ones. How well they are organized and how united they are in pursuit of certain objectives depends not just on how well they interact regarding personal abilities and team aspirations, but also how supportive and open the social environment is and how capable members are of expressing love and anger. Compared to the social cohesion studied, it appears that this is a much more active and vital part of team communication. This may be due to a combination of two factors. Firstly, these teams are competing at an elite level, and are organized and maintained primarily for this purpose. Secondly, their life as a group will be relatively short. Because of this emphasis of their team as a task oriented unit, their social existence is much more conditional than their functional one. Task cohesion has to be that much more dynamic because it is much more imperative to the group. This is an example of how structure and communication patterns interact in systems. Because the team is structured as a system of constant turnover, with a definite goal (much more so than families), communication as a social process revolves around this structure. The dominant patterns allow for healthy communication, but more importantly, functional interaction of a goal oriented team with relatively minimal social constraints. While these teams are similar to families in terms of the style of communication and its relationship with group cohesion, this team may be too elite to see the full effect, as was hypothesized. A team with a more relaxed attitude towards winning and a more permanent social life would have a structure capable of promoting more family-like interactions.

As in other healthy systems, these (social and task) concepts are inter-facilitatory. A team which is open and supportive will be confident in their ability to discuss each other's talents. Likewise, for a team to be constructive regarding their abilities and objectives, they must promote open communication between members. A similar facilitatory nature may also exist between communication, cohesion, and other characteristics of a healthy system noted above. The team's realistic perceptions, and how well they deal with change, may be in part based on how open their communication is and how effectively they discuss task factors. An empowering style of leadership would rely in open communication between members sub-systems. An environment fostering emotional independence, as opposed to one which nurtures clinging dependence would be based partially on the open communication of love and support. Knowing they have this unconditional resource, players would feel free to seek acceptance in other groups.

The finding that all aspects of communication, no matter how functional, were not related to all measures of cohesion may stem from the measurement of communication used. While the IRRS was deemed the best measure of social communication available and was impressively supported as applicable for student-athlete populations, there are other aspects of healthy communication which did not emerge from these variables. For instance how honest members are with each other or how direct issues tend to be communicated within the issue may tie directly to these feelings of involvement, acceptance and social interaction. This and other

factors may support more powerful models.

Practical suggestions research supports

On the basis of this research, it appears that communication within teams is of practical concern. How well players discuss sport-specific tasks and abilities as well as how the group facilitates a warm, supportive and open environment has a definite effect on all aspects of cohesion. Given the established relationship between cohesion and performance, especially in team sports (Butt, 1987; Carron, 1980; Carron, 1986; Gill, 1988; Williams & Widmeyer, 1991), it appears that teams capable of healthy patterns of communication can also be better, more productive teams. Rugby players and coaches would be wise to note that a team which can communicate love and support, react well to different topics and anger and constructively discuss individual and team abilities and objectives will be closer, and as a result, perform better. In other words, a team which is capable of communicating like a healthy family or any other social group, will be a better team.

Shortcomings of present study

The primary limitation of this study concerns the external validity of its findings. Rugby is a unique sport and, within this community, male inter-collegiate rugby a select faction. It is conceivable that the findings here are generalizable to club (men's and women's) rugby, as well as provincial and national teams because of the stability of these teams. In these more permanent environments, these healthy patterns would be expected to be fostered. Members would be more familiar with each other, more accepting and understandably more open, loving and expressive.

Because of the select nature of rugby as a cohesive social experience as well as a sport, extension of this research to other sports may be vulnerable. Still, despite this conventional wisdom regarding rugby, there is currently no substantiated reasoning to support it as so qualitatively different from hockey, volleyball or any other team sport. This research was aimed at rugby teams in particular because of the researcher's intimate knowledge of the sport, which aided immensely in the interpretability of the findings.

Suggestions for future research

The findings of this study are interesting, practical and somewhat predictable; they also open the door for a variety of approaches to communication in sports teams.

This study would benefit from the investigation of communication and cohesion in lower levels of competition. If teams are similar to families, are recreational teams more like families than more elite teams? Future research should also address communication styles in different teams. Are rugby teams unique in their communication? Do other sports teams have better or worse communicative abilities? As well, a more complete, qualitative approach to communication styles is suggested. Are there other dimensions of communication which weren't touched on because of the limitations of the measurement used? Are these subjectively reported communication styles perceived correctly or do teams function differently than members think they do?

Another focus of research could stem from this study as a first link in the establishment of sports teams as functional, healthy systems. If there is a proven relationship between healthy communication and the attraction of group members in sports, will the other characteristics of healthy groups be applicable? Are teams able to thrive on change? Do they have a realistic view of their own competencies? How do these and other characteristics interact?

Hopefully, this project will serve as the impetus for a new and fruitful area of study in sport psychology. Sports teams are an important group for much of society. Membership is multifaceted and rewarding and can last decades. In some cases, they may be the most influential and desired group in an individual's life. It is important

that these and other issues be addressed so as to best aid sports participants.

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APPENDIX A

LATENT ROOTS (EIGENVALUES)

1	2	3	4	5
7.245	2.195	1.872	1.716	1.491
6	7	8	9	10
1.417	1.192	1.070	0.870	0.808
11	12	13	14	15
0.756	0.607	0.602	0.470	0.420
16	17	18	19	20
0.390	0.339	0.318	0.305	0.263
21	22	23	24	25
0.208	0.182	0.130	0.071	0.062

COMPONENT LOADINGS

	1	2	3	4	5
LIST	0.325	0.423	-0.527	-0.061	0.294
AWFL	0.580	0.220	-0.304	0.184	0.088
TOLDIF	0.527	0.310	0.018	-0.222	-0.233
TRUST	0.606	0.233	-0.316	0.036	-0.292
CLREL	0.506	-0.463	-0.072	0.168	-0.251
BPI	0.506	-0.076	-0.289	0.158	-0.479
ABINF	0.348	0.096	-0.665	0.084	0.258
RXAF	0.438	-0.345	0.031	-0.311	-0.074
RXOP	0.607	0.285	0.271	-0.017	-0.357
RXCF	0.359	0.426	0.292	-0.133	-0.203
RXCM	0.495	0.300	0.285	-0.258	0.254
WDIS	0.564	-0.467	0.182	-0.302	-0.113
SU	0.323	0.091	0.017	-0.474	0.370
SE	0.541	0.028	-0.179	-0.089	0.212
LOVE	0.594	-0.479	-0.024	-0.503	0.119
OP	0.617	-0.393	-0.267	-0.177	0.172
PM	0.737	0.016	0.212	-0.126	0.060
ASP	0.660	0.263	0.028	0.206	-0.044
PAS	0.409	0.210	0.081	0.218	-0.031
VERS	0.655	0.243	0.185	0.078	0.150
INNO	0.747	-0.074	0.141	0.125	-0.279
ANG	0.293	-0.440	0.242	0.526	0.220
CLEXP	0.701	-0.130	0.252	0.265	0.310
IND	0.314	0.053	0.371	0.439	0.410
TASK	0.358	-0.336	-0.356	0.332	-0.040
	6	7	8		
LIST	0.297	-0.141	0.293		
AWFL	0.443	0.113	-0.221		
TOLDIF	0.159	-0.062	-0.176		
TRUST	0.185	-0.290	0.167		
CLREL	0.016	0.026	0.082		

BPI	-0.072	0.262	0.205
ABINF	-0.052	0.380	-0.101
RXAF	0.328	0.346	-0.428
RXOP	-0.068	0.153	0.041
RXCF	-0.306	0.470	0.014
RXCM	0.124	0.283	0.340
WDIS	0.273	-0.091	0.116
SU	-0.302	0.122	-0.199
SE	-0.594	-0.235	0.104
LOVE	0.005	-0.172	0.008
OP	-0.039	-0.063	0.005
PM	-0.225	-0.184	0.035
ASP	-0.235	-0.279	-0.228
PAS	0.001	-0.282	-0.282
VERS	0.048	0.102	0.190
INNO	0.005	-0.142	-0.058
ANG	-0.016	0.120	0.290
CLEXP	0.168	0.079	0.198
IND	0.150	-0.026	-0.364
TASK	-0.406	0.243	-0.155

VARIANCE EXPLAINED BY COMPONENTS

1	2	3	4	5
7.245	2.195	1.872	1.716	1.491
6	7	8		
1.417	1.192	1.070		

PERCENT OF TOTAL VARIANCE EXPLAINED

1	2	3	4	5
28.981	8.781	7.488	6.862	5.965
6	7	8		
5.669	4.768	4.280		

ROTATED LOADINGS

	1	2	3	4	5
LIST	0.021	0.019	0.902	-0.016	-0.049
AWFL	0.083	0.064	0.589	0.186	0.169
TOLDIF	0.344	0.203	0.218	-0.185	-0.080
TRUST	0.161	0.286	0.514	-0.136	0.118
CLREL	0.046	0.511	-0.042	0.188	0.427
BPI	0.373	0.252	0.171	-0.079	0.586
ABINF	0.025	-0.073	0.569	0.022	0.591
RXAF	0.134	0.501	-0.040	0.009	0.141
RXOP	0.665	0.147	-0.008	0.026	0.079
RXCF	0.812	-0.138	-0.105	-0.044	0.121
RXCM	0.655	0.202	0.317	0.291	-0.224
WDIS	0.134	0.831	-0.008	0.141	-0.053
SU	0.208	0.170	0.052	-0.050	0.011
SE	0.094	0.229	0.129	0.043	0.327
LOVE	-0.004	0.862	0.055	0.016	0.051

OP	-0.065	0.625	0.233	0.130	0.333
PM	0.320	0.424	0.029	0.200	0.049
ASP	0.155	0.041	0.098	0.127	0.176
PAS	0.077	0.076	0.118	0.184	0.050
VERS	0.479	0.160	0.290	0.385	0.005
INNO	0.266	0.417	0.000	0.172	0.194
ANG	0.007	0.202	-0.111	0.763	0.265
CLEXP	0.256	0.347	0.211	0.719	0.073
IND	-0.067	-0.152	-0.050	0.668	-0.100
TASK	-0.058	0.082	-0.054	0.146	0.815

	6	7	8
LIST	0.073	0.107	-0.116
AWFL	-0.054	0.380	0.456
TOLDIF	0.029	0.486	0.230
TRUST	-0.251	0.525	-0.109
CLREL	-0.240	0.183	0.028
BFI	-0.325	0.165	-0.019
ABINF	0.283	-0.028	0.207
RXAF	0.126	0.045	0.719
RXOP	-0.087	0.447	0.051
RXCF	0.187	0.160	0.058
RXCM	0.231	-0.015	0.001
WDIS	-0.071	0.117	0.139
SU	0.730	0.068	0.074
SE	0.503	0.375	-0.467
LOVE	0.338	0.125	0.037
OP	0.267	0.156	0.027
PM	0.288	0.509	-0.161
ASP	0.162	0.788	-0.079
PAS	0.055	0.746	0.086
VERS	0.100	0.317	-0.029
INNO	-0.134	0.607	0.044
ANG	-0.176	-0.049	-0.148
CLEXP	0.028	0.240	0.030
IND	0.147	0.397	0.299
TASK	0.108	0.131	0.010

VARIANCE EXPLAINED BY ROTATED COMPONENTS

	1	2	3	4	5
	2.422	3.275	2.187	2.094	2.065
	6	7	8		
	1.608	3.296	1.251		

PERCENT OF TOTAL VARIANCE EXPLAINED

	1	2	3	4	5
	9.689	13.100	8.748	8.377	8.259
	6	7	8		
	6.433	13.185	5.006		

DEPENDENT VARIABLE ATGS

MINIMUM TOLERANCE FOR ENTRY INTO MODEL = .010000

STEP # 0 R= .000 RSQUARE= .000

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'p'
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IN

1 CONSTANT

OUT PART. CORR

2 TBANG	0.075	.	.1E+01	0.299	0.587
3 TBCONF	0.010	.	.1E+01	0.006	0.941
4 TBEFF	0.289	.	.1E+01	4.821	0.033
5 TBLOV	0.220	.	.1E+01	2.684	0.107
6 TBSUP	-0.054	.	.1E+01	0.155	0.696
7 TBTOL	0.163	.	.1E+01	1.450	0.234

STEP # 1 R= .289 RSQUARE= .083

TERM ENTERED: TBEFF

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'p'
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IN

1 CONSTANT

4 TBEFF	1.217	0.554	0.289	.1E+01	4.821	0.033
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OUT PART. CORR

2 TBANG	0.048	.	0.98966	0.119	0.731
3 TBCONF	0.078	.	0.95281	0.319	0.575
5 TBLOV	0.233	.	0.99985	2.985	0.090
6 TBSUP	0.003	.	0.96148	0.000	0.983
7 TBTOL	0.214	.	0.98098	2.498	0.120

STEP # 2 R= .365 RSQUARE= .133

TERM ENTERED: TBLOV

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'p'
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IN

1 CONSTANT

4 TBEFF	1.229	0.544	0.291	0.99985	5.094	0.028
5 TBLOV	1.157	0.665	0.223	0.99985	2.985	0.090

OUT PART. CORR

2 TBANG	0.048	.	0.98965	0.119	0.731
3 TBCONF	0.120	.	0.92874	0.743	0.393
6 TBSUP	0.004	.	0.96147	0.001	0.980
7 TBTOL	0.222	.	0.98094	2.639	0.110

STEP # 3 R= .419 RSQUARE= .176
 TERM ENTERED: TBTOL

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
IN						
1 CONSTANT						
4 TBEFF	1.350	0.541	0.320	0.98082	6.223	0.016
5 TBLOV	1.164	0.659	0.225	0.99981	3.119	0.083
7 TBTOL	1.273	0.784	0.209	0.98094	2.639	0.110
OUT						
	PART. CORR					
2 TBANG	0.035	.	.	0.98580	0.063	0.803
3 TBCONF	0.078	.	.	0.89066	0.310	0.580
6 TBSUP	0.007	.	.	0.96120	0.003	0.958

THE SUBSET MODEL INCLUDES THE FOLLOWING PREDICTORS:

CONSTANT
 TBEFF
 TBLOV
 TBTOL

DEP VAR: ATGS N: 55 MULTIPLE R: 0.419 SQUARED MULTIPLE R: 0.176
 ADJUSTED SQUARED MULTIPLE R: .127 STANDARD ERROR OF ESTIMATE: 6.074

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
CONSTANT	16.294	6.653	0.000	.	2.449	0.018
TBEFF	1.350	0.541	0.320	0.981	2.495	0.016
TBLOV	1.164	0.659	0.225	1.000	1.766	0.083
TBTOL	1.273	0.784	0.209	0.981	1.625	0.110

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	401.278	3	133.759	3.626	0.019
RESIDUAL	1881.522	51	36.893		

DEPENDENT VARIABLE ATGT

MINIMUM TOLERANCE FOR ENTRY INTO MODEL = .010000

STEP # 0 R= .000 RSQUARE= .000

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
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IN

1 CONSTANT

OUT PART. CORR

2 TBANG	0.266	.	.1E+01	4.032	0.050
3 TBCONF	0.280	.	.1E+01	4.502	0.039
4 TBEFF	0.121	.	.1E+01	0.793	0.377
5 TBLOV	0.140	.	.1E+01	1.066	0.307
6 TBSUP	0.176	.	.1E+01	1.695	0.199
7 TBTOL	0.106	.	.1E+01	0.607	0.439

STEP # 1 R= .280 RSQUARE= .078

TERM ENTERED: TBCONF

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
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IN

1 CONSTANT

3 TBCONF	1.903	0.897	0.280	.1E+01	4.502	0.039
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OUT PART. CORR

2 TBANG	0.228	.	0.96759	2.857	0.097
4 TBEFF	0.194	.	0.95281	2.043	0.159
5 TBLOV	0.193	.	0.97675	2.011	0.162
6 TBSUP	0.198	.	0.99756	2.123	0.151
7 TBTOL	0.047	.	0.94968	0.113	0.738

STEP # 2 R= .355 RSQUARE= .126

TERM ENTERED: TBANG

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
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IN

1 CONSTANT

2 TBANG	1.044	0.618	0.223	0.96759	2.857	0.097
3 TBCONF	1.630	0.896	0.240	0.96759	3.309	0.075

OUT PART. CORR

4 TBEFF	0.167	.	0.93232	1.465	0.232
5 TBLOV	0.191	.	0.97584	1.934	0.170
6 TBSUP	0.214	.	0.99574	2.438	0.125
7 TBTOL	0.046	.	0.94963	0.109	0.743

STEP # 3 R= .408 RSQUARE= .166
 TERM ENTERED: TBSUP

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
IN						
1 CONSTANT						
2 TBANG	1.085	0.610	0.231	0.96583	3.164	0.081
3 TBCONF	1.687	0.885	0.248	0.96596	3.635	0.062
6 TBSUP	1.138	0.729	0.200	0.99574	2.438	0.125

OUT	PART. CORR
4 TBEFF	0.222
5 TBLOV	0.197
7 TBTOL	0.042

STEP # 4 R= .455 RSQUARE= .207
 TERM ENTERED: TBEFF

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
IN						
1 CONSTANT						
2 TBANG	0.948	0.607	0.202	0.94666	2.439	0.125
3 TBCONF	2.054	0.901	0.302	0.90387	5.198	0.027
4 TBEFF	0.745	0.464	0.214	0.89179	2.581	0.114
6 TBSUP	1.384	0.734	0.243	0.95244	3.556	0.065

OUT	PART. CORR
5 TBLOV	0.215
7 TBTOL	0.065

STEP # 5 R= .494 RSQUARE= .244
 TERM ENTERED: TBLOV

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
IN						
1 CONSTANT						
2 TBANG	0.913	0.599	0.195	0.94532	2.323	0.134
3 TBCONF	2.281	0.901	0.335	0.87953	6.412	0.015
4 TBEFF	0.783	0.458	0.225	0.88914	2.923	0.094
5 TBLOV	0.829	0.539	0.194	0.97291	2.370	0.130
6 TBSUP	1.404	0.724	0.247	0.95214	3.757	0.058

OUT	PART. CORR
7 TBTOL	0.061

THE SUBSET MODEL INCLUDES THE FOLLOWING PREDICTORS:

DEPENDENT VARIABLE GIS

MINIMUM TOLERANCE FOR ENTRY INTO MODEL = .010000

STEP # 0 R= .000 RSQUARE= .000

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
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IN

1 CONSTANT

OUT	PART. CORR
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2 TBANG	0.153	.	.	.1E+01	1.266	0.266
3 TBCONF	0.110	.	.	.1E+01	0.646	0.425
4 TBEFF	0.396	.	.	.1E+01	9.835	0.003
5 TBLOV	0.326	.	.	.1E+01	6.301	0.015
6 TBSUP	0.003	.	.	.1E+01	0.000	0.985
7 TBTOL	0.030	.	.	.1E+01	0.049	0.826

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STEP # 1 R= .396 RSQUARE= .157

TERM ENTERED: TBEFF

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
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IN

1 CONSTANT

4 TBEFF	1.322	0.421	0.396	.1E+01	9.835	0.003
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OUT	PART. CORR
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2 TBANG	0.123	.	.	0.98966	0.801	0.375
3 TBCONF	0.218	.	.	0.95281	2.600	0.113
5 TBLOV	0.360	.	.	0.99985	7.750	0.007
6 TBSUP	0.089	.	.	0.96148	0.416	0.522
7 TBTOL	0.093	.	.	0.98098	0.457	0.502

#####

STEP # 2 R= .516 RSQUARE= .266

TERM ENTERED: TBLOV

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
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IN

1 CONSTANT

4 TBEFF	1.335	0.397	0.400	0.99985	11.311	0.001
5 TBLOV	1.359	0.488	0.331	0.99985	7.750	0.007

OUT	PART. CORR
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2 TBANG	0.131	.	.	0.98965	0.886	0.351
3 TBCONF	0.299	.	.	0.92874	5.010	0.030
6 TBSUP	0.096	.	.	0.96147	0.479	0.492
7 TBTOL	0.103	.	.	0.98094	0.544	0.464

#####

STEP # 3 R= .576 RSQUARE= .332
 TERM ENTERED: TBCONF

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
IN						
1 CONSTANT						
3 TBCONF	1.737	0.776	0.266	0.92874	5.010	0.030
4 TBEFF	1.530	0.392	0.458	0.95071	15.208	0.000
5 TBLOV	1.528	0.476	0.372	0.97460	10.293	0.002
OUT						
	PART. CORR					
2 TBANG	0.072	.	.	0.94544	0.263	0.610
6 TBSUP	0.132	.	.	0.95226	0.893	0.349
7 TBTOL	0.045	.	.	0.94071	0.102	0.751

THE SUBSET MODEL INCLUDES THE FOLLOWING PREDICTORS:

CONSTANT
 TBCONF
 TBEFF
 TBLOV

DEP VAR: GIS N: 55 MULTIPLE R: 0.576 SQUARED MULTIPLE R: 0.332
 ADJUSTED SQUARED MULTIPLE R: .292 STANDARD ERROR OF ESTIMATE: 4.334

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	T	P(2 TAIL)
CONSTANT	7.056	4.722	0.000	.	1.494	0.141
TBCONF	1.737	0.776	0.266	0.929	2.238	0.030
TBEFF	1.530	0.392	0.458	0.951	3.900	0.000
TBLOV	1.528	0.476	0.372	0.975	3.208	0.002

ANALYSIS OF VARIANCE

SOURCE	SUM-OF-SQUARES	DF	MEAN-SQUARE	F-RATIO	P
REGRESSION	475.287	3	158.429	8.433	0.000
RESIDUAL	958.094	51	18.786		

DEPENDENT VARIABLE GIT

MINIMUM TOLERANCE FOR ENTRY INTO MODEL = .010000

STEP # 0 R= .000 RSQUARE= .000

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
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IN

1 CONSTANT

OUT PART. CORR

2 TBANG	0.224	.	.1E+01	2.796	0.100
3 TBCONF	0.112	.	.1E+01	0.671	0.416
4 TBEFF	0.316	.	.1E+01	5.900	0.019
5 TBLOV	0.264	.	.1E+01	3.960	0.052
6 TBSUP	0.318	.	.1E+01	5.975	0.018
7 TBTOL	0.236	.	.1E+01	3.118	0.083

STEP # 1 R= .318 RSQUARE= .101

TERM ENTERED: TBSUP

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
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IN

1 CONSTANT

6 TBSUP	1.894	0.775	0.318	.1E+01	5.975	0.018
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OUT PART. CORR

2 TBANG	0.254	.	0.99742	3.572	0.064
3 TBCONF	0.135	.	0.99756	0.961	0.331
4 TBEFF	0.408	.	0.96148	10.366	0.002
5 TBLOV	0.278	.	.1E+01	4.361	0.042
7 TBTOL	0.245	.	0.99988	3.322	0.074

STEP # 2 R= .501 RSQUARE= .251

TERM ENTERED: TBEFF

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
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IN

1 CONSTANT

4 TBEFF	1.434	0.445	0.394	0.96148	10.366	0.002
6 TBSUP	2.355	0.729	0.396	0.96148	10.445	0.002

OUT PART. CORR

2 TBANG	0.237	.	0.98867	3.032	0.088
3 TBCONF	0.258	.	0.94399	3.637	0.062
5 TBLOV	0.310	.	0.99985	5.429	0.024
7 TBTOL	0.333	.	0.98071	6.377	0.015

STEP # 3 R= .578 RSQUARE= .334
 TERM ENTERED: TBTOL

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
IN						

1	CONSTANT					
4	TBEFF	1.584	0.428	0.435 0.94304	13.683	0.001
6	TBSUP	2.384	0.694	0.401 0.96121	11.811	0.001
7	TBTOL	1.535	0.608	0.291 0.98071	6.377	0.015
OUT						
PART. CORR						

2	TBANG	0.230	.	. 0.98489	2.788	0.101
3	TBCONF	0.207	.	. 0.90608	2.238	0.141
5	TBLOV	0.331	.	. 0.99980	6.173	0.016

STEP # 4 R= .638 RSQUARE= .407
 TERM ENTERED: TBLOV

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
IN						

1	CONSTANT					
4	TBEFF	1.597	0.408	0.439 0.94287	15.324	0.000
5	TBLOV	1.210	0.487	0.271 0.99980	6.173	0.016
6	TBSUP	2.388	0.661	0.401 0.96120	13.056	0.001
7	TBTOL	1.545	0.579	0.293 0.98066	7.117	0.010
OUT						
PART. CORR						

2	TBANG	0.242	.	. 0.98487	3.056	0.087
3	TBCONF	0.280	.	. 0.88237	4.166	0.047

STEP # 5 R= .674 RSQUARE= .454
 TERM ENTERED: TBCONF

VARIABLE	COEFFICIENT	STD ERROR	STD COEF	TOLERANCE	F	'P'
IN						

1	CONSTANT					
3	TBCONF	1.632	0.800	0.229 0.88237	4.166	0.047
4	TBEFF	1.773	0.405	0.487 0.90030	19.169	0.000
5	TBLOV	1.368	0.479	0.306 0.97363	8.171	0.006
6	TBSUP	2.515	0.644	0.423 0.95226	15.253	0.000
7	TBTOL	1.309	0.574	0.248 0.94070	5.209	0.027
OUT						
PART. CORR						

2	TBANG	0.198	.	. 0.94493	1.952	0.169

THE SUBSET MODEL INCLUDES THE FOLLOWING PREDICTORS:

CONSTANT
 TBCONF
 TBEFF
 TBLOV
 TBSUP
 TBTOL
 ~~~~~

DEP VAR: GIT N: 55 MULTIPLE R: 0.674 SQUARED MULTIPLE R: 0.454  
 ADJUSTED SQUARED MULTIPLE R: .398 STANDARD ERROR OF ESTIMATE: 4.353

| VARIABLE | COEFFICIENT | STD ERROR | STD COEF | TOLERANCE | T     | P(2 TAIL) |
|----------|-------------|-----------|----------|-----------|-------|-----------|
| CONSTANT | 0.102       | 5.928     | 0.000    | .         | 0.017 | 0.986     |
| TBCONF   | 1.632       | 0.800     | 0.229    | 0.882     | 2.041 | 0.047     |
| TBEFF    | 1.773       | 0.405     | 0.487    | 0.900     | 4.378 | 0.000     |
| TBLOV    | 1.368       | 0.479     | 0.306    | 0.974     | 2.858 | 0.006     |
| TBSUP    | 2.515       | 0.644     | 0.423    | 0.952     | 3.905 | 0.000     |
| TBTOL    | 1.309       | 0.574     | 0.248    | 0.941     | 2.282 | 0.027     |

ANALYSIS OF VARIANCE

| SOURCE     | SUM-OF-SQUARES | DF | MEAN-SQUARE | F-RATIO | P     |
|------------|----------------|----|-------------|---------|-------|
| REGRESSION | 770.972        | 5  | 154.194     | 8.136   | 0.000 |
| RESIDUAL   | 928.664        | 49 | 18.952      |         |       |

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Appendix B

The following questionnaires are designed to assess your perception of how your team functions on various dimensions. It is part of a study to examine the relationship between communication and cohesion. This study is a partial requirement for the completion of my Master's degree in Human Kinetics at the University of Windsor. It is very important for this purpose that you complete the questionnaires honestly and completely. As well your responses will be part of the initial sports psychology research on rugby. As you know, this is a unique sport in many ways and as such is intriguing to study. Hopefully, your participation will encourage further investigation into your sport.

This envelope contains three different questionnaires. On all questions, you should respond with your immediate reaction. They should take no more than twenty minutes to complete.

Your participation is voluntary and your responses are anonymous. As well, you may withdraw from the study at any time. All information will be kept confidential. Your answers will be analyzed with the results of approximately sixty other players at different schools. Any further discussion or presentation of these results will involve this pool of subjects as a whole. If you wish, a final copy of the study can be made available to you by contacting me at the University of Windsor. I will also be available to answer any questions when the session is over.

Thank you for your assistance.

Philip Sullivan

The following questions are designed to assess your perceptions of YOUR TEAM AS A WHOLE. Please CIRCLE a number from 1 to 9 to indicate your level of agreement with each of the statements.

10. Our team is united in trying to reach its goal for performance.

1 2 3 4 5 6 7 8 9
strongly strongly
disagree agree

11. Members of our team would rather go out on their own than get together as a team.

1 2 3 4 5 6 7 8 9
strongly strongly
disagree agree

12. We all take responsibility for any loss or poor performance by our team.

1 2 3 4 5 6 7 8 9
strongly strongly
disagree agree

13. Our team members rarely party together.

1 2 3 4 5 6 7 8 9
strongly strongly
disagree agree

14. Our team members have conflicting aspirations for the team's performance.

1 2 3 4 5 6 7 8 9
strongly strongly
disagree agree

15. Our team would like to spend time together in the off season.

1 2 3 4 5 6 7 8 9
strongly strongly
disagree agree

Interpersonal Relationship Rating Scale

The following questions are designed to assess **your perceptions** of **YOUR TEAM AS A WHOLE**. Complete this form quickly without thinking too much about each item. For each of the following items, **CIRCLE** the number that best describes the degree to which the statement fits your team.

Example:

In this example the rater feels that the team is average in talent.

A. Talent of team.

1	2	3	4	5	6	7
Very poor						Very rich

1. Ability to listen to each other in an understanding way.

1	2	3	4	5	6	7
Low						High

2. Awareness of the feelings of each other.

1	2	3	4	5	6	7
Unaware						Aware

3. Tolerance of differences in each other.

1	2	3	4	5	6	7
Low						High

4. Tendency to trust each other.

1	2	3	4	5	6	7
Quite suspicious						Very trusting

5. Tendency to seek close personal relationships with each other.

1	2	3	4	5	6	7
Low						High

6. Tendency to build on the previous ideas of each other.

1	2	3	4	5	6	7
Infrequent						Frequent

7. Ability to influence each other.

1	2	3	4	5	6	7
Low						High

8. Reaction to expression of affection and warmth from each other.

1	2	3	4	5	6	7
Low tolerance						High tolerance

9. Reaction to the opposing opinions of each other.

1	2	3	4	5	6	7
Low tolerance						High tolerance

10. Reaction to conflict and antagonism from each other.

1	2	3	4	5	6	7
Low tolerance						High tolerance

11. Reaction to each other's comments about our behavior.

1	2	3	4	5	6	7
Reject						Welcome

12. Willingness to discuss our feelings and emotions with each other.

1	2	3	4	5	6	7
Unwilling						Willing

13. Level of our self understanding.

1	2	3	4	5	6	7
Doesn't know self						Knows self a great deal

14. Level of our self esteem.

1	2	3	4	5	6	7
Very low						Very high

15. Level of our giving love.

1	2	3	4	5	6	7
Cold						Warm and affectionate

16. Level of our openness

1	2	3	4	5	6	7
Reveal little						Reveal much

17. Degree of our peace of mind.

1	2	3	4	5	6	7
Restless and dissatisfied						At peace with selves

18. Level of our aspiration.

1	2	3	4	5	6	7
Very low						Very high

19. Level of our physical aspiration.

1	2	3	4	5	6	7
Tire easily						Vital and resilient

20. Degree of our versatility.

1	2	3	4	5	6	7
Can do only a few things well						Can do many things well

21. Degree of our innovativeness.

1	2	3	4	5	6	7
Likes the status quo					Very creative and inventive	

22. Level of our anger expression.

1	2	3	4	5	6	7
Represses it consistently					Expresses it openly	

23. Clarity in expressing our thoughts.

1	2	3	4	5	6	7
Quite vague					Very clear	

24. Degree of our independence.

1	2	3	4	5	6	7
Very little					A great deal	

VITA AUCTORIS

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