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
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Personality, Perceptual Conflict and Anxiety in Rugby Players

by

Stephen R.W. Rowley

B.Sc. Loughborough University 1978

A Master's Thesis

*Submitted in Partial Fulfillment of the Requirements for the
Award of Master of Philosophy of the Loughborough University
of Technology*

March, 1984

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Abstract

The object of this thesis is to illustrate how the sports environment engenders a 'normal-abnormal' approach to the classification of athlete personality disposition. An athlete whose perceptions of self are in conflict with the normative stereotype may feel that his identity as an athlete is threatened, and respond to this threat with high levels of both trait and state anxiety.

The traditional approach to the study of athlete personality has, in seeking to differentiate the athlete from the non-athlete, promulgated this classificatory system. It is argued here that, as a consequence, what is needed is a paradigm shift away from the current emphasis upon group process to a concentration on individual praxis which focuses on the athletes' perceptions of self whilst performing. In order to effect this 'athlete-centred' paradigm a self-schema was proposed consisting of the self; not-self; and ideal self.

The experimental sample consisted of five university rugby union 1st. XV squads, and a questionnaire was administered on two occasions. The questionnaire consisted of three parts; biographical details; an Interpersonal Check List; and Spielberger's State Trait Anxiety Inventory.

An empirical analysis revealed that 'normative' personality typologies emerged for each aspect of the self-schema on both questionnaire administrations; a competitive-dominant self; a rebellious-distrustful not-self; and an autocratic ideal. The homogeneity of the players about these perceptual norms was influenced by the degree of formal structure inherent in their respective teams. However, there were deviations apparent in all five teams and it was established that there was a significant relationship between ego-threat and trait anxiety - players whose self-schemata did not stress these normative traits perceived themselves as self-effacing, dependent, low in self acceptance and high in their levels of trait anxiety. Conversely, although statistically significant, neither the 'normative' nor deviate self perceptions had any theoretically uniform effect upon the relationship, proposed by Spielberger, between trait and state anxiety. The reason advanced for this being that Spielberger's conceptualisation of state anxiety is uni-dimensional, and as such is not sensitive to differential ego-threat. It is proposed therefore that until further research takes place the utility of state anxiety as a significant affective dimension of the self-schema is in question.

As a conclusion, and in the light of the empirical data, a more flexible, humanistic approach to coaching is proposed which includes techniques for the identification and reduction of intra-psychic conflict and high levels of anxiety.

Acknowledgements

In the course of undertaking a work of this nature there are many sources of help and inspiration, both direct and indirect, which, if documented, would probably double its length. To those people a big thank-you and I apologise for omitting a specific reference. However there are those who deserve a special mention for their encouragement, advice and support.

I am indebted to Mr. Rex Hazeldine and Mr. Robert Piggot of Loughborough, Mr. Edward Wood of Durham, Mr. John Stevens of Newcastle, and all the players who took part in the research as without their cooperation it would not have been possible; to the Department of Physical Education and Sports Science Loughborough, particularly Mr. Alan Guy; to Mr. Peter Smith for the illustrations and Dr. Colin Prichard of the M.R.C. Unit Aberdeen for advice on the factorial statistical analyses; to my parents for showing an interest in what was, for the most part, an unintelligible subject matter; and to Mr. David Bunker, my supervisor, I am grateful for the chance you gave me, the independence, and for keeping me on the straight and narrow. Thanks are also due to Mrs. Alison Nicholson for her patience and fortitude in typing and retyping (.....) this thesis.

I owe a special mention to Ms. Kathryn McCann for her continual advice, support and motivation, and for her presence in those early hours when panic sets in. Much love and a special thank-you.

Finally, I would like to dedicate this thesis to the memory of my grandmother, Mrs. E. Rowley, who always showed an interest in what I was doing and who would have been pleased I'm sure with the outcome of this piece of work.

Personality, Perceptual Conflict and Anxiety in Rugby Players.

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CHAPTER 1

The Myth of the Male Sports-Type:

Some Methodological and Theoretical Considerations

Murro (1968), defines the function of a myth as being "to record and present the moral system (of a particular institution or society) whereby present attitudes and actions are ordered and validated", (p.122). It is the purpose of this chapter to indicate how those researchers involved in the analysis of personality and sport, have done little more than perpetuate a mythical 'moral system' which entails perceiving the athlete as being somehow different from the rest of humanity (sic); non-athletes. As a consequence of this approach the sports psychologist has conferred 'scientific authenticity' upon a selected array of normative personality traits which both 'order' and 'validate' the athlete's experience of himself. However, what they fail to realise is that any deviation from these norms will necessarily entail the athlete invalidating himself, with the possible consequence of intrapsychic conflict and psychological maladjustment¹: although for the most part variations in athlete personality are subsumed by the use of mean statistical scores, and any athlete whose 'personality' does slip the fine mesh of the statistical net usually has his 'inappropriate' behaviour attributed to other, more socially acceptable factors such as worry over physiological injury or the transient effect of the ubiquitous 'bad patch'. The following analysis will establish therefore how this mythical sports-type is the result of an inadequate paradigm and in so doing an athlete-centred paradigm, based upon the existential and phenomenological philosophies, will be advanced as a more suitable methodological and theoretical alternative for the analysis of athlete personality.

It is agreed by most, if not all theorists, that sport reflects macro-societal trends (Hoch 1972; Scott 1972; Mihalich 1982.), and as such it is hardly surprising that the athlete's ability to maintain a constantly high level of performance has never been of greater importance than in today's contemporary sports environment. The economic, political and, in particular, the immediate interpersonal pressures from the coach and team-mates to succeed in competition (ipso facto to win), has ultimately obscured the fact that the

participants are human beings, and in so doing they have placed heavy psychological as well as physiological burdens upon many athletes, both amateur and professional alike.

However, the effects that these pressures can have upon the three major categories of psychological process, cognition, connotation and affect, has for the most part been ignored and as a consequence any psychologically 'inappropriate' behaviour is usually attributed to either bad luck, rebelliousness or a poor motivational disposition. The maxim thus seems to be a distorted inversion of the Latin 'mens sana in corpore sana'; it must be a healthy mind because it's a healthy body.

To help meet the demands of the sports environment for unqualified success, a new branch of a relatively young academic discipline, sports psychology, has evolved. However, its emphasis upon performance rather than the athlete's self-perceptions whilst performing, has again obscured the athlete's existence as a being-in-the-world. Indeed it is the contention of this introductory chapter that the sports psychologists have merely authenticated a set of procrustean² norms which serve only in perpetuating the myth that the male athlete is specifically different to the rest of humanity. Although, as the following discussion will illustrate much of this research is methodologically and theoretically inadequate.

It must be stated at this point however that it is not the aim of this thesis to discredit previous research, as Magee (1973) states "in logic, scientific law is conclusively falsifiable, although it is not conclusively verifiable" (p.23), it is rather to establish a 'paradigm shift' towards an athlete rather than a performance centered approach. Popper (1981), in his observations upon scientific epistemology, has summarised my contention:

"It is a profound mistake to try to do what scientists and philosophers have almost always tried to do, merely prove the truth of a theory, or justify our belief in a theory, since this is to attempt the logically impossible. What we can do however, and this is of the highest possible importance, is to justify our preference for one theory over another." (in Magee, 1973, p.36).

In order therefore to attempt the justification of an athlete-centred paradigm, it is necessary to review, briefly, the current

status of sports personality research with an emphasis upon its theories and methods.

(1) Sports Personality; Its Methodological and Theoretical Basis:

// Carron (1980), has described the principle theoretical orientation within sports personality research as one based upon the question as to "what are the unique identifiable personality characteristics which differentiate athletes from non-athletes" (p.9). To achieve this aim two contrasting research strategies had been used; one based upon explanation/prediction, where an attempt is made to see if, in fact, personality dimensions have an effect on performance. The second however contrasts different sports to see if there are any personality orientations specific to them. Within both these strategies trait personality theory has had the greatest influence. Allport (1961), has defined a morphogenic trait as a:

"generalised neuropsychic structure (peculiar to the individual) with the capacity to render many stimuli equivalent, and to initiate and guide consistent (equivalent) forms of adaptive and stylistic behaviour" (p.373).

Transposing Allport's definition onto the sports personology research paradigm will then (theoretically) indicate which 'neuropsychic structure(s)' delineate athletes from non-athletes. To this end many theorists have produced 'profile descriptions' of athletes from at least seventeen different sports. The results indicating that:

"When the activity and level of performance are held constant, interesting consistencies in personality have been reported, and furthermore some evidence has been presented in support of the existence of certain sports types" (Kane 1978 p.122).//

// These types are reported as being characterised by a high level of dominance, social aggression, leadership, tough-mindedness and emotional control. However, whether or not these traits can be regarded as concomitants of successful performance has now become the object of the credulous versus the sceptical debate. The sceptics point to the fact that there is no empirical evidence which points to a consistent athletic profile. The fault lies, they state, in the utility of

personality research and many point to its methodological and conceptual errors (Rushall 1975). Carron (1980), gives an example of one such error when he poses what he feels to be one of the basic conceptual questions:

"It is difficult to determine whether athletes differ on personality characteristics if an athlete cannot be clearly distinguished from a non-athlete " (p.31). //

// Other methodological and conceptual errors which, it is proposed, have affected the identification of a consistent sports type have involved; the use of non-sport specific questionnaires (Kroll, 1970; Martens, 1975; Rushall 1975); inadequate statistical analyses (Hardman, 1973; Martens, 1975); and improper interpretation of the results (Fisher 1974; Martens 1975; Rushall 1975). // *quitt*

// The general picture is then one of methodological, theoretical and conceptual confusion and as a consequence attempts to rectify the situation have proposed; taking into account the psychological salience of the situation (Endler and Hunt 1973); developing personality assessment techniques which are specific to sport (Martens, 1975; Kroll, 1976); abandoning trait theory altogether because of its "inability to account for a sufficiently large proportion of the behavioural variance" (Carron 1980.p.36), or less drastically reclassifying the athletes personality profiles according to the particular sports involvement, i.e. team or individual sports, long or short duration (Schurr, Ashley and Joy 1977). Carron (1980); favours this method as:

"It is apparent that a number of findings conform to 'traditional' or 'stereotypical' personality profile for athletes" (p.40).

Again, the methodology has been used to do little more than 'confirm' the existence of sports types. The author's concluding that athletes engaged in team sports are more extroverted, more dependent and manifest less abstract reasoning than non-athletes. //

// Schurr et al.'s emphasis upon the athlete-sport interaction however, does seem to indicate the beginnings, if not of an athlete-centred

approach, at least a greater degree of theoretical specificity. //
 Although Kane (1978) qualifies the use of the interactionist approach when he states that:

"To establish the superordinate importance of the interaction as opposed to the person or the situation in sport will need a great deal more subtle and supportive existence than that which is currently available" (p.136).

He does however, preface these remarks with the observation that the attractiveness of this particular approach is reasonably assured "if only to complement trait (profile) descriptions" (emphasis added).

One of the more recent theoretical perspectives, given scant attention by most sports personality theorists, but which is more in keeping with the objectives of this thesis, is that which has attempted to analyse the athletes experience of self. Unfortunately this approach has for the most part tended to single out athletes as having quasi-mystical experiences during performances. The emphasis has therefore been upon self-actualisation and the incidence of peak experiences and "flow" (Csikszentmihaly, 1975).

However there has been some doubt expressed as to the 'scientific validity' of such existential approaches. Carron (1980), therefore describes the phenomenological theoretical approach as although having:

"some appeal (undoubtedly due to its humanistic orientation) a major limitation has been the inability to test the theories via a strong scientific approach" (p.17).

(p.17)

//It is apparent, even from this cursory review of sport personality research that there appears to be some degree of confusion not only as to its future development but also the validity of many of the methodological and theoretical approaches used in previous research. The current view within this discipline does appear to involve establishing that there are fundamental differences between athletes and non-athletes, and fundamental similarities between 'athlete-types', this view being held consistently even in the face of conflicting research.

Martens (1975), proposes therefore that:

"The first step towards improving the quality of research in sports personology is not the correction of methodological or interpretive errors, although these too must be corrected, but it is the adoption of a viable experimental paradigm for studying personality" (cited in Carron 1980 p. 31). //

Although Martens sees the future of personality research as being couched in merely experimental terms, his proposal for a new paradigm will form the basis of the following critique.

(2) Sports Personality; A Critique

Kuhn (1962) has proposed that "particular coherent traditions of scientific research (normal science) take their shape from paradigms" (p.10). And he defines a paradigm as:

"The source of the methods, problem fields and standards of solution accepted by any mature scientific community at any given time. As a result, the reception of a new paradigm often necessitates a redefinition of the corresponding science" (ibid).

Consequently, in order to achieve a 'paradigm shift' as proposed by Martens above, a redefinition of sports personality must occur. This can be achieved by using Lakatos' (1970) concept of sophisticated falsification, however, as "there is no falsification before the emergence of a new theory" (Lakatos op cit p.119), it is proposed that both the theoretical perspectives of the sports-type, and also the scientific methodology which has structured its analysis and theoretical permanence are both inadequate. As a consequence they have simply produced a psychology based upon mechanistic and deterministic principles, and as such obscured, and ultimately constrained the individual athlete's personality. The methodological falsification will be considered first.

Personality has been defined by Child (1968) as the:

"More or less stable internal factors that make one person's behaviour consistent from one time to another and different from the behaviour other people would manifest in comparable situations" (p.83).

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// Transposing this definition onto the results obtained from most of the sport personology research, it is clear that there has been little emphasis upon individual differences, rather it has concentrated upon establishing group similarities. The fault lies partially in the emphasis those currently involved in personality research have placed upon the scientific method. // Rychlak (1977) states that:

"Psychologists derive their terms from all manner of sources including analogies to philosophical models that have been woven into the very fabric of their metaphysical outlook 'on scientists'" (p.187).

Rychlak proposes that most current psychological research is grounded in "Lockean philosophy", which is based upon an "empirical determination of all the mind represents" (ibid), similarly it is a deterministic philosophy which emphasises the active nature of the (objective) environment and passive nature of man.

It is possible to see the effects of Lockean empiricism within sports personality. Carron (1980) defines science as a "systematized body of knowledge" which is acquired through observation, measurement, classification and finally the generation of theories and laws. Using Kuhn's terminology these are the "acceptable steps" which are to be taken in the design of experiments. Rychlak (1977) states:

"Resting ultimately on the procedural evidence of an overriding paradigm, rules act as strictures. If the researcher does not follow the rules of the proper science, ending in validating evidence, he is not going to be listened to". (p.185).

This type of approach has been heavily criticised by many involved in humanistic psychology but perhaps its most vociferous critic was the founder of phenomenology itself, Edmund Husserl.

Husserl (1965) argued in his paper entitled 'Philosophy as a Natural Science' that "The true method follows the nature of things and not our prejudices and preconceptions". And although this statement is grounded in philosophical idealism, when it is applied to psychological method, Husserl's objections are clear.

He states:

"How could psychology fail to see that in its purely psychological concepts, with which it cannot at all dispense, it necessarily gives a content that is simply not taken from what is actually given in experience but is applied to the latter." (1965, p.133).

// This process of giving objective meaning to athletes personality dispositions has been prominent within sports psychology through the use of inadequate statistical methods. Hardman (1973) has criticised one such approach when he pointed out that there is a:

"danger inherent in trying to establish an athletic personality type through the use of mean scores. Only rarely does a researcher give the range of scores obtained in an investigation. Usually the mean score is given which can lead the reader to the conclusion that the group is a homogeneous one." (p.79).

However Hardman's preconception that there is in existence a sports-type is still in evidence as he concludes by expressing that:

"some members of athletic groups seem to succeed despite a wide divergence from the group mean" (ibid; emphasis added).

The emphasis seems to be therefore upon verifying rather than falsifying the already accepted paradigm i.e. the sports-type, despite conflicting evidence. //

Merleau-Ponty (1967) emphasises the advantages that the phenomenological method has for the researcher, and also its importance as a means of re-establishing the athlete's experience of himself as a being-in-the-world within scientific methodology, when he states that:

"I am not the outcome or the meeting point of numerous causal agencies which determine my bodily or psychological make-up. I cannot conceive myself as nothing but a bit of the world, a mere object of biological, psychological or sociological investigation. I cannot shut myself up in the realm of science. All my knowledge of the world, even my scientific knowledge, is gained from my own particular point of view The whole universe of science is built upon the world as directly experienced and if we want to subject science itself to rigorous scrutiny and arrive at a precise assessment of its meaning and scope, we must begin by re-awakening the basic experience of the world of which science is the second-order expression " (p.356).

It is important to emphasise Merleau-Ponty's view, supported by Polanyi (1958), that 'scientific' knowledge is dependent upon, and affected by experience:

"For as human beings, we must inevitably see the universe from a centre lying within ourselves Any attempt rigorously to eliminate our human perspective from our picture of the world must inevitably lead to absurdity" (Polanyi 1958 p.3).

However, the phenomenological approach, as was illustrated by the views of Carron above, has been equated with a lack of scientific validity, presumably as it is regarded as either lacking any empirical methodology, or representing a rejection of the 'scientific approach'. However, this is not the case. Van Kaam (1969) states that:

"Empirical observation, experimentation, measurement and accumulation of data should be fostered in all different psychologies. From the viewpoint of comprehensive psychology, however, (retaining the wholeness of lived experience) much of this admirable effort is wasted if there is no phenomenological explication of what it is that is being observed, experimented upon, measured, correlated and applied." (in Rychlak op cit p.195).

Moreover, Schutz (1962) has formulated three criteria with which to construct and evaluate a social-scientific model. Consequently in order to establish validity, a phenomenological social science must satisfy the following postulates:

- (1) The postulate of logical consistency: this includes the clarity and distinctness of the constructs and their compatibility with the principles of formal logic.
- (2) The postulate of subjective interpretation: this includes the construction of a model of the individual mind and its contents which can explain the data the psychologist has gathered: this enables the results to be interpreted in terms of the subjective meaning they have for the individual.
- (3) The postulate of adequacy: each concept in the model must be constructed so that an act actually performed in the world in the way indicated by the construct would be understandable for the actor himself and for his fellow men in terms of commonsense

schemes of interpretation, (adapted from Schutz original).

It is evident from the above that a phenomenologically based psychology need not abandon scientific methods. Moreover, when the current practices in sports personality research are contrasted with Van Kaam's and Schutz proposals it is clear that methods have obscured the subject matter; personality "the internal factors that make one person's behaviour different from the behaviour other people manifest." Indeed, it could be argued at this point that sports personology is in the pre-paradigm stage. Kuhn (1970) states that:

"The pre-paradigm period is regularly marked by frequent and deep debates over legitimate methods, problems, and standards of solution" (pgs.47-48).

The credulous versus the sceptical debate, the confusion over methodology and the conflict based around psychological theorem do indicate the existence of a pre-paradigmatic period. However, within these debates the emphasis has still centred upon researchers supporting and not falsifying the existing paradigm, and it has been in this approach where method has apparently obscured any theoretical (paradigmatic) shifts. The following will indicate the inadequacy of many of the theoretical notions existent in current sports personality research.

1.1.1. The prevalent theoretical movement in sports psychology concerns establishing (a) whether in fact athletes differ in personality disposition from non-athletes and (b) whether there are sports-types. To this end numerous personality profiles have been generated for athletes from many different sports and as a consequence a sports-type has emerged. He is stable, dominant, socially aggressive and low in (anxious) arousal, and although lip-service has been paid to deviations from this mean typology, (Hardman, 1973), the theories have mostly been aimed at accounting for individual similarities rather than any differences. //

However, within this theoretical approach there are several anomalies (or areas of falsification) which ultimately question the validity of maintaining such an approach.

The first anomaly throws into doubt the contention that what the sports psychologist is actually measuring is athlete personality. It is proposed here that it is not individual personality which has been assessed but rather the athletes 'depersonalised personality', and this is an extremely important theoretical point for those involved in the analysis of team sports, (rugby, soccer or hockey for example).

Previous research conducted into intragroup process (Rabbie 1974; Dion 1979), established that when groups are in competition there is a great emphasis upon conformity. Consequently, under these psychologically salient conditions:

"social behaviour tends to become more uniform.....This is because under such conditions, individuals define themselves.....in terms of their common attributes as group members and not in terms of their idiosyncratic features as unique people" (Brown and Turner 1981 p.40).

It is evident therefore that the presentation of athletes' personalities as somehow similar, and also distinct from those of non-athletes, has much to do with the influence of group process rather than any unique disposition. Within this factor there are two additional theoretical anomalies which require elaboration. The first concerns the importance of the person by situation interaction effect; the second the prevalence of a solipsistic approach.

It will be remembered that Kane (1978) questioned the superordinate nature of the interactionist approach which had been particularly emphasised by Endler and Hunt (1973). Yet it is theoretically inconceivable that a person, any person, could be thought of as being somehow distinct from the effects of his or her environment. Kane (1978) states:

"The problems in allocating the correct amount of importance to the person, the situation and the interaction in sports performance will not be resolved easily or quickly"(p.136).

However, this is again an example of research methodology obscuring theory. It is not up to the researcher to weigh the relative importance of 'the person, the situation (or) the interaction', it is the individual perception of the athlete. Merleau-Ponty (1962) emphasised the role of the person by situation in his philosophy of perception. Mallin (1979) summarises the importance of this emphasis when he states that:

"When Merleau-Ponty says that a man is in a particular situation or is situated by something, he means that the subject or some state of the subject is thoroughly intertwined with the object, body, other person, or general milieu that is indicated. It is his aim to overcome the perpetual problem of Cartesian dualism (I think therefore I am) and its resulting extremes of realism by showing that neither the subject or object is primary and that, when taken as distinct, (as per many personality theorists), both are theoretical abstractions from the unified situation that founds both" (p.8).

Consequently, any theoretical proposal as to the nature of athlete personality must not only specify the situation with which he or she interacts, but it must also account for the depersonalizing effect of the person versus group versus the situation interaction. Moreover, if 'personality' is to some degree situation and group specific then the whole conceptual difficulty as to what differentiates an athlete from a non-athlete is largely immaterial, as identity is given definition by the psychological salience of the situation and the needs of the group. Also, and of perhaps greater theoretical significance, as the athlete identity defined by the above process is based upon both situational (performance) and also group norms, any analysis of sports personality must account for the influence of the athlete role. As:

"By playing roles, the individual participates in a social world. By internalising these roles, the same world becomes subjectively real to him." (Berger and Luckmann, 1979, p. 91)³

The athlete role is then a powerful influence not only in shaping the actors beliefs as to how he should behave, but also the others expectations as to how he will behave. The role therefore orders and supervises potential and also actual social interaction.

However, individual consciousness is not merely a passive receptor of situational role requirements. Cognition mediates the athletes role response. His behaviour being dependent upon the ease with which his perception of self is congruent with the role demands. Previous research, based solely upon a performance centered paradigm, has therefore failed to account for the fact that the similarities in athlete personality type could be due to a conformity engendered by the role requirements of the performance situation, and not as evidence for consistencies in athlete personality.

Furthermore, situations are nearly always defined by either real or fantasised others and it is a fundamental error of personality research to either ignore or attempt to estrange an individual from his social environment. Hegel (1964) states:

"Self-consciousness exists in itself and for-itself, in that, and by the fact that it exists for another self-consciousness" (p.201).

Therefore, if there is no theoretical interpersonal orientation the conceptualisation of the athletes' intentions are extremely difficult both to define and to understand. Similarly the motives, needs or indeed the pressures described above, behind the typological traits of dominance or social aggression are incomprehensible without a clearly defined interpersonal perspective. For instance are these traits perceived by the athlete as pertaining to his actual identity or are they simply seen as the necessary personality dispositions for successful performance? Are the traits teleological or deterministic? It is evident therefore that a theoretical orientation which accounts for the concept of intentionality is crucial if there is to be a shift away from the psychological determination of performance as being the sole criterion affecting personality disposition or self perception. As Solomon (1972) contends: "The situation (performance) itself, while clearly restricting my choices does not determine my choice" (p.294). Consequently, it is the intentions of the athlete not the performance situation which affects personality. Husserl (1967) summarizes the importance of this construct when he remarks that:

"every intentional experience - and this is the fundamental mark of all intentionality - has its "intentional object" i.e. its objective meaning. Or to repeat in some other words: to have a meaning or to have something "in mind" is the cardinal feature of all consciousness" (pgs. 261-2)

The personality or behaviour of an athlete during a performance is then a correlate of self perception, the intentions and role requirements associated with the situation, and also a fourth element, the mood state which the performance situation evokes. The influence of this final but by no means unimportant factor will be briefly described below.

Current approaches to the analysis of sports personality have not accounted for the effect that an athlete's mood can have upon his behaviour. Mood attunes the individual to the situation. For example if an athlete is anxious about a particular performance then his being-in-the-world will be attuned to threats to his self. As such mood states are an important factor in determining how a person will behave in a particular situation as they emphasise or heighten the 'pitch' of certain personality traits. Consequently they are not dynamic properties in the sense of causing a particular behaviour, rather they disclose the meaning of the situation of relevance to the individual. This means of course that far from being a fixed property personality is a flexible, dynamic construct which by definition makes every performance situation unique in terms of the particular pattern of behaviour it evokes.⁴

At the beginning of this chapter the status of the athletic personality type, as being distinct from non-athletes and influential in achieving successful performance, was likened to a myth. The "scientific-authentication" of this myth has subsequently been shown to be the product of an inadequate paradigm, grounded in a naturalistic and deterministic psychology. It will be remembered that a myth was defined as a societal phenomenon which both orders and validates the attitudes of the members within a particular community or society. It is apparent therefore that the sports psychologists mythical sports-type, orders and validates not only the athlete's perception of his personal adequacy, but also the coach's expectations and perceptions of how an athlete should behave. The myth is therefore accepted as a norm which delineates athletic behaviour.

Moreover, in seeking wider scientific recognition and in their perpetuation of an inadequate methodological and theoretical conceptualisation, the sports psychologists have effectively ignored both the existence of, and therefore the effects, that deviations from these normative typologies can have upon the athlete's self-perceptions. As Goffman (1979) states "one can say, then, that identity norms breed deviations as well as conformance" (p.154). The final section will consider both the existence and effects of this contention for the athlete within a competitive sports environment.

(3) Toward an Athlete-Centered Paradigm

The common perception of normative behaviour is one in which conformance is equated with adjustment, non-conformance with maladjustment. Indeed Scott's (1958) criterion of social adjustment is one where:

"adjustment is necessarily determined with reference to norms of the total society or of some restricted community within the society. Accordingly, one may conceptually define adjustment as adherence to social norms "(p.31).

However, the non-conformity which results from a failure to maintain "such norms has a very direct effect on the psychological integrity of the individual" (Goffman 1979 p.153), and can result in an individual perceiving himself as a 'discreditable' person, anxious, ashamed and who manifest feelings of inferiority. This particular psychological process is particularly relevant in what Sartre (1982) terms bonded groups, where a high degree of interdependence is necessary in order to achieve group goals. Group structure is held together by fear, anxiety and guilt.

The questions and contentions to which this study will address itself therefore concern: (i) An examination of athletes self perceptions to see if, in fact, there is any evidence to support the existence of a de-personalised sports-type. If so, does it conform to the one proposed by the sports personality theorists.(ii) The effect that non-conformity to typological norms can have upon the athletes self perceptions with particular reference to consciously perceived levels of anxiety.

It is the contention here therefore that not all athletes perceive themselves as stable (low in anxiety), dominant individuals, and that many suffer inordinate 'pre' and 'post' performance anxiety. This is due to intra-psychic conflict generated by a series of self perceptions which are felt to be incongruent with specific group and more general, environmental, normative typologies.

The alternative, athlete-centred, paradigm is therefore one in which emphasis is placed upon the athletes perception of himself whilst performing, with particular reference to his interpersonal notions of self. Rogers' (1965), definition of the self concept defines the theoretical parameters of this study. It:

"May be thought of as an organised configuration of perceptions of the self ... It is composed of such elements as the perceptions of one's characteristics and abilities; the percepts and concepts of self in relation to others and to the environment; the value qualities which are perceived as associated with experience and objects; and goals and ideals which are perceived as having positive and negative valence "(p.138).

There are three important factors in the above definition which, it is believed, are axiomatic in achieving a theoretically comprehensive paradigm-shift: (i) An emphasis upon the athlete's perception of self in relation to his group, interpersonal environment. (ii) An emphasis upon the not-self; the notions of self perceived as having a 'negative valence'. (iii) Accounting for the athlete's 'goals and ideals' which are perceived as having a very definite 'positive valence'.

Using the above self-schema information can be obtained pertaining to the athlete's phenomenal field, either singularly or in opposition: The former gives the researcher an insight as to the intentions behind an athlete's interpersonal motions of him-self. The latter gives a 'measure' of personal adjustment and acceptance. This criteria is important when one considers the affective construct referred to earlier; anxiety.

The paradigm-shift can be conceptualised then as a change in theoretical methodology from 'process', with its emphasis upon mechanistic-determinism, to 'social praxis' (Sartre 1982) where the emphasis is upon:

"action that can be traced to definite decision undertaken out of definite motives by definite people Social events can be rendered intelligible by showing that they are the outcome of decisions taken in a social field by motivated actors". (Sedgewick 1982, p.81).

The following chapter will attempt to "render intelligible" the individual praxis involved in an athletic group performance by contrasting the traditional personality approaches with the more contemporary humanistic, athletic-centred literature and research. The former will emphasise how the "process" of sports personality research has viewed the athlete as merely a nexus of selective traits, shaped by the demands of the performance situation. The latter will concentrate upon a review of the literature associated with the effects that group process has upon individual praxis, represented by the self-schema described above.

Laing (1971) summarises this methodology when he states that:

"What happens in a group will be intelligible if one can retrace the steps from what is going on (process) to who is doing what (praxis)" (p.22).

This approach will not only emphasise the intra-psychic effects, (largely ignored by the more traditional (process) theoretical perspectives), that performing within a group can have upon the athlete. But it will also establish both the methodological and empirical trends which will be used in Chapter 3 and 4 respectively.

Footnotes

1. Maladjustment: It is difficult to use any terminology which refers to a person's psychological health without implying value judgements. One way of reducing this inevitable by-product is to offer a specific conceptualisation as to what the term actually describes. For the purpose of this thesis then, maladjustment will be used to indicate a general disposition toward subjective unhappiness; loss of self-esteem, low self-acceptance and/or high levels of both general and specific interpersonal anxiety.
2. Procrustean: Procrustes was the character in Greek mythology who took people of definite size and then either stretched or truncated their limbs so that they would fit the beds he provided. (Sedgwick 1982 p.112) See also Laing 'The Politics of Experience and the Bird of Paradise' 1967.
3. For a more detailed description as to the influence of roles on behaviour see Berger P. and Luckmann T. (1979) 'The Social Construction of Reality', London, Peregrine Books. Particularly pages 89-96.
4. A more detailed description of mood states can be found in Boss M. (1963), 'Psychoanalysis and Daseinanalysis', New York, Basic Books.

CHAPTER 2

A Literature Review of the Self-Schema and its Relationship to Traditional and Contemporary Perspectives Within Psychology and Sports Personality Research

// The prevalent traditional and, for the most part, contemporary view of sport is one in which the athlete:

"Once was and still can be treated as a sacred being ... He is credited with the dignity of embodying a supreme value" / (Weiss 1969 p.153).

// As a consequence both those involved in the serious study of the athlete, the sports psychologist, and also the sports fan who obtains a high degree of vacarious arousal through spectating, concentrate upon emphasising the difference between sportsmen and women and the remainder of humanity; the non-athletes. /

// One such approach has been the research conducted by the sports psychologist into the 'profile' descriptions of various athletes' personalities. Using either the Cattell 16 P.F. or the Eysenck P.I. these researchers have produced personality profiles for Olympic Champions (Heusner 1952); Rugby Players (Hardman 1968; Sinclair 1968); Swimmers (Hendry 1968); Racing Drivers (Ogilvie 1968) and Footballers (Kane 1966). In all, at least seventeen different sports have yielded a 'profile' and Kane (1978) proposes that on this evidence: /

^ "It is noticeable that when the activity and level of performance are held constant, interesting consistencies in personality have been reported and furthermore some evidence has been presented in support of the existence of certain sports 'types'. / (p.124)

// Consequently:

"There is a tendency for the male athlete to be described in terms of extroverted and stable dispositions and for women athletes to be shown as relatively anxious extroverts." (p.122) /

Although these stereotypical traits have been shown to be based upon an inadequate theoretical and methodological approach, they are accepted as those "supreme value(s)" which somehow differentiate the athlete from the non-athlete. Their psychological stability is evidently just one part of the general personality disposition and on the whole these prevalent traits are not only those which are most valued by modern capitalist ideology, but they also embody the gender role definitions which permeate society. Of specific interest to this study is Hardman's (1968) profile of the rugby player; highly sociable, dominant and conscientious but low in sensitivity, insecurity and tension (anxiety).

It is important to realise however, that although the research is for the most part inadequate, it does illustrate the importance of the relationship between sport and self identity. Jack Scott (1972) indicates the psychological salience of the sports environment when he states that "with few exceptions, a dedicated athlete in his late teens or early twenties gets nearly his entire identity from his sport involvement." Similarly Stein and Hoffman researching into sports and male role strain (1978) report that "the role of the athlete was the most salient for the athletes we interviewed. For most of them, "sport was everything." (p.139).

However, as was indicated both in chapter one and above, this role or self identity is posited by many as being delineated by the needs of the competitive environment. Mihalich (1982) summarises the parameters of athlete endeavour when he contends that:

"Winning with honour and decency and compassion is the essence of sports and athletics and life itself" (p.13).

Although to win the athlete must possess a particular personality disposition. Indeed Stephen Ward, a practising psychiatrist, expresses his horror at the sports environment which does not stereotype its athlete's self-image. In his essay "Winning is Everything" Ward (1978) states that:

"I am not a believer in the Little League¹ philosophy that everyone who shows up should get to play, regardless of who wins ... It is somehow or other not very nice anymore to win ... The Little League philosophy fosters security-seeking dependence, acceptance of weakness and goals of mediocrity. It does not breed superior athletes or enterprising citizens" (pgs.142-143).

The view of sport and its relationship to the athlete is therefore one which emphasises certain selective traits which are delineated by the parameter of success, and which in turn reflect the macrocosmic needs of society at large. However, most involved in the sporting environment have appeared to selectively inattend to deviations from these norms. Consequently they ignore the fact that the stresses imposed by this type of selective environment leads to the construction of a 'normal' and 'abnormal' approach both to athlete personality, and the perception of self within the sports participation framework.

This proposal is worth discussing in more detail in order to:

1) dispel any doubts as to its existence and 2) to consider the influence it has upon the athletes' self identity whilst he is performing or anticipating performance.

In order to examine the existence of abnormal behaviour within sport, previously defined as the degree of an athlete's subjective unhappiness (Coles 1982), consider the following statements:

"Among the activities through which men seek release from everyday life, games offer in many ways the purest form of escape ... they obliterate awareness of everyday reality, but they do not do this by dimming awareness but by raising it to a new intensity of concentration. Moreover, they have no side-effects, hangovers or emotional complications". (Lasch 1978.p.100. Emphasis added)

Conversely Cratty (1978) states that:

"Emotional problems among athletic groups are not only found in the professional ranks. It has been estimated that within a 40 - 60 member roster of a high school football team, from 1 - 2 are on the verge of a nervous breakdown during a season, while at least 12 - 15 others could benefit from some kind of psychiatric or psychological counselling, due to the stress imposed by the sport" (p.209).

Cratty's figures indicate a 34% approximate rate of psychological morbidity. Similarly, Beisser (1977), Stein and Hoffman (1978) and Patmore (1979) have all established that the pressures of the sporting environment can have far reaching effects upon the equilibrium of the athletes psyche.

The two statements above can be thought of as belonging to two opposing schools of thought. Borrowing from the sceptical-credulous debate currently taking place within sports personality research²; the former statement can be categorised as belonging to the sceptical school whose prevalent view is that there is no relationship between participation in sport and intra-psychic conflict.

Adopting the credulous approach necessitates evaluating the way in which the concept of normal/abnormal behaviour proposed above affects the athletes' involvement in sport. To achieve this aim the athlete-centred self-schema will now be discussed in detail, firstly with specific reference to the effect on the athlete of the intra and inter group environments.

Shaw (1976) has defined a group as comprising "two or more persons who are interacting with one another in such a manner that each person influences and is influenced by each other person" (p.11). These "influences" can be conceptualised as being the product of a series of interpersonal relations, themselves delineated by member's perceptions, motivation, goals, organisation, interdependence and interaction (Turner and Giles 1981). However the way in which these factors affect individual psychology within the group process has led to some divergence in views. // One of the first theoretical analyses of the social psychology of the group was proposed by Allport in 1924. He stated that:

"There is no psychology of groups which is not essentially and entirely a psychology of individuals" (p.6).

And this appears to be the approach favoured by the sports psychologists in their profile analyses of sports groups. However, both Sherif (1936, 1967) and Asch (1952), criticised Allport's individualism and proposed instead that the group was a social gestalt whose essence, or 'total', is different to the mere sum of its parts. As a consequence individuals are changed in the group context because the group has a phenomenological reality for its members which cannot be reduced to the sum of its parts. (Turner, 1981).

Turner proposes therefore that group members stereotype themselves: /

"Once some specific social identification is salient, a person assigns to self... the common, typical or representative characteristics that define their group as a whole." (p.39)

And although he contends that the research at present does not permit a systematic presentation of these salient conditions, previous research does suggest that group membership becomes more salient in conflict situations with an out-group (Sherif 1967; Dion, Earn and Yee 1978; Doise 1978.); where there is a distinctiveness of the group in a certain environment (Bruner and Perlmutter 1957); or by the number of group members present (Doise 1978).

The importance of these factors for the sports group, particularly a rugby team, is apparent, as out-group confrontations are marked by a high degree of conflict, and the in-group is not only environmentally distinct but regulated to a specific size; fifteen.

/// The effect that the group-identity has upon the individual has been at the centre of much contemporary research, and it has been conceptualised by Tajfel (1978), Goffman (1979) and Turner (1982) as representing a change from personal to social identity. Turner has termed this identity change 'depersonalisation', whereby:

"Under conditions where a shared social identification becomes salient, social behaviour tends to become more uniform both within the in-group and towards the out-group. This is because under such conditions, individuals define themselves ... in terms of their common attributes as group members and not in terms of their idiosyncratic features as unique persons". (Brown and Turner 1981, p.40). /

Social identity is regarded by Turner as being one half of the self-concept, the other being constituted by personal identity. For him the former represents social category membership (race, sex, student and so on), the latter the idiosyncratic attributes of personality. However, such a dichotomous theoretical division is erroneous as one can never remove the personal from the social identity and vice versa. It is rather the interpersonal or social situation which delineates an individual's personal/social identity; the two terms being symbiotic. As Storr (1981) states:

"to talk of personality as if it existed apart from interpersonal relationships is meaningless." (p.129)

Consequently, a more accurate theoretical representation of the process of depersonalisation would be that it is the psychological salience of the social situation, specifically the pressure to conform to certain normative traits, which delineates identity. As Hampson (1982) observes:

/"(Personality) traits should not be treated as though they referred exclusively to people; they also refer to situations. Viewed in this way 'personality' becomes a characteristic composed of both person and situation"(p.163)./

The salience of the sports group however is also mediated by the concept of 'normal' and 'abnormal' behaviour, the former being defined by those 'authenticated' traits associated with winning. Sage (1978) states:

"The individual player is expected to do his best to fit himself into functions which are needed by the organisation. This is vividly exemplified by the popular locker-room slogan: "There is no I in team." ... Instead of coaching from the expressive foundation of personal fulfilment, coaches often adopt a production profile in working with athletes."

Consequently:

"... many coaches have defined coaching as analogous to sculpturing ... Thus we have two sports psychologists, Bruce Ogilvie and Thomas Tutko (1966), labelling athletes who will not be moulded in the ways coaches wish as "problem athletes" " (p.157).

The "problems" defined by the two psychologists range from a lack of 'coachability', through injury-proneness to depression, and it is worth looking at their study in more detail as it clearly defines the coach as guardian, and enforcer, of the normative typologies which have been at the centre of this discussion.

Ogilvie and Tutko (1966) reported that the 64 coaches' personalities studied yielded 12 common attributes. These included that they were (a) highly success driven, (b) highly ordered, (c) outgoing, warm people (d) open, trusting people. They also found however that the coaches as a whole manifested a low tendency to be interested in the dependency needs of others,

and that they were disinterested in providing the understanding or emotional support for athletes who sought them out for counselling. There is something of a contradiction here, in that the coaches were reported to be 'outgoing', 'warm people', 'trusting and unusually mature". The two authors comment that they were continually "reminded by these men that 'I'm no social worker; my job is to teach how to win.'" (ibid p.24) The authors' examination of the problem athlete begins by looking at the athletic 'trait' of 'coachability' which they define as representing the need for order and as the capacity of the athlete to show appropriate deference. They propose that the athlete who exhibits a balance between these traits will "present few problems".

It is then as Goffman (1979) states:

"He who adheres to the advocated line is said to be mature and to have achieved good personal adjustment; he who does not follow the line is said to be an impaired person, rigid, defensive, with inadequate inner resources"; (p.140)

a problem athlete. Indeed there is some evidence here to suggest that the coaching process endeavours to deindividuate rather than depersonalise the athlete, The former implying a loss or shedding of identity in group situations. The athletic group then shares some affinity with Sartre's (1982) 'bonded' and Laing's (1962) group 'nexus', both constellations being held together by fear, anxiety and guilt in terms of what "the other group members will do to the member who secedes or betrays," (Sedgewick 1982 p.80).

In order to understand how such a group environment could provoke such an affective response it is necessary to discuss, in some detail, the interpersonal notion of self encompassed by the self-schema proposed in chapter 1.

It will be remembered that the self-schema comprised of three separate yet interrelated self-percepts; the self, the not self and the ideal self. It is proposed, before describing the specific properties of each and the way in which they affect each other, to briefly review the tradition of self-psychology.

The position of the self within psychology generally has only really received 'authentication' in the last two or three decades, and this is due mainly to the work of Carl Rogers and his other humanistic

oriented colleagues. However, although the self has only recently been accredited as being not only a worthy area of study but also as an important factor within the clinical and therapeutic setting, it has a long history; longer in fact, than the academic discipline of psychology to which it now belongs. Unfortunately, during this time the self has become synonymous with a multiplicity of different terms, so much so that it is difficult to conceptualise it historically with any degree of specificity. Because of this factor only those self-theorists who have influenced the development of the self-schema will be reviewed, in an attempt to posit it within some historical perspective.

The concept of self is inextricably linked to philosophical discourse and in particular the writings of Immanuel Kant. Kant (1934) stated that "there can be no doubt that all our knowledge begins with experience" (p. 54). Furthermore he observed that there was something very significant for human development in the fact that each infant becomes conscious of himself first as 'me' then, only later as 'I'. This order has subsequently been confirmed as universal (Becker, 1962), and as such it indicates that a child "becomes a point of reference in relation to others before he becomes an agent of action for himself" (ibid p.33). Consciousness or 'knowledge' of self is then a fundamentally social experience.

It was not however, until the work of William James (1890), that the 'self' entered the realm of psychology proper. With his concept of the 'Global Self', James shifted the emphasis "from a philosophical and subjective experiencing 'I' to a psychological and empirical 'Me'", (Burns 1979, p.28). A proposal which advanced Kant's original thesis as it submitted that the self is comprised of two components which discriminate between pure experience, (I; the self as subject) and the content of that experience, (Me; the self as object). James' theoretical division therefore paved the way for a psychological quantification of the (interpersonal) Me, and re-introduced the problem (which has been an embarrassment to the phenomenologists since Husserl) of how one can ever 'know' the content of another I. A more cogent development within self-psychology however, followed the work of G.H. Mead (1934) and C. Cooley (1912). They introduced the concept of symbolic interactionism to the developmental study of the self. This emphasised that the individual was not a passive receptor of environmental stimuli but an organism which modified, through individual experience, the predominantly social cues. They therefore

introduced the concept of the intentionality of consciousness into psychology.

Unfortunately however, with the rise of the behaviourists (Watson 1925, Thorndike 1932, Hull 1943), the 'non-visible' self was effectively dismissed from the ranks of psychological enquiry, until the work of the neo-Freudians (Fromm 1947, Erickson 1956, and Sullivan 1956), and the phenomenological humanists (Lewin 1935, Kelly 1955, Rogers 1959). Both the work of Kelly and Rogers was heavily indebted to the previous findings of such theorists as Cooley (1912) and Mead (1934), and also the philosophy of Kant. However it did represent a refinement of previous research, both theoretically and methodologically. Rogers (1980), thus contends:

"The only reality I can possibly know is the world as I perceive it at this moment ... There are as many worlds as there are people" (p.102).

Rogers, although realising the importance of the generalised other, emphasises the importance of the individual's self-concept as a kind of umbilicus attached to, and yet mediating, the perceptions of his or her social reality. Kelly, too, marked a shift away from Mead and Cooley's 'other centered' approach with the introduction of his personal construct theory. As such he emphasised that "psychology is man's understanding of his own understanding!" He therefore selectively mediates his perceptions and cognitions of reality by delineating it with reference to his experience of self.

The importance particularly of both Rogers and Kelly's work, for the proposed self-schema is their emphasis upon man as mediating his experience of reality by referring to his-self. It thus allows the introduction of intentionality, needs, values and also affect into the theory of self.

However, one final point needs clarification, namely why the object of empirical analysis is a self-schema rather than a self-concept. A concept can be thought of as a mechanism which enables an individual to classify the object of perception into meaningful categories; the specificity of the category being dependent upon the nature of the concept. A schema on the other hand, is "the image of the thing with which the imagination aids the understanding in its procedure" (Chambers Dictionary 1972). Consequently the self schema is the author's theoretical understanding of what the self-concept is thought to be, and as such it is dependent upon the vagaries of his experience. It is

then as Smail (1982) contends:

"Scientists seek and work for objectivity on the basis of their personal acquaintance with their subject matter: it is not imposed upon them from without and cannot be set up as a test of the validity of scientific statements" (p.68).

Borrowing from Rogers (1965), the definition of the self can be conceptualised as being:

"The perceptions of one's characteristics and abilities; the percept and concept of self in relation to others and to the environment" (p.138).

Within this are two theoretically important factors which must be accounted for in any notion of self perception, the 'others' and the specific environment in which the interaction with these others takes place.

The importance of either real or fantasised others within any personality theory has been attested to both within the theoretical and methodological concerns of chapter 1 and also within the present literature review. However, this importance has not yet been developed with any degree of specific theoretical significance.

Hegel (1964) was perhaps one of the first to indicate the significance of the other both for the control and development of the self. As a consequence he proposed that "self-consciousness attains its satisfaction only in another self-consciousness" (p.201). In order to illustrate this process he used the 'parable' of the Master and Slave. The Master is "another consciousness existing on its own account which is mediated with itself through another consciousness" (p.201). However, this mediation entails that although the master is self-sufficient - in the sense of having the slave dependent upon him - he is also dependent upon the dependence of the slave for his own definition of self; the master. In much the same way a hermit can only define himself as a recluse through the absence of concrete others; he is still dependent upon the existence of others in order to achieve a sense of him-self as hermit.

More contemporary uses of the importance of the other(s) for defining self have been in the psychological theories of Cooley (1912), Mead (1934), and in particular Sullivan (1953) and Leary (1957).

Sullivan proposed the theorem of reciprocal emotion as a way of conceptualising the dependency of self on other. He writes:

"Integration in an interpersonal situation is a reciprocal process in which (1) complementary needs are resolved, or aggravated; (2) reciprocal patterns of activity are developed, or disintegrated; and (3) foresight of satisfaction, or rebuff, of similar needs is facilitated" (1953 p.198).

The theorem of reciprocal emotion was subsequently elaborated by the work of Leary and his colleagues at the Kaiser Foundation. Leary (1957), borrowing heavily from Sullivan, proposed an interpersonal system of personality based upon his theory of reciprocal relations. He emphasised that:

"Interpersonal reflexes tend (with a probability significantly greater than chance) to initiate or invite interpersonal responses from the "other" person in the interaction" (p.123).

However, although there is essentially no significant theoretical difference between either of the above proposals, Leary, unlike Sullivan subsequently developed a specific methodology with which to analyse his contention.

Perhaps the most simple illustration of Leary's theory of reciprocity or complementarity (Carson 1969) is his example of the sado-masochistic relationship. He states that : "sadistic-critical behaviour pulls resentment, distrust, fear and guilt from "others" (1957, p 343). Consequently:

"The common genus of household sadist usually operates in reciprocal relationship to masochistic marital partners who respond submissively." (ibid p.343)

(A more detailed account of Leary's theoretical methodology will be given in the following chapter). An essential element within Leary's reciprocal theory is the construct of intentionality. He has termed this factor the principle of self-determination whereby he contends that man is responsible for his own goals, motives and attitudes within an inter-subjective world. This factor has particular reference when one considers the 'profile descriptions' described earlier, as the normative typologies given by this particular process were essentially non-interpersonal. The situation is then as Leary (1957) states:

"Terms such as depressed, impulsive and inhibited, for example, refer to characteristics that possess maximum meaning when their inter-

personal purpose is added ... a popular diagnostic phrase (such) as "the patient acts depressed" is really not very great until we add, overtly or implicitly, the social implication" (p.5).

Although Leary's contention is couched in the nomenclature of the psychiatric environment, it should not be dismissed as being irrelevant for the sports environment. Particularly if, following Leary's instructions, the profile trait of dominance for instance was given its social implication of perhaps the player perceives himself as dominant in order to 'pull' obedience and respect from others. He therefore maintains or enhances his self-esteem by (a) conforming to the normative personality traits seen as maintaining successful group functioning and (b) by receiving positive feedback from those with whom he interacts, by his use of a dominant interpersonal orientation.

Uriel Foa (1961) conceptualised the relationship between self, other and group structure when he wrote that:

"an interpersonal act is an attempt to establish the emotional relationship of the actor toward himself and toward the other, as well as to establish the social relationship of the self and other with respect to a larger reference group" (p.350).

There is contained within Foa's statement the second factor taken from Rogers definition which was posited as having significance for the self-schema, namely the reference group or environmental situation within which the series of self-other interactions take place.

For Mallin (1979), being in a situation:

"implies being actively involved in trying to determine one's present circumstances ... But this struggle to understand the situation is equally the attempt to work out a kind of principle of action that will both organise its diverse elements and establish a role in respect to them" (pgs.10-11).

However, most, if not all situations, and in particular that of the sporting environment, are bound by normative interpersonal parameters which delineate or 'depersonalise' self perception. The implications for the cognitions based upon these perceptions are then as Endler (1980) observes, in that:

"situations, and the perceptions or meanings of situations in terms

of cultural norms and roles are the basic determinants of behaviour.

Instead of asking whether (personality) traits or situations are the major source of behavioural variance, one might profitably ask "How do persons and situations interact in determining behaviour" (p.253).

The importance of these cultural, or group norms and roles, is indicated by Goode (1961), when he writes that a role relationship is:

"a set of mutual expectations of behaviour between two or more actors, with reference to a particular type of situation. These expectations are backed by normative based sanctions applied by ego, alter and others. Thus, both ego and alter know, or believe they know, what the 'other' will, in fact, do in the situation" (p.249).

Goode continues that in some instances both ego and alter are in 'tension'; ego may know that alter is not conforming with the norms of that particular situation. However, rather than ego adjusting his cognitive predictions "he feels that alter should adjust his performance to meet ego's expectations" (ibid). This, as we have seen in the research of Ogilvie and Tutko (1966), is the view of many coaches and it must be said the athletes themselves .

The pressure to shift ego's self perception to that of alter can ultimately lead to a series of disjunctive (Sullivan 1953) or false-self interpersonal interactions (Laing 1971), and although these compensatory mechanisms will be discussed in greater detail later in this chapter, before moving on to the second element within the self-schema, consider the following observations by Sartre (1956), in which he details the condition of societal obligation for self:

"This obligation is not different from that which is imposed on all tradesmen. Their condition is wholly one of ceremony ... there is the dance of the grocer, of the tailor, of the auctioneer, by which they endeavour to persuade their clientele that they are nothing but a grocer, an auctioneer, a tailor. A grocer who dreams is offensive to the buyer, because such a grocer is not wholly a grocer. Society demands that he limit himself to his function as a grocer" (p.59).

Most, if not all of the above discussion regarding the salient psychological factors which delineate the self, can be attributed to the second percept of the self-schema, the not-self. Consequently only a brief review of its theoretical properties will be given in order to avoid needless repetition.

The definition of the not-self to be employed within this thesis is

that it is comprised of:

"The goals or ideals which are perceived as having ... negative valence" (Rogers op cit).

Unfortunately the paucity of the available research on such a construct effectively negates any comprehensive literature review. However, it is still felt to be an extremely important element within the totality of the self.

Perhaps one of the nearest one can get in terms of previous researchers using the 'not-self' in the way in which it is to be used in this study, has been by the personal construct theorists. Wright (1970) states:

"A symptom may be regarded as a part of a person's experience of himself which he has singled out and circumscribed as in some way incongruous with the rest of his experience of himself ... On account of the incongruity with the 'self' it tends to be regarded as non-self" (p.222).

Within this statement there is again the intentionality of the person to deliberately 'detach' the symptom or not-self from the remaining self, and in this way the concept is the same as the self. Moreover, it must be realised that at some other time the person could become his symptom if circumstances or the situation allowed. It is then as Gergen (1977) suggests:

"the individual harbours a multitude of self-relevant concepts, many of which are inconsistent if not diametrically opposed. Thus, the same experience of self may be coded differently from one situation to the next ... In this sense, the individual may feel at one moment that he is truly sensitive as a person, but at another that he is brutally calloused" (p.165).

The implication is therefore that given the profiles offered by previous research, the sporting situation mediates not-self perception so that it encompasses non-dominant, non-aggressive or non-sensitive traits. Unfortunately the significance of these polar constructs cannot be taken per se, as the athletes have never been asked which traits they do in fact find incongruent or inconsistent with their sense of self. This is a similar fault in many other psychometric techniques and one cannot simply assume that self and not-self are diametrically opposed. The person must consciously reject those aspects of him or her-self which (s)he perceives

to be incongruent with the needs of the particular situation.

The final construct which completes the phenomenal self-schema is the ideal self. Borrowing again from Rogers statement which has formed the basis of the schema's theoretical perspectives, the ideal self can be defined as "the goals or ideals which are perceived as having ... positive valence" (1965). However, it is felt that although structurally accurate, this definition does not encompass the full meaning of the 'idealised' perception of self. A far more accurate representation is offered by Murray and Kluckhohn (1953):

"One of the important establishments of personality is the ego-ideal, an integrate of images which portray the person "at his future best", realising all his ambitions."

These ambitions however:

"are imaginatively created and recreated in the course of development in response to patterns by the environment - mythological, historical, or living exemplars" (p.40)..

The stereotypical or normative images of the athletic personality encompass strong mythological (see chapter 1), historical and contemporary pressures to strive for dominant, extrovert ideals. Indeed only those athletes who fit the mythological and historical mould are treated as living exemplars of athletic idealism.

Most of us should be educated in the good life and how to attain it. In this the athlete provides a much better model than the scholar... In his highly visible pursuit of a highly visible perfection, he illustrates the age-old advice to become the person you are" (G. Sheehan 1974, cited in Mihalich 1982 p.51).

However the:

"Win at any cost syndrome is reflected in the excessively competitive character of contemporary sports and athletics and (in) the tendency of unscrupulous administrators and coaches to resort to dehumanising tactics to ensure victory" (Mihalich 1982 p.26).

"excesses in sports are a microcosm of society. When society stops cheating, then we can expect the same of intercollegiate sports" (Paterno 1978, cited in Mihalich op cit p.27).

"In the traditional male role, taught in part through sports, interpersonal and emotional skills, are relatively underdeveloped, and feelings of tenderness and vulnerability are especially prohibited. The ideal sportsman is tough, strong and aggressive." (Pleck 1976, p.156)

The situation, as illustrated by the four statements above, is therefore one which questions the very nature of the ideal itself. Consequently is the ideal (a) what people believe they are supposed to feel or believe; or (b) a 'real ideal' in which they do in fact believe; or (c) an ideal which, if 'believed', will engender credibility to a self-system which it would otherwise lack.

The view proposed by Leary (1957) is that:

"the acceptance of certain ideals tends to link the individual to strong forces in his world." (p.202).

These ideals, he suggests, can come from parental, religious or more importantly, from a person's societal group. Symonds (1946) has described the process, proposed in (c) above, where a 'discreditable' self-system can develop feelings of belonging and worth by acceding to the models and values of his group:

"One looks for support by acceding to the wishes of society through its laws and customs, so that one feels secure as a member of the group and derives power from the group." (cited in Leary 1957 p.202).

Leary, using information obtained from research conducted into individuals' ideal or value systems, posits that for most (90%), dominant or responsible interpersonal themes structured the respondents ideals. He concludes that "This homogeneity is a cultural stereotype," (p.205), and as such he proposes that other cultures (or groups) could idealise other normative values. Some thirty years earlier Freud had also recognised the importance of cultural or environmental effects upon the development of the ego-ideal³, "the differentiating grade in the ego which forms out of all the limitations imposed on the ego by the external world, " (Guntrip, 1972). An extension of this proposition, of more interest to the aims of this thesis however, was Freud's discussion in 'Group Psychology and the Analysis of the Ego' (1921) of the way in which ego-analysis can be used as a means of explaining group ties. Freud argues that each individual

within the group identifies himself with the leader in that part of his ego, called the ego-ideal. He then substitutes the leader for his ego-ideal, thus falling completely under the leader's direction. The important factor here is the way in which Freud proposes that an ideal is introjected from some external source, 'adopted' as one's own and then used as a group manifestation of control. However, as we have seen, it is not the leader who acts as some kind of group ideal, but the group's instrumental and social environment; coach, peer group, and/or the sports psychologist.

The ideal self, like its two perceptual counterparts, is not a 'passive' or merely additive percept within the totality of the schema. Indeed, although each one of the percept's has an importance in its own right, the self-schema takes on an additional or more distinct quality when each of the percepts "oppose" or more accurately, interact with one another. It is therefore important to see the instrumentality of the schema not as a elementaristic or additive model of self, where the total impression is one taken from the summation of all the separate pieces of information (Asch 1952). But as a perceptual Gestalt which cognizes the athlete's perceptions of group reality into something more than the mere sum of his schematic parts. As such, the perceptual field of the athlete within the sports group is subject to the Gestalt "Law" of the interdependence of parts, thus each percept within the self-schema is structural in:

"relation to each other (one) to form an organised whole, so that each part influences the other parts, and the characteristics of any part are determined by its membership in the total system" (Brown and Turner, p.35 1981).

Moreover, the effect upon cognition of this 'total system' is one which necessitates that each group member perceives himself, not in isolation, but as we have seen through Sullivan's and Leary's theories of complementarity, as members of a social entity. And as such they:

"internalise group products such as slogans, norms, values and stereotypes and so achieve shared frames of reference which regulate and coordinate their actions and attitudes" (ibid).

This internalisation of the group product has been demonstrated with reference to each aspect of the self-schema. In-group deviants are labelled 'problem athletes' as they fail to adjust their 'total system'

to the normative frames of reference; they consequently fail to consume.

However, it is only by tracing group process back to individual praxis, a methodology proposed in the conclusion of the previous chapter, that the intelligibility or intentionality of the athlete-as-a-being-in-the-group can be analysed, and any attempt made for it to be understood. For the most part it is in not adopting this shift of perspective that has led to many talking not about personality but group process. We are then left to assume that athletes bring to the competitive situation a cluster of traits which not only make them distinct from the population at large, but which also ensures the prospect of success. However, apart from the cross-situational validity of such an approach, which is in itself in doubt, the kind of statement it generates in general that "sports people as a group are extroverted" (Nias, New Society 1982) is so broad as to be absolutely meaningless.

The perspective of the self-schema is summarised by Martin Howarth-Williams (1977), when he writes that:

"Laing notes that a group as such can never actually do anything, except through the praxis of an individual. That is, process cannot be attributed to a group as a whole; or rather apparent group process can always (in theory) be traced to a multiplicity of individual praxes" (p.33).

Although as noted previously, the group, particularly in sport, has to ensure its existence - its continued survival. As such some 'measures' have to be taken to ensure the compliance of these individual praxes within the group process. Consequently to understand the implications of this statement, both for the individual self and also for the theoretical objectives of this research, it is proposed to borrow from the work of John Paul Sartre in order to briefly review the delineators of the structural permanence of groups.

Sartre (1982), begins his discussion of the group by examining the conditions under which it arises. The simplest form of group he argues is the series, and to illustrate he gives the example of people queuing for a bus. The members of this 'group' have only the forthcoming bus as their common object of unification, thus "they relate to each other only in so far as they all relate to a common external object." (Howarth-Williams p.34). The second, more complex and distinct group, is the fused group and to

illustrate the particular properties of its formation Sartre uses the storming of the Bastille during the French Revolution. He argues that faced with the danger of the troops who were surrounding Paris, the differences that separated people began to diminish. As a consequence the fused group was formed, whereby:

"The individual discovers common action as the sole means of reaching the common objective". (Poster, 1979, p.84)

However, the group cannot maintain its state of 'spontaneous' fusion forever. Somehow the group must ensure its survival, and it can only achieve this through the commitment of its members. Sartre refers to this commitment as 'terreur' or terror. Consequently:

"In order to preserve the group from disintegration the group itself places severe restrictions on its members. The internal danger to the group is countered by the demand for allegiance to the "social unit." (Stack, 1977 p.121-122).

Therefore:

"The individuals being-in-the-group is a free consent to accept the right of the group to his praxis and the absolute right of all over each individual." (ibid)

Thus the interpersonal structure of this third new group, the bonded (Sartre), or nexual group (Laing), is based upon 'violence and terror' or to put it in less dramatic but more realistic terms, anxiety and guilt. These affects being generated by a self out of the "decision or 'pledge' before the others to join together in linked activity for the achievement of the common group goal", (Sedgewick, 1982, p.80).

The metamorphosis of the group from serial to nexual and the interpersonal implications for self of such a shift, parallel the change which has taken place now that play has become, for many, sport. The group of workmates kicking a football at dinner-time or the play of children in the park form a series, and the situation is as Caillois (1969) observes that games attempt to substitute ideal conditions for the "normal confusion of everyday life"(p.49). However, in circumstances where out-group pressure entails

that in-group members conform to ensure both the success and survival of the group, then play changes to sport; series becomes nexus. And it is this shift in emphasis that provoked Huizinga (1955) to argue that modern games and sports have been ruined by a "fatal shift toward over-seriousness" (p.197).

The final 'section' of this review will endeavour to describe the possible effect that the group process has upon the individual praxis preforming within a 'bonded' group. This will be achieved by referring specifically to certain interactive combinations of the percepts within the self-schema, with particular reference to the affective component, inherent within both schema and group, of anxiety. The aim however is two-fold, this review will not only introduce the reader to the topology of the athletes psyche, it will introduce some of the areas which will be empirically analysed in Chapter 5.

Perhaps the simplest, but by no means unimportant interactive product, given by a combination of specific percepts within the self-schema, is that which emerges from the self and not-self perceptions. Together they offer an interpersonal parameter of self which is itself delineated by those perceptual poles seen by the athlete as having positive and negative valence. Their interaction forms, essentially, the superstructure of not only athletic personality disposition but also the particular mode of adjustment to group process.

Using the sports psychologists athlete 'profile' as our illustration we thus, theoretically, have a self perception which stresses dominant and aggressive interpersonal themes and, in all probability, a not-self which consciously rejects either self-effacement or dependence. Therefore, the first interpersonal parameter of self perception is structured along a continuum of dominance and submission. If this were in fact true, then given the specific theoretical perspective of this review we could designate this perceptual typology as constituting the norm; it must be said that given the comments of many involved in sports it certainly constitutes the stereotypical expectation.

However, given this situation, what of those athletes who "seem to succeed despite a wide divergence from the group mean"? (Hardman, 1973). The answer to this question introduces the first area of possible intrapsychic conflict for the athlete whose self and not-self perceptions are inconsistent with those of his group; a self perception which is not aggressively dominant and a not-self which does not reject

self-effacing dependency. For example Stein and Hoffman (1978), using 24 male athletes between the ages of 21 and 32 found that one area of athletic role strain involved anomie or ambiguity. They define this type of strain as being "a confusion involving normative expectations of role partners"(p.139). This particular situation will be of importance in the later discussion regarding the concomittments of interpersonal anxiety.

The second, and probably the more important perceptual interaction, is that between the self and ideal self, the product of which will be termed self acceptance⁴. Crowne and Stephens (1961) state that:

"While no single definition of self-acceptance would be accepted by all who use the term, the phenomenological view of Rogers seems to represent at least a common point of departure."(p.104).

In fact the construct of self acceptance only really gained respectability within the clinical and psychotherapeutic psychological domains with the work of Rogers (1965). Rogers, using Stephenson's 'Q' technique⁵, attempted to measure via statistical correlation the way in which his client or person-centred therapeutic techniques facilitated a movement of self toward the ideal, or ideal toward self⁶:

The correlation between self and ideal is initially low, but becomes much higher as a result of therapy ... Thus the result of therapy would appear to be a greater congruence between self and ideal" (p.141).

However, despite the proliferation of research conducted into the nature of self acceptance since Rogers first attempts to statistically map its effects upon the whole personality system, the ensuing multiplicity of meanings conveyed by the term has resulted in most definitions being either rigidly operational, where the parameters defining the variable are not specifiable, or highly abstract, where they are semantically loose and subject to differing interpretations, (Crowne and Stephens 1961).

Given this criticism there is evidently some need to offer an operational definition regarding the way in which self acceptance will be used both here and also in the empirical analysis which follows.

The construct of self-acceptance corresponds to MacCorquedale's and Meehl's (1948) early conception of a hypothetical construct: "something that cannot be observed but still is assumed to exist." As such a

definition must specify the parameters which conceptualise this particular aspect of an individual's phenomenological cognition in order to ensure that the variable is neither elusive semantically nor operationally. For the purpose of this research self acceptance will be defined as the degree of congruence between an individual's self and ideal self perceptions, mediated by his particular interpersonal environment, the result influencing whether cognition is positively or negatively biased.

This definition closely follows Brisset's (1972) conceptualisation of self-esteem in that it encompasses two basic psychological processes, (a) self-evaluation and (b) self-worth.. And it is by considering the polarities of these two constructs that most of the previous research into self acceptance can be subsumed. Consequently:

"positive self concept can thus be equated with ... self respect, self-esteem, self acceptance; a negative self concept becomes synonymous with negative self-evaluation, self hatred, inferiority and a lack of ... self acceptance" (Burns 1979 p.57).

(It must be noted that each one of the above self-referent adjectives can be thought of as belonging to the generic term of either high or low self acceptance). Therefore, those individuals with a high level of self acceptance are regarded by most psychologists as being mature, adjusted personalities, those with a low level as being subjectively unhappy and unstable. As Sappenfield (1970) contends:

"persons having normal self-esteem tend to perceive themselves as having the characteristics that they attribute to the ideal personality"(p.976).

However, this rather tidy linear relationship between self acceptance and psychological adjustment has not been without criticism. Crowne and Stephens have proposed that the 'regression' is rather curvilinear. The authors state that:

"those individuals describing themselves as very close to their ego ideals tend to deny and suppress threatening features of themselves and cannot be considered mature and healthy" (op cit p.110).

They argue that such a person may be said to be "overly-integrated", a condition sufficient enough for a stable benign environment, where the pressures on the individual are never too great, however environmental stress can result in a high level of cognitive disruption. This view has

also been supported by the work of Neuringer, Lowell and Wandke (1966) who state that:

"there is, phenotypically, stability of interpersonal relationships among high self-concept individuals. But this may be due to the masking effects of social group composition... However, the conflict-arousing effect of high self-concept individuals lurks behind this defensive screen" (p.321).

In essence then extreme satisfaction and extreme dissatisfaction with self are to be regarded as unhealthy for the psychological stability of the individual (see also Butler and Haigh 1954 and Erickson 1956). However, although this research enables a specific conceptualisation of the construct of self acceptance to take place, the underlying question, to which this thesis will be addressed, is why the individual with a very low level of self acceptance (it would be more accurate to describe this situation as a high level of self rejection) has an ideal in which is enshrined such "bitter self-criticism" (Guntrip 1971).

It will be remembered that the self-schema was described as a perceptual Gestalt and as such it is important to consider the role played in self acceptance of both the self and not-self perceptions. Consider the athlete whose sense of self deviates from his group norm, one possible way of feeling not only an integral part of the group, but also of diminishing feelings of inferiority, is for him to adopt the values or ideals of the group and introject them as his own:

"By taking on standards and ideals the individual wins approval and attempts to ward off disapproval. Heightened self-esteem and the avoidance of shame and inferiority can be achieved by the acceptance and expression of value systems" (Leary 1957 p.22).

However, this introjection of external ideals can have a destructive and unsettling effect upon the rest of the personality system. It is as Murray and Kluckhohn (1953) state "high aspirations can cause unhappiness and discontent".

It is evident therefore that to compensate for the feelings of inferiority, generated by what is perceived to be an inadequate self and not-self system, the individual strives for superiority and dominance. This psychological process is similar to the Adlerian theory (1930) that the fundamental human motive is one which strives for superiority in order

to compensate for feelings of inferiority. However, within this compensatory psychological mechanism the motive or need inculcated in the ideal is 'other directed', as it is bound by the requirements of the bonded group process. Indeed Murray's (1938) definition of a need emphasises the relationship between the individual's perception of himself and the 'objective' requirements of the environment. A need is:

"sometimes provoked directly by internal processes of a certain kind ... but more frequently ... by the occurrence of one of a few commonly effective press [environmental forces]" (pgs.123-124, emphasis added)

Similarly Kluckhohn's (1951) definition of a value emphasises the influence of group characteristics:

A value is a conception, explicit or implicit ... characteristic of a group of the desirable, which influences the selection from available modes, means and ends of action" (p.342)

He continues that such a conception of the desirable is usually related to beliefs about the nature of reality, and it is evident that the 'reality' of the group process is one in which the dominant interpersonal relationships between self and other is somehow accepted as 'given' within the performance situation.

The needs of the athlete who introjects an ideal which is incongruent with the remainder of his self-schema leads to the situation whereby he erects a false-self in order that he becomes, to use Heidegger's (1962) expression, part of 'Das Man', his goal being to be 'average':

"Being-with-one-another concerns itself as such with averageness, which is an existential characteristic of das man" (p. 127)

The consequence of such an existence is inauthenticity; thus none of his actions, values "not even his conception of self is his own" (Solomon 1972 p.215). Laing (1979) summarises Heidegger's philosophical statement when he states that:

"To be 'authentic' is to be true to oneself, to be what one is, ... to be 'inauthentic' is not to be oneself, to be false to oneself" (p.127).

Although Laing elaborates upon Heidegger's proposal by emphasising that it is how much 'room' a person has to 'move' which determines their position of authenticity:

"The space, geometrical and metaphysical of both adult and child, is highly structured by the influence of others" (ibid, p.135).

Laing's comment is particularly pertinent to the athlete who is performing as his 'room to move' is bound not only by his position or specific role within the team, but also by the physical dimensions of the pitch, delineated by the rules of others, upon which the performance takes place; the athlete cannot therefore leave this place or his position as it would negate his existence as an athlete.

It is clear from the above review that the percepts inherent within the self-schema, whether in isolation or particularly in concert, delineate the athletes cognitions with which he mediates his interpersonal response to the external reality of performance. Moreover, there is an important relationship inherent within this psychological process which for literally centuries, has been held in dispute; that between cognition and affect. Coles (1982) states that cognition is:

"the perception and evaluation of one's ability to deal with the environment. The affective component is anxiety ... since there is a relationship between the ability to control or predict the consequences of an event and this emotion" (pgs.123-124)

Affective processes are commonly referred to as feelings, moods and emotions, and they constitute what Aristotle referred to as the 'appetite systems' (Coles 1982). Moreover, since Grecian times, they have been regarded as contradistinct from 'intellectual', or 'normal' social behaviour (Peters 1960). As a consequence much time has been spent upon attempting to define affective processes in isolation. Wundt (1896), proposed that human feelings could be described in terms of a tripartite system; pleasantness-unpleasantness; excitement-quiescence; and strain-relaxation. Titchener (1921), reduced this categorisation into the single dimension of pleasantness-unpleasantness which was subsumed by Beebe-Centre (1932), under the heading of 'hedonic tone'. Although the tridimensional theory did re-emerge in the 1970's with the work of Russell and Mehrabian (1977), who suggested that three independent and bipolar dimensions were

necessary in order to define emotional states; pleasure-unpleasure; degree of arousal; and dominance-submission.

It is clear from previous research that in attempting to define affective processes in isolation from the rest of the psychological systems, i.e. cognition and connotation, then we are presented with a very one-dimensional view, grounded in psycho-physiological response patterns. Similarly, where attempts have been made to account for the subjective emotional experience and the physiological changes, there has been much contention as to the primacy of each system. Such that the James-Lange theory (1890;1885) specifically denies that there was any intervention of consciousness between physiological stimulus and emotional response.

However, more recent research into stress and anxiety has shown that cognitions and affect are in fact a 'two-way street' (Coyne and Lazarus, 1980). Here emphasis is placed upon the perceived self-efficacy of the individual within a particular situation rather than a cause and effect relationship. This has particularly been the case with the work centred upon a cognitive-phenomenological approach to affective responses. Coyne and Lazarus write:

"Although we argue that stressful emotions and coping are products of cognition - that is, the way a person appraises or constructs his relationship with the environment - we do not mean that the relationship goes only one way. In an adaptational encounter, environmental demands, cognitive appraisal process, coping and emotional response interpenetrate, each affecting the other." (ibid p.150)

The work of Lazarus overcomes the determinism and myopia of the previous concentration upon either cognition or affect, and meshes affective response into the self-schema with its emphasis upon the interaction of self-perception with the situation. /Lazarus (1966) introduced the concept of 'cognitive appraisal' as the method by which the individual judges the demands of the environment and his or her resources for managing them. This includes the 'primary appraisal' which entails evaluating the effect of the situation upon one's well being; and 'secondary appraisal' which refers to the person's ongoing judgements concerning his or her coping resources. / Thus we have an emphasis upon an organismic approach to the relationship between cognition and affect which concentrates upon the chain of events, organised by the individual's perception of himself, which lead to a particular affective response, rather than a psycho-

physiological description of that response in isolation.

Bandura (1977), has also emphasised the important role that perceived self-efficacy has in affective behaviour, and Ellis (1962), specified the manner in which maladaptive emotional reactions are a function of various irrational beliefs manifested in internal self-statements, (Smith 1980). Ronald Smith (1980), using college and professional athletes (Smith, in press; Smith and Smoll, 1978) and borrowing from the work of Ellis (1962), Lazarus (1966), Schachter (1966) and Arnold (1967), has proposed that the relationship between cognition and affect has four major elements: (a) the situation, (b) the person's cognitive appraisal of the situation, (c) affective response and (d) instrumental behaviours. Smith's description of these four psychological processes proposes that the stimuli that constitute the situation can be either external or internal in origin, i.e. an example of the former would be the stimulus of the forthcoming game, of the latter, thoughts, images or memories which could entail either positive or negative experiential appraisals. However, it must be said that Smith's external/internal division is somewhat academic as the two can be more accurately thought of as inter-dependent.

The person's cognitive appraisal of the situation again contrasts sharply with those nonmediational models of behaviour which conceive the situation as directly stimulating the physiological component of the particular affective response. However as Smith (1980) states:

"Appraisal processes create the psychological reality to which people respond, and the nature and intensity of emotional responses are a function of what people tell themselves about the situation and about their ability to cope with it" (p.266).

(It is apparent from the above statement the extent to which Smith has been influenced by the work of Lazarus as he has subsumed under one heading both the primary and secondary appraisal processes).

Physiological responses, the third component of the model, are according to Smith "intimately related in a bidirectional fashion to appraisal processes" (ibid).. Therefore, not only does the cognitive appraisal of the individual mediate his affective response but also the physiological response provides feedback as to the intensity of the emotion being experienced. Consequently, the feedback process facilitates a fluid, ongoing process of appraisal and re-appraisal (Schachter 1966). (This

proposed feedback loop will be of particular importance when discussing the theoretical relationship between trait and state anxiety below).

The final part of Smith's model, the instrumental behaviours made in the situation, include task-oriented, social and coping behaviours. These factors being affected by both cognitive and physiological processes.

Smith's model emphasises the importance of the relationship between cognition and affect, in particular the part played by the individual's perception of self in the mediational or appraisal process. However, before giving a detailed review of the properties inherent in the specific affective response of importance to this study; anxiety, the following elegant description by Sartre (1956) will perhaps elucidate and hopefully converge the theoretical propositions behind the self-schema and their relationship to the model described above.

"Let us imagine that I have just looked through a key-hole. I am alone and on the level of non-thetic consciousness. This means first of all that there is no self to which I can refer my acts in order to qualify them, "I am my acts." "All of a sudden I hear footsteps in the hall. Someone is watching me" What does this mean? It means that I am suddenly affected in my being and that essential modifications occur ... First of all, I now exist as myself: I see myself because somebody sees me. I discover shame; shame of self. I am indeed that object which the Other is looking at and judging" (pgs.259-260)

Within Sartre's description we have illustrated the importance of the situation; myself looking through a key-hole, and also the influence of the interpersonal environment; the presence of the other, for the perception of self and the resulting cognition of reality. The subsequent interpersonal perception 'pulls' judgement from the other upon my self. However it is important to note that the other does not have to speak, it is my intention or praxis as a 'voyeur' which establishes the reciprocal interpersonal link between we two. The cognition of this particular reality provokes the affective response of shame, although the mediational aspect of cognition could, just as easily, invoke feelings of fear, guilt or anger.

Perhaps the most culturally pervasive affective disturbance, and certainly the most documented, is that of anxiety, so much so that W.H. Auden (1947) has termed the post-war period the age of anxiety. Yet it is hard to conceive of any age which could have been exempt from

this particular emotion. Its existence is inherent in man's development from birth until death with no regard for historical specificity.

//The importance attached to the understanding of the psychological determinants of anxiety has resulted in it becoming the cornerstone of most, if not all personality theories since its central position in Freud's psychoanalytic theories, and its subsequent relevance to much of contemporary psychopathology and psychiatry. However, the consequence of this proliferation of research is that the literature is now replete with a wide, and sometimes confusing array of competing terms:

"... .. with some authors using different terms to refer to the same basic concept, while others use a single term, often in the same article, to refer to a number of different concepts" (Akutagawa 1968, cited in Coles 1982 p.124).

Thus we have neurotic anxiety; moral anxiety; test anxiety; anxious feelings of inferiority; separation anxiety and so on. As a consequence there is on occasion, as Akutagawa contends, some theoretical as well as methodological confusion couched in the generic term of anxiety. In order to attempt to overcome this problem, and prior to describing the relationship between the self-schema and anxiety, a brief review of what are considered to be the major developments in anxiety research will be given. Obviously a whole thesis could be written tracing the theoretical revisions prompted by the influence of previous research, as such, and to ensure some degree of specificity, theoretical priority will be given to introducing the reader to those research developments which engender an interpersonal, self-oriented, perspective of anxiety.

//The universality of anxiety as a concomitant of the human condition was asserted as long ago as the eleventh century by Ibn Hazm who observed that:

"one end in human actions which all men unanimously hold as good, and which they all seek, I have found only this: the aim of escaping anxiety;" (in Spielberger 1972)./

However, it was Sigmund Freud who attempted to construct a comprehensive nosology and aetiology of anxiety in relation to his psychoanalytic theories of psychopathology. //Freud (1979) observed that:

"Anxiety is in the first place something that is felt ... As a feeling, anxiety has a very marked character of unpleasure ...; the problem of anxiety is a nodal point at which the most various and important questions converge, a riddle whose solution would be bound to throw a flood of light upon our whole mental existence" (p.288)./

Freud's description of the physiological aspects of anxiety have remained largely unchanged, (see p.40 'On Psychopathology' 1979): increased tension in the skeletal muscles; changes in the cardiovascular system; and increased activity of the gastrointestinal system, (Coles 1982). However, he found it a great deal harder to specify, with any degree of satisfaction, the psychological characteristics of anxiety.

His original theoretical formulations posited two different types of anxiety: realistic anxiety, which referred to specific objects in the individual's phenomenal field and was essentially synonymous with fear; and neurotic anxiety, which was an irrational affective response to a seemingly innocuous or unintelligible external stimulus. Freud (1963) observed that everyone has suffered from realistic anxiety, however:

"... I think the question has never been seriously enough raised of why neurotics in particular suffer from anxiety so much more and so much more strongly than other people" (pgs.392-393).

He proposed therefore an aetiology of neurotic anxiety based upon disturbances in the economy of the libido; premature ejaculation, abstinence from masturbation. Subsequent re-formulations of this theorem saw Freud revise this specifically libidinous orientation in favour of a more holistic approach. //He decided that realistic and neurotic anxiety had similar affective characteristics, what differentiated them was the source of their anxiety:

"A real danger is a danger which threatens a person from an external object, and a neurotic danger is one which threatens him from an instinctual demand" (1959 p.167)/

//Freud argued that these neurotic dangers were based upon the child's psychological development. Anxiety therefore began at birth with separation from the mother, it is transformed into castration anxiety in childhood, and then castration becomes moral or social anxiety, generated by the

super-ego in adulthood. Consequently it is the loss of a loved object, mother, penis or social approval, which characterises the instinctual demand of neurotic anxiety. /

Freud's formulations upon the nature of realistic and neurotic anxiety provide a rich and essentially convoluted array of ideas. Therefore, although the above précis only represents a drop in Freud's theoretical ocean, there are still a number of points, inherent in the above description, and subsequently revised by others which form the basis of the theoretical view of anxiety taken in this study.

//Freud emphasised that the ego was "the actual seat of anxiety" and this marks an important developmental stage in the aetiology of anxiety. The ego or self, as described above, is subject to threats from "three harsh masters": threats from the external world resulting in realistic anxiety; from the super-ego resulting in moral or shame anxiety and from the id resulting in neurotic anxiety. There is then the beginnings of an interpersonal approach to anxiety as it has a close affinity with social rejection, isolation and helplessness. /

//From this point (1925) until the 1950's there was little experimental work conducted into the nature of human anxiety outside the ambit of psycho-analysis, most emphasised ethological studies, for example Liddell with sheep (1944) and others with dogs. / It was probably the traumatic aftermath of the second world war which led to a renewed interest in human anxiety, much as the first had motivated many of Freud's later theoretical revisions. The work of Grinker (1966). on veterans, emphasised that anxiety caused by war was often accompanied by a state of dependency, characterised by a need to rely on others. He thus began the experimental documentation of the way in which individuals use specific interpersonal orientations to overcome the threat of traumatic events to self.

//It was the work of the 'neo-Freudian' Harry Stack Sullivan however, that did most to integrate anxiety into an alternative personality system based specifically upon interpersonal relations. Sullivan (1953), like Freud, proposed that it was the mother/child relationship which originates the infant's first feelings of anxiety, however unlike Freud, this was not characterised by the experience of birth but by an empathic process:

"The tension of anxiety, when present in the mothering one, induces anxiety in the infant" (p.41) /

This induction process occurs not only through empathy but also, he emphasises, when the child is left or separated from its mother. /As the experiential capacities of the child develop, the precipitating circumstances of anxiety are chiefly associated with the disapproval of significant others, particularly the parents./ Beyond infancy anxiety is associated with a drop in self-esteem and an increase in insecurity, and it always has an interpersonal referent (Carson 1969). For Sullivan then the self-system of an individual is motivated by anxiety:

"The self-system thus is an organisation of educative experience called into being by the necessity to avoid or to minimise incidents of anxiety" (op cit p.165).

//Consequently Sullivan emphasised the primary role of interpersonal relationships rather than Freud's intra-psycho conflicts, in the aetiology of anxiety. Moreover, and this is of importance to the sports environment, he emphatically distinguished between anxiety and fear. For Sullivan there was no realistic anxiety and neurotic anxiety but only fear and anxiety/. The former being characterised by:

"the felt aspect of tension arising from danger to the existence or biological integrity of the organism" (ibid, p.50)

such as anoxia, starvation or injury to parts of the body. The latter being an exclusively human, social anxiety:

"As such, it is elicited by the experienced disapproval and/or condemnation of significant others" (Fischer, 1970 p.34).

//Timothy Leary (1957), working Sullivan's theoretical and clinical observations into a personality methodology, also emphasised the motive force of anxiety:

"Personality is the multilevel pattern of interpersonal responses expressed by the individual. Interpersonal behaviour is aimed at reducing anxiety. All the social, emotional, interpersonal activities of an individual can be understood as attempts to avoid anxiety" (p.16) /

Leary, like Sullivan, sees the existence of anxiety as being grounded exclusively in "mankind's social interdependence". However Sullivan, (and

also by theoretical association Leary) is criticised by Guntrip (1973), for proposing such a neurotic relationship:

"Sullivan's self-system or self-dynamism, being totally motivated in its development by anxiety is therefore a neurotic phenomenon. This cannot be the whole truth about the nature and development of the self, the ego or 'I'" (p.183).

In essence Guntrip's criticism reasserts the primacy of the self in its relationship with anxiety: anxiety must be seen as a product of the self and not vice versa. However it is important to note that this observation in no way reduces the importance of either Sullivan's or Leary's theories regarding the influence that interpersonal relationships have upon both self and anxiety.

Up to and including this period the clinical and theoretical concern had concentrated upon either anxiety as pathology or its development and societal pervasiveness. For Freud there was realistic and neurotic anxiety; a gradient of nervous excitation which differentiated normal from abnormal affective responses. For Sullivan there was only one anxiety, interpersonal anxiety, and this was seen as being either mild or severe; an emotional polarity with no middle ground. There was little to tell us either how or why people differed in their capacity to be anxious, the question which first prompted Freud's theoretical formulations, although there was overwhelming support for the notion that anxiety was the result of a threat to the self from either real, fantasised or symbolic others.

//It was not until the introduction of the trait/state theoretical perspective that there was a marked shift away from the emphasis upon psychological morbidity, and an attempt made to specify why, and under what circumstances individuals differed in their capacity to be anxious.//

//It was Cattell and Scheier (1958: 1961) who, using the mathematical technique of factor analysis, dichotomised anxiety into two distinct components; trait anxiety and state or 'real' anxiety. The trait factor was defined as a relatively permanent personality characteristic reflecting individual differences in anxiety proneness. Conversely state anxiety was conceptualised as being a transitory affective state or condition which fluctuates over time. Moreover, apart from identifying these two affective constructs, the factorial methodology also established that anxiety per se was a second rather than a first order factor⁷; the first being characterised by guilt, self-rejection, dependence, low ego-strength and self-effacement. Consequently, Cattell authenticated, via

a statistical analysis, a multidimensional interpretation of the aetiology of anxiety which Freud had in fact evolved some thirty years earlier, but given a different nomenclature and Sullivan (1953), had proposed, with his theory that anxiety was a complex emotion which suggested shame, guilt and humiliation./

Adding to this multidimensional perspective was Mosher (1966) who defined guilt and anxiety as related concepts; Katz and Ziegler (1967) who discussed guilt as a parallel condition to anxiety; and Gottschulk and Glesser's (1969) classification of anxiety into six inter-related subtypes of which guilt and shame were two. These and other related findings led Janis (1969), to conclude that anxiety is a concept which: "most theorists use as a generic term that includes ... shame and guilt" (p.75). Furthermore Izard (1972), again using factor analysis, defined anxiety as a variable combination of fear and two or more of the fundamental emotions of distress, anger, shame, guilt, shyness and interest-excitement.

/However, although anxiety had been shown to be both a multidimensional and also a dichotomous affective phenomenon, there was no theoretical or methodological principles which emphasised the relationship between the trait and state conditions. It was Spielberger (1966:1967) who suggested a theoretical relationship between the two which, put simply, states that:

"In general, it would be expected that those who are high in A-trait will exhibit A-State deviations more frequently than low A-trait individuals because they tend to react to a wider range of situations as dangerous or threatening. High A-trait persons are also more likely to respond with increased A-state intensity in situations that involve inter-personal relationships which pose some threat to self-esteem" (Spielberger Gorsuch and Lushene 1970 p.3)./

/However, this approach has not been without criticism, particularly concerning the construct validity of trait anxiety./ Carson (1969), suggests that trait anxiety is the same as a self-effacing interpersonal orientation and support for this view was also offered by Kindler and Posnich (1967). Criticism of this nature ignores, or fails to understand the complex relationship between perception of self, cognition and affective response; self-effacement is not synonymous with anxiety, its association with what Cattell described as the first order factors of shame, low ego-strength and dependence do predispose the individual

to perceive his interpersonal environment as threatening and therefore manifest high levels of anxiety trait. /Conversely Coles (1982), proposes a more balanced critique concerned with the nature of manifest (state) and latent (trait) anxiety. He contends that latent anxiety has the connotation of being active but not seen, however if anxiety is an affective response then it is a contradiction in terms for it to be present but not active. This dilemma can however, be overcome in two ways; by referring not to an anxiety response but to a tendency or predisposition to respond with anxiety (state), and by proposing an inhibitory mechanism (cognition) which is also present and neutralises or mediates the impulse to respond. In effect what Coles describes is the mediational link, proposed by Lazarus (1966) and Smith (1980) above, between cognition and affect. /

Much contemporary research has concentrated upon refining the theoretical and methodological links between trait and state anxiety, however an extensive review of these findings will be deferred until chapter 3, when they will be described in relation to the way in which they affected the construction of this study's research methodology.

Before embarking upon the concluding section of this review, (the relationship between the self-schema and anxiety), it is necessary to describe the development, both theoretical and methodological, of the sports psychologists research into the athlete's interaction with, and predisposition toward anxiety, as it too contributes to normal-abnormal model of athlete behaviour.

/Within sports psychology, research into anxiety can be subsumed under one heading, the relationship between anxiety and performance. There are two main areas of concern which are encompassed by this particular objective: the part played by anxiety in the athlete's total personality system; and the drive or motivatory effect that anxiety has upon an individual's capacity to learn or perform a particular skill. Both approaches have emphasised the trait approach, although in the case of the latter there has been a higher degree of both theoretical and methodological sophistication in its use of manifest, trait and state and most recently, sports competition anxiety. /

//Most of the research conducted into the relationship between athlete personality and anxiety disposition has used the Cattell 16 PF as its methodological tool, and as such it is just one, second order part,

of an overall profile description. /

//The general view proffered by this approach is that athletes are on the whole emotionally stable or non-anxious. However, a comprehensive analysis of these profile descriptions by Hardman (1973), established that this 'finding' was based upon erroneous conclusions. He observed that for the second order factor of anxiety the predominant pattern was for the profile scores to be either average or above average, with top-class athletes tending to be much closer to the population norm (ie. stable and non-anxious) than less competent performers. Consequently he concludes that:

"in light of these results it is surprising that the claim that games players are stable or non-anxious is pursued a comparative lack of anxiety has been a characteristic of good players and this has led to the belief that such players have a degree of stability greater than the norm of the total population" (p.93). /

However, as with the personality system as a whole, the view that athletes are in some way different to the rest of the population is hard to eradicate, and their high degree of emotional stability is just the affective component of the overall mythology which surrounds the athlete personality.

//The second, and by far the most prevalent research approach has emphasised the relationship between anxiety and its inhibitory or facilitatory effect upon learning or performing a simple or complex motor task. This approach, due to the controvertible nature of the findings, has utilised three different yet generically similar forms of anxiety; manifest, trait and state, and sports competition anxiety. Manifest anxiety (Taylor 1953, 1956; Spence 1956, 1958), was used by researchers such as Hammer (1967), Carron (1968) and Martens (1969), in order to differentiate between the degree of emotional arousal manifested by individuals on simple and complex motor tasks. However, a review of the findings proposed by twenty-eight different experimenters was conducted by Martens (1971), and the results were found to be extremely contentious. In an effort to obtain a greater degree of uniformity Martens (1977) proposed using the situational trait-state anxiety approach, and when this too proved equivocal he introduced the concept of sports competition anxiety, (1977a). Martens defines competition trait anxiety as:

"a tendency to perceive competitive situations as threatening and to respond to these situations with feelings of apprehension and tension" / (p.8).

//Although Marten's approach is laudable because it attempts to introduce a situation specific methodology of anxiety, his concept of competitive anxiety trait is so broad as to pose many more questions than answers. / (He has 'lumped' together, whether intentionally or unintentionally, every possible source of stress; the 'objective' competitive physical environment, the 'objective' social environment and the subjective competitive environment are all subsumed by competitive anxiety.)
Consequently it is not possible to specify which aspect of the competitive environment is perceived as either generally or specifically threatening. Is it fear of physical injury, of failure, or of negative appraisal by one's significant others? In effect, because of this confusion, Martens has defeated his own objective as we have only a vague idea as to the anxiety-threat confluence. //It is as Endler (1980) points out; as anxiety is multidimensional the anxiety trait measure must be congruent with the perceived threat, / i.e. the interpersonal ego-threat interacts with an interpersonally ego-threatening situation; physical danger threat with physical danger situation and so on.

//The theoretical, methodological and perhaps most importantly, the 'conclusive' findings of the sports psychologist, leaves the reader with the impression that the (low) level of athlete anxiety / is taken a priori, with no reason advanced for affective disposition save for the fact that they are athletes. //We are left with the impression that athletes are on the whole non-anxious but, as with all population distributions, there is some variance between the members in their degree of 'non-anxiousness' which can effect the learning or execution of a skill. / The concluding part of this review will establish that no such a priori, or affective determinism can be accepted as an explanation for athlete anxiety disposition. //Rather it is perceptions of self which mediate trait-state anxiety responses. / Consequently, rather than trace anxiety forward toward its effect upon performance, which is a bit like shutting the stable door after the horse has bolted, a more fruitful and also accurate approach would be to establish how the performance situation is perceived by the self as threatening and invokes general or specific anxiety responses. The emphasis is therefore upon the performer rather than upon performance.

A simplistic, yet accurate summation of the theoretical developments in the psychology of anxiety, would emphasise the inextricable link between an interpersonal notion of self, or reflexive I, and the predisposition to be generally (trait), or specifically (state) anxious. //Spielberger contends (1966; 1966a; 1971) that the relationship between the self, taken as a holistic integrative unit, and anxiety is ego-syntonic:/ High anxiety trait persons are in general self-depreciatory and concerned with "fear of failure", consequently such individuals, in ego-threatening situations, will manifest intense levels of real or state anxiety. Empirical support for Spielberger's theorem has come from Hodges (1968), O'Neil, Spielberger and Hansen (1969), Hodges and Spielberger (1969) and Rappaport and Katkin (1972), (see also Auerbach (1969); Mcadoo (1969); Hodges and Felling (1970); and Spielberger, Gorsuch and Lushene (.1970)), who all report that in ego-threatening situations high anxiety trait individuals report greater changes in their levels of anxiety state than their low anxiety trait counterparts.

//Within the sports environment Stein and Hoffman (1978) have termed this ego-syntonic affective relationship 'role-intrinsic anxiety'. After interviewing 12 athletes they conclude that it is the demand for excellence which caused many of their respondents to worry about embarrassing themselves, failing, or not 'looking good'/. The situation is graphically summarised by one respondent who stated:

"Before any game ever, from Little League to college, nausea, butterflies, whatever you want to call it I was afraid of losing, of failure, of performing poorly... .. I was always far too self-conscious. I felt every eye was on me," (ibid, p.146).

The threat of interpersonal evaluation is reported by Endler (1977) to be at the heart of the competitive sports situation. Indeed Endler and Flood (1980) using 41 male 'track' athletes found that:

"The interaction between social evaluation A-trait and the stressful track-and-field situation was significant," (in Endler 1980 p.265).

However, although it is apparent that trait anxiety disposition is at bottom ego-syntonic, this perspective is particularly uni-dimensional and says very little about the other contributory mechanisms, of equal

importance, which tend to be subsumed under this all-embracing term.

Looking at the self in its capacity as the bedrock of the phenomenal self-schema, much research has emphasised the relationship between dominance, submission and anxiety. Wolpe (1969) argues that assertion and anxiety are mutually exclusive, a view supported by Russell and Mehrabian (1977), and given empirical authenticity by Brown (1963) who, using 77 women undergraduates reported an inverse correlation of $-.34$ between dominance and anxiety. The interpersonal referent, inherent in this relationship, was emphasised by Weitzner, Stallone and Smith (1967), who established that not only did "high manifest anxiety subjects have a low self-opinion" but they were also dependent upon the encouragement, sympathy and affection of others. This self-other complementarity and anxiety disposition has also been observed by Leary (1957), who reports a high degree of association between docile-dependence and "manifestations of overt, free-floating anxiety" (p.296), and Schachter (1972), who found that affiliation or affiliative desires increase with anxiety.

A further psychological perspective subsumed under the gamut of the ego, and which is inherent in the self-schema, is the individual's degree of self-acceptance; the product of the degree of congruence between self and ideal self. Rollo May (1980), has concluded that it is one's ideals or values which encapsulate the distinctive quality of human anxiety. He writes:

"One now validates himself by fitting into the herd: What makes him prey to anxiety is to be different, to stand out. (He concludes) ... anxiety, may be at bottom, separation anxiety". (p.243)

However this flight into 'otherness' as a means of validating self entails conflict. Leary (1957) states that:

"the value system may play a destructive and unsettling role in the total personality system. Ideals which are too elevated or standards which are too strict may lead to severe conflict ... with a resulting feeling of guilt and self-dissatisfaction" (p.202).

This factor is particularly important when one considers the rigid and extremely narrow cluster of traits which make up the athlete's value system, and the obvious pressure to conform, indeed the desire to conform

so as to be like everyone else, establishes a particular form of stress based upon perceptions of 'normal' and 'abnormal' typologies. The pervasive nature of ideals and their relationship to both high and low levels of anxiety has been established by Furlong and La Forge (1975), who report that:

"It has been found that high anxious subjects have more negative self-concepts than their low anxious colleagues, while there is no difference between the two groups in ideal self concepts".(p.237).

Similarly, Bond and Lader (1976), using a matched group experimental design found that the 30 patients who complained of suffering from free-floating anxiety saw themselves as unsuccessful, weak, tense and passive. However, they found that there was a high degree of similarity between the patients and the 'normals' ideal self perceptions; the difference being in the discordance manifested by the patients between self and ideal self. It is possible to conclude therefore that the ideal self is less variant than the actual self because of the former's tendency to stereotype (Furlong and La Forge). Given this, it is possible that the in-group deviant attempts to overcome his feelings of anxious inferiority by adopting a value system which will re-integrate him back into the group. However, as Leary pointed out this compensatory process can, and more often than not does, exacerbate the situation. Ohmacht and Muro (1967), using 125 college freshmen established that there was a significant difference between high and low self acceptance groups on seven of the sixteen scales incorporated within Cattell's 16 P.F. Furthermore six of these seven contributed to the second order factor of anxiety; ego-weakness (C-), shyness (H-), guilt (O+), self conflict (Q3-), paranoia (L+), ergic tension (Q4+).

Consequently, the overall contribution to cognition of these depreciatory, dependent and submissive self-perceptions is that they focus, specifically, upon the threat of the possible negative consequences which may occur during the course of social interaction; i.e. fear of failure, rejection or disapproval. Therefore the general threat of the environment is transposed into real anxiety by the inordinate array of situational cues and the individual's perceived incompetence or inadequacy in dealing with them. Indeed both Watson and Friend (1969), and Richardson and Tasto (1975), have reported the association between a general fear of negative appraisal and interpersonal trait anxiety.

It is apparent from the tenet of the above that the ego-syntonic approach to the description of both trait and state anxiety disposition, is multidimensional. Consequently, to attribute anxiety 'proneness' solely to cognitions based upon 'fear of failure' or 'self-depreciation', is to ignore the complex psychological process described in the main by Lazarus (1966) and in particular Smith (1980), above. Thus we must account for the real, or fantasized interpersonal situation; the perceptions of self in that situation; the cognition of reality based upon these perceptions; and the affective response based upon this cognition.

Therefore, a more accurate method of summarising not only the relationship between self and anxiety, but also the salient points raised throughout this chapter, would be to use Laing's (1978) concept of 'ontological insecurity' instead of the rather ubiquitous concept of ego-syntonicity favoured so far.

Laing describes the ontologically secure person as:

"experiencing his own being as real, alive, whole; as differentiated from the rest of the world in ordinary circumstances so clearly that his identity and autonomy are never in question". (ibid, p.41)

The athlete however, and particularly the team athlete, is 'differentiated from the rest of the world' by extraordinary circumstances; he is depersonalised or 'petrified' into himself as-an-athlete by a highly selective cluster of normative traits, given authenticity by his coach, peer group, the spectators and sports psychologist, and which delineates both connative and affective predisposition. This high degree of depersonalization engenders a 'normal-abnormal' approach to athlete behaviour, enforced in particular by the exigencies of the bonded group process where control is maintained by 'terreur'; the anxiety registered within each individual by the fear of what the other group members will do to the member who secedes or betrays the group; rejection; ostracism or even expulsion from the group (Sedgewick 1982).

Consequently, those who fail to conform are labelled 'problem-athletes' and as such their deviant in-group behaviour does not disturb the delicate equilibrium of group functioning. Thus group process obscures individual praxis, a situation which can entail, for some, an interpersonal atmosphere which provokes the individual to manifest ontological insecurity

where the player is concerned not with expressing himself through his sports involvement but with preserving himself, his identity. This can be achieved by assuming a more dependent or affiliative interpersonal orientation and also by an adoption of the values or ideals of the others. However, as Sartre (1956) states "conflict is the essence of 'being for others'" (p.364) and the erection of what is in essence a false self-schema exacerbates rather than alleviates intra-psychic and interpersonal tension. Therefore the anxiety generated by this situation is anxiety in the face of all one's possibilities, a general (trait) anxiety or dread concerned with:

"not merely 'that one is' (one's existence), but 'what one is' (essence) and 'who one is' (identity)." (Collier 1977 p.2).

The realisation of these situations, as represented by the threat posed by the forthcoming performance, induces real or state anxiety.

The following chapter will describe the methodologies which will be used to analyse these propositions.

Footnotes

1. It is reported by Burke and Kleiber (1978) that over one and a half million, seven to twelve year olds take part in this junior version of adult professional baseball. Much concern has been expressed of late as to the long term damage that such a highly organised competitive environment can have upon children's physiological and psychological development. Torg et al (1972) describe the problem as one where:

"Little Leaguers must compete to make the team, must compete to play in each game, and are subjected to intense pressures to win by adult coach and spectator" (in Straub 1978 p.204).

2. The credulous-sceptical debate proper, was introduced by Morgan (1978), as a means of representing the two points of view, currently held in sport personality research, as to the validity of predicting athletic success from psychological data. Morgan summarises the debate as follows:

"The credulous psychologist would lead us to believe that psychological (personality) data are certainly useful in predicting success, whereas the sceptical would argue that psychological data are of little or no value whatsoever" (p.218).

3. Freud proposed that cultural influence upon the development of the ego-ideal takes the form of parental interpretations of the traditional values and ideals of society. These interpretations are then transferred from parent to child; a process which represents the introduction of external, or social limitations upon the developing ego. Freud also proposes in 'Group Psychology and the Analysis of the Ego' (1921) the important part played by the ego-ideal in the development of groups. He suggests that groups consist of:

"A number of individuals who have put one and the same object in the place of their ego-ideal and have consequently identified themselves with one another in their ego " (p.80).

In terms of the proposals of this study the values of the sports-type have replaced parental limitations, and this contagion of object identification produces the depersonalised group.

4. Wylie (1974) points out in her comprehensive review of the methodologies used to measure the self-concept the many other terms used in the ambit of psychology generally as being synonymous with self-acceptance. She states that terms such as self satisfaction, self acceptance, self-esteem, self-favourability, congruence between self

and ideal "are so intertwined and overlapping in the literature that the constructs must be discussed as a group" (p.127). In keeping with her proposal and in an attempt to avoid confusion, the concept of self-acceptance used in this study represents a generic term under which all the other constructs of self-regard are subsumed.

5. Stephenson's 'Q'-sort technique, named after the English psychologist William Stephenson, consists of a subject being given a number of cards containing personality descriptive items. The subject is instructed to sort these items into nine piles which are arranged along a continuum according to the degree with which the item is thought to correspond with S's idea of self: Most like me being nine, least like me, one. The S is also forced by the instructions to place a specified number of cards onto each pile, so as to yield a quasi-normal distribution. The test is then repeated with the S arranging the items according to the degree with which they are characteristic of his ideal self. The results of the two sorts can then be correlated and a coefficient, representing the S level of self acceptance, obtained. For a more detailed analysis of the Q-sort see Wylie (1974) ps.128 - 150, and for a more complete description of its use within Rogerian non-directive therapy see Hall and Lindsay (1970), pgs.538-543, and Rogers (1965), pgs.140-141.
6. Rogers comments that in many cases self-rejection, caused by a discrepancy in self-ideal self perception, can be reduced not by moving the self closer to the ideal, but by restructuring the ideal so that it is a more realistic, attainable value system.
7. Child (1970), defines a factor as being 'the outcome of discovering a group of variables having a certain characteristic in common' (p.13). This factor or characteristic is the result of a statistical analysis which initially correlates all the variables under scrutiny with one another; and then extracts the underlying dimensions or factors from the correlation matrix. In essence this secondary procedure discovers how best to reduce the number of correlations to a much smaller amount by selecting those clusters of items which, as indicated by the size and direction of the coefficient, are closely related and therefore measuring the same underlying characteristic. Second order factors, such as Cattell's factor of anxiety, is the result of a specific factorial technique termed oblique analysis. As this presupposes that the variable correlations are not independent a new matrix can be generated by inter-correlation of the first order factors, and a second analysis carried out. The factors produced by this method are termed second order factors. One result of this method is that the number of factors is reduced. For example Cattell's 23 first order factors were inter-correlated and several second order factors emerged, one of which was anxiety. This second order factor of anxiety was reported as having high loadings on the first order factors of weak ego strength (C); timid (H), suspicious (L); guilt prone (O), low self sentiment (Q3); and tense (Q4). (for a more comprehensive description as to the statistical technique of factor analysis see Child 1970).

CHAPTER 3

Research Methodology:

Leary's Interpersonal Diagnosis of Personality;

Spielberger et al's State Trait Anxiety Inventory.

In order to analyse the relationship between individual praxis represented by the self-schema, anxiety, and the influence of the bonded group process, it is necessary to gain access to the phenomenal perceptions of the athlete whilst performing or anticipating performance. The method favoured with which to achieve this objective is to use psychometric self-report questionnaires, as the athletes' responses to questions about himself can be empirically analysed and interpreted in terms of the theoretical propositions discussed previously. Two such methodologies were chosen; La Forge and Suczeks (1955), 'Interpersonal Check List' (known as the ICL), which is a methodological representation of Leary's interpersonal theory of personality; and Spielberger, Gorsuch and Lushene's (1970) 'State Trait Anxiety Inventory' (known as the STAI), the choice being based upon the theoretical complementarity and interpersonal orientation, as is illustrated by the following statements:

"Personality is the multilevel pattern of interpersonal responses (overt, conscious, or private) expressed by the individual. Interpersonal behaviour is aimed at reducing anxiety. All the social, emotional, interpersonal activities of an individual can be understood as attempts to avoid anxiety or to establish and maintain self-esteem" (Leary 1957 pgs. 15-16).

Similarly, but stressing the affective response rather than the personality disposition:

"the STAI assess(es) primarily ego-threat or interpersonal trait anxiety interpersonal or ego-threatening conditions or situations interact with congruent interpersonal A-trait to evoke differential A-State changes." (Endler 1980 p.259)

It is apparent therefore that, although the theoretical methodologies differ in the implicit or latent function to which they attribute either anxiety (Leary), or interpersonal relationships (Spielberger et al),

used in conjunction there is a stimulus-response congruence between the interpersonal perceptions of self within the sports environment (as measured by the ICL), and the affective response to these perceptions with general or situation specific interpersonal anxiety (as measured by the STAI). It is possible therefore to transpose Smith's model (1980), which linked cognition and affect, by positing the self as an intermediary influence (see the previous chapter), onto the contents of the two questionnaires. The object of the remainder of this chapter will be to describe this project in more detail by; (a) introducing the reader to the theoretical methodologies of the two questionnaires; a process which will also include a report as to their construct validity and reliability; and (b) by describing, and obviously justifying the adaptations to the questionnaires' internal structures; the result of a pilot-study, and also to accord with the developments which have taken place in trait psychology since the two were formulated.

1. The Interpersonal Check List

The development of the ICL, like many other psychometric techniques, came out of the need to match a theory of personality, in this case Leary's interpersonal theory, with a method for quantifying the variables specified by the theory. Consequently, prior to discussing the specific properties of La Forge and Suczeck's adjectival check list, Leary's parent theory, to which it belongs, will be described in some detail.

Leary's interpersonal personality system is based upon the psychologism that man is a uniquely social being who is constantly involved in interactions with either real, fantasised or imaginary others; the type of interpersonal transaction being delineated by the necessity to avoid anxiety and to maintain or enhance one's self-esteem. Leary was therefore critical of much of the traditional conceptualisation in psychology and the nomenclature of psychiatry for its solipsistic bias, and he cogently argues that in removing a person's behaviour from its interpersonal environment psychology renders its meaning unintelligible. He maintains that as a consequence his objective is to the task:

"of understanding and predicting the subjects interpersonal behaviour in one specific environmental context - its relationship to a psychiatric clinic." (1957, p.6).

As it is not the object of this thesis to 'diagnose' the stability, flexibility or appropriateness of an individual's interpersonal personality disposition, much of Leary's initial theoretical discourse, which was aimed at producing a classification of normal and abnormal behaviour, is beyond the scope of this thesis. As such the description below will concentrate specifically upon the development of the interpersonal 'circumplex' (for further discussion of Leary's nosological formulations see pages 3 to 58 of the original text, (Leary 1957), although a more detailed assessment of this particular dimension of the personality system will also be considered when the administrative and interpretive changes to the ICL are reviewed).

In general terms, Leary's theoretical formulations were heavily influenced by the work of other interpersonal theorists, particularly the so-called neo-Freudians. Thus the developmental theories of Erik Erikson (1950) and the 'character' studies of Harry Sullivan (1953) each contribute to the personality system. Indeed using the proposals and research findings of the above clinicians as a theoretical guide, Leary proposed nine 'working principles' which, when taken together, would form "the basic requirements of an adequate science of personality", (ibid p.59). The fundamental postulate, and first 'working principle' being his definition of personality:

"Personality is the multilevel pattern of interpersonal responses... .. Interpersonal behaviour is aimed at reducing anxiety" (ibid p.59).

The remaining eight sketched the criteria by which he could affect a working model of this definition. These included accounting for the 'multilevel' nature of personality; a scale or methodology which could account for the effect the interpersonal perceptions of self have upon the other with whom (s)he interacts; construction of a continuum of interpersonal behaviour; and that all measurements must be public and verifiable.

To achieve an integrated system based upon these 'principles' Leary systemised his interpersonal theory by defining, as the basic datum of personality, the:

"communications by the subject or by others about his interpersonal activity. The basic units of personality come from the protocol language by which the subject's interpersonal behaviour is described," (p.34).

Once the 'machinery' of personality had been defined Leary and his co-workers at the Kaiser Foundation observed, recorded and studied the interpersonal interactions of many small groups; male, female, neurotic, psychosomatic and normal. This mass of verbal raw data was then analysed with a view to describing and summarising the interpersonal activity under scrutiny. In the course of rating these verbal transactions it was noted that transitive verbs which predicate action i.e. insult, dominate or help, were the handiest method for describing what the subjects did to each other. Conversely, and of importance to this study, adjectives were found to be suitable for rating the content of the spoken descriptions of self. Thus a relationship between different expressions of personality could be made on the basis of a linguistic procedure; what you actually do in a situation is described by a verb; what you say about yourself in that situation by an adjective. Once this specification had been made the task facing Leary was to reduce an unwieldy and seemingly disparate "list of several hundred terms for describing interpersonal behaviour" (p.63) into their generic interpersonal motives. This was achieved by putting together grammatically similar terms until all 'several hundred' were subsumed under a list of sixteen interpersonal motives. These, along with their alphabetical notations are listed below:

A: Managerial	P: Autocratic
B: Competitive	C: Narcissistic
D: Aggressive	E: Sadistic
F: Rebellious	G: Distasteful
H: Self-Effacing	I: Masochistic
J: Docile	K: Dependent
L: Cooperative	M: Overconventional
N: Responsible	O: Hypernormal

It was then necessary to order these sixteen generic themes along a continuum and it was decided that a two-dimensional grid or circumplex allowed Leary to imply a systematic relationship between the variables, and thus account not only for the generic theme which summarises the interpersonal disposition of self, but also the 'pull' or effect that this disposition has upon the Other. Leary describes this systematic relationship as:

"If we rate any behaviour as C, we have defined it in terms of all the other variables since C is one unit away from (and therefore close to) D and B, while it is eight units (and therefore quite different) from K." (ibid p.66).

Empirical support for this relationship between the sixteen variables have been provided by the intercorrelational studies of both Naboisek (1953) and Lorr and McNair (1963)¹.

The 'pull' or effect of an individual's interpersonal disposition has been described by Leary in terms of a probability statement:

"Interpersonal reflexes tend (with a probability significantly greater than chance) to initiate or invite reciprocal interpersonal responses from the 'other' person in the interaction." (op cit p.123)

A simple yet accurate illustration (if somewhat extreme), would be that masochistic interpersonal behaviour (I) pulls a sadistic interpersonal response (E), from the other. (A more detailed description of these reciprocal relationships will be given in the review of each generic theme below).

Once the sixteen variables had been ordered around the circumplex it was discovered that all the generic trends had some reference to a power or affiliative factor. Therefore a further degree of conceptual specificity could be obtained by bisecting the circumplex horizontally and vertically in terms of these two factors. Leary explains the process:

"When dominance-submission is taken as the vertical axis and hostility-affection as the horizontal all the other generic interpersonal themes could be expressed as combination of these four nodal points." (p.64)².

A further modification was to combine adjacent themes, thus reducing the sixteen interpersonal variables into eight 'octants'; therefore the managerial and autocratic themes were joined to form a 'power' octant, and this combination process was completed for each of the sixteen generic themes. Figure 1 overleaf illustrates the completed circumplex with octants, nodal points and the 'pull' which the interpersonal reflex has upon 'the other', marked.

Finally before discussing the I.C.L. and its relationship to Leary's personality system, the properties of the eight generic interpersonal themes will be described as they will provide summary descriptions of the experimental samples' interpersonal perceptions of self.

1. Octant AP; Managerial-Autocratic³:

Leary describes those whose interpersonal perceptions of self are summarised by the AP octant as being individuals:

"who express strength, force, energy and leadership, and who win from others respect, approbation, and deference" (p.323).

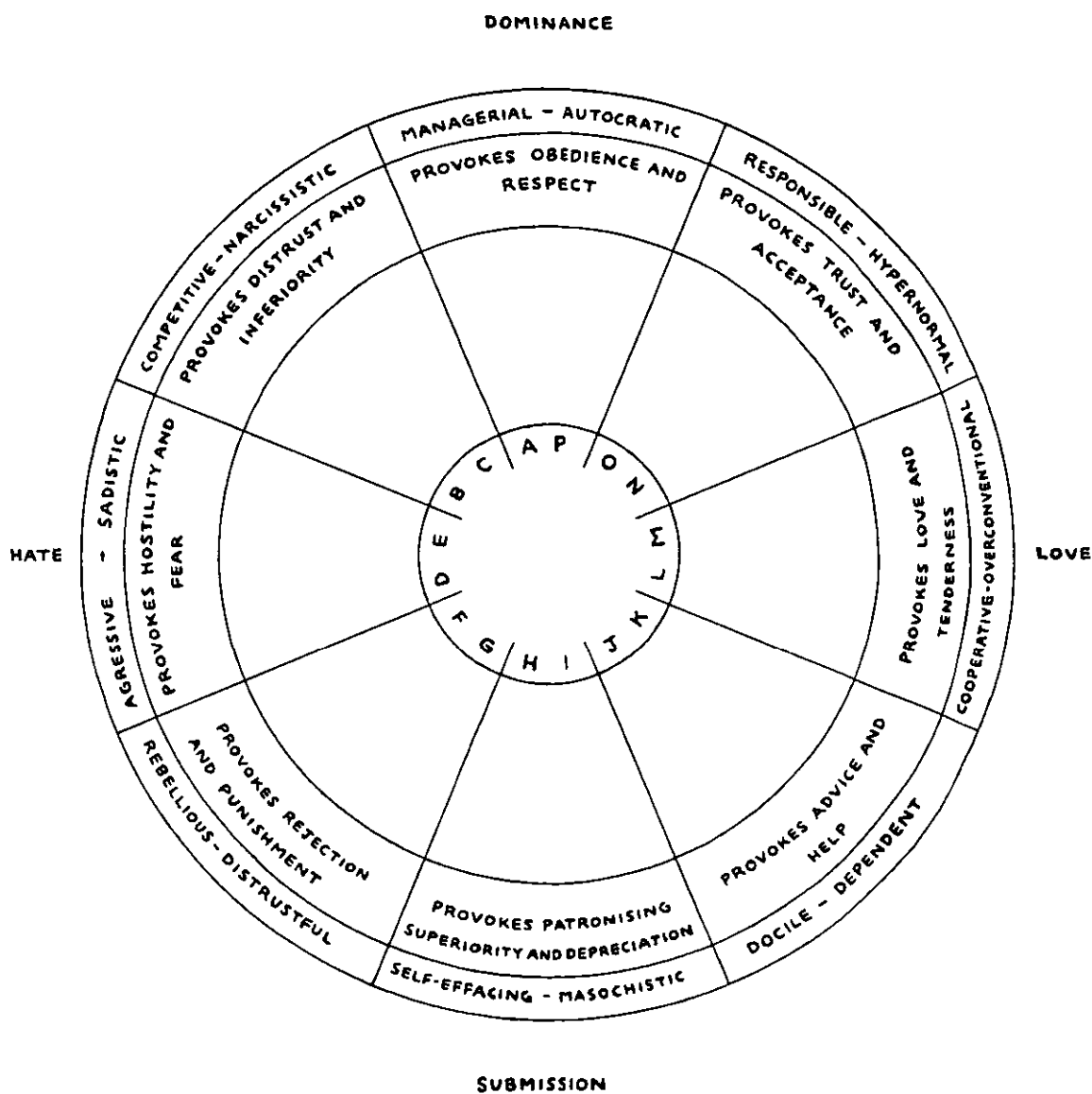
He contends that there are many ways in which this 'power' can be manifested and he proposes that physical strength, particularly with the male, is a means of winning respect from others. An interesting factor when transposed onto the male sports environment.

The more extreme forms of this power-oriented personality are characterised by autocratic, domineering behaviour. However, both moderate and extreme characterisations have the same motive; the avoidance of anxiety:

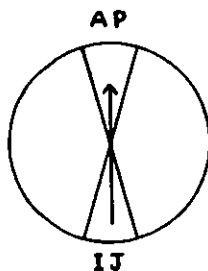
"The (managerial-autocratic) individual is, we assume, made most anxious when he feels uncertain, confused or passive. He attempts to maintain security and self-esteem by means of his power-oriented operations" (p.325).

The effect of this type of interpersonal disposition, using the 'language' of the circumplex, is that AP pulls IJ, (see page 65 above for all alphabetical notations), or power and control provokes obedience and respect:

Figure 1: The Interpersonal Behaviour Circle (Leary 1957)



The outer circle of the circumplex shows the eight generic interpersonal octants; the innermost their alphabetical notation. The middle ring indicates the type of behaviour that the interpersonal reflex tends to 'pull' from the other one.



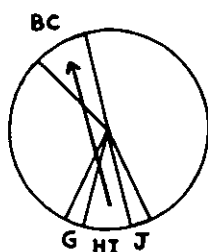
However, as Leary comments the principle of reciprocal interpersonal relations is a probability statement. Therefore, it can, of course, be altered by the personality of the other, such that a managerial personality interacting with another who uses the same interpersonal reflex "may generate a power struggle" (p.325).

2. Octant BC; Competitive-Narcissistic:

The BC interpersonal reflex communicates the message of superiority, independence and confidence. Consequently the individual whose self-perceptions are subsumed by this generic theme are most secure when they are independent and feeling that they are triumphing over other people.

The position of the BC octant, adjacent to AP, suggests that the two are to some degree similar, the basic difference between them being in the "amount of positive or affiliative affect involved", (p.333). As we have seen above the managerial person 'trains' others to identify with his strength, and he or she gives the impression that this strength will be used to help the other. Conversely the narcissistic person tends to emphasise his superior difference from the other and gives the impression that his strength will be used to shame or humiliate the "other" (Leary). The more extreme form of this interpersonal theme is marked by an almost compulsive desire for superiority: "He is driven to compete, exhibit and exploit" (p. 334).

The BC personality is made most anxious by the threat of weakness or dependence; for them a humiliating and dangerous position. The effect of this behaviour provokes envy, distrust and feelings of inferiority from others. In the language of the circumplex BC pulls GHIJ:

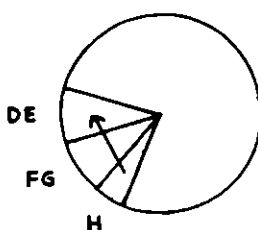


As with AP this reciprocal interaction is a probability statement and as such a generalisation dependent upon the interpersonal reflex of the other, although Leary states that the 'pull' of BC "will be found to work in most cases." (p.334)

3. Octant DE; Aggressive-Sadistic

The interpersonal reflex summarised by the DE octant represents those individuals whose personality dispositions stress cold, stern, punitive or sadistic tendencies. Leary, comments that a great majority of aggressive characters are to be found in the ranks of the socially approved; stern toughness being frequently admired and endorsed as being indicative of positive, social adjustment. It has certainly contributed to the mythical personality of the athletic sports-type (see the review of the work of the trait theorists in chapters 1 and 2).

However, it must be noted that the 'aggression' characterised by this octant is not concerned solely with physical aggression (although this of course must be taken into account). Hostile criticism, verbal derogation or insult are all subsumed under the generic, interpersonal theme. It is evident therefore that the DE personality is most secure when "flexing his muscles" or "expressing stern coldness." Conversely, he is made most insecure and anxious in situations which pull for tender, agreeable or docile feelings. The 'effect' of DE behaviour is to provoke resentment, distrust, fear and also guilt from the other. In the language of the circumplex DE pulls FGH.

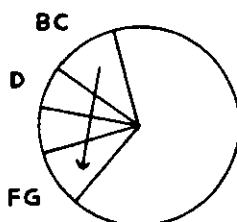


Leary notes that the exception to this 'probablistic' rule being in the case of a sado-masochistic or crime-punishment relationship.

4. Octant FG; Rebellious-Distrustful:

The rebellious-distrustful personality type eschews close relationships with others and manifests instead an interpersonal reflex centred around distrust and resentment. In a moderate form the FG octant is associated with "a critical approach to the accepted conventions and to the accepted forms of social relationship" (p.269); its extreme by marked suspicion and an uncompromising rejection of "authority" (Carson 1969). As with the other octants this "security operation" is maintained so as to avoid anxiety. Leary proposes that trustful tender feelings tend to provoke anxious feelings of insecurity.

The effect of FG behaviour is to provoke resentment and superiority from others. In the language of the circumplex FG pulls BCD.

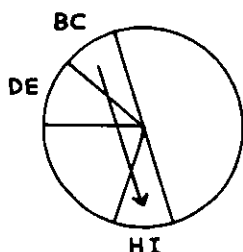


5. Octant HI; Self-Effacing-Masochistic:

This submissive interpersonal reflex tends to communicate a message of obedience, self-consciousness and modesty to the 'other'. And it is by the process of self-depreciation that these individuals avoid anxiety and maintain security. In its more extreme form this behaviour involves an almost masochistic self-rejection.

The effect of the HI reflex is to provoke depreciation and patronising superiority from others; HI pulls BC and DE. However

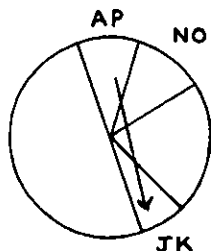
self-derogation can sometimes provoke sympathy "but if the guilt reflex does not shift in response to this positive reaction, the "other one" will inevitably respond with irritation and disapproval" (Leary p. 285).



6. Octant JK; Docile-Dependent:

The JK interpersonal theme is one of trusting and respectful conformity. Like HI above the behaviour is primarily submissive but it includes a degree of friendliness and affiliation, rather than self-derogation and apologetic conformity. In its more extreme form this reflex is characterised by cloying, helpless dependency. The JK individual is, as a consequence, made most anxious by the threat of independence or when called upon to make decisions.

The effect of docility pulls strong, helpful leadership from others; thus JK pulls AP and NO. Although if the 'personality' of the other stresses a punitive interpersonal reflex (DE), the dependent individual may meet with stern disapproval, (Leary).



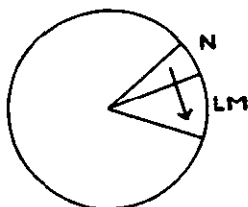
7. Octant LM; Cooperative-Overconventional:

The motive behind this interpersonal reflex is to be liked and accepted by 'others'. Thus the LM personality "tends to seek satisfaction in sociability with others" (p.303). They emphasise cooperation and compromise; external harmony being more important than internal values. Social anxiety is mediated by an emphasis upon friendly, amicable responses.

The non extreme form of this behaviour is characterised by the overwhelming desire to be seen to accept external values and to gain

the approval of others.

The effect of 'friendly-agreeability' is to provoke approval and friendliness from others. In systematic language LM 'pulls' MN.

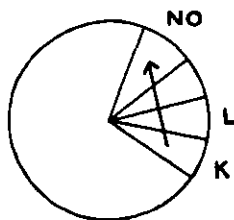


8. Octant NO; Responsible-Hypernormal:

The NO individual attempts to present himself as a 'normal' person. A characteristic brought about by an emphasis upon 'strength' in interpersonal relationships. However, unlike AP, and in particular BC, the other octants which stress this generic theme, this 'strength' is used in an affiliative way; power and independent self-confidence are used as methods by which to help, counsel or support others. The more extreme or 'hypernormal' form of this behaviour is marked by the overwhelming need to be popular, helpful and responsible, irrespective of the interpersonal 'needs' of the situation. The NO individual is:

"we assume, most threatened by the prospect of appearing defeated, deprived, unfriendly, or passive." (316)

The effect of responsible, protective behaviour is to provoke others to dependence and respect; or NO pulls KL. However, as Leary has been at pains to point out, this reciprocal interaction is dependent upon the interpersonal 'reflex' of the other, and, particularly in the case of the more extreme NO individual, the appropriateness of the reflex to a specific interpersonal situation.



At the beginning of this particular section the I.C.L. was introduced as the methodology with the specific purpose of 'quantifying the variables' specified by Leary's interpersonal theory of personality. As such its description was deferred until the reader was made familiar with the circumplex and the "variables", or more accurately the eight generic interpersonal themes, which make up its circumference. The following discussion will describe how these theoretical parameters, imposed by the demands inherent in the circumplex, were to delineate the construction of the check list.

It will be remembered from the above that the first of Leary's working principles conceptualised personality as a 'multilevel' construct. The I.C.L. was specifically developed to allow qualification of three of those 'levels', two⁴ of which are of importance to this study: The kind of conscious communication (IIC), which concerns the phenomenal self-perceptions of the subject; and the level of values (VC), which is concerned with the "consciously reported ideals" (Leary) of the subject (the C-affix denoting the 'measurement' of the level by use of the check list: see Leary 1957).

La Forge and Suczek's (1955) objectives in constructing a questionnaire sensitive to the above levels of a subject's personality, was to develop a check list whose content would be representative of each one of Leary's sixteen hypothetical variables of interpersonal behaviour. Moreover, a further structural consideration was that since the check list was to follow 'ideographic procedures'⁵(Leary) and so avoid 'untestable scaling assumptions' (p.457), the selection of each interpersonal adjective 'became of crucial importance'. The overall development of the I.C.L. took over four years to complete and included four revisions. The initial source of items for the check list was prepared by Suczek and it was comprised of 334 adjectives which were representative of trait lists extant in the psychological literature upto the 1950's. This comprehensive but unwieldy list was reduced to 106 items on the basis of the pooled judgements of five psychologists. Subsequent revisions centered upon the issue of item reliability and validity and the researchers noted the effect of certain extraneous variables⁶:

"among these are the misunderstanding and failure to recognise the meaning of a word" (Leary 1957 p.459).

In order to correct this source of contamination the words which made up the check list were checked by the patient culture at whom the questionnaire was aimed. The result was that many words: "like discriminating, conciliatory" (ibid p.459) were discarded because they were unintelligible to large numbers of the patients. However, perhaps, the most comprehensive revision was conducted upon 'Form IIIb'. A series of intercorrelations were carried out to test the relationship between each item regarding the systematic relationship, proposed by Leary, between the octants:

"a good item was characterised by high correlations with neighbouring items and low correlations with items more distant on the circle of variables" (ibid p.460).

Leary reports that approximately 6,000 item intercorrelations were examined, and that replacements were made for items with a poor pattern of results. The remaining words were then re-checked by a group of five psychologists with respect to interpersonal category, comprehensibility and over-all desirability. Each word was then re-checked by a conference of from four to six psychologists and the remaining satisfactory or modified words, formed the core of the new form of the check list Form IV.

During this period of revision the check list was administered to several thousand subjects. The principal use was as part of an evaluation procedure for incoming patients to the psychiatric clinic. However, other samples included several hundred university students; a group of dermatitis patients; and a group of 200 overweight women. The data used in the revision of the check list was derived from these samples, and the corrected list, Form IV, based upon this data is presented overleaf.

The check list used in this thesis, Form IV, is comprised of 128 items; eight for each of the sixteen interpersonal variables. When the form has been completed the raw data has to be converted, via a statistical process, into a 'summary' of the subjects' interpersonal perceptions; this procedure will be described below.

TABLE 1: THE INTERPERSONAL CHECK LIST, FORM IV (La Forge and Suczek)Octant 1: AP, Managerial-Autocratic

- | | |
|--|--|
| <p>A: Well thought of
 Makes a good impression
 Often admired
 Respected by others
 Always giving advice
 Acts important
 Tries to be too successful
 Expects everyone to admire him</p> | <p>P: Able to give orders
 Forceful
 Good leader
 Likes responsibility
 Bossy
 Dominating
 Manages others
 Dictatorial</p> |
|--|--|

Octant 2: BC, Competitive-Narcissistic

- | | |
|--|--|
| <p>B: Able to take care of self
 Can be indifferent to others
 Businesslike
 Likes to compete with others
 Thinks only of himself
 Shrewd and calculating
 Selfish
 Cold and unfeeling</p> | <p>C: Self-respecting
 Independent
 Self-confident
 Self-reliant and assertive
 Boastful
 Proud and self-satisfied
 Somewhat snobbish
 Egotistical and conceited</p> |
|--|--|

Octant 3: DE, Aggressive-Sadistic

- | | |
|---|--|
| <p>D: Can be frank and honest
 Critical of others
 Irritable
 Straightforward and direct
 Outspoken
 Often unfriendly
 Frequently angry
 Hard-hearted</p> | <p>E: Can be strict if necessary
 Firm but just
 Hardboiled when necessary
 Stern but fair
 Impatient with others' mistakes
 Self-seeking
 Sarcastic
 Cruel and unkind</p> |
|---|--|

Octant 4: FG, Rebellious-Distrustful

- | | |
|---|--|
| <p>F: Can complain if necessary
 Often gloomy
 Resents being bossed
 Skeptical
 Bitter
 Complaining
 Resentful
 Rebels against everything</p> | <p>G: Able to doubt others
 Frequently disappointed
 Hard to impress
 Touchy and easily hurt
 Jealous
 Slow to forgive a wrong
 Stubborn
 Distrust everybody</p> |
|---|--|

Octant 5: HI, Self-Effacing-Masochistic

- | | |
|--|--|
| <p>H: Can be obedient
Usually gives in
Easily led
Modest
Passive and unaggressive
Meek
Obeys too willingly
Spineless</p> | <p>I: Able to criticise self
Apologetic
Easily embarrassed
Lacks self-confidence
Self-punishing
Shy
Timid
Always ashamed of self</p> |
|--|--|

Octant 6: JK, Docile-Dependent

- | | |
|--|--|
| <p>J: Appreciative
Very anxious to be approved of
Accepts advice readily
Trusting and eager to please
Lets others make decisions
Easily fooled
Likes to be taken care of
Will believe anyone</p> | <p>K: Grateful
Admires and imitates others
Often helped by others
Very respectful to authority
Dependent
Wants to be led
Hardly ever talks back
Clinging vine.</p> |
|--|--|

Octant 7: LM, Cooperative-Overconventional

- | | |
|--|---|
| <p>L: Cooperative
Eager to get along with others
Always pleasant and agreeable
Wants everyone to like him
Too easily influenced by friends
Will confide in anyone
Wants everyone's love
Agrees with everyone</p> | <p>M: Friendly
Affectionate and understanding
Sociable and neighbourly
Warm
Fond of everyone
Likes everybody
Friendly all the time
Loves everyone</p> |
|--|---|

Octant 8: NO, Responsible-Hypernormal

- | | |
|--|--|
| <p>N: Helpful
Big-hearted and unselfish
Enjoys taking care of others
Gives freely of self
Generous to a fault
Overprotective of others
Too willing to give to others
Spoils people with kindness</p> | <p>O: Considerate
Encouraging others
Kind and reassuring
Tender and soft-hearted
Forgives anything
Oversympathetic
Too lenient with others
Tries to comfort everyone</p> |
|--|--|

The interpersonal circumplex is in essence a mathematical representation in two dimensional space; these dimensions being characterised by Dominance, situated at the AP octant, and Lov situated at LM.

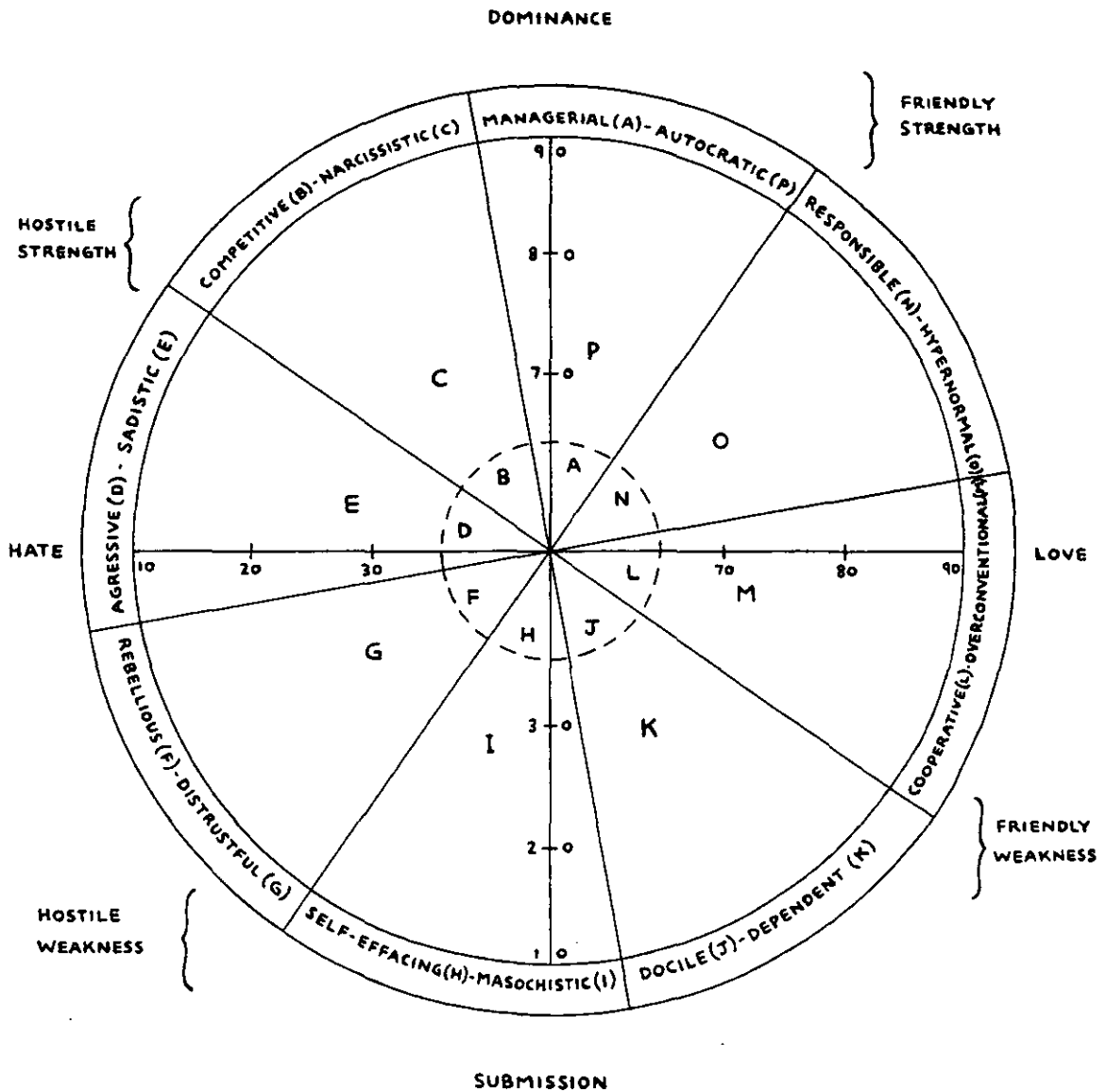
Consequently, using the results from the check list, a person's interpersonal self perceptions can be summarised in terms of these two nodal points. This interpersonal vector is found using the following formula:-

$$\text{Dom} = \text{AP} - \text{HI} + .7(\text{NO} + \text{BC} - \text{FG} - \text{JK})$$

$$\text{Lov} = \text{LM} - \text{DE} + .7(\text{NO} - \text{BC} - \text{FG} + \text{JK})$$

Where AP equals the number of items from the check list belonging to category AP which are checked by the subject as describing his self; this 'process' is continued until all the items are summed with respect to their generic interpersonal themes. The two indicies given by these formulae are then converted into standard scores using norms published by the Kaiser Foundation, (see Leary p. 495). These scores are then plotted onto the interpersonal grid, their intersection 'summarising' the subject's interpersonal perceptions in terms of one of the eight generic themes. The distance this point is from the centre, or mean of the circle, representing the 'intensity' of the particular interpersonal trait. The use of an 'intensity' dimension allows a more specific conceptualisation of the subject's interpersonal perceptions as it differentiates between the moderate and extreme interpersonal themes' combined in each octant. The 'limit' between these two 'scales' being calibrated by a circle whose circumference is one standard deviation away from the mean or centre of the circumplex, (the mean or centre was a figure determined by Leary from a clinic sample of 800 cases). Therefore, if the summary point falls below this limit it denotes a moderate form of the interpersonal theme, if above a more extreme form. For example if a subject's summary point falls in the AP octant below the one standard deviation parameter then he would be described as having a moderate managerial self perception. Figure 2 overleaf illustrates the calibration of the interpersonal grid and the positions of the different intensities of the generic interpersonal themes.

Figure 2: The Diagnostic Grid (Leary 1957)



The letters within the inner dashed circle represent the moderate interpersonal themes, those within the outer portions of the circumplex, above one standard deviation, the more extreme themes. The calibrations on the two axes are used in conjunction with the standard scores to locate a subject's summary point.

This method of summarising an individual's self perceptions in the form of a single point also allows comparisons to be made between the different 'levels' of personality measured. One of the aims of this thesis which was established in chapters one and two, is to analyse the kind of relationship which exists between the different self perceptions; self, not-self and ideal self. With regard to establishing, empirically, their degree of similarity or conflict, acceptance or rejection, Leary contends that this type of analysis is concerned with the 'structural variability' of the personality system and he, along with his co-workers at the Kaiser Foundation, formulated a methodology with which to measure a person's perceptual variance.

One such method involved measuring the linear distance between the different 'summary scores' in centimetres:

"This had the advantage of directness and simplicity. It had the overwhelming disadvantage of doing violence to the concept of the circle" (Leary p. 257).

Instead, a more improved and sophisticated method was formulated by using the development of the numerical code system which Leary assigned to each octant, and which accounted for the differences in intensity: A = 1; P = I; B = 2; C = II and so on (see diagram on the previous page). Consequently, in using the numerical code system every score falling in the same intensity sector of an octant is assigned the same code. Borrowing from this method an attempt was made by Leary et al to establish a set of points on the circle which would represent the eight octants at two intensity levels; a total of sixteen points. Therefore assessing a person's perceptual discrepancy is simplified as the position of his summary scores within any octant is considered to fall always at one point. Again the standard deviation unit described above was used to calibrate the different interpersonal intensities, and using a series of geometric formulae⁷ these sixteen reference points were established. The standardised discrepancies generated by this method are illustrated in Table 2 below.

TABLE 2: All Possible Discrepancies Around the Pair AP and their Magnitude

PAIR	DISCREPANCY
A-A; P-P	00
A-P; P-A	23
A-B	26
A-C; P-B	41
P-C	44
A-D	48
A-F	62
A-E; P-D	66
A-H	68
P-E	81
A-G; P-F	84
A-I; P-H	91
P-G	105
P-I	114

(Leary 1957)

Of course the above represents only a small proportion of all the possible interpersonal combinations and the Kaiser Foundation provides a table of weighted discrepancy scores with which to assess intra-level variance (see Leary pgs. 498-499).

Research which has used the check list and Leary's interpersonal personality system can be summarised by placing it into two distinct areas; that concerned with their reliability and validity; and that which has emphasised the relationship between the generic themes, anxiety and discrepancies within the self-system.

One of the most important issues regarding both the structure of the check list and the circumplex, is that of the proposed systematic relationship which exists between the eight generic interpersonal themes; i.e. adjacent octants on the circular continuum are more closely related than non-adjacent. Using results obtained from the ICL, La Forge and Suczek report that the relationship between the octants is a "monotonic decreasing function of their separation around the circle" (Leary p. 462). This relationship is illustrated in Table 3 below.

TABLE 3

Octant	1	2	3	4	5	6	7	8
AP								
BC	56							
DE	32	46						
FG	05	12	54					
HI	-30	-31	-10	36				
JK	00	-21	-14	18	60			
LM	10	-09	-31	-27	21	44		
NO	12	-15	-06	-08	23	34	46	

(Decimal points omitted: From a sample of 200 neurotics (Leary 1957))

Further support for this circular ordering of personality variables has been provided by Stern (1958), Campbell (1959) and Lorr and McNair (1963). Similarly, work conducted by Foa (1961), and Wiggins (1961) has confirmed, using factorial techniques, the 'Dom' and 'Lov' dimensions of the circumplex. Wiggins reported that AP, BC and DE had a significant positive loading with dominance, HI a negative loading; HI, JK, LM and NO all had positive loadings on the 'Lov' interpersonal orientation; and finally that BC, DE, and FG loaded positively on the 'hate' pole of the circumplex (see Hamilton 1971). Test-retest reliability using the ICL is reported by La Forge and Suczek as being between .73 for sixteenth reliability, and .78 for octant reliability. Similarly, Armstrong (1958) notes internal consistency coefficients of .95 and .96 for the self-ratings of normal and alcoholic subjects, (should the reader wish to supplement what is, of necessity, a brief review of the reliability of this methodology he or she should refer to the 6th 'Mental Measurement Yearbook' pages 1072-1073 and 1256-1258; and Wylie 1974 pages 213-223).

The second area of research has concentrated upon the psychological referents, both cognitive and affective, which appear to be associated with the generic interpersonal themes; The results of which can be summarised in terms of the octants relationship to the two axes of dominance-submission and love-hate. Using clinical observation, the

study of completed self-reports and also the relationship between the octants and certain scales on the M.M.P.I. (Minnesota Multiphasic Personality Inventory), Leary found that those themes toward the base of the vertical 'Dom' axis were all, to some degree, associated with anxiety. He states that self-effacing-masochistic individuals are "overtly anxious ... They exhibit guilt and self-depreciation" (p. 286). Similarly JK, the docile-dependent octant is reported to be connected with anxiety neurosis, anxiety hysteria⁸ and neuresthenia. (Gottesfeld (1979) suggests that neuresthenia is 'no longer recognised or treated', and that the nervous debility or weakness symptomatic of the term is now embraced by the ambit of depression). The JK theme has also been found by the Kaiser Foundation to correlate with the anxious (D), worried and fearful (PE) scales of the M.M.P.I. The final point of what is an interpersonal triad is completed by a :

"generalised 'nervousness' or anxiety vaguely defined and not tied to emotional causes" (Leary p. 301).

Leary reports that 'cooperative' patients frequently describe themselves as tense, nervous and anxious. Conversely, the octants toward the apex of the 'Dom' axis have been found to have an inverse relationship with anxiety, and to be characteristic of a much more positive, accepting attitude toward self. Brown (1963) using 77 undergraduates, found an inverse condition of $-.44$ between 'Dominance,' as measured on the circumplex, and anxiety, a result which corresponds to the factor loadings reported by Wiggins above. Indeed Leary reports that a psychometric sign characteristic of the competitive-narcissistic personality is a low level of anxiety (as measured by the (D) scale of the M.M.P.I.) The relationship between perceived self-satisfaction (ideal self) and power or dominance, has been confirmed by the empirical findings of the Kaiser Foundation research. In a sample of 207 routine clinic intake patients who had completed the check list, 53% placed their ego-ideal in the AP managerial octant, and 37% in NO the 'responsible' octant. In total this meant that 90% of all these patients had ego-ideals in the upper right-hand quadrant (denoting a concern with 'friendly strength'), and less than 2% placed their ideal in the lower half of the circumplex (Leary p. 205).

Indeed Leary notes that the self-effacing sector of the circle "is the farthest removed from the standard ego-ideal of our culture" (p,286) which, when combined with an ego-ideal "invariably located in the opposite sectors" (p. 287) produces cognitions based upon inferiority, guilt and self-depreciation. In essence the force of the self-punitive ego rejects and demeans the self (Leary). Conversely, there is little or no conscious structural variance at the apex of the 'Dom' axis: "Managerial personalities.....are closely identified with their ego-ideals" (p. 329). The relationship between the degree of structural variability and anxiety has been reported by Smith and Edwards (1963) who noted a significant correlation between self acceptance and anxiety ($p < .001$), and Brown who found that the greater the discrepancy between the self and ideal self the more anxious were the subjects ($p < .001$).

The review so far has summarised the properties of the eight generic interpersonal themes in terms of their proximity to the vertical and horizontal axes of 'Dom' and 'Lov'. However, there is a third axis which although not as influential in Leary's theorising as the two above, will be of use in assessing the importance attached by the athletes to the construct of conformity. The points of the conformity-nonconformity axis are measured by, at the apex, L, M and N, and opposed at the base by FG. Leary comments that:

"The individuals whose overt operations emphasise non-conformity.... invariably isolate and alienate themselves from others" (p. 273).

Conversely, the interpersonal 'operations' emphasised by the themes of L, M and N are all concerned with cooperation, consideration and helping others.

As can be seen from the above, much of Leary's theoretical concern is with accounting for the effect that a particular interpersonal orientation has upon the other or others in the transaction. Unfortunately the reliability of his proposed patterns of reciprocal relations are based, as he describes, upon a probability statement, and as no empirical evidence is available to support these contentions the confidence which one can have in the response of the other is severely limited, (the way in which this has affected the interpretation of my results will be considered in the final section of this chapter).

However the work of Uriel Foa (1961), already cited in chapter 2 and in the above, elaborated upon Leary's theory of reciprocity by specifying not the response of the other, which as we have seen, is subject to the problems of reliable empirical verification, but the motive behind the particular interpersonal orientation held by the self toward the other(s).

Foa has suggested that an interpersonal act is an attempt to establish the emotional relationship of the actor toward himself and toward the other. He argues therefore that the content of any act:

"serves the purpose of giving or denying love and status to the self and to the other" (p. 351).

Transposing this proposal onto the circumplex reveals that embedded within the two interpersonal axes' of 'Dom' and 'Lov' there are three underlying "facets": (1) The content of the interpersonal act (acceptance vs rejection).

(2) The object of the interpersonal act (self vs others).

(3) The mode of the interpersonal act (emotional vs social).

He goes on to suggest (1965) that an interpersonal act can be represented by the product of the interaction of these three facets. The interpersonal 'products' given by the eight generic themes are illustrated below.

(AP) Managerial-Autocratic	Social acceptance of the other
(BC) Competitive-Narcissistic	Social rejection of the other
(DE) Aggressive-Sadistic	Emotional rejection of the other
(FG) Rebellious-Distrustful	Emotional rejection of the self
(HI) Self-Effacing- Masochistic	Social rejection of the self
(JK) Docile-Dependent	Social acceptance of the self
(LM) Cooperative-Overconventional	Emotional acceptance of the self
(NO) Responsible-Hypernormal	Emotional acceptance of the other

In Foa's terminology, therefore, the eight generic themes convey implicit "messages" that give or deny love, or status, to the self or to the other (Carson 1969). The 'facet' profiles can be used therefore to complement and also to expand upon Leary's notion of interpersonal reflexes.

2. The State Trait Anxiety Inventory:

The State Trait Anxiety Inventory is a methodology based upon Spielberger's (1966) theoretical and conceptual extension of Cattell and Scheier's (1958: 1961) factorial classification of anxiety. Both of these psychometricians differentiated between anxiety as a relatively permanent personality trait, and as a transitory affective state. The former referring to the relatively stable difference in individual anxiety proneness; the latter referring to a transitory emotional state characterised by feelings of tension and apprehension. By using this notion of individual differences in affective personality disposition, which is inherent in any trait psychology, Spielberger was able to propose a relationship between the two affective components based upon an individual's expectations as to the outcome of a self versus other interaction:

"In general, it would be expected that those who are high in A-Trait will exhibit A-State elevations more frequently than low A-Trait individuals because they tend to react to a wider range of situations as threatening. High A-Trait persons are also more likely to respond with increased A-State intensity in situations that involve interpersonal relationships which pose some threat to self-esteem" (Spielberger et al 1970 p.3).

The psychological rationale behind the above relationship is based, Spielberger et al contend, upon trait anxiety having the characteristics which Campbell (1963) calls "acquired behavioural dispositions", and which Atkinson (1964) refers to as "motives". Motives are defined as dispositional tendencies which remain latent until the cues of a situation activate them; and 'acquired behavioural dispositions' are the residues of past experience that predispose an individual to cognise reality in a certain way, and to manifest "object-consistent" response tendencies. //Therefore in the language of the trait-state theory, anxiety as a personality trait implies a 'motive' or 'acquired

behavioural disposition' that predisposes an individual to either perceive a wide range of objectively non-dangerous situations as threatening to self and to respond to these 'threats' with elevated levels of A-State; or to perceive a wide range of situations as non-threatening to self and manifest consistently low responses of A-State.

In developing a 'self-evaluation' questionnaire sensitive to the above relationship, the objective of Spielberger et al was to construct unidimensional scales for the measurement of both trait and state anxiety disposition in adults; each item on the trait scale having a high item remainder correlation with its state scale partner, along with clear evidence of construct validity, (Spielberger, Vagg, Barker, Donham and Westberry 1980). The development of these measurement scales began in 1964 and several revisions were made to their original format until Form X, which contains the scales used in this thesis, were developed.

The original form of the questionnaire (Form A), consisted of 177 items selected from three anxiety scales already in existence; the IPAT Anxiety Scale (Cattell and Scheier, 1963), the Taylor (1953) Manifest Anxiety Scale, and the Welsh (1956) Anxiety Scale. Item selection was based upon the results of a series of inter-correlations between the three scales; those items correlating .25 or higher were retained and their meaning modified so that they could be placed in a single measurement scale. The original idea being that by simply changing the administrative instructions A-Trait and A-State could be measured on the same scale. Repeated testing of Form A on several hundred undergraduate students, and correlation measures with the IPAT and TMAS, revealed that both the psycholinguistic properties of some of the items and also their concurrent validity were unreliable, and eventually the scale was reduced to only 23 items. It was at this point, after several test-retest administrations, that Spielberger et al (1970) questioned the validity of measuring an individual's trait and state anxiety disposition on the same scale. They report that although there was a moderately high correlation between the A-State and A-Trait scales:

"Since the same items were used to measure both A-Trait and A-State, this correlation reflected, at least in part, the specific content of the individual items" (p.22).

Based upon this finding, the tests' authors decided to develop a second form of the STAI in which two different scales would be used to measure trait and state anxiety. Therefore, the results of any correlations between the two could be interpreted as reflecting an individual's affective disposition, without fear of contamination from the content of the scale's items. The revised format of the STAI, termed Form B, consisted of the 20 Form A items given with only A-State instruction, and 20 new A-Trait items selected from an 'item-pool' after being subject to the inter-correlation criterion described above.

After correlating this new form of the test with others already in existence⁹ the final step in the test procedure was to review the 'offensive' nature of the scale items using high school and college populations. Any items reported as being 'offensive' or overtly threatening were replaced. The items from the STAI B (revised), and a number of possible replacements were then administered to 263 university undergraduates; items whose meanings were ambiguous were replaced by items comparable in content but worded in a more acceptable manner. The revision of the STAI which resulted from this final item-replacement process was designated Form X (should the reader require a more extensive description of the development of the STAI, he or she should refer to Spielberger et al's (1970) STAI Manual pages 19-22). This finalised form of the questionnaire consists of two, twenty item scales. One of which describes the symptoms of anxiety (state), the other indicating an individual's predisposition toward anxiety (trait). Both scales require the respondent to rate him or herself on a Likert-type 4-point scale: The STAI A-Trait scale requires the individual to report how he generally feels in connection to the listed items, by checking one of the four categories; Almost never; sometimes; often; almost always. The STAI A-State scale requires that the respondent report how he feels, at this moment in time, by again checking one of the four categories associated with each of the twenty statements: Not at all; somewhat; moderately so; very much so. The full contents of the STAI and the instructions used for their completion in this thesis are illustrated on pages 2-5 of the sample questionnaire, in Appendix A.

In the course of validating the STAI more than 3,000 college students were tested on the initial form, Form A, of the questionnaire. And a total of over 3,300 high school and college students were tested

on the most recent revision¹⁰ of the STAI, Form X. In addition, normative data were obtained on more than 600 neuropsychiatric and medical patients, and for approximately 200 young prisoners (Spielberger et al 1970). Since this forms inception, Buros (1978) reports that the STAI has been used more often in psychological research than any other anxiety measure. As was the case with the ICL this research can be broadly summarised as falling into two areas; that concerned with the instruments validity and reliability; and that which used the STAI to assess the relationship between self perception and anxiety disposition. The former will be considered first.

Research conducted into the validity and reliability of the STAI can be further sub-divided into two areas; the reliability of the proposed trait and state factors, both as individual constructs and in terms of the proposed relationship between them; and the validity of the uni-dimensional factor structure of the inventory. Test-retest reliability for the STAI (Form X) is reported by Spielberger et al (1970) to range from an 'r' of .73 to .83 for trait anxiety, and from .16 to .54 for state anxiety. Commenting upon these results the tests authors state that:

"The low 'r's for the A-State scale were anticipated..... because a valid measure of A-State should reflect the influence of unique situational factors existing at the time of testing" (p.9).

Correlations between the trait and state scales are said to vary between .51 and .67, however the size of this correlation has been found to be influenced by the gender of the respondent and also the type of situational threat. On the whole males have been found to have a higher correlation between the two scales than females. For women the correlations between trait and state anxiety range from .11 to .53, with a median 'r' of .30. The corresponding correlation for males is reported to vary between .37 and .67, with a median 'r' of .47, (Spielberger et al 1970). The other influence mentioned above, the type of threat, entails that:

"larger correlations are obtained between the scales under conditions which pose some threat to self-esteem" (ibid p. 12).

Consequently, high A-Trait persons in ego-threatening situations should manifest greater changes in A-State levels than do low A-Trait persons. Conversely in physical danger conditions, high A-Trait persons would not show any greater increases in A-State arousal than their low A-Trait counterparts, (Endler 1980). Hodges (1968), using college students on a memory task under different sources of threat; failure, physical harm, no threat, reported that although A-Trait appears to reflect differences in disposition to manifest A-State, it only has this ability when in response to threats to self-esteem or ego-threat. Similarly Katkin (1965), and Hodges and Spielberger (1966), found that threat of shock (physical danger) did produce increases in reported levels of A-State but that these changes were not in any way related to the level of A-Trait. Other support for the differential effect of a psychological versus a physiological stressor has been provided by Hodges (1968); O'Neil, Spielberger and Hansen (1969); Kent et al (1972); Rappaport and Katkin (1972)¹¹.

The second, and possibly most comprehensive research into the inventory since its publication, has concerned the validity of both the trait and state constructs as independent dimensions of anxiety. Gaudry, Vagg and Spielberger (1975); Gaudry and Poole (1975); Kendall, Finch et al (1976) and Barker et al (1977), all found that the trait and state scaler items consistently loaded on different factors¹². The dimensionality of trait and state anxiety has been investigated by Endler et al (1976; 1976a) and Loo (1979). Endler et al propose that there are three trait and three state factors, four of which are invariant across sex: emotive (affective) discontent and 'distress preoccupation' (cognitive) for the A-Trait scale. 'Emotive (affective) discontent' and 'agitated distress' for the A-State scale. Loo however, identified four factors for A-Trait, two of which, affect and cognition, were found to be invariant across sex. The remaining factors being 'insecurity' and 'neurotic depression' for females, and 'social insecurity' and 'fatigue' for males. Spielberger (1980) has questioned both the validity and reliability of these studies proposing that:

"the resulting factors were, however, quite heterogeneous for males and females" (p.98).

His criticism of both Endler's and Loo's results on the basis of gender seems paradoxical however, given that research conducted by Spielberger

et al (see above) has discriminated between the sexes as to their predisposition toward anxiety. Consequently, although there are discrepancies between the above factorial studies, taken generally the results attest to the independence of the two affective constructs and their structural relationship to cognitions of the interpersonal environment. The important factor being as Endler (1980) contends:

"Spielberger's state-trait theory of anxiety accurately describes the relationship between A-State, type of threat, and A-Traits. However, the STAI A-Trait measure is restricted to interpersonal A-Traits and ignores other facets of the domain of trait anxiety" (p.260).

//The reliability and also validity of the STAI, is therefore, dependent upon its congruence with the type of threat//, a factor which will be elaborated in the final section of this chapter.

The second area of research has concentrated upon the relationship between personality and trait-state anxiety disposition. In general terms Spielberger summarises this relationship when he contends that high A-Trait persons are self-depreciatory, and concerned with "fear of failure". As a consequence they perceive a wide array of situations as threatening to their self-esteem and they respond to this threat with high levels of A-State. More analytical research has elaborated upon this link between ego-strength and affective arousal. Jackson (1967) administered an early form of the STAI along with the Personality Research Form to 162 students attending a university counselling centre. These students had either 'educational-vocational' problems (n=124), or 'emotional' problems (n=38). For both groups there was a negative correlation between dominance, as measured by the PRF and trait anxiety: $-.07$ for the 'educational' sample and $-.32$ for the emotional sample, (unfortunately the result for the former failed to reach significance; the latter was significant at the .05 level). Interestingly, the students with educational problems manifested a significant correlation between 'social recognition' and both trait and state anxiety; r being equal to .38 and .28 respectively, a result which links the STAI with its proposed interpersonal factor structure. Similarly, research using the STAI and the 'Mooney Problem Checklist' (1950) emphasised the influence of the interpersonal environment on trait and state anxiety.

Although A-Trait was found to correlate with all eleven items of the MPC for a group of 77 psychology students, an analysis of the size of these correlations gives some interesting results. The two problem areas with the highest correlations both involved an interpersonal referent; social-psychological relationships, $r = .509$ and personal psychological relations, $r = .623$. The results for state anxiety were significant on seven of the eleven items but again the highest correlation was given by personal-psychological relations, $r = .458$. Using the Edwards, (1954) EPPS, Spielberger again emphasised the relationship between trait anxiety and low ego-strength when he found a significant correlation ($r = .42$) between this relatively stable affective dimension and abasement. However, perhaps the most interesting findings resulted from correlations between the STAI and the MMPI using two groups of hospitalised patients. It will be remembered that Leary (1957) also used the MMPI to profile his eight generic interpersonal themes. (Table 4 overleaf illustrates the relationships between the STAI, Leary's personality system and the MMPI).

The correlations listed in Table 4 illustrate the relationship, proposed by Leary, between the generically weak interpersonal themes FG, HI, JK and anxiety, and the dominant themes characterised by AP, BC and NO, and low general or situation specific affective arousal. The three former octants which are all situated about the 'submission' pole of the vertical 'Dom' axis are associated, either jointly or independently, with the D, PE, Sc and F scales of the MMPI. All of which correlate highly with both trait and state anxiety; mean¹³ r 's being .59, .73, .72 and .61 for trait anxiety respectively; and .51, .62, .59 and .45 for state anxiety. Indeed the obsessional 'PE' scale, which Leary proposed as being characteristic of octants HI and JK has the highest trait correlations for both experimental samples. Moreover, it will be remembered that both of these interpersonal themes have a high predisposition toward anxiety; the HI individual is "overtly anxious and unhappy" (p.286), and the JK subject manifests "overtly free-floating anxiety" (p.296). Conversely, the dominant interpersonal themes, specifically AP, BC and NO, which are all situated about the apex of the 'Dom' axis have high scores on the MMPI Mania scale, (which was designated by Leary as reflecting the 'Dom' axis) and correspondingly low correlations with trait and state anxiety; Mean r 's being equal to .30 and .32 respectively.

Table 4:

MMPI NOTATIONS	DESCRIPTIONS	OCTANTS		CLARKSBURG CORRELATIONS		GULFPORT CORRELATIONS	
		HIGH SCORE	LOW SCORE	TRAIT	STATE	TRAIT	STATE
F	<u>NONCONFORMITY</u> : CORRESPONDS TO 'HATE' POLE ON CIRCUMPLEX	FG DE	LM NO	.60	.56	.61	.34
K	<u>DENIAL OF PSYCHOPATHOLOGY</u> : CORRESPONDS WITH 'LOVE' POLE	LM NO AP		-.63	-.64	-.60	-.46
D	<u>DEPRESSION</u> : ANXIETY; SUBMISSION; LOW EGO-STRENGTH	FG HI JK	NO AP BC	.57	.57	.61	.44
Hy	<u>HYSTERIA</u>	JK LM		.26	.26	.21	.23
Pd	<u>PSYCHOPATHIC DEVIANT</u> : REBELLIOUS DISIDENTIFICATION	FG DE		.49	.52	.60	.48
Mf	<u>MASCULINE - FEMININE</u> : PASSIVITY	HI		.28	.20	.25	.16
Pt	<u>OBSESSIONAL</u> : WORRIED, FEARFUL	HI JK	NO AP BC	.81	.79	.65	.45
Sc	<u>SCHIZOID TENDENCIES</u> : ALIENATION; ISOLATION	FG DE	LM NO	.75	.71	.68	.46
Ma	<u>MANIA</u> ; HYPERACTIVITY; DOMINANCE	AP BC		.31	.30	.48	.33

n = 129

n = 79

*(The above table was constructed from data reported by Leary (1957), and Spielberger et al. (1970). Three of the twelve MMPI scales, L.(Lie Scale), Hs. (Hyperchondriasis), and Pa. (Paranoia), have been omitted as there is no mention of them by Leary as corresponding with any of the eight generic themes (see Leary (1957) pgs. 269-350).

Furthermore, both AP and NO have high scores on the MMPI 'K' scale (which Leary contends corresponds to the 'Lov' pole of the circumplex), which, as can be seen from the table, has a mean negative correlation of $-.62$ for trait and $-.55$ for state anxiety. The matching together of these three sources of results confirms the relationship between self-perception, ego-strength, anxiety and the other components of this multidimensional affective construct, ruminative worry, fearfulness, guilt and depression. Moreover, the importance of the interpersonal referent is established by the high correlations between the MMPI items of nonconformity, isolation, alienation and trait and state anxiety.

3. Revision of the ICL and the STAI

The strength of any self-report questionnaire lies in (i) its ability to make its contents understood to each and every respondent with little variability of meaning; and (ii) that its contents possess sufficient construct validity and reliability so as to ensure that there is an adequate bond between theory and method.

Throughout this thesis the differences in individual self and environmental perceptions have been stressed, and of course the same vagaries of interpretation surround the linguistic items in any questionnaire. The instructions for completion 'set the scene' for the subject; however, if this 'scene' is not specified sufficiently then one source of variability or contamination can occur. Similarly since both the ICL and STAI are American developments it is conceivable that the meaning of some items could be confusing and/or ambiguous for a British sample. Moreover, since their publication certain advances in trait psychology have posed questions as to the forms' validity and reliability as measures of self perception and anxiety. Finally, the interpretation of the results could be problematic, particularly for the ICL given its original orientation toward a psychiatric population. In the light of these questions a pilot study using friends, university students, civil servants and a random sample of the population was completed, and the modifications to the two tests which arose out of this study have been placed under three headings; (a) Linguistic Modifications; (b) Administrative and Completion Modifications; (c) Interpretive Modifications.

(a) Linguistic Modifications:

In chapter one Schutz' (1962) proposals for ensuring a valid social-scientific model were described and two of these are of importance here. Briefly, postulates two and three, those concerned with subjective interpretation and adequacy, contend that the contents of any model, such as the ICL or STAI, should correspond to the individual's subjective meaning. And also that any act performed or emotion felt in the way indicated by the contents are understandable to the actor himself, and not the sole prerogative of the psychologist, sociologist or whatever. To ensure phenomenological validity therefore, the questionnaire's internal meaning must match, as closely as possible, that of the subject. The importance of the correct use of language in this consensual validity process is, obviously, crucial, particularly as Leary defines as the basic data of personality, communication, or 'protocol' language. Unfortunately, if the self is symbolised as a verbal edifice as Leary contends, then the individual differences in the linguistic contents of consciousness mirror the different interpretations, inflections and misunderstandings which surround the use of words generally. As Leary (1957) states:

"Anger may denote one thing to an individual patient, another in terms of general usage, and a third in the precisely defined scientific discourse." (p.67)

He concludes, as did Schutz, that to avoid misunderstandings the "scientific" meaning of words are kept as close to that of the general public, of the culture being studied, as possible. The pilot study revealed that in order to fulfil the above criteria several modifications would have to be made to questionnaire items which were seen as either obscure, confusing or unknown.

Of the 128 items in the ICL the pilot study subjects had difficulty with three: 'Hardboiled when necessary'; 'Meek'; and 'Sociable and Neighbourly'. Many of the subjects found the exact meaning of 'Hardboiled' difficult to ascertain, and its meaning was thought to be more widely understood in America than in Britain. As such, and bearing in mind that it comes from the 'moderate' part of the 'Aggressive-Sadistic' octant scale (see Figure 2 above), it was replaced

by stubborn. 'Meek' was thought by the subjects to be a rather antiquated term, and it was felt that as such this could prejudice its frequency of endorsement. As it falls toward the more 'extreme' part of the 'Self-Effacing-Masochistic' scale, it was changed to submissive. The final item, 'Sociable and Neighbourly', was found difficult to answer as many subjects thought of themselves as 'sociable' but were not sure as to the adjunct neighbourly. Like 'hardboiled', neighbourly was thought to have a more general usage in America, however, rather than drop neighbourly the two adjectives were split-up, and placed in different parts of the check-list. Consequently, if a respondent checked sociable, neighbourly or both, he would still only be attributed with one score.

The item content of the STAI proved to be less ambiguous and only the meaning of the term 'I feel blue' on the trait inventory was found to be difficult. It was subsequently changed to 'I feel down'. However, a far more comprehensive difficulty was found in the clarity of the Likert scaling on the 'State' part of the inventory. The scale reads; not at all; somewhat; moderately so; very much so. Nearly every subject complained that they had great difficulty in using the terms 'somewhat' and 'moderately so'. A more extensive analysis of this finding was undertaken and a wide range of people were asked to describe the intensity of feeling which they would associate with each category. They were also given alternative categories so that, if necessary, replacement items could be found. A description of the method, samples and results obtained from this exercise are given in Appendix B. In brief however, the results revealed that the respondents had great difficulty in differentiating between Spielberger's original categories for 'somewhat' and 'moderately so'. Moreover there was found to be a significant difference between the perceived and proposed affective intensities of these two categories; $p < .001$. As a result of this study the replacement categories were chosen as a more reliable measure of affective intensity. The scale now reads; not at all; a little; quite a lot; extremely so.

(b) Administrative and Completion Modifications:

Theoretical and methodological advances in trait psychology since

both questionnaires' publication has entailed that in order to ensure experimental validity and reliability, certain changes be made to their completion instructions. During the course of the introduction to this final section the function of a set of instructions was described as being to 'set the scene' for the subject. Moreover it was stated that if this scene failed to be wholly accurate or lacked situational specificity, contamination of the results could, and in all probability would, occur. One of the major debates in trait psychology over recent years has concerned the stability or 'cross-situational' validity of personality traits. Many theorists regard personality as being the major determinant of behaviour, and although most do acknowledge the part played by the situation (Cattell's specification equation for example), behavioural consistency is seen in terms of stable, internal personality factors.

Conversely, social psychologists such as Cooley (1912), Mead (1934) and Cottrell (1942) stressed that it was the situation, and the norms and roles inherent in that situation, which was the basic determinant of behaviour (Endler 1980). A third view takes advantage of both perspectives, therefore instead of asking whether it is traits or situations which are the basic determinants of behaviour, a less sectarian position asks:

"How do persons and situations interact in determining behaviour"
(Endler, 1980 p250)

One of the earliest proponents of interactionism was Kurt Lewin (1935) who proposed that:

"a person's behaviour in any situation is jointly determined by the characteristics of that situation as he perceives them, and by the particular behavioural disposition of which he is prone at that time" (Carson 1969 p.9).

Lewin, believing that mathematics were the 'proper language of scientific discourse', represented the above in terms of a functional notation; $B = f(P,E)$: Behaviour is a function of a person-situation interaction. Empirical evidence for this situation specific perspective of personality has been provided by Argyle and Little (1972) and Bowers (1973),

Mischel (1968) and Endler (1973; 1975). All evaluated the trait stability hypothesis and noted that there was little empirical support for the cross-situational stability of personality dispositions. Adopting the interactionists theoretical perspective entails that the instructions for the completion of any personality inventory should stipulate the situation in which the behaviour under scrutiny takes place. Therefore, in terms of the ICL and STAI there must be congruence between a specified situation, the interpersonal stimulus qualities of that situation, and the response to this stimulus with differing perceptions of self and also levels of affective arousal. How this need for stimulus-response congruence affects the two sets of instructions which accompany each of the questionnaires will be discussed below.

The instructions for completing the ICL simply require the respondent to check all 128 items as either being true or false descriptions of him or her self (La Forge and Suczek (1956)). The problems inherent in this approach are two-fold. Leary (1957) himself proposes that personality is subject to 'situational variability', which "refers to differences in cultural and environmental factors" (p.245). However, the instructions which accompany the ICL have no such situational specificity. As a consequence the instructions which accompany the questionnaire used in this thesis have been modified, and the subject is asked to 'describe the sort of person that you think you are when you are playing with your team-mates during the course of the game!' Inherent in this statement is the specification of the situation, the game, and the stimulus of its interpersonal content, 'playing with your team-mates'. The need for stimulus-response congruence has been met. The second problem area involves the 'true' or 'false' dichotomous scale. As it stands the perceptual variance inherent in the two categories is obviously low. Moreover merely designating an item as 'false' cannot be taken as a wholehearted rejection of the contents of that item. The subject may not know, or he may feel that it is not applicable to himself. Consequently, the 'true' or 'false' scale could lead to a false, self and not-self, profile. Because of this it was decided to expand the scale to 4-points; Like Me; Not Like Me; Not Applicable; Don't Know. Using this scale the subject has to make a specific choice as to the items relevance to his self.

In terms of the instructions which accompany the STAI, although they have a far greater degree of specificity than those for the ICL, slight amendments had still to be made in terms of the A-State scale. For the A-Trait scale Spielberger et al (1970) state that:

"the instructions for the A-Trait scale should be those printed on the test form" (p.4).

Conversely, research should always specify the stressful stimuli that evoke different levels of A-State (Spielberger, 1972). Consequently, in terms of the former the subject is asked to describe how he generally feels in terms of the twenty inventory items. In terms of the latter the subject is asked to describe 'how you feel right now, that is, at this moment, about the forthcoming game' (see Appendix A, page 6). As with the instructions which accompany the ICL, the situation, interpersonal stimulus and self's response are congruent. An affinity which would not exist if the original instructions which simply ask you to indicate 'how you feel right now', with no regard for the influence of the situation, were left unaltered.

(c) Interpretive Modifications

One of the major criticisms directed at much of the contemporary research into athlete personality disposition has concerned their use of clinically oriented psychometric techniques. Martens (1975), summarises the debate as follows:

"Many scales that have been used for measuring normal athletes were not developed for measuring normality but for identifying abnormality" (in Carron 1980 p.31).

Further support for Martens has been provided by both Kroll (1970), and Rushall (1975), who specifically condemn the use of the MMPI. However, although Martens is correct in identifying a possible source of experimental invalidation, it is rather his preoccupation (as this thesis contends) with concepts of normality and abnormality which are chiefly at fault, not necessarily the structure of any particular inventories. Moreover, reference to A.R. Beisser's (1977) 'The Madness of Sports' or Carmen, Zerman and Blaine's (1968) observation that:

"athletes of all ages and levels of participation are subject to the same mental conflicts as non-athletes but may be less likely to seek psychiatric help" (in Yaffe 1983 p.224).

indicate that 'abnormality' is not the sole prerogative of the non-athlete. In order to minimise the possibility of any extraneous variability arising out of the use of clinically oriented techniques, what is needed is a sensitivity both to the aims and restrictions of the instrument, and caution in any interpretation of the results. Of the two inventories to be used in this thesis it is only the ICL whose use falls into Marten's critical ambit.

It will be remembered that the objective of Leary's (1957) personality system was to understand and also predict a person's interpersonal behaviour in the specific setting of a psychiatric clinic. Conversely, the author's (in brief), is to analyse athletes' perceptions of self whilst performing and relate these perceptions to their level of affective arousal. However, the two are by no means mutually incompatible. The major 'problem' areas both in Leary's system and in the circumplex, is firstly their concern with the 'intensity' of a person's interpersonal perceptions, and secondly the reliability of the interpersonal reflex; the former will be considered first.

The intensity dimension of the circumplex was introduced by Leary et al so that the content of a person's interpersonal perceptions could be 'diagnosed' as being either 'normal' or 'abnormal': The criteria being based upon the extremity and appropriateness of the person's interpersonal behaviour. The scalar continuum which evaluates a person's level of adjustment is borrowed from Sullivan's (1956) concept of psychopathology:

"Everything that can be found in mental disorder can be found in anyone, but the accent, the prominence, the misuse, of that which is found in the mental patient is more or less characteristic" (p. 77).

On the circumplex this shift from adaptive to maladaptive is marked by the circumference of the inner circle, whose parameter lies one standard deviation away from the mean interpersonal behaviour of a sample population of 800 clinic inpatients. Therefore, if a person's interpersonal perceptions fall in the outer ring (1 sigma above the mean), an intense or maladaptive degree of behaviour is indicated. If they fall

below this statistical deviation a moderate or adaptive degree is indicated. Therefore, taking octant AP as our example, A, the managerial theme and P, the autocratic, are the moderate and extreme dimensions of the power octant respectively. In essence the further one's interpersonal summary point is from the centre or mean of the circle the more maladaptive and extreme your perceptions of self are thought to be.

Similarly, the items on the Check List have been weighted so as to account for the different intensities of the adjectives which make up the eight generic themes. Using a four-point scale there is one intensity 1 item which reflects "a mild or necessary amount of the trait"; three intensity 2 items which indicate "a moderate or appropriate amount of the trait"; three words reflect intensity 3 "a marked or inappropriate amount of the trait"; and one word expresses intensity 4, "an extreme amount of the trait". An example of this weighting scale is given below:

Interpersonal theme A;

Able to give orders	-	'mild or necessary amount of the trait'
Forceful		
Good leader	-	'moderate of appropriate amount of the trait'
Likes responsibility		
Bossy		
Dominant	-	'marked or inappropriate amount of the trait'
Manages others		
Dictatorial	-	'extreme amount of the trait'

Both Wiggins (1961), and Bentler (1963) have observed that using this weighting scheme can distort the 'Dom' and 'Lov' dimensions of the circumplex. Moreover, there is a danger inherent in most questionnaires that the subject will fail to understand the meaning of the variables listed. This danger is increased many many times if one assumes that every single respondent would attach the same linguistic level of intensity to the items contained in the ICL. For this reason the weighting system will not be used.

As far as the intensity dimension of the circumplex is concerned,

its use will be restricted to simply differentiating between the two levels of interpersonal behaviour where applicable. In general however, octant scores will be used as the source of statistical data, with no reference to extremity. Similarly, where description of a particular interpersonal theme is given the more pathological self-referents have been omitted, and descriptions of the 'maladaptive' interpersonal themes have concentrated upon their general characteristics only. Should the reader wish to familiarise him or herself with the full range of the interpersonal themes it is suggested that reference is made to Leary (1957) pages 269 to 351.

The second problem area concerns the validity and reliability of Leary's concept of the 'interpersonal reflex'. Leary defines the reflex as being the observable, expressive units of face-to-face social interaction. These units include the content of verbal communication, but are chiefly comprised of the tone of voice, gestures, carriage and external appearance. Of chief interest here is the way in which the particular 'content' of the reflex provokes particular responses from the other. It is obvious that the 'content' of any reflex is, by definition, idiosyncratic, however Leary contends that their effect is specifiable. He states that a person's interpersonal reflex provokes a reciprocal interpersonal response from the 'other' person in the interaction that in turn leads to a repetition of the original reflex. An example of this cyclic relationship would be the 'managerial-autocratic' individual who provokes others to obedience and respect, the other responds with dependent helplessness which stimulates the managerial person to provide strong, helpful leadership and so on.

Unfortunately Leary provides no empirical support for his patterns of reciprocal relations, however they will be used in the course of this thesis but only as a general indication as to the effect which the different generic themes have upon one another. They will of course have no statistical significance. The concept of reciprocal relations is important to consider as it provides an idea as to the motive behind a person's particular interpersonal perceptions, and it is hoped that by dealing with it in this manner it is possible to avoid any accusations of 'unscientific' conduct.

It is thought that the above structural and interpretive modifications should enable both the ICL and the circumplex to be used

with confidence, outside the setting of the psychiatric clinic. Indeed since their publication they have been used to assess the interpersonal perceptions of college students, medical students and as an aid to marriage counselling.

Summary:

In general terms the use of these two psychometric techniques allow individual praxis to be extracted from the bonded group process. More specifically the ICL and the interpersonal circumplex allow quantification of the athletes self-perceptions with regard to patterns of conformity, motive and rejection- with particular reference as to the effect that perceptual deviations from the stereotypes engendered by the bonded group process have upon the general, and game specific, affective disposition. Consequently, the two questionnaires not only have a high degree of methodological complementarity, but together they provide an empirical representation of the way in which the self links the two psychological conditions of cognition and affect (Smith 1980).

The following chapter will describe how the experimental sample was chosen, and how the above questionnaires were administered.

FOOTNOTES:

1. The study by Lorr and McNair was designed to test and extend the theory of a circumplex ordering of interpersonal behaviour categories. Using Guttman's multiple-group factoring technique (1952), they analysed the ICL and found three central factors which accounted for the correlations between octants: Factor A, Dominance; Factor B, Affiliativeness versus Detachment; and Factor C, Compliant Abasement. These results are illustrated below.

Variable	A	B	C
'Managerial'	.75	-.03	.06
Competitive	.73	.00	-.26
Aggressive	.52	.20	-.41
Rebellious	.17	.70	-.60
Self-effacing	-.32	.65	.02
Dependent	-.04	.60	.23
Cooperative	.05	.09	.56
Responsible	.03	.02	.60

The authors also noted that the results above link Leary's circumplex with the orderings suggested by Stern (1958), and Campbell (1959).

2. The use of four systematically related variables with which to classify personality disposition is by no means a new phenomenon. Leary suggests that the four quadrants given by the intersections of the poles of the 'Dom' and 'Lov' axes, closely resemble the classical 'humors' of Hippocrates; and the Freudian notion of a 'Compass of Motives' based upon the points of love and hate, and power and weakness. Similarly, the work of Stagner (1937), Parsons (1953), and Lodge's use of the Haskell Coaction Compass (1953) are other, more contemporary conceptualisations for the four-fold classification of human motives.
3. The descriptions of the interpersonal properties of self associated with each of the eight generic themes are much abbreviated forms of how they appear in Leary's 'Interpersonal Diagnosis of Personality'. This is because much of Leary's description concentrates upon the pathological aspects of each interpersonal theme, in particular their clinical manifestation and relationship to standard psychiatric diagnosis.
4. The other three levels which complete Leary's interpersonal personality system are level 1, the level of 'public communication'; level 3, the level of 'private symbolization' (dreams, fantasies etc); and level 4, the level of 'the unexpressed unconsciousness' (interpersonal themes which are completely avoided).

5. The psychologist Gordon Allport emphasised that psychological investigation can choose to study behaviour in terms of general principles, involving large numbers of people; or it can focus on the individual person. Borrowing from the German philosopher Windelband he termed the former nomothetic (universal), and the latter ideographic (individual).
6. Other extraneous variables described by Leary were the selection of an alternative meaning by the subject to the one implied, the general tendency to mark more or fewer words, and the tendency to check more or fewer 'positively' valued words.
7. The 'centre of mass' or reference point for the moderate inter-personal themes was found using the following formula:

$$\frac{\iint_R x ds}{\iint_R ds} \text{ and } \frac{\iint_R y ds}{\iint_R ds}$$

where x and y are points along the abscissa and ordinate, and s is the area integrated over region R. However, the problem of finding a point to represent the extreme intensity was more difficult as "there can be no centre of mass because each outer area is infinite" (La Forge 1957). La Forge decided therefore to consider the meaning of relative discrepancies and concluded that a change in the same octant should be less than the change, even at the least intensity, between two octants. With this in mind she arbitrarily selected a set of points by which to represent the extreme intensities for the eight octants.

The interaction of each of these arbitrary points with the x (Lov) and the y (Dom) axes was established, and the continuum of these points was assigned values from +56 to -56, with zero at the centre of the circle. It was then possible to establish vertical and horizontal components of each discrepancy. The geometric distance given by the formula $\sqrt{dx^2 + dy^2}$ is taken as the measure of discrepancy (where dx is the vertical discrepancy and dy the horizontal). By taking the square roots to the closest whole number fourteen possible discrepancies were obtained, (see Table 2).

8. Rycroft (1968), defines a neurosis as a condition, in an otherwise healthy person, which is characterised by the presence of anxiety. The condition of 'neurotic-anxiety' is used to describe all people whose symptom is predominantly anxiety itself, its chief characteristic being that the anxiety is free-floating, in that it is not connected to any specifiably external source. Conversely, anxiety hysteria "is specifically connected with a special situation" (Fenichel 1945). Moreover, it is usually associated with a physiological complaint where in reality none exists.
9. The STAI was again correlated with the IPAT Anxiety Scale, and the Taylor MAS.

10. After the administration of both questionnaires had been completed I became aware that a new format of the inventory, the STAI-Y Form, had been produced. This revision being the direct consequence of the conflicting research conducted into the factor structure of the inventory items. Spielberger et al (1980), report that there are six items on the A-State scale which are questionable as measures of anxiety: "I am regretful", which appears to have a depressive content; "I feel over-excited" and "I feel joyful" which seem to be more closely related to mania and elation than anxiety; "I feel rested" which is related to an absence of fatigue, and fatigue is equally characteristic of depression and anxiety. Two other items "I feel anxious" and "I feel 'high strung'" were dubious measures of A-State given their low item-remainder correlations, (see Ross 1978; Tomalesky 1977).

Similarly, there were six A-Trait items which were considered questionable due to their content being primarily depressive: "I feel like crying"; "I feel down"; "I tire quickly"; "I feel rested"; "I take things hard"; "I avoid a crisis".

A comparative analysis of the item-remainder coefficients for the original and replacement items for both the trait and state scales revealed that all the replacement items had equal or superior psychometric properties than those of the originals. As such the following changes were made:

Item	Replace with
I am regretful	I feel strained
I feel rested	I feel satisfied
I feel anxious	I feel frightened
I feel 'high strung'	I feel indecisive
I feel over-excited	I feel confused
I feel joyful	I feel steady

And for the A-Trait scale:

I tire quickly	Nervous and Restless
Feel like crying	Feel satisfied
Losing out on things	Feel like a failure
Take things hard	Disturbing thoughts
Avoid crisis	Make decisions easily
Feel blue	Feel inadequate

11. The relationship between the STAI and the psychological components of anxiety rather than the fear component of physiological injury is a distinction of importance to this study given the violent nature of rugby football.

12. For a more detailed account of the findings of these factorial studies please see Spielberger et al (1980) pgs. 95-98.
13. Mean scores were used as Spielberger et al (1970) administered the STAI to two psychiatric samples; 129 from Clarksburg psychiatric hospital and 79 from Gulfport hospital.

CHAPTER 4

Sampling and Administrative Procedures

Kerlinger (1977), defines the function of sampling as being that of:

"taking any portion of a population or universe as representative of that population or universe" (p.118).

Inherent within this process there are two important considerations, one theoretical, the other methodological, both of which affect the choice of the sample population; the latter directly, the former indirectly. These are; (i) that the sample is considered to be, and not specified as representative, of the larger population to which it belongs; and (ii) that the sample possesses a sufficient number of those characteristics relevant to the research population in question.

The problem of finding an experimental sample whose members would fulfil the theoretical criteria imposed by the propositions of this thesis, and in so doing implement point two above, was not difficult however, as the research conducted into athlete personality has not been limited to any one specific section of the sporting population. Indeed the 'sports-type', by definition, has been used to encompass most if not all of the different sports, (see Kane 1978). As a consequence it was possible to choose virtually any sport, bearing in mind the limitations imposed by access, control, sufficient numbers and so on. The eventual choice was to use a sample of student rugby football players and four universities and one college of education were contacted; as a result 96 players aged between 18 and 24 were assembled. It must be noted at this point however that the choice of both this particular sport and also the sample population was not entirely arbitrary. Indeed it was thought that together they would possess a number of characteristics which would make the influence of the bonded group process upon individual praxis more acute. The reasoning behind this particular proposition can best be explained by reviewing firstly the historical traditions of the game of rugby; secondly, the results of the research conducted into the rugby players personality; and thirdly by describing the properties of the five teams

whose members made up the experimental sample.

It has been proposed that the origins of modern ball sports such as football and rugby emerged from the far less demanding Roman sport of Harpastum, which was a primitive form of rugby used to toughen up the Legions. The game was introduced into Britain as one of the many effects of the conquest, and over the years it was gradually modified into inter-village brawls called 'fote-ball'. By 1175 this 'ball' game had become an annual event in London, where the 'players' would fight over a rolled-up canvas or leather, the severity of this game being reflected in its East Anglian name of 'savage camp ball'. The popularity of the game flourished until the demands of the industrial revolution curtailed workers' leisure time. It was during this period however that the game was adopted by the Public Schools¹ and integrated into their ethos of 'Muscular Christianity'.²

The football field was regarded by many as being the ideal arena for moulding character. Thomas Arnold, headmaster of Rugby public school, saw it as fostering a whole range of manly qualities such as bravery, chivalry and self-sacrifice. Indeed E.D. Sewell wrote at the turn of this century that:

"No other game if it is played seriously, in the highest company, equals Rugger in its combined call on its players for courage, self-control, stamina and sticking-it." (in Atyeo 1979).

This concern with the masculine nature of rugby is not without contemporary support. Danie Craven (1975), former Springbok and now the head South African rugby coach states that:

"Rugby is a game of power. Because rugby is a power game it is also said that rugby is a man's game" (p.9)

Although it is not my intention to become involved in the polemics of the current feminist debate, the existence of a pervasive patriarchal ideology within rugby, from its origins as a game for toughening up the legionnaires to its traditional and contemporary function for inculcating manly qualities, provide, and has provided the male athlete with a supportive solidarity based upon the traits of power, dominance and aggression, (see Riesman 1967 and Millet 1976). Tiger (1968)

contends that this group solidarity is a manifestation of the male 'bonding instinct', however it is a bond which appears to control behaviour by enforcing stereotypes based upon rigid, gender based, norms. The current research into the rugby players personality confirms this element of the bonded-group process. Indeed it is interesting to note that the profiles of the players are extremely similar to the description offered by Sewell above. This similarity is illustrated in Figure 6 overleaf which summarises, graphically, the research completed by Sinclair (1968), and Hardman (1968); both of whom used the Cattell 16 P.F. In order to aid the reader should he or she wish to interpret the diagram, Cattell (1970), states that 'normal' or 'average' scores on the factors are represented by stens of 5 or 6, and that it is only when scores reach the stens of either 4 or 7 that a person could be thought of as departing from the average on a particular trait or traits. Using Cattell's comments as a criterion it is apparent from the diagram that there is a move toward high scores on the factors of aggressiveness (E); impulsiveness (F); self-confidence (L); shrewdness (N); and self-control (Q3), (in fact the results for the sample of county and first class players and those for the junior club players fall above the sten of 7 for F, L, N and Q3). Conversely there is a move toward low scores on the profiles of (I), indicating tough-mindedness and (O) indicating self-assurance, (again the samples listed above fall below the sten of 4 signifying a significant departure from the mean on these two particular traits). A more interesting finding, in terms of the proposed self-schema emerges when the interactive nature of these personality traits is considered. In chapter 2 the work of Ohnmacht and Muro (1967), was cited as they reported that low self-acceptance was associated with low scores on the factors of C, H and Q3, and high scores on O and Q4, results which, when transposed onto the rugby players profiles suggest that they have a high degree of satisfaction with self.

The results of the above profiles, with their evident concentration about stereotypical personality characteristics, endorse, whether directly or indirectly, the traditional notions as to the character of a rugby player. Thus the bonded rugby group controls a members sense of self through a combination of historical and also contemporary

Figure 6:



Key:

- Results of a sample of 32 international rugby players.*
- Results of a sample of 48 county and first class players.*
- Results of a sample of 52 junior club players.*
- Mean levels for 161 players.\$
- Mean level for population as a whole.#

A; Sociability. B; General Ability. C; Ego-Strength.

E; Dominance. F; Surgency. G; Conscientiousness.

H; Adventurousness. I; Sensitiveness. L; Protension.

M; Bohemianism. N; Shrewdness. O; Insecurity.

Q1 ; Radicalism. Q2 : Self-Sufficiency. Q3 ; Willpower.

Q4 ; Tenseness.

* Sinclair (1968): \$ Hardman and Sinclair (1968):

#Cattell (1970)

factors; the rugby personality like the sports-type, is therefore a mythological abstraction from historical precedent. As a consequence the sport of rugby makes an ideal criteria from which to assess the validity of the sports-type, given the games intrinsic masculine nature and the evident pressure to conform i.e. manifest certain personality traits.

The choice of a student population to represent both the rugby population as a whole, and the sports-type in general, was, in many ways, eclectic. It was thought, as has been described above, that student rugby would not only reflect the games traditional 'personality' bias, but the manifestation of this historical precedent, in terms of the influence of the bonded group process, would be exacerbated by the privileged position that rugby occupies in university life. Moreover, as student rugby is generally under the control of a member of staff, it was also thought that it would be easier to exercise restraint over the sample members when administering the questionnaire, and so avoid the contaminating influence of unnecessary talking or levity.

In most universities therefore, rugby union is regarded by both student and faculty member alike as being the most prestigious student sport; a factor which probably has direct lineage in the game's public school origins. As such the pressure, particularly on the first team player, is magnified not only by his prestigious position, but also because the parameters of the student population are extremely small, and one tends to interact with many who are interested in the sport on a day-to-day basis; a factor which does not occur in any other setting to such a degree. However the choice³ of the five student first fifteens also reflected a gradation of performance, in an attempt to assess whether the 'normal-abnormal' approach to athlete personality profiles, inherent in the philosophy of the sports-type, transcend levels of skill. As a consequence two of the teams, Loughborough and Durham, are generally regarded as the best student teams in the country; the Newcastle and Freshers fifteens are an example of the average or middle ground; the York fifteen an example of a very 'junior' or below average side. The following, brief descriptions of the teams will elaborate upon these points. Loughborough University has perhaps the most successful tradition of all five teams having

won the prestigious 'University Athlete Union' championship on numerous occasions as well as the Middlesex Sevens title. As Loughborough University itself is regarded as the foremost physical education establishment in the country, there is a great deal of pressure on the athletes to succeed and so maintain this level of achievement. The rugby clubs fixture list, against some of the best teams in England, reflects the clubs and, by association, the University's status. Moreover, the club has been regarded over the years as a breeding ground for both county and international players, as such there is pressure on students to either maintain or achieve first team status. The club itself is run on a highly organised basis with a democratically elected committee running its affairs; a member of the University staff supervises the twice-weekly training sessions, where attendance is compulsory if selection for any team, particularly the first fifteen is required. Durham University rugby club has, in recent years come to the fore in student rugby, and as the university itself is run on Oxbridge lines, the sport is given pride of place. The club's rise to form can be attributed, at least in part to its policy, borrowed from the American collegiate system, of approaching players/students with an offer to attend, and obviously play, for the university. Like Loughborough it has an impressive fixture list against most of the best sides in the north of England, similarly it has a highly organised club structure, with training being organised and also monitored by ex-England international Peter Dixon; again attendance is compulsory. The Newcastle University club, unlike the two above, has only been in existence since the 1960's. In the past rugby in the university was comprised solely in terms of intra-mural competitions and even now the club relies heavily upon a 'constituent' club basis⁴. Because of this factor the pressure on first fifteen places is not so acute as many second fifteen players prefer to play for one of the four 'constituent' clubs. The club has had no real success and this is reflected in a mediocre fixture list consisting of local 'junior' sides. However, like the two clubs above, there is a committee to manage its affairs, and a member of staff organises training sessions. The pressure to attend these sessions is not as great as Loughborough or Durham however, given the existence of the 'constituent' clubs. The

Loughborough Freshers XV, although sharing many of the attributes of the first fifteen, were included in an attempt to assess whether its members perception of self would differ significantly from the other teams given that they had only been attending the university for a short time, most coming straight from school rugby. The team itself comes under the aegis of the club committee and it is coached on a twice weekly basis by a member of the university staff. Attendance is compulsory if selection for the team is required. Similarly, like Loughborough and Durham above, the existence of another team, in this case the Freshers 'B', puts pressure on the players to maintain or attain Freshers 'A' places. The Saint John's College York rugby club appears to be the most disorganised of all the five teams. As an institution the college had a strong tradition as one of the foremost physical education teacher training centres in the country, however this tradition is now in decline and appears to be reflected in the status of the college rugby team. The club as a whole has no official bureaucracy, and most of all the decisions concerning organisation and training are taken by the club captain. There is no member of staff concerned with the running of the club. The general status of the club is reflected in a mediocre fixture list containing very junior local sides.

The administration of the questionnaire to the above teams took place on two separate occasions, once prior to the Christmas Vacation (1980), and again just before the end of the rugby season. The reason for this longitudinal design was that the results from the first administration, obtained when the influence of the bonded group process is most significant, could be compared with those from the second, administered at a time when the influence of the group is, in all probability, at its lowest; at the end of the season. Consequently, by using this particular method, it is possible to assess whether the influence of the sports-type, and the bonded group of which it is part, is variant or invariant with the demands of the season.

The questionnaire itself consisted of three separate parts; biographical details such as age, position on the field, previous honours and so on; the trait state anxiety inventories; and two interpersonal check lists, one for self, another for the ideal self. The Questionnaire is shown in full in Appendix A. The actual administration of the questionnaire, to the five teams, although fundamentally

similar on both occasions, differed in terms of the testing conditions. A limitation imposed by time and locational factors, and as such the administration of the questionnaire to the teams, will be described on an individual basis.

The questionnaire was administered to the Loughborough 1st XV squad on the first occasion in mid-November; 23 players were questioned in total. Although the questionnaires are self-explanatory the players were instructed that should any problem arise they should indicate this by raising their hands and not in any circumstances shout out. Similarly, they were instructed that upon completing the questionnaire they should leave the room immediately, (these instructions were given to every team on both administrative occasions). The testing session took place in one of the skill laboratories where I was able to separate the players from one another by the use of screens, thus minimising the possibility of contamination. Prior to the particular administration the team had had a satisfactory series of results winning six games and losing three. The second administration took place in late February, one week prior to the University Athletic Union's rugby championship final. On the way, they had met and beaten Newcastle University and were to face Durham in the final. As before the testing took place in the skill laboratory with all 23 players present.

The Durham team were given the first questionnaire in early December; fourteen players being questioned in total. The administration took place in the rugby 'headquarters' and, although no screens were available, every attempt was made to ensure that there was an adequate space between each one of the respondents. Prior to the administration the team had won seven of their eight matches. The second administration took place in mid-March and nine of the original fourteen completed the questionnaire. Prior to this date the team had beaten the Loughborough students 6 - 3 in the U.A.U. final, and had only two games of the season remaining. The administration took place under the same conditions as before.

The Freshers XV were first tested in early December and twenty players completed the questionnaire. As with the first fifteen the skill laboratory was used as the experimental setting. Prior to this date the Freshers were probably the most successful of the five teams

having won every game by a considerable margin. The second administration took place in late March, two days before the final game of the season against the England Colts, a fixture regarded as the highlight of the season. Fourteen of the original twenty completed the questionnaire under the same conditions as before.

The Newcastle squad were first tested in late November and twenty players completed the questionnaire. The administration took place in a changing room prior to the team's training session. The same conditions prevailed as for the Durham administration and again, every attempt was made to separate the players and so minimise contamination. Prior to this date the team had had a disappointing sequence of results losing many of their matches by a narrow margin. The second administration took place in early March with three weeks of the season remaining, fourteen of the original twenty players completed the questionnaire. On this occasion the administration took place in a lecture room which, in terms of environmental conditions, aided the control of contamination. The performance of the team up until this point was described as 'disappointing' with the team losing fourteen of their matches and winning only nine.

The York rugby squad were first tested in early December and nineteen players completed the questionnaire. The administration took place in the college bar⁵, hired by the club captain for the occasion. As the seating in the bar area was in the form of a number of separate booths, I was able to separate the members of the team from one another. The second administration took place in late April, three weeks into the close season, nine of the original nineteen completed the questionnaire under the same conditions as above.

The time taken to complete the questionnaire ranged from forty to eighty minutes, the average time being approximately fifty-five minutes.

It is evident from the above description of the administrative procedure that certain anomalies arose as a consequence of the longitudinal research design. One concerned the reduction in sample size between the first and second administration; the other, the proposal as to the difference, between the administrations, in the influence of the bonded group process. The former will be considered first.

Between the first and second administrations there was a reduction in the size of the sample from 96 to 69 players respectively; a reduction of 28%. Part of this decrease can be attributed to players who were either dropped from the squad after the first administration or became injured and therefore ceased to play in any more games. However, by far the biggest proportion were those who refused, whether consciously or unconsciously, to turn up to complete the second administration. Indeed, in some cases just trying to finalise the dates for the administration of the questionnaire took many weeks of correspondence and inevitably frantic telephone calls. By far the greatest difficulty was created by the York rugby club where there was no member of the college staff or recognised committee with which to make contact. This had the effect of pushing the second administration into the close season, a factor which meant that the state part of the STAI had to be dropped from the questionnaire format, as its inclusion would violate Spielberger's theoretical concept of this situation specific effect⁶. In short therefore, although every effort was made on the part of myself and the four coaches to ensure that all the players turned up to complete the second questionnaire, one basically could not force an individual's attendance and therefore relied upon their 'goodwill'.

The second anomaly arose as an indirect consequence of the above. It was originally proposed that the influence of the bonded group process would diminish the longer the season progressed, however it is evident that the second administration coincided with two of the teams' most important games; Loughborough's against Durham in the final of the U.A.U., and the Freshers XV against the English Colts. However, this was not as problematic as it appeared, as the question as to the invariant nature of the bonded group process could still be analysed by simply inverting the original proposition. Moreover a further comparison could be made between the results from these two teams and those from the other three, two of which had nearly completed their season and one who indeed had.

The way this and the other aspects of the self-schema were statistically analysed is described in full in the following chapter.

Footnotes

1. Rugby was adopted by many but not all the public schools, the others preferring soccer.
2. Muscular Christianity was a vigorous combination of Christian living with athletic enjoyment.
3. It must be pointed out that having been an undergraduate student at Loughborough University, there was a certain degree of convenience in using both the Loughborough and Freshers XV in my experimental sample.
4. The constituent clubs were those who played in the university intra-mural competitions and were made up of students from the Agricultural Department and the Castlereigh, Henderson and Armstrong Halls of Residence.
5. The bar was hired for the morning as it had a number of booths which could be used to separate the players.
6. As York were tested in the close season it was decided to drop the A-State scale as there was no forthcoming game. It was felt that to ask the players to imagine how they would feel would affect the validity of the study.

Chapter 5

Statistical Analyses

The self-schema has been described as the composite of three independent yet inter-related phenomenal percepts; self, not-self and ideal self perceptions. As a consequence of this structure, and in keeping with the initial objectives of this study, it is felt that the analysis of the results should take place in two parts: the first accounting for the players' interpersonal perceptions of self as isolated variables; the second considering their interactive properties, and the way in which the products of these various interactions influence personal adjustment and also the levels of trait and state anxiety experienced by the players.

It is hoped that by using this 'building block' approach the way in which the bonded group process affects the praxis of each of the players' self perceptions will be quantifiable in statistical terms. Moreover, once these analyses have been completed the influence, if any, of the sports-type can be assessed, with specific reference to the way in which it effects both the players' degree of self-acceptance, and also their levels of general and situation specific anxiety. In essence, measures of personal adjustment will be related to patterns of depersonalisation.

Initially therefore, the questionnaire results for self, not-self and ideal self will be analysed. In each case the analysis will consider firstly the results for the sample as a whole, a separate test being conducted for each administration, and secondly the existence of any between group differences.

Each analysis will be presented in a similar manner; the research hypothesis (eses) will be introduced followed by a brief description of the statistical technique(s) to be used and reasons for its/their choice described. A summary of the results and a brief discussion of the findings complete each section, (a more detailed discussion of the findings will take place in chapter 6).

The raw data to be used in the analyses will consist of the players' questionnaire responses transformed into either alphabetical or numerical octant notations, standardised discrepancy units, and/or trait and state anxiety scores. However, the particular form or forms of data used will

be specified within each individual analysis.

1a: An Analysis of the Distribution of the Players' Perceptions of Self.

Research Hypotheses:

- H1: There is a significant difference in the distribution of the players' perceptions of self around the interpersonal circumplex.
- H2: There is a significant difference between the two test administrations in the distributions of the players' perceptions of self.

Experimental Measures:

In order to analyse the initial hypothesis proposed above, a statistical measure which can assimilate data when it is both nominally ordered, and also grouped into eight discrete categories, is required. The test chosen which fulfils these criteria is the one sample chi square test. This technique is used in order to measure whether there is a significant difference between the actual number of responses falling in each particular category, and the expected number; a figure which is derived from the proposal made by the null hypothesis: in this case that there will be no significant difference in the distribution of the players' perceptions of self around the interpersonal circumplex. For this analysis, as N is equal to ninety-six for the first administration, and sixty-nine for the second, and as there are eight categories, the expected frequency, based upon the hypothesis of no differences, will be twelve and eight point six players per octant respectively.

In essence, if the difference between the observed and expected frequencies is small, chi square will be small, if large then chi square will be large. Siegal (1956), concludes that:

"Roughly speaking, the larger χ^2 is, the more likely it is that the observed frequencies did not come from the population on which the null hypothesis is based." (p.43)

The formula for computing chi square is as follows:

$$\chi^2 = \sum_{i=1}^K \frac{(O_i - E_i)^2}{E_i}$$

Where, O_i = the observed number of cases in i^{th} category.

E_i = the expected number of cases in i^{th} category.

and, $\sum_{i=1}^K$ directs one to sum over all K categories.

The significance of the result is determined by comparing it, in conjunction with the respective degrees of freedom, to the appropriate sampling distribution of chi square. The corresponding degrees of freedom are given by the formula $K - 1$, where K is equal to the number of categories.

The second research hypothesis was advanced in order to analyse the possible effect the temporal nature of the research design had upon the distribution of the players' perceptions of self.

A statistical measurement of this 'effect' had to comply with two factors, both of which were contingent upon the distribution of the available data; a reduction in the sample size, which occurred between the two tests, from ninety-six to sixty-nine, (a disparity which precluded the use of a correlated groups statistical measure), and the need to concentrate upon the whole distribution of the player/octant frequencies, as opposed to analysing possible differences in central tendency.

With the above restrictions determining statistical choice it was decided to use the Kolmogorov-Smirnov Two Sample Test, as it can contrast whole distributions of unequal size. The advantages of this technique are summarised by Siegal (1956) when he states that this test:

"Is sensitive to any kind of difference in the distribution from which the samples were drawn - differences in location (central tendency), in dispersion, in skewness, etc." (p.127)

K , the product of the distributional comparison, is formulated using a step-wise progression which essentially converts the observed scores into a series of cumulative frequency proportions. The largest difference, 'D', between these proportions, is then found by using the following formula in conjunction with each interval:

$$D = |CP1 - CP2| : \text{Max}$$

Using 'D', K can be found:

$$K = D \sqrt{\frac{N1 \times N2}{N1 + N2}}$$

Where, N1 = the number of players from the first administration,
and, N2 = the number of players from the second administration.

The significance of K is established by comparing it with the expression given in a pre-determined table. If K is equal to, or larger than this critical value, then the research hypothesis is accepted at the given level of significance.

Results:

Tables 5 and 6 below indicate the number of players, for both observed and expected frequencies, who fall in each particular octant:

Table 5: First Questionnaire Administration.

	Octants							
	AP	BC	DE	FG	HI	JK	LM	NO
Observed	21	26	11	3	6	9	10	10
Expected	12	12	12	12	12	12	12	12

Putting this data into the formula described previously, a chi square of 34.3 results. Using seven degrees of freedom this result exceeds the value of 24.322 obtained from the chi square distribution table, and is therefore significant at beyond the .001 level.

Table 6: Second Questionnaire Administration.

	AP	BC	DE	FG	HI	JK	LM	NO
Observed	19	21	11	2	1	1	5	9
Expected	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6

The above data gives a chi square of 51.64. Using seven degrees of freedom, this result exceeds the value of 24.322 obtained from the chi square distribution table, and is therefore significant at beyond the .001 level.

The observed frequencies in the two chi square tables above give the following cumulative proportions and 'D's, for use in the Kolmogorov-Smirnov test.

Table 7:

	Octants							
	AP	BC	DE	FG	HI	JK	LM	NO
First Administration (CF1)	21	47	58	61	67	76	86	96
CP1 (CF ÷ N)	.219	.490	.604	.635	.698	.792	.896	1
Second Administration (CF2)	19	40	51	53	54	55	60	69
CP2 (CF2 ÷ N)	.275	.580	.739	.768	.783	.797	.870	1
D = CP1 - CP2	.056	.09	.135	.133	.085	.005	.026	-

Using the formula $D = | CP1 - CP2 | : \text{Max.};$

$$D \text{ Max.} = .135$$

$$\text{Therefore, } K = .135 \times \sqrt{\frac{96 \times 69}{96 + 69}} = .855$$

The value of .855 falls below the .05 expression of 1.36, indicating that there is no significant difference between the two distributions.

Analysis:

The results of the two chi square statistical analyses established that there is a significant difference in the distribution of the players' perceptions of self around the interpersonal circumplex; $p < .001$ for both test administrations. This distributional difference was then confirmed as being the same across both questionnaires; K failing to reach significance at any level.

However, although these results indicate that there is a distributional difference, they do not determine the direction that this difference takes. Referring back to tables 5 and 6 it is clear that AP, the Managerial-Autocratic, and BC, the Competitive-Narcissistic octants, are most representative of the players' perceptions of self. Together these two generic themes account for forty-nine per cent of the overall total for the first administration and fifty-eight per cent for the second. In essence the frequency of these two distributions indicate that the players are concerned with a phenomenal self which stresses power, dominance and respect.

Although these two octants indicate the trend in the direction of the frequency distributions, there is a more fundamental difference which establishes a basic dichotomy in the overall distribution of the players' self perceptions. This can be shown generally by using the horizontal 'Lov' axis as an interpersonal parameter, and more specifically by looking at the poles of the vertical 'Dom' axis; the former will be considered first.

If the octants are divided into two groups of four, using the 'Lov' axis as described above, then those octants above this line; AP, BC, DE and NO, account for seventy-two per cent of the overall total for the first administration and eighty-seven per cent for the second.

Ignoring the basic differences in the self's presenting operations, these octants taken together indicate the importance of an apparent display of 'strength'. Conversely, the four remaining octants, FG, HI, JK and LM, which make up the remaining twenty-eight and thirteen per cent of the respective totals, are all characterised by a lack of the 'strength' inherent in the interpersonal themes above. This 'weakness' denotes a low ego-strength and a weak dependent self.

A more specific representation of the structure outlined above can be illustrated by referring to the vertical 'Dominance-Submission' axis. At the apex of this axis are AP and BC, whose characteristics have already been described; at the base are FG, the Rebellious-Distrustful, and HI, Self-Effacing-Masochistic octants, which, over the two test administrations, are the least used interpersonal themes. The significance of these uneven bi-polar distributions takes two forms. Firstly the concern with presenting a self which is independent and authoritative, and secondly, when the frequencies for FG and HI are placed in the team dynamics framework, distrust, rebellious non-conformity, and critical passivity are traits which appear to be regarded by the players as having a negative valence.

1b: A Between Groups Analysis of the Homogeneity of the Players' Perceptions of Self.

Research Hypotheses:

H1: There is a significant difference between the teams in the homogeneity of their players' perceptions of self.

H2: The temporal nature of the research design will have a significant effect upon a team's level of homogeneity.

Experimental Measures:

An analysis of the initial hypothesis entails that some modifications have to be made to the data in order to comply with, (a) the assumptions inherent in statistical methodology, and (b) the need for a measure which would, in itself, represent the homogeneity of a player's perception of self.

The initial problem arose when the players' perceptions were allocated to their respective octants, and also segregated upon the basis of team membership. When this process was completed it was found that there was an insufficient number, (in some cases none), to fulfil the statistical requirements mentioned above, (see the description of the statistical

properties of chi square given in the previous analysis).¹ One way around this problem was to 'collapse' certain, adjacent octants into one another, therefore giving a sufficient number of players in each new category to allow statistical analysis. This method was rejected however as firstly it was felt that an amalgamation of what are, by definition, discrete interpersonal typologies, would ensue a loss in much of the overall sensitivity of the circumplex. And secondly, the lack, or in some cases the complete absence of players from some of the teams in certain octants was, in itself, an important factor to be taken into account.

The second proviso precluded the use of the numerical notations formulated by Leary to represent each octant, i.e. AP being one, BC two NO eight. As they do not, in themselves, comprise a measure of homogeneity which could be used as would a vector, to represent both the magnitude and direction that a player's particular self perception was away from some central point: in this case the interpersonal theme which represents the mean of his team's octant scores.

With these criteria in mind it was decided that what was needed was a measure which would both take into account, the octants that the players were positioned in, and also the degree of deviation these positions were from their respective team means. This measure would thus afford an index of homogeneity which would encompass both direction, and magnitude, and also be amenable to statistical analysis.

The methodology used which fulfilled all of the above criteria was to initially determine the mean of each team's player/octant frequencies, thus obtaining a measure of central tendency, which would represent the interpersonal behaviour of each group. This method was accomplished by summing the number of times each octant was used by each player from a particular team. The mean of each octant frequency was computed and then converted, via Leary's standardised formula, into a 'Dom/Lov' summary score which could then be plotted onto the interpersonal circumplex.² Using this summary point a measure, representing the index of homogeneity proposed above, could be computed by interpreting the distance a player's self falls from his particular group mean; this distance being established using Leary's discrepancy scores.³ Consequently, a player, (depending upon the position of his perception of self around the interpersonal circumplex), could score between zero, which would indicate no deviation from the mean, and one hundred and fourteen, indicating the maximum possible deviation. By using this method each team will have a series of scores which can be compared to see if there are

any significant differences between them.

The Kruskal-Wallis One Way Analysis of Variance by Ranks will be used to determine the presence of between group significance. This method, rather than its parametric counterpart, was chosen as a homogeneity of variance check revealed that there was a significant difference in the team's sub-variances, for both test administrations; F Max: being 2.549, ($p < .05$), and 4.692, ($p < .01$) respectively.⁴

Cohen and Holliday (1978), report that:

"The power efficiency of the Kruskal-Wallis test relative to the parametric F test is reported as 95.5%" (p.214).

'H', the statistic used in this test, is given by the formula:

$$H = \frac{12K}{N(N+1)} - 3(N-1)$$

With the following correction for tied ranks:

$$\frac{H}{1 - \frac{\sum T}{N^3 - N}}$$

Where, K = the total of the squared sum of ranks in each of the teams, divided by the total number of players,

N = the total number of players combined,

and, T = $t^3 - t$, where t is the number of tied observations in a tied group of scores. T directs one to sum over all groups of ties.

As there are more than five cases in each of the teams, the significance of 'H' is determined by referring to the chi square distribution table.

The corresponding degrees of freedom are given by the formula $K - 1$, where K is equal to the number of teams.

If the result of the Kruskal-Wallis test indicates that there is a significant difference between the teams, then a method has to be used to determine which of the teams do in fact differ. Because the teams have both unequal sub-variances and differing sizes, (particularly in the second test administration), the independent 't' test could not be used

to analyse the data with any confidence. Consequently the Mann-Whitney 'U' was chosen as an alternative, as the assumptions made by this statistic are not as rigid as its parametric counterpart.

The Mann-Whitney 'U' is computed by ranking all the scores, from both teams under analysis, as though they belong to one group. Once completed, the ranks for each group are summed and then used in the following formula to find 'U':

$$U = N_1 N_2 + \frac{N_1 (N_1 + 1)}{2} - R_1$$

and,

$$U = N_1 N_2 + \frac{N_2 (N_2 + 1)}{2} - R_2$$

Where, R_1 = the sum of ranks for group with N_1 subjects,
and, R_2 = the sum of ranks for group with N_2 subjects.

For small samples ($N_2 < 20$), the significance of 'U' is determined by establishing whether the value of 'U' in a pre-defined table is larger than the smaller estimated value, computed from the formula above, for the particular size of samples.

For larger samples ($N_2 > 20$) in order to interpret significance, the 'U' value is converted into a Z score, using the following formula:

$$Z = \frac{U - \frac{N_1 N_2}{2}}{\frac{(N_1)(N_2)(N_1 + N_2 + 1)}{12}}$$

(Cohen and Holliday, 1978)

A one-tail rather than a two-tailed distribution will be used to determine significance, as the experimental hypothesis implies a directional difference.⁵

The second hypothesis will also be analysed using the above test due to its facility for evaluating differences in population distributions with unequal numbers.

Results:

Tables 8 and 9 show how the players perceptions of self are distributed, around the interpersonal circumplex, when they are allocated to their respective teams.

Table 8: First Questionnaire Administration

Teams	Octants								Group Mean	Mean Homogeneity
	AP	BC	DE	FG	HI	JK	LM	NO		
Loughborough	6	7	3	1	0	0	2	4	AP	39.24
Freshers XV	6	4	3	1	0	1	2	3	AP	43.13
Durham	4	5	1	0	1	2	0	1	AP	45.50
York	2	5	2	0	3	3	1	3	AP	56.10
Newcastle	3	5	2	1	2	3	4	0	AP	59.10

When the above player/octant frequencies are converted into indices of homogeneity, the data gives an 'H', corrected for ties, of 8.079. Using four degrees of freedom this value is significant at beyond the .10 level.

The Mann-Whitney 'U' test established that the following teams have significant differences in their degree of homogeneity, at the levels indicated.

	Newcastle	York
Loughborough	.012	.026
Freshers XV	.05	-

Table 9: Second Questionnaire Administration.

Teams	Octants								Group Mean	Mean Homogeneity
	AP	BC	DE	FG	HI	JK	LM	NO		
Loughborough	7	10	4	0	0	1	0	1	BC	28.39
Freshers XV	3	4	2	0	0	1	0	4	AP	41.07
Durham	5	1	0	1	1	0	1	0	AP	34.00
York	2	3	2	0	0	0	1	1	AP	46.50
Newcastle	2	3	3	1	0	2	0	3	AP	40.50

The above player/octant frequencies, when converted, give a Kruskal-Wallis 'H', corrected for ties, of 20.20. Using four degrees of freedom this result is significant at beyond the .01 level.

The Mann-Whitney 'U' test established the significance of the following team combinations, at the levels indicated.

	Freshers XV	Newcastle	York
Loughborough	.047	.015	.017

Using the same technique to analyse the second research hypothesis, the Mann-Whitney 'U' results indicate that the temporal research design has no significant effect upon the homogeneity of the players' perceptions of self; H2 is therefore rejected.

Analysis:

The results of the Kruskal-Wallis analysis of variance leads to an acceptance of the proposed hypothesis; there is a significant difference between the teams in the homogeneity of their players self perceptions: $p < .10$ and $< .01$, respectively. The results of the Mann-Whitney 'U' established the direction of this difference; Loughborough and the Freshers XV having a significantly more homogeneous distribution than Newcastle and York, ($P = .012$ and $.026$), and Newcastle respectively, ($p = .05$), for the first administration. Loughborough being significantly more homogeneous than the FreshersXV, Newcastle and York, for the second, ($p = .047$, $.015$ and $.017$).

The homogeneity of the players' self perceptions was also found to be a stable construct, 'U' failing to reach significance at any level, and for any team comparison; the second experimental hypothesis is therefore rejected.

Inherent in the initial findings of this analysis is that there appears to be a significant degree of association between octant choice and team membership. The homogeneous nature of this relationship is clearly illustrated for the first administration in Table 8 above, where Loughborough, the Freshers, and to a lesser degree Durham, all display similar concentrations of player/octant frequencies about the same area on the interpersonal circumplex, octants AP and BC.

The two remaining teams, Newcastle and York, are much more heterogeneous, with any themes of strength being countered by weakness, self-depreciation and dependence, (octants HI and JK).

For the second administration there is again a clear concentration, particularly by Loughborough and Durham, of players in octants AP and BC, (see Table 9). Unfortunately the heterogeneous nature of the other three teams is not as unequivocal due to the smaller number of players involved. However, it is apparent that Newcastle again has the most diffuse distribution of any of the teams.

2a: An Analysis of the Distribution of the Not-Self

Research Hypotheses:

- H1: There is a significant difference in the distribution of the players' perceptions of not-self around the interpersonal circumplex.
- H2: There is a significant difference between the two test administrations in the distribution of the not-self.
- H3: The players' perceptions of self and not-self are diametrically opposed across the interpersonal circumplex.

Experimental Measures:

The statistical techniques used to analyse both H1 and H2 above, and the methodology behind this choice, have been extensively reviewed in the first of these series of analyses on pages 120 to 122. It is suggested therefore that should the reader need additional clarification of the following brief discussion, reference should be made to these cited pages.

The initial experimental hypothesis will be analysed using the one sample chi square test. The formula for computing chi square is:

$$\chi^2 = \sum_{i=1}^K \frac{(O_i - E_i)^2}{E_i}$$

The between administration significance will be determined using the Kolmogorov-Smirnov Two Sample Test; K, the result of which, is given by the formula:

$$K = D \sqrt{\frac{N1 \times N2}{N1 + N2}}$$

The significance of the third and final hypothesis proved difficult to assess as no conventional measure of association could be used given the particular form of the data; eight categories ordered around a circle. As such neither the Pearson 'r' nor the Spearman rho could be used as the data did not conform to the restrictions imposed by the former, and the latter is not sensitive to the ordered relationship between the eight generic themes; i.e. rho would interpret a player with a self of 1 (AP) and a not-self of 7 (LM) as being six ranks apart, when in fact there is only one octant between them. It was decided therefore to dispense with an 'omnibus' measure of association and instead to present the data in the form of an 8 x 8 contingency table. From the table the difference between the observed and expected not-self perceptions, in each cell, can be computed in the form of a percentage. Where this percentage is greater than ten percent the difference between 'O' and 'E' is taken to be 'significant'. The results of this measure will be represented diagrammatically in the form of a series of circumplexes.

Results:

Tables 10 and 11 below indicate the number of players, for both observed and expected frequencies, who fall in each particular octant.

Table 10: First Questionnaire Administration.

	AP	BC	DE	FG	HI	JK	LM	NO
Observed	5	14	16	33	11	10	4	2
Expected ⁶	12	12	12	12	12	12	12	12

Putting the above frequencies into the formula described previously a chi square of 42.438 results. Using seven degrees of freedom this

figure exceeds the value of 24.332 obtained from the chi square distribution table, and is therefore significant at beyond the .001 level.

Table 11: Second Questionnaire Administration.

	AP	BC	DE	FG	HI	JK	LM	NO
Observed	1	4	15	25	15	6	1	2
Expected	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6

This data gives a chi square of 67.235. Using seven degrees of freedom this figure exceeds the value of 24.322 obtained from the chi square distribution table, and is therefore significant at beyond the .001 level.

The observed frequencies from the two chi square tables overleaf, give the following cumulative proportions and 'D's for use in the Kolmogorov-Smirnov test.

Table 12:

First Administration (CF1)	5	21	35	68	79	89	93	95
CP1 (CF1 ÷ N)	.053	.221	.368	.716	.823	.937	.979	1
Second Administration (CF2)	1	5	20	45	60	66	67	69
CP2 (CF2 ÷ N)	.014	.072	.290	.652	.870	.957	.971	1
D = CP1 - CP2	.039	.149	.078	.064	.047	.02	.008	-

Using the formula $D = | CP1 - CP2 | \text{ Max:}$,

$$D \text{ Max} = .149$$

$$\text{Therefore, } K = .149 \times \sqrt{\frac{95 \times 69}{95 + 69}} = .942$$

The value of .942 falls below the .05 expression of 1.36, indicating that there is no significant difference between the two administrations.

The relationship between the players' self and not-self perceptions for the first administration are presented in the form of a contingency

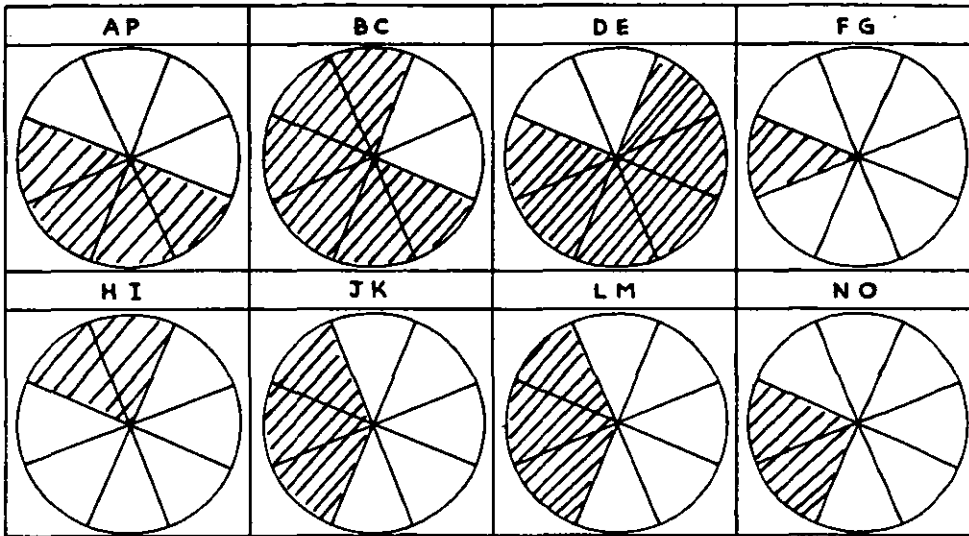
table below. The figure above the diagonal in each cell represents the observed frequencies of not-self associated with each octant, that below, the expected frequencies.

Table 13: First Questionnaire Administration

		NOT SELF							
		AP	BC	DE	FG	HI	JK	LM	NO
SELF	AP	0 1.1	0 3.1	1 3.5	15 7.29	4 2.4	1 2.2	0 .88	0 .44
	BC	3 1.4	3 3.8	1 4.4	6 9	6 3	7 2.7	0 1.1	0 .5
	DE	0 .58	0 1.6	1 1.8	1 3.8	1 .1	2 1.2	4 .46	2 .23
	FG	0 .10	0 .29	2 .32	0 .69	0 .23	0 .21	0 .08	0 .04
	HI	2 .32	4 .88	0 1	0 2.1	0 .69	0 .63	0 .25	0 .13
	JK	0 .47	4 1.3	4 1.5	1 3.1	0 1	0 .9	0 .33	0 .19
	LM	0 .53	3 1.5	4 1.6	3 3.5	0 1.2	0 1.1	0 .42	0 .2
	NO	0 .53	0 1.5	3 1.7	7 3.5	0 1.2	0 1.1	0 .42	0 .21

When the percentage difference between the observed and expected frequencies is computed for each one of the above cells, those greater than 10% are represented by the shaded portion within the eight circumplexes illustrated below; one for each respective generic theme.

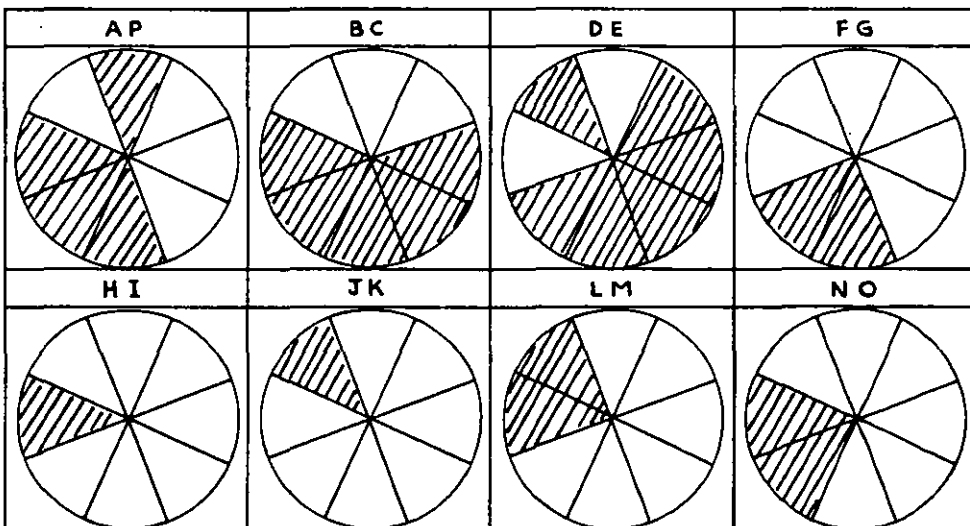
Figure 7: First Questionnaire Administration.



The results of the players' self and not-self perceptions for the second administration are presented in Table 14 below. As before the figure above the diagonal represents the observed frequencies of not-self, that below, the expected frequency. (See next page).

When the percentage difference between the observed and expected frequencies above are computed the following patterns emerge:

Figure 8: Second Questionnaire Administration.



The shaded areas above again represent those differences between the observed and expected frequencies of not-self which are greater than 10%.

Table 14: Second Questionnaire Administration

		NOT SELF							
		AP	BC	DE	FG	HI	JK	LM	NO
SELF	AP	1 .27	0 1.1	3 4.4	11 5.8	4 4.4	0 1.6	0 .55	0 .83
	BC	0 .30	0 1.2	4 4.9	3 6.4	9 4.9	4 1.8	1 .59	0 .91
	DE	0 .14	2 .64	0 2.5	1 3.3	2 2.5	2 .96	1 .32	3 .48
	FG	0 .03	0 .12	0 .46	1 .61	1 .46	0 .17	0 .06	0 .09
	HI	0 .01	0 .06	1 .2	0 .3	0 .2	0 .09	0 .03	0 .04
	JK	0 .01	1 .06	0 .2	0 .3	0 .2	0 .09	0 .03	0 .04
	LM	0 .07	1 .3	4 1.2	0 1.5	0 1.1	0 .4	0 .14	0 .22
	NO	0 .13	0 .52	4 2.1	5 2.7	0 2.1	0 .78	0 .26	0 .39

Analysis:

The results of the two chi square statistical analyses have established that there is a significant difference in the distributions of the players' concepts of not-self, around the interpersonal circumplex; $p < .001$ for both administrations. The direction of this difference was found to be the same for both tests, K failing to reach significance at any level; H_2 is therefore rejected.

The disproportionate nature of the player/octant frequencies centre upon FG, the Rebellious-Distrustful octant, which alone accounts for over one-third of the total distribution for the first and second administrations. The concentration of the players upon this particular interpersonal theme identifies the importance placed upon the constructs of conformity and trust, as FG is characterised by distrust and an inability to maintain, or indeed establish close relationships with others, (Leary 1957).

A more general analysis of the frequency distributions reveals that for both administrations there is a rejection of the interpersonal themes of hostility, whether characterised by strength, octants BC and DE, or weakness, octants FG and HI. Conversely octants AP, NO and LM, which all have as their generic theme the traits of expressive authority, (AP and NO), and cooperation (AP, NO and LM), are hardly used at all as indicators of the not-self.

The patterns which emerge from the analysis of the players' self and not-self perceptions (see figures 7 and 8) tend, in general, to support the proposal made by H_3 , that the two self percepts are diametrically opposed across the interpersonal circumplex. The results also lend support for Leary's theory as to the nature of the relationship between the generic themes:

"For example, adjacent variables on the circular continuum are more closely related than non-adjacent, and the relationship between two variables is a monotonic decreasing function of their separation. "
(La Forge 1957 pgs.461-462).

In general the illustrations above support La Forge's statement as those players whose self perceptions are concerned with expressive strength (AP and NO) reject hostile weakness (FG and HI); hostile strength

(BC and DE) rejects any weak generic theme (FG, HI and JK); conversely friendly weakness (JK and LM) rejects hostile strength (BC and DE). These relationships are the same for both questionnaire administrations.

When the above pattern of results is transposed onto the self and not-self distributions for the sample as a whole, although it indicates the existence of an inverse relationship between self and not-self perception, the distribution of the not-self appears to be a more complex and discriminatory amalgam of self referents. There is a clear rejection of interpersonal hostility, whether characterised by strength or weakness. However, this transposition also reveals that there is a cognitive dualism operating, which, when identified goes some way to explain the variegation of the two distributions; a self which stresses expressive strengths and independence and a not-self which stresses hostility, distrust and self-rejection.

2b: A between Groups Analysis of the Not-Self

Research Hypotheses:

- H1: There is a significant difference between the teams in the homogeneity of their players' not-self perceptions.
- H2: The temporal nature of the research design will have a significant effect upon a team's level of homogeneity.

Experimental Measures:

The concept of homogeneity, and the methodology which enabled it to be statistically analysed, has been extensively discussed in the second section of this series, on pages 125 to 128. As the following discussion will only involve a brief description of the statistical formulae to be used, the reader is advised to review the cited reference above should additional clarification of the techniques be required.

Between groups significance will be determined using the Kruskal-Wallis Analysis of Variance by Ranks, as the sub-variances of the teams, for the second administration, were found to be unequal;

F Max being 6.282, $p < .01$, (it must be noted however that although F Max failed to reach significance for the first administration, in order to maintain consistency, the non-parametric test will be used on both distributions). 'H', the product of this statistic, is given by the following formula:

$$H = \frac{12K}{N(N+1)} - 3(N-1)$$

With the following correction for tied ranks:

$$1 - \frac{\sum T}{N^3 - N}$$

If the results of the Kruskal-Wallis tests indicate that there is a significant difference between the teams, the teams which differ can be identified using the Mann-Whitney 'U'. This statistic is computed using the following formula:

$$U = N_1 N_2 + \frac{N_1(N_1+1)}{2} - R_1$$

and,

$$U = N_1 N_2 + \frac{N_2(N_2+1)}{2} - R_2$$

The second hypothesis will also be analysed using the above test, due to its facility for evaluating differences in population distributions with unequal sizes.

Results:

Tables 15 and 16 below show how the players' not-selves are distributed around the interpersonal circumplex when they are allocated to their respective teams.

Table 15: First Questionnaire Administration

Teams	Octants								Group	Mean
	AP	BC	DE	FG	HI	JK	LM	NO	Mean	Homogeneity
Loughborough	0	2	3	11	3	3	1	0	FG	29.39
Freshers XV	0	3	2	5	4	3	2	0	FG	41.79
Durham	2	2	1	5	2	1	0	1	FG	37.93
Newcastle	3	2	6	6	1	2	0	0	DE	38.60
York	0	5	4	6	1	1	1	1	DE	39.16

When the above player/octant frequencies are converted into indices of homogeneity, the data gives an 'H', corrected for ties, of 3.514. Using four degrees of freedom this value fails to reach the .10 expression of 7.779.

Table 16: Second Questionnaire Administration

Teams	Octants								Group	Mean
	AP	BC	DE	FG	HI	JK	LM	NO	Mean	Homogeneity
Loughborough	1	1	4	10	4	1	0	2	FG	34.65
Freshers XV	0	1	3	3	4	2	1	0	HI	46.07
Durham	0	0	3	4	1	1	0	0	FG	20.22
Newcastle	0	2	5	3	4	0	0	0	FG	33.86
York	0	0	1	3	3	1	0	0	FG	35.22

The above player/octant frequencies, when converted, give a Kruskal-Wallis 'H', corrected for ties, of 4.895. Using four degrees of freedom this value fails to reach the .10 expression of 7.779.

The results of the Mann-Whitney 'U' indicate that the temporal research design has no significant effect upon the homogeneity of the players' not-selves.

Analysis:

The results of the Kruskal-Wallis statistical analyses indicate that there is no significant difference between the teams, in the homogeneity of their players' not-self perceptions: 'H' failing to reach

any given level of significance for either test administration. Consequently, H1 is rejected, The results of the Mann-Whitney 'U' establish that the players' perceptions of not-self are stable over time, regardless of team affiliation; 'U' failing to reach any given level of significance for any team comparison; H2 is therefore also rejected.

It is evident from the above frequencies in tables 15 and 16 that starting from AP there is a monotonic increase in the player/octant frequencies, which centres upon the 'hate' pole of the horizontal 'lov' axis; octants DE and in particular FG. After this point there is then a decrease in the octant frequencies, with LM, NO, and AP hardly being used as indicators of the not-self. As regards more specific individual differences, for the first administration both York and Newcastle have a higher number of players rejecting AP and BC respectively, than any of the other teams. However, the trend of their players' perceptions is still toward the aggressive-rebellious octants.

The disproportionate nature of the distributions indicates that irrespective of team-membership there is a shared concern in rejecting punitive aggression. (DE), rebellious-distrust (FG), and self-criticism (HI). The common factor inherent in these three generic themes being interpersonal hostility, whether directed at the self, or at the others with whom one interacts.

The rejection of hostility is also a stable phenomenal construct, as there is no apparent change over-time in the direction of the players' perceptions of not-self.

3a: An Analysis of the Distribution of the Ideal Self.

Research Hypotheses:

H1: There is a significant difference in the distribution of the players' ideal selves around the interpersonal circumplex.

H2: There is a significant difference between the two test administrations in the distribution of the ideal self.

Experimental Measures:

The statistical techniques to be used to analyse both of the above proposals and the methodology behind this choice have been extensively discussed in the first of this series of analyses, and can be found on pages 120 to 122. As the following discussion will only present the formulæ used to process the data, it is suggested that, should the reader require additional clarification, reference should be made to these pages.

The initial research hypothesis will be analysed using the one sample chi square test. The formula used to compute this statistic is:

$$\chi^2 = \sum_{i=1}^K \frac{(O_i - E_i)^2}{E_i}$$

The between administration significance will be determined using the Kolmogorov-Smirnov two sample test; K, the result of which, is given by the formula:

$$K = D \sqrt{\frac{N_1 \times N_2}{N_1 + N_2}}$$

Results:

Tables 17 and 18 below indicate the number of players, for both observed and expected frequencies, who fall into each particular octant.

Table 17: First Questionnaire Administration.

	Octants							
	AP	BC	DE	FG	HI	JK	LM	NO
Observed	59	22	0	0	1	0	0	14
Expected	12	12	12	12	12	12	12	12

Putting the above frequencies into the formula described previously, a chi square of 250.85 results. Using seven degrees of freedom this figure exceeds the value of 24.322 obtained from the chi square distribution

table, and is therefore significant at beyond the .001 level.

Table 18: Second Questionnaire Administration.

	Octants							
	AP	BC	DE	FG	HI	JK	LM	NO
Observed	43	17	1	0	0	0	0	8
Expected	8.6	8.6	8.6	8.6	8.6	8.6	8.6	8.6

This data gives a chi square of 186.96. Using seven degrees of freedom this figure exceeds the value of 24.322 obtained from the chi square distribution table, and is therefore significant at beyond the .001 level.

The observed frequencies from the two chi square tables above give the following cumulative proportions and 'D's, for use in the Kolmogorov-Smirnov test.

Table 19:

	AP	BC	DE	FG	HI	JK	LM	NO
First Administration (CF1)	59	81	81	81	82	82	82	96
CP1 (CF1 ÷ N)	.614	.844	.844	.844	.854	.854	.854	-
Second Administration (CF2)	43	60	61	61	61	61	61	69
CP2 (CF2 ÷ N)	.623	.870	.884	.884	.884	.884	.884	-
D = CP1 - CP2	.009	.026	.04	.04	.03	.03	.03	-

Using the formula $D = CP1 - CP2$ Max:

$$\begin{aligned}
 D \text{ Max} &= .04 \\
 &= .04 \sqrt{\frac{96 \times 69}{96 + 69}} \\
 &= .253
 \end{aligned}$$

The value of .253 falls below the .05 expression of 1.36, indicating that there is no significant difference between the two administrations.

Analysis:

The results of the two chi square statistical analyses establish that there is a significant difference in the distribution of the players' ideal selves around the interpersonal circumplex; $p < .001$ for both administrations. The direction of this distributional difference was confirmed by the result of the Kolomogorov-Smirnov test as being the same for both administrations; K failing to reach significance at any level.

From tables 17 and 18 it is evident that the disproportionate nature of the player/octant frequencies centres upon the apex of the vertical 'Dom' axis; octants AP, and to a smaller extent BC and NO.

The AP octant is unequivocally the most popular interpersonal theme used by the players to represent their phenomenal ideal. However, of the 59 players from the first administration, and the 43 from the second, whose ideal is represented by this particular octant, every single one from the first, and 98% of the second, display the more autocratic form of this generic code (P). Leary (1957) states that:

"The key factor in this type is the complete avoidance of weakness and uncertainty, and the compulsive desire to appear competent, organised and authoritative." (p.324).

In terms of the 'principle of reciprocal relations' advanced by Leary, AP 'pulls' IJ, or the person who manifests control and independence is respected and valued by those with whom he interacts.

Of the two remaining octants which were used to any significant degree, BC and NO act as more extreme (BC), and less extreme (NO), versions of AP. They therefore form an interconnected triad based upon self-confidence, authority and expressive responsibility.

This pattern of results, perhaps more than any other so far, indicates the influence that the bonded group has in terms of shaping the values and ideals of its members in the direction of the sports-type. The interpersonal traits represented by both AP and BC being similar to those of the stereotypical athlete reported by Kane et al.

The only deviations to the above discussions were HI in the first administration, and DE in the second. The significance of these players' perceptions will be discussed in a later analysis.

3b: A Between Groups Analysis of the Ideal Self.

Research Hypotheses:

H1: There is a significant difference between the teams in the homogeneity of their players' ideal self perceptions.

H2: The temporal nature of the research design will have a significant effect upon a teams level of homogeneity.

Experimental Measures:

The methodology behind the use of 'homogeneity scores' as measures of perceptual dispersion, and the statistical techniques used to analyse these measures have been extensively discussed in the second section (1b) of this series on pages 125 to 128. As the following discussion will only involve brief descriptions as to the properties of both the concept of homogeneity and the statistical tests used to establish between group differences, the reader is advised to review the cited reference above should additional clarification of either theoretical or statistical methodology be required.

In brief, players' homogeneity scores are obtained by firstly computing each team's mean interpersonal ideal. This is achieved by allocating the players to their respective teams and then converting, via Leary's (1957) standardised formula, these groups of raw octant scores into Dom and Lov indices, the intersection of which represents the 'teams' interpersonal ideal. Each player's homogeneity score is then computed by assessing how far his particular ideal is away from the teams. Size being expressed in terms of Leary's discrepancy scores.

Using these discrepancy scores as raw data, between groups' significance will be determined using the Kruskal-Wallis Analysis of Variance by Ranks, as the sub-variances of the teams scores, for the first administration, were found to be unequal; F_{Max} being equal to 2.70, $p < .05$, (it must be noted however that although F_{Max} failed to reach significance for the second administration, in order to maintain consistency, the non-parametric technique will be used on both distributions). 'H', the product of this statistic, is given by the following formula:

$$H = \frac{12K}{N(N+1)} - 3(N-1)$$

With the following correction for tied ranks:

$$\frac{H}{1 - \frac{\sum T}{N^3 - N}}$$

If the results of the Kruskal-Wallis tests indicate that there is a significant difference between the teams, the teams which differ can be identified using the Mann-Whitney 'U'. This statistic is computed using the following formula:

$$U = N_1 N_2 + \frac{N_1 (N_1 + 1)}{2} - R_1$$

and,

$$U = N_1 N_2 + \frac{N_2 (N_2 + 1)}{2} - R_2$$

The second hypothesis will also be analysed using the above test, due to its facility for evaluating differences in population distributions with unequal sizes.

Results:

When assessed all five teams were found to have the same mean ideal for both administrations; 'AP' the Managerial-Autocratic interpersonal theme. All the players' homogeneity scores are therefore expressions as to the size of their deviation from this point. Tables 20 and 21 below show how the players' ideal selves are distributed around the interpersonal circumplex when they are allocated to their respective teams. These frequencies formed the raw data from which the team means described above were computed.

Table 20: First Questionnaire Administration

Teams	Octants				Group Mean	Mean Homogeneity
	*AP	BC	HI	NO		
Loughborough	16	7	0	0	AP	13.13
Freshers XV	12	5	0	3	AP	17.6
Durham	10	2	1	1	AP	17.57
York	10	3	0	6	AP	19.8
Newcastle	11	5	0	4	AP	20.84

* (The reader will have noticed that only four of the eight generic themes are listed. This is because only those themes which were actually used by the players have been reported).

When the above player/octant frequencies are converted into indices of homogeneity, the data gives an 'H', corrected for ties, of 2.459. Using four degrees of freedom this value fails to reach the .10 expression of 7.779; H1 is therefore rejected for the first administration.

Table 21: Second Questionnaire Administration

Teams	Octants				Group Mean	Mean Homogeneity
	AP	BC	DE	NO		
Loughborough	14	8	1	0	AP	18.69
Freshers XV	9	3	0	2	AP	17.36
Durham	5	3	0	1	AP	19.2
York	5	1	0	3	AP	12.36
Newcastle	10	2	0	2	AP	19.56

The above player/octant frequencies, when converted, give a Kruskal-Wallis 'H', corrected for ties, of .855. Using four degrees of freedom this value fails to reach the .10 expression of 7.779; H1 is therefore rejected for the second administration.

The results of the Mann-Whitney 'U' statistic indicate that the temporal research design has no significant effect upon the homogeneity of the players' ideal self perceptions. (see page 188).

Analysis:

The results of the Kruskal-Wallis statistical analyses indicate that there is no significant difference between the teams in the homogeneity of their players' ideal self perceptions: 'H' failing to reach any given level of significance for either test administration. Consequently H1 is rejected. The results of the Mann-Whitney 'U' tests establish that the distribution of the players' ideal perceptions are also stable over time, irrespective of team affiliation; 'U' failing to indicate any significant change in the teams levels of homogeneity. As a consequence H2 is also rejected.

It is evident from the player/octant frequencies in tables 20 and 21 that, regardless of team affiliation, the most frequent ideal percept is AP, the Managerial-Autocratic octant. Each team therefore has a majority of players whose predominant concern is behaviour which:

"(I)nvolve a dominant orientation shaded with elements of positive affect or friendliness." (Carson 1969 p.107).

The only minor differences between the teams occurs in the proportion of players who have either competitive independence (BC), or responsible friendliness (NO), as their phenomenal ideal. For both administrations Newcastle and York transpose the more expressive ideal of NO onto their AP distribution. Conversely, the three remaining teams tend to gravitate from AP toward the more competitive BC profile.

4a: An Analysis of Self Acceptance⁷

Research Hypotheses:

- H1: Self perception has a significant effect upon the level of self acceptance.
- H2: Not-self perception has a significant effect upon the level of self acceptance.
- H3: The self and not-self perceptions have a significant interactive effect upon the level of self-acceptance.

Experimental Measures:

The distribution of the data available for the above analyses precludes the use of a standard multiple regression technique by which to assess the significance of any of the proposed effects, as it assumes a curved, rather than a linear regression between the independent and dependent variables.

An alternative method which overcomes this limitation is a factorial analysis of variance. Although this statistic does have a great methodological and conceptual affinity to regression analysis, the major difference between them is in the latter's ability to process non-linear regressions. Kerlinger (1977) states that the two techniques:

"(A)re in essence the same. They both express relations. They are both sets of ordered pairs with the independent variable or variables defined." (p.633).

However, ignoring the fundamental similarities between the two techniques, it is the shape of the regression which led to the preference of the factorial analysis which is of initial importance, both practically, and, as will be discussed later, conceptually, as it begins to relate the three aspects of the self schema under analysis to the generic themes of the interpersonal circumplex. The data's departure from rectilinearity is illustrated in Tables 22 and 23 below:

Table 22: The Self

Octants	Unadjusted Mean Deviation	
	First Administration	Second Administration
AP	-29.83	-20.05
BC	-11.78	-5.90
DE	16.49	14.66
FG	22.22	40.48
HI	40.89	55.48
JK	42.55	48.48
LM	17.62	27.68
NO	-9.78	2.26

Table 23: The Not-Self

Octants	First Administration	Second Administration
AP	26.82	-35.52
BC	26.86	32.48
DE	13.47	6.54
FG	-11.63	-7.66
HI	-32.32	1.10
JK	-15.38	-7.86
LM	20.97	-13.52
NO	41.72	6.14

The figures in both tables above represent the mean self acceptance score associated with each octant, expressed as a deviation from the sample means of 43.78 for the first administration, and 35.52 for the second. For example, in the first administration the mean self acceptance score associated with the self for octant AP is 13.95 (-29.83 plus 43.78), for BC 32, and for HI 84.67. The unadjusted notation means that the results of each independent variable, i.e. the self and not-self preceptions, are taken separately, without adjusting them for the effects of the other, (this technique will be developed in more detail later on in this discussion).

The fundamental purpose in using the factorial analysis of variance, apart from its facility for establishing the effects of a non-linear regression, is summarised in the following statement by Kerlinger (1977):

"Factorial analysis of variance is the statistical method that analyses the independent and interactive effects of two or more independent variables on a dependent variable." (p.644).

The methodology used by this technique involves segregating the variations associated with each of the experimental variables so that any significant differences will emerge in the form of an F ratio. Furthermore, as a

result of segregating the sources of variation it is possible to determine whether the differences between the means owe their divergencies to the self, not-self or both. There is also the further possibility of 'interactive variance' which are those variations in the dependent variable attributable to the effects of the two independent variables acting together.

The two-way analysis of variance to be used to determine the significance of the experimental hypothesis is shown schematically in the following formula:

$$X = \bar{X}_t + da + db + dab + er$$

Where, \bar{X}_t = the grand mean of the self acceptance scores,

da = the deviation in X due to the self,

db = the deviation in X due to the not-self

dab = the deviation in X due to the interactive effects of the self and not-self perceptions.

and, er = the random error contribution.

The information given by the results of the analysis of variance is three-fold, and each aspect will now be discussed in some detail. The initial products of this statistic are a series of F ratios, each one pertaining to the significance a particular effect has upon the dependent variable. These can be summarised as: a) the main effects; the effect that the self and not-self perceptions have, independently, upon self acceptance. b) the joint effect; the effect the two self perceptions together, have upon self acceptance. c) the effect the interaction of the two independent variables have upon the dependent variable.

The significance of each one of these F ratios is determined by using the appropriate number of degrees of freedom in conjunction with Snedecors table. The source of these values are summarised overleaf.

Source	Degrees of Freedom
Between Rows	$r - 1$
Between Columns	$k - 1$
Interaction	$(r - 1)(k - 1)$
Within Sets	$N - rK = rk(N - 1)$
Total	$N - 1$

A further series of statistics given by this method are a number of eta and beta correlation coefficients. The former, known as the correlation ratio, represents the unadjusted effects each independent variable has upon the variance in self acceptance scores. The latter gives a standard partial regression coefficient, where the effect of the variable, other than the one to which the Beta weight applies, is held constant. A comparison of the products of these coefficients affords an indication of the separate effect of the two self perceptions.

Finally, the coefficient of determination (or R^2) is given. The size of this figure indicates the proportion of the variance in self acceptance explained by the additive effects of the self and not-self perceptions.

Results:

Table 24 below summarises the effect the different sources of variation have upon self acceptance for the first administration of the questionnaire.

Table 24:

Source of Variation	Sum of Squares	D.F.	Variance	F
Main Effects	64535.149	14	4609.654	12.371
Self	24370.825	7	3481.546	9.344
Not-Self	7875.658	7	1125.094	3.020
Interaction	1420.114	12	118.343	0.318
Residual	25337.096	68	372.604	
Total	91292.359	94	971.195	

Interpreting the F ratios as they are listed above, using fourteen and sixty-eight degrees of freedom, the F ratio of 12.371, given by the joint effect of the two self perceptions, is significant at the .001 level. Similarly, taking the individual main effects, using seven and sixty-eight degrees of freedom, the F ratios of 9.344 and 3.020 are both statistically significant; $p < .001$ for the effect of self perception, and $p = .008$ for the effect of the not-self. Finally, the F ratio of .318, representing the interactive effect of the two self perceptions, fails to reach significance at any given level.

A more detailed analysis as to the effect of the self and not-self perceptions is given by the following eta and beta correlation coefficients.

	Eta (unadjusted)	Beta (adjusted)
Self	.79	.68
Not-Self	.66	.32

Analysing the eta coefficients first; for the self the η of .79 indicates that 62%, (η^2) of the variance in the self acceptance scores is accounted for by the effect of self perception. Similarly the η of .66 indicates that 44 % of the variance is accounted for by the effect of not-self perception.

The significance of the beta coefficient is in its ability to indicate the presence of any difference in effect the two self perceptions may have upon self acceptance. The two results establish that the influence of the self is only slightly diminished, (.79 to .68) when the effect of the not-self is controlled. However, the influence of the not-self is markedly reduced, (.66 to .32) when the effect of the self is controlled.

Finally, an R^2 of .707 is given as a summary measure of the effect the self and not-self perceptions have upon self acceptance. In essence the result means that 70.7% of the variance in self acceptance is accounted for by the effect of the two self perceptions.

Table 25 below summarises the effects that the different sources of variation have upon self acceptance for the second questionnaire administration.

Using fourteen and forty-six degrees of freedom, the F ratio of 4.618, given by the joint effect of the two self perceptions, is significant

at the .001 level. Similarly, using seven and forty-six degrees of freedom, the F ratio of 6.276, given by the individual effect of the self is also significant; $p < .001$. However neither the F ratios of 0.888 or 1.106, given by the not-self and interactive self perceptions, are statistically significant at any given level.

Table 25:

Source of Variation	Sum of Squares	D.F.	Variance	F
Main Effects	25792.261	14	1842.304	4.618
Self	17524.303	7	2503.472	6.276
Not-Self	2478.725	7	354.104	0.888
Interaction	3529.635	8	441.204	1.106
Residual	18349.320	46	398.898	
Total	47671.216	68	701.047	

A more detailed analysis of the effects indicated in the above table is given by the following eta and beta coefficients.

	Eta (unadjusted)	Beta (unadjusted)
Self	.70	.72
Not-Self	.42	.25

Interpreting the eta coefficients first; for the self the η of .70 indicates that 49% of the variance in the self acceptance scores is accounted for by this particular perception. Similarly, the η of .42 given for the not-self establishes that it accounts for 18%.

The beta coefficients indicate the disproportionate nature the effect of the respective self perceptions have upon self acceptance, the influence of the self increasing when the effect of the not-self is controlled, (.70 to .72). However, there is again a marked reduction in the influence of the not-self when the effect of the self is controlled (.42 to .25).

The coefficients of determination, R^2 , summarising the effect the two self perceptions have upon the self acceptance scores when they are

taken together is .541. Consequently 54.1% of the variance in self acceptance is accounted for by the effects of the self and not-self perceptions.

Analysis:

The results of the two factorial analysis of variance indicate that for both administrations the joint effect and main effect of the self, are statistically significant; $p < .001$ for all cases. The effect of the not-self was found to be significant but only for the first administration; $p = .008$. However the interactive effect of the two self perceptions failed to reach significance for either test.

The results established that the perception of self is an extremely important construct in determining a player's level of self acceptance. The magnitude of this relationship can be seen in the size of the correlation ratios, .79 for the first administration and .70 for the second. Referring back to table 22 it will be remembered that the relationship established is curvilinear; there is a monotonic decrease in the level of self acceptance for both test administrations, AP being the most self accepting interpersonal theme with a mean divergence of -29.83 and -20.05 for each respective test. Conversely JK for the first administration and HI for the second are octants associated with self rejection, with mean divergencies of 42.89 and 55.48 respectively, (to give some indication of the magnitude of these results the maximum possible mean discrepancy is 70.22).

The results of the effect of not-self perception, for the first administration at least, establish a relationship which is the inverse to that described above. Referring back to table 23 it is clear that the monotonic relationship centres upon HI and JK, these generic themes being associated with a high level of self acceptance, each theme having a mean deviation of -32.32 and -15.38 respectively. However NO, and to a smaller degree AP and BC, are now the least self accepting themes with NO having a mean deviation of 41.72. The failure of the significance of this effect to be repeated in the second administration may have something to do with the critical component of the not-self perception, however a full discussion of this factor will be deferred until the next chapter.

Finally, looking at the additive effects that the two self perceptions have upon self acceptance, the R^2 for both administrations, 70.7% for the first and 54.1% for the second, indicate that together they account for a very large proportion of the variance in the self acceptance scores. As such they should be taken into account when any evaluation is made of this particular aspect of a player's phenomenal cognition.

4b: A Between Groups Analysis of Self Acceptance

Research Hypotheses:

H1: There is a significant difference between the teams in their players' levels of self acceptance.

H2: There will be a significant difference between the two test administrations in the players' levels of self acceptance.

Experimental Measures:

The properties of the statistical methods which will be used to determine the significance of the above proposals have been extensively reviewed in the second of these series of analyses and can be found on pages 127 to 128. As only the formulae involved in the computation of each method will be presented in this discussion, it is suggested that should the reader require clarification of either the methodology behind, or the assumptions made by these statistics, reference should be made to the above cited pages.

Between groups significance will be determined using the Kruskal-Wallis Analysis of Variance by Ranks. This non-parametric method was the chosen alternative to the parametric F test which could not be used as the teams sub-variances were found to be unequal; F Max being 2.513, $p < .05$ for the first administration, and 4.706, $p < .01$ for the second. 'H', the product of this statistic, is given by the formula:

$$H = \frac{12k}{N(N+1)}$$

With the following correction for tied ranks:

$$\frac{H}{1 - \frac{\sum T}{N^3 - N}}$$

If the results of either of the Kruskal-Wallis tests indicate that there is a significant difference between the teams, the teams which differ can be identified using the Mann Whitney 'U'. This statistic is computed using the following formula:

$$U = N_1 N_2 + \frac{N_1 (N_1 + 1)}{2} = R_1$$

and,

$$U = N_1 N_2 + \frac{N_2 (N_2 + 1)}{2} = R_2$$

The between administration significance will also be analysed using the above statistic as it has the facility for evaluating differences in population distributions with unequal sizes.

Results:

For the first questionnaire administration when the players' self acceptance scores are allocated to their respective teams the data gives an 'H', corrected for ties, of 10.756. Using four degrees of freedom this value is significant at the .05 level. Analysing this result in more detail, the Mann Whitney 'U' established that the players from the following teams have significantly different levels of self acceptance at the expression indicated.

Table 26:

	Newcastle	York
Loughborough	-	.0217
Freshers XV	.05	.01

The data for the second administration gives an 'H' corrected for ties, of 8.28. Using four degrees of freedom this value is significant

at beyond the .10 level. The Mann Whitney 'U' established the significant difference of the following team combinations, at the levels indicated.

Table 27:

	Freshers	Durham	Newcastle
Loughborough	.002	-	.0281
York	-	.05	-

The same statistic revealed that only the players from Loughborough had any significant difference in their levels of self acceptance for the two administrations; $p = .0133$.

Analysis:

The results of the Kruskal-Wallis analyses of variance entail that the initial research hypothesis is accepted. There is a significant difference between the teams in their players' levels of self acceptance for both test administrations; $p < .05$ and $.10$ respectively. The Mann Whitney 'U' established the source of these differences. For the first administration the players from Loughborough and the Freshers XV were found to be significantly more self accepting than either York ($p = .0217$), or Newcastle and York respectively, ($p = .05$ and $.01$). For the second administration the players from Loughborough and York were significantly more self accepting than either the Freshers and Newcastle ($p = .002$ and $.281$), or Durham respectively ($p = .05$). This statistic also revealed that only the Loughborough XV showed any significant difference between the two test administrations; the players becoming more self accepting $p = .0133$.

Inherent in the above findings is that there is an apparent relationship between self acceptance and team membership. This proposal can be briefly explained by reviewing the results obtained from the analyses of the between groups self and not-self perceptions, (see pages 125 and 138).

The players' perceptions of self were shown in the previous analysis to have a significant effect upon self acceptance, transposing this result onto the players' perceptions when they are controlled for team membership, there is a consistency of effect. For the first administration, as above,

the between groups analysis revealed that the players from Loughborough and the Freshers XV were significantly different to either Newcastle or York; their players' perceptions of self being more homogeneous around the 'self accepting' octant of AP (for clarification of this term please see the previous analysis). Similarly, for the second administration Loughborough was, as above, significantly different to either the Freshers or Newcastle in its players' degree of perceptual homogeneity.

The results of the not-self, though not as clear-cut, nevertheless reveal that for the first administration both Newcastle and York had a higher proportion of their players rejecting the 'socially acceptable' octants of AP, BC and NO, than any other team. The rejection of these themes was found in the previous analysis to be connected with low levels of self acceptance.

It is evident from the above discussion that there is a transference of effect from the sample population as a whole down to the individual group, in terms of the relationship between self perception and self acceptance. The delineator appearing to be the homogeneity of a team's player self perceptions. A more detailed analysis of these factors will be deferred until the next chapter.

5: An Analysis of Trait and State Anxiety

Research Hypotheses:

- H1: There is a significant difference between the teams in their players' levels of trait anxiety.
- H2: There is a significant difference between the teams in their players' levels of state anxiety.
- H3: Trait anxiety is by definition a stable construct, consequently there will be no significant difference, between the two test administrations, in each team's trait anxiety levels.
- H4: There is a significant difference between the two test administrations in each team's levels of anxiety state.

H5: There is a significant relationship between the players' levels of trait and state anxiety.

Experimental Measures:

Most of the statistical techniques which are to be used to determine the significance of the above proposals have been extensively described in previous sections. Consequently only the formula involved in the computation of each method will be given here, however page references will accompany each brief description, and should the reader require any additional information it is suggested that (s)he review the appropriate cited reference.

The initial research hypothesis will be analysed using a one way analysis of variance for independent groups. This test takes as its basic premise that the population, estimated from the sample means, "should be essentially the same as that estimated from the single observations", (Guilford and Fruchter, 1950, p.225). Therefore:

"(T)he expected value of a sample mean \bar{x} will be the population mean ... Similarly the expected value for the sample variance will be the population variance". (ibid).

Consequently:

$$E(\bar{x}_i) = \mu, \text{ for all } k \text{ treatments, and}$$

$$E(S_i^2) = \sigma^2, \text{ for all } k \text{ treatment variances.}$$

In order to establish the truth of the above proposal, the 'F' statistic is computed using the following formula:

$$f = \frac{Msb}{Msw}$$

Where, Msb = the between group variance of the players' trait anxiety scores, and, Msw = the within group variance of the players' trait anxiety scores.

The result of the between group variance is given by the formula:

$$Msb = \frac{(\sum X_1)}{n_1} + \frac{(\sum X_2)}{n_2} + \frac{(\sum X_k)}{n_k} - GT$$

Where, X = the sum of the scores in each of the groups,
 n = the number of players in each of the groups,
 X_k = the sum of the scores in the K^{th} group,
 and GT = the grand total; $\frac{(\sum X)^2}{N}$

where, X = the sum of all raw scores.

The result of the within group variance is given by the formula:

$$Msw. = X_i^2 - \frac{(\sum X_i)^2}{n_i} + \dots \dots \dots \text{to } i^{th} \text{ group}$$

Where, X_i^2 = the sum of X in the i^{th} group,
 X_i = the sum of X_i in the i^{th} group,
 and, n_i = the number of players in the i^{th} group.

In order to establish the significance of 'F', two separate degrees of freedom have to be considered. For the numerator of 'F', the corresponding degrees of freedom are given by the formula $K - 1$, where K is equal to the number of groups. Similarly, for the denominator of 'F' the number of degrees of freedom are equal to $N - K$, where N equals the number of players and K the number of groups.

Using these two values reference is then made to Snedecor's table in order to establish whether the computed 'F' exceeds the tabular value, found at the intersection of the respective degrees of freedom.

Should the result of either one of the analyses of variance indicate that there is a significant difference between the groups, then a method has to be used to identify the source of this difference. The technique which will be used should this eventuality occur is the Tukey test, 'T', the product of which, is given by the following formula:

$$T = (q) \times \sqrt{\frac{\text{Var Within}}{N}}$$

Where, q = a tabular value found using the total number of means and the degrees of freedom associated with the denominator of the 'F' test.

Var With = the within group variance of the 'F' test,
and N = the number in each group or the number of scores from which each mean is calculated.

If the resulting 'T' value is smaller than the difference between the two means under scrutiny, then the means can be said to be significantly different, (Cohen and Holliday op cit).

The between group significance of state anxiety will be determined using the Kruskal Wallis Analysis of Variance by Ranks (see pages 127 and 128). This non-parametric method is used as the teams sub-variances were found to be unequal for the second administration; F_{Max} being 4.03, $p < .05$, (it must be noted however that although F_{Max} failed to reach significance for the first administration, in order to maintain consistency, the non-parametric method will be used on both distributions). 'H', the product of this statistic, is given by the formula:

$$H = \frac{12k}{N(N+1)} = 3(N-1)$$

with the following correction for tied ranks:

$$1 - \frac{\sum T^3}{N^3 - N}$$

Should the results of either of the Kruskal Wallis analyses indicate that there is a significant difference between the teams, the source of these differences can be identified using the Mann Whitney 'U', (see page 128). This statistic is computed using the following formula:

$$U1 = N1 N2 + \frac{N1(N1+1)}{2} = R1$$

and,

$$U2 = N1 N2 + \frac{N2 (N2 + 1)}{2} = R2$$

This method will also be used to determine the stability of the teams trait and state anxiety scores.

The final proposal will be investigated using a coefficient of correlation. The product of this statistic, usually written as 'r', is a summary measure which indicates both the strength and direction of an association between two variables. In different situations 'r' can vary from between plus one, which would indicate that there was a perfect association between the two variables, through zero, indicating the absence of any relationship, to minus one, which would indicate a perfect negative, or inverse relationship between the two variables.

The correlation method to be used here is the Pearson Product Moment correlation coefficient, the result of which is given by the formula:

$$r = \frac{n\sum XY - (\sum X)(\sum Y)}{\sqrt{n\sum X^2 - (\sum X)^2 \quad n\sum Y^2 - (\sum Y)^2}}$$

Where, r = the correlation coefficient,

n = the number of pairs of scores,

X = each of the scores on the first variable, (A-Trait)

and, Y = each of the scores on the second variable, (A-State).

The meaning of 'r' can be interpreted in two ways: (i) is it significant; and (ii) how much confidence can one have in the strength of the relationship indicated? The significance of 'r' is established using the appropriate degrees of freedom, given by the formula $N - 2$ (where N equals the total number of pairs of scores), in conjunction with pre-defined tabular values.

The strength of the relationship can be judged using the guide proposed by Cohen and Holliday, (1978):

r	Meaning
0.00 - 0.19	A very low correlation.
0.20 - 0.39	A low correlation.
0.40 - 0.59	A modest correlation.
0.69 - 0.89	A high correlation.
0.90 - 1.00	A very high correlation.

Inverse or negative correlation coefficients are interpreted in exactly the same manner.

One additional statistic will be computed which, although not directly related to any one of the research hypotheses listed above, will mean that a more detailed analysis of each teams trait and state anxiety scores is possible.

Normative data will be computed by converting both sets of anxiety raw scores into T-Scores, both for the sample as a whole and for each of the respective teams. The purpose of this transformation is three-fold; (i) comparisons can be made with Spielberger et al's (1970) published norms, (ii) comparisons between teams can be made, and (iii) comparisons between test administrations can be made.

The raw scores will be converted into T-Scores using the formula:

$$T = 10 \frac{(X - \bar{X})}{\text{S.D.}} + 50$$

Where, X = a players trait or state anxiety score,

\bar{X} = the mean of the distribution to which that player belongs,

S.D. = the standard deviation of the distribution.

The effect of the T-Scale is essentially one of normalising any distribution so enabling comparisons to be made. However, the additional advantage of this particular scale is in its sensitivity to extreme scores. In a normal distribution 99.74% of the scores lie between ± 3 standard deviations from the mean; the T-Scale however has a range of ± 5 standard deviations, with a fixed mean of fifty. It is therefore sensitive to the extremes within any population, (Cohen and Holliday, 1978).

Results:

Tables 27 and 28 below summarise the results of the two analyses of variance which measured the between group significance of trait anxiety.

Table 27: First Questionnaire Administration

Source of Variation	Sum of Squares	D.F.	Variance	F
Between Groups	352.252	4	88.063	1.768
Within Groups	4531.408	91	49.796	
Total	4883.660	95		

Using four and ninety-one degrees of freedom the 'F' ratio of 1.768 falls below the tabular expression of 2.46 and so fails to reach significance at the .05 level.

Table 28: Second Questionnaire Administration

Source of Variation	Sum of Squares	D.F.	Variance	F
Between Groups	359.26	4	89.815	1.968
Within Groups	2921.552	64	45.649	
Total	3280.812	68		

Using four and sixty-four degrees of freedom the 'F' ratio of 1.968 falls below the tabular expression of 2.51 and so fails to reach significance at the .05 level.

The players state anxiety scores, when allocated to their respective teams, gave an 'H', corrected for ties, of 11.532, for the first questionnaire administration. Using four degrees of freedom this value is significant at the .05 level. Analysing this result in greater detail the Mann Whitney 'U' test established that players from both the Loughborough and Freshers XV had significantly lower levels of state anxiety for the following team combinations, at the levels indicated.

Table 29:

	Loughborough	Durham	York
Freshers XV	.018	.05	.01
Loughborough	-	-	.068

The players state anxiety scores for the second administration gave an 'H', corrected for ties, of .537. Using three degrees of freedom this value fails to reach the .10 tabular expression of 6.251.

The stability of trait anxiety as a psychological construct was indicated by the results of the Mann Whitney test. 'U' failing to indicate the presence of any significant differences, between the two test administrations, in the teams' levels of trait anxiety.

Conversely, both Loughborough and Newcastle had a significant difference between the two test administrations, in their players' levels of anxiety state; $p = .024$ and $.01$ respectively.

The results of the Pearson correlation established that there is a strong, positive relationship between the players' trait and state anxiety scores for both test administrations; 'r' being equal to $.557$ ($p < .01$), and $.556$ ($p < .01$) respectively.

Finally, tables 30 and 31 overleaf illustrate the normalised T-distributions of each teams trait and state anxiety scores for both administrations. The results for an undergraduate sample, taken from Spielberger's published norms, has been included as a comparative measure. This particular group was chosen as it has a close affinity with the background of the experimental sample.

Analysis:

As the F ratios obtained from the two analyses of variance failed to reach significance at any level for either administration, the initial experimental hypothesis is rejected. Consequently there is no significant difference between the teams in their players' levels of trait anxiety. Conversely, the Kruskal-Wallis test established that there was a significant difference between the teams in their players' levels of state anxiety for the first administration; $p < .05$. The Mann Whitney 'U' indicated

Table 30: STAI Normalised Trait and State T-Scores for the First Administration of the Questionnaire

Raw Score	Sample Pop.		Undergrads.*		Loughboro ¹		Durham		Freshers		Newcstl.		York	
	Tr	St	Tr	St	Tr	St	Tr	St	Tr	St	Tr	St	Tr	St
20	-	31	23	21	-	-	-	-	-	32	-	30	-	-
21	-	32	26	26	-	33	-	-	-	-	-	-	-	-
22	-	33	27	29	-	34	-	-	-	-	-	-	-	-
23	35	30	32	-	35	-	33	-	-	-	-	-	-	-
24	31	36	32	35	35	-	-	-	-	38	-	35	-	-
25	32	38	35	38	36	-	-	-	-	39	-	-	-	-
26	34	-	37	40	36	-	-	-	-	-	-	-	-	-
27	35	39	38	40	38	40	-	-	-	42	35	-	-	-
28	37	40	39	40	40	-	-	-	34	44	-	40	-	36
29	38	41	41	43	41	42	36	-	36	45	38	41	-	-
30	39	42	43	44	42	43	37	-	38	47	40	-	37	-
31	41	43	44	46	44	44	39	-	-	-	-	44	38	36
32	42	44	46	47	45	-	40	42	42	50	43	45	40	-
33	45	46	47	48	46	46	-	-	44	51	44	46	41	41
34	45	47	48	49	48	-	-	44	46	53	-	-	-	-
35	46	48	49	50	49	-	44	45	-	54	47	49	43	43
36	48	49	50	51	50	49	45	46	-	56	49	50	-	-
37	49	50	51	52	51	50	-	47	52	-	50	52	46	-
38	51	51	51	53	53	51	47	-	54	59	52	53	47	-
39	52	52	52	54	54	52	49	49	56	60	53	54	48	47
40	53	53	53	54	55	-	50	-	58	62	65	-	50	48
41	55	54	54	56	57	54	-	-	60	-	-	-	51	-
42	56	54	55	57	58	56	-	-	-	-	-	58	-	50
43	57	57	56	58	59	57	54	-	64	-	59	59	-	-
44	59	-	57	59	61	-	-	-	-	-	-	-	-	-
45	60	59	58	60	62	-	-	-	68	-	-	-	-	54
46	62	60	59	60	63	-	-	-	-	-	63	63	-	-
47	63	61	60	61	65	-	-	57	-	-	-	-	58	-
48	64	62	61	62	-	60	-	-	-	-	66	-	60	57
49	66	-	62	63	-	-	-	-	-	-	-	-	-	-
50	67	64	62	63	69	64	-	61	-	76	-	-	-	59
51	69	65	63	64	-	-	64	62	-	-	-	-	-	-
52	70	-	64	65	-	-	-	-	-	-	72	-	-	-
53	71	68	65	66	-	-	-	-	-	-	-	-	66	62
54	73	69	66	66	74	68	68	-	-	-	-	-	-	63
55	74	-	67	67	-	-	-	-	-	-	-	-	-	-
56	76	71	68	68	-	-	-	-	-	-	-	76	70	-
57	77	72	69	68	-	71	-	68	-	-	-	-	-	-
63	-	79	70	71	-	-	-	-	-	-	-	-	-	72

*These figures were obtained from Spielberger et al's (1970) published norms (n = 253).

Table 31: STAI Normalised Trait and State T-Scores for the Second Administration of the Questionnaire

Raw Score	Sample Pop.		Undergrads.*		Loughboro'		Durham		Freshers		Newcastl		York
	Tr	St	Tr	St	Tr	St	Tr	St	Tr	St	Tr	St	Tr
20	-	-	23	21	-	-	-	-	-	-	-	-	-
21	-	31	26	-	34	-	-	-	-	-	-	-	-
22	-	33	27	29	-	-	-	-	-	-	-	34	-
23	-	34	30	32	-	36	-	-	-	-	-	-	-
24	32	-	32	35	34	-	-	-	-	-	-	-	-
25	-	37	35	38	-	-	-	-	-	-	-	38	-
26	35	38	37	40	36	-	-	-	36	36	34	39	-
27	-	40	38	40	-	-	-	36	-	37	-	41	-
28	38	-	39	41	-	-	-	-	40	-	38	-	-
29	40	-	41	43	41	43	35	-	-	-	-	-	-
30	41	44	43	44	42	44	-	43	43	-	-	-	-
31	42	45	44	46	-	-	-	-	45	43	42	-	40
32	44	46	46	47	-	-	39	47	47	44	47	-	-
33	45	48	47	48	47	48	-	-	-	46	46	48	-
34	47	49	48	49	-	49	42	-	51	47	47	50	43
35	48	50	49	50	50	50	-	54	-	-	49	-	45
36	50	52	50	51	51	51	-	57	54	50	-	52	-
37	51	53	51	52	-	52	-	59	56	-	52	-	47
38	53	54	51	53	54	53	-	-	-	53	54	55	-
39	54	56	52	54	55	54	-	64	60	-	55	56	-
40	55	-	53	55	57	-	-	-	-	-	-	-	51
41	57	58	54	56	58	-	51	-	63	57	-	-	-
42	58	-	55	57	-	-	52	-	-	-	-	-	54
43	60	61	56	58	-	59	-	-	-	-	61	-	-
44	61	62	57	59	-	-	54	-	69	-	-	63	-
45	63	64	58	60	64	61	-	-	-	63	-	-	-
46	64	65	59	60	66	-	-	-	-	-	66	65	-
47	65	66	60	61	-	64	-	-	-	-	68	-	-
48	67	-	61	62	-	-	-	-	-	-	-	-	61
49	68	-	62	63	70	-	61	-	-	-	-	-	-
50	-	-	62	63	-	-	-	-	-	-	-	-	-
53	74	74	65	66	-	-	66	-	-	75	-	-	-
54	76	-	67	67	-	-	-	-	-	-	-	-	69
57	-	80	69	68	-	75	-	-	-	-	-	-	-

* These figures were obtained from Spielberger et al's (1970) published norms (n = 253)

the source of these differences; the Freshers XV having a significantly lower level of anxiety state than either Loughborough ($p = .018$), Durham ($p < .01$) or York ($p < .01$), similarly Loughborough was found to be significantly lower than York ($p = .068$). The results for the second administration failed to reach significance at any level.

The results regarding the stability of trait and state anxiety as psychological constructs were found to be in keeping with Spielberger's theory. There was no significant difference between the two test administrations in any teams level of anxiety trait, however both Loughborough and Newcastle had significantly lower levels of state anxiety; $p = .024$ and $.01$ respectively. The fundamental difference in the temporal properties of the two constructs can be further illustrated by looking at the reliability of the measures. Using a Pearson 'r', test-retest reliability for the players' anxiety trait was found to be $.744$, for anxiety state $.436$ ($p < .01$ for both results). The lower 'r' for anxiety state was expected as it:

"should reflect the influence of unique situational factors existing at the time of testing". (Spielberger et al 1970 p.9).

The final statistical analysis established that there was a significant relationship between the players levels of trait and state anxiety for both questionnaire administrations; 'r' being equal to $.557$ ($p < .01$) and $.556$ ($p < .01$) respectively. Moreover, the size of both coefficients are in keeping with those reported by Spielberger et al who found that the trait-state correlations "for males varied between $.37$ and $.67$, with a median 'r' of $.47$ " (1970 p.12).

The illustration, by the two T-Scales, of the distribution of the anxiety scores gives a graphic representation of the initial findings of this analysis.

For the first administration it is apparent from table 30 that the experimental sample as a whole have a higher elevation in both trait and state anxiety, than Spielberger et al's undergraduate norms, however there is a high degree of similarity between these two samples anxiety scores, upto and around the mean of fifty T-points, for the second administration, although after this point the two distributions diverge.

The between team differences are more discernible; for the first

administration the Freshers XV and Loughborough have the lowest means for both trait and state anxiety, corresponding in fact to the undergraduates for trait anxiety. Also both of these teams have a number of players who fall in the lower extremities of the anxiety distributions, with a series of scores beginning at -1.7 and -1.8 standard deviations from the mean respectively, a situation which illustrates why these two teams were shown to have significantly lower levels of state anxiety by the Mann Whitney 'U'. The upper-limits of the two anxiety distributions however, are heavily populated by both York and Durham, with York having the more extreme distribution of T-Scores.

In terms of the Newcastle players, although not significantly different to any of the other four teams, their trait and state T-distributions represent something of a 'middle ground' between the concentration, particularly about the lower extremities of the A-trait and A-state scales, of the Freshers XV and to a lesser extent Loughborough, and the more diffuse distribution, centred about the far higher scores, of both Durham and York. In general the Newcastle distribution is centred about the middle range of anxiety scores (between 30 and 40, plus and minus one standard deviation from the mean) although there is a difference between the trait and state T-Scores: the players having a far greater deviation in terms of their state scores a distribution which, as can be seen from table 30, represents the full range of affective disposition.

For the second administration both Loughborough and Newcastle have the lowest mean anxiety T-scores, with their trait and state T-distributions, upto the fifty T-point mean, being almost identical to that of the undergraduates. Again both York and Durham are characterised by a more extreme range of T-scores for trait anxiety, although there is a reduction in the range of Durham's anxiety state scores.

6: An Analysis of the Effect the Phenomenal Self-Schema has upon the Relationship Between Trait and State Anxiety

Research Hypotheses:

H1: There is a significant relationship between the perception of self and trait anxiety.

- H2: There is a significant relationship between not-self perception and trait anxiety.
- H3: There is a significant relationship between self-acceptance and trait anxiety.
- H4: The phenomenal perceptions of the players' self-schemata will have a significant effect upon the relationship between trait and state anxiety.

In order to establish the significance of H4 above it is necessary to analyse the following subsidiary hypotheses:

- Hi: The relationship between trait and state anxiety is significantly affected when the influence of the players' self perceptions are controlled.
- Hii: The relationship between trait and state anxiety is significantly affected when the influence of the players' not-self perceptions are controlled.
- Hiii: The relationship between trait and state anxiety is significantly affected when the influence of the players' levels of self-acceptance are controlled.

Experimental Measures:

The significance of the relationships between the phenomenal self-percepts and trait anxiety will be determined using a correlation statistical technique. However, due to the distribution of the data available for the first two hypotheses, in that it assumes a curved rather than a linear regression between the variables, two different methods will be used, H1 and H2 will be analysed using a correlation ratio, H3 a Pearson correlation.

The concept of the rectilinearity of regression has been extensively discussed in a previous section in relation to the use of factorial

analysis of variance; consequently no detailed account of its effect upon the relationship between the independent and dependent variables will be given here. However, should any additional information be required it is suggested that reference is made to pages 149 to 150.

The correlation ratio, or eta, overcomes the limitation of linearity by using mean deviations as the method by which to process the regression between two variables. It assumes that the best prediction of trait anxiety in any given octant, is the mean level of trait in any octant column. Consequently, if there were no correlation between trait anxiety and self perception, the mean octant deviation would be the same as that of the sample mean. It follows therefore that what is of interest is how far these mean octant values of trait anxiety deviate from the grand mean. For example, using part of the data available for the correlation between the players' perceptions of self and trait anxiety the following values emerge. The grand mean of the samples A-Trait scores is 37.50, and it is from this figure that the mean octant deviations used for the computation of eta are obtained. The players are grouped on the basis of their respective self perceptions and every octant's mean level of A-Trait computed. These figures are then compared with the grand mean and any differences used to represent the degree of mean deviation. For instance taking the anxiety scores associated with octant AP, 21 players have this interpersonal theme as representing their perception of self. The mean level of A-Trait associated with this group of players is 33.36 which, when compared with the grand mean, gives a deviation of -4.14. This process is completed for each generic theme until eight deviations are obtained, the size of these deviations determining the degree of association between the two variables.

The product of these series of deviations is given by the formula:

$$r_{\eta yx} = \sqrt{\frac{\sum nc (Y' - \bar{Y})^2}{N - 1}}$$

Where, $r_{\eta yx}$ = the regression of trait anxiety on self/not-self perception,

Y' = the mean level of trait anxiety in each octant column,

\bar{Y} = the mean of all octant columns,

$\sum nc$ = the sum of squared deviations multiplied by the number of cases in that octant column,

N = the number of players involved in the analysis.

The significance of the result of the correlation ratio is determined by using its methodological affinity to the analysis of variance. The figure given by $\sum nc (Y' - \bar{Y})^2$, represents the between group sum of squares, since its computation is based upon the sum of the squared deviations from the grand mean. The total sum of squares is given by the product of the formula $(N - 1) Sy^2$, where N equals the total number of players and Sy^2 the standard deviation of the whole sample. The within group sum of squares can be calculated by simply subtracting the total from the between group sum of squares.

The corresponding degrees of freedom are given by the formulae:

$DfB = K - 1$, where K is equal to the number of octants, and;

$DfW = N - K$, where N is equal to the number of players and K the number of octants.

By using the above process it is possible to construct an analysis of variance summary table; the significance of the obtained F ratio being equivalent to that of η^2 .

The Pearson correlation, which will be used to establish the significance of the relationship between self acceptance and trait anxiety (H_3), has been extensively described in a previous analysis, and the reader is advised to refer to pages 163 and 164 for a detailed account of its statistical properties. Briefly r , the product of this linear correlation coefficient, is given by the formula:

$$r = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{(n \sum X^2 - (\sum X)^2)(n \sum Y^2 - (\sum Y)^2)}}$$

The significance of each one of the subsidiary hypotheses will be determined using a single statistical technique, an analysis of covariance. However, in order to understand how this particular statistical technique quantifies the effect the self-schema has upon the relationship between trait and state anxiety, it is necessary to discuss, in some detail, the methodology which led to its use.

Initially the main experimental hypothesis was to be analysed using a four-way factorial analysis of variance, the properties of which have

been extensively discussed previously (see pages 149 to 151). Using this design the effect each independent variable has upon state anxiety is assessed independently, and in a hierarchical manner. However, this method was rejected for two reasons, the first computational, the second conceptual.

The computational anomaly arose when the number of players in each of the cells, partitioned by the effect of this particular factorial design, were analysed. It transpired that many of these cells were either empty or contained one player at the most. Consequently the effect of these empty or 'almost empty' cells was to reduce, artificially, the within-group error term, i.e. a cell which only contains one player will have a deviation from the mean within that cell of zero. The implication of this situation is summarised by Ferguson(1976) when he states that:

"One object of experimental design is to ensure that the results observed may be attributed within limits of error to the treatment variable and to no other causal circumstances." (p.346, emphasis added).

Consequently, as this design minimalised the 'limits of error' by default, the resulting F ratios and coefficients of determination, although significant, could not be used and interpreted with any degree of confidence.

The second reason for the rejection of this method, and which led to the preference of the covariance design, involved the relationship between trait and state anxiety itself. Spielberger et al (1970), describe this as:

"(A)nalogous to the concepts of kinetic and potential energy in physics. State anxiety, like kinetic energy, refers to an empirical process or reaction taking place at a particular moment in time Trait anxiety, like potential energy, indicates differences in the strength of a latent disposition to manifest a certain type of reaction In general it would be expected that those who are high in A-Trait would exhibit A-State elevations more frequently than low A-Trait individuals because they tend to react to a wider range of situations as dangerous or threatening." (p3).

It is evident from the above statement that it is important to conceptualise the two temporal components of anxiety as an inter-related unit: The degree of anxiety state elicitation being the product of a

person by situation interaction. However, using a factorial analysis of variance, which assesses the independent effects that firstly the components of the self-schema and secondly that A-Trait have upon the intensity of A-State, would violate the trait-state relationship proposed by Spielberger et al above, as the effect that the players' self perceptions have upon A-Trait and as a consequence A-State are ignored. Thus one half of the affective pairing, the 'latent disposition' to respond, is lost. Because of this situation it was decided to analyse the relationship between trait and state anxiety when the components of the self-schema were statistically controlled. In essence this experimental design generated a hypothesis of no differences which proposed that the regression between trait and state anxiety would be homogenous for all the generic themes around the interpersonal circumplex and for any degree of self acceptance. The technique which could accommodate this proposal was an analysis of covariance, and its use ensured that there would be a sufficient number of players in each of the cells to establish accurate error limits.

The function of a covariate analysis is summarised by Kerlinger (1973) in the following statement:

"What an analysis of covariance does is to test the significance of the differences among means after taking into account or controlling initial mean differences between the experimental groups on a so-called covariate, a variable that is correlated with the dependent variable", (p.647).

The analysis of covariance therefore, will correct the trait anxiety measures for the effect of the self-schema by removing the variance due to either self or not-self perception, or self acceptance. The removal of variance being dependent upon which aspect of the phenomenal self percept is being controlled. However, due to the complexity of this computation, the data for this design will be processed using the Manova multivariate analysis offered by the SPSS computer programme⁸. This particular statistic gives the following results: F ratios are given for each analysis, from which it is possible to establish the significance that controlling a particular aspect of the self-schema has upon the relationship between trait and state anxiety. Similarly, because the Manova design normalises the intercept (the point where the regression line intercepts the state anxiety axis) of trait on state anxiety, a series

of beta coefficients, one for each octant or self acceptance discrepancy unit, is given. It will be remembered that a null hypothesis was proposed earlier which stated in effect that $H_0 = B_1 = B_2 = \dots B_k$, which assumes that the regression of trait upon state will not be affected by controlling any one of the self percepts. A comparison of the coefficients (B_1, B_2 etc), affords a test of the homogeneity of the regression slopes.

The final statistic, R^2 , is computed using the sum of squares given for each analysis; the size of this measure is found using the following formula:

$$R = \frac{SSy - SSerror}{SSy}$$

Where, SSy = the total sum of squares,

and SS error = the within and residual sum of squares.

The product of this statistic indicates the proportion of the variance in state anxiety, explained, when the effect of the self schema, upon trait anxiety, is controlled.

Results:

Using eta, the correlation between the players' perceptions of self and trait anxiety was found to be .535 for the first questionnaire administration, and .491 for the second. A more detailed illustration of the nature of these two octant/anxiety relationships is given in table 32 overleaf. From the table it is apparent that for both administrations, the relationship between the two variables assumes an inverted 'U' shape. The significance of these two non-linear regressions are determined by referring to the analysis of variance summary tables, again illustrated overleaf. Using 7 and 88 degrees of freedom, the F ratio of 5.032 is greater than the tabular expression of 2.87, and is therefore significant at beyond the .01 level. (Table 33).

Table 32: The Self

Octants	Unadjusted Mean Deviations for A-Trait	
	First Administration	Second Administration
AP	-4.14	.95
BC	-.38	-3.98
DE	.64	3.71
FG	-1.67	5.16
HI	7.67	5.16
JK	7.22	1.16
LM	2.60	5.96
NO	-3.40	-2.39

Table 33: First Questionnaire Administration

Source of Variation	Sum of Squares	D.F.	Mean Squares	F
Between Groups	1384.43	7	197.776	5.032
Within Groups	3458.632	88	39.303	
Total	4843.062	95		

Table 34: Second Questionnaire Administration

Source of Variation	Sum of Squares	D.F.	Mean Square	F
Between Groups	811.762	7	115.966	2.772
Within Groups	2551.728	61	41.832	
Total	3363.490	68		

Using 7 and 61 degrees of freedom the F ratio of 2.772 is greater than the tabular expression of 2.17, and is therefore significant at beyond the .05 level.

The relationship between not-self perception and trait anxiety gave a correlation ratio equal to .445 for the first questionnaire administration and .415 for the second. Table 35 overleaf illustrates the shape of these not-self/anxiety regressions.

Table 35: The Not Self

Octants	Unadjusted Mean Deviations for A-Trait	
	First Administration	Second Administration
AP	4.05	-6.84
BC	5.42	.16
DE	.85	1.41
FG	-2.78	-.58
HI	-2.42	-2.09
JK	-1.55	-.84
LM	3.85	-.84
NO	4.85	11.83

The significance of the two 'eta' coefficients are determined using the analysis of variance summary tables given below:

Table 36: First Questionnaire Administration

Source of Variation	Sum of Squares	D.F.	Mean Square	F
Between Groups	956.827	7	136.690	3.072
Within Groups	3871.567	87	44.5	
Total	4828.394	94		

Using 7 and 87 degrees of freedom the F ratio of 3.072 is greater than the tabular expression of 2.87, and is therefore significant at beyond the .01 level.

Table 37: Second Questionnaire Administration

Source of Variation	Sum of Squares	D.F.	Mean Square	F.
Between Groups	580.144	7	82.877	1.816
Within Groups	2783.346	61	45.629	
Total	3363.490	68		

Using 7 and 61 degrees of freedom the F ratio of 1.816 falls below the tabular expression of 2.17. and thus fails to reach significance at the .05 level.

The results of the relationship between self acceptance and trait anxiety gave a Pearson 'r' equal to .419 for the first questionnaire administration, and .590 for the second. Using 94 and 67 degrees of freedom respectively, the two coefficients are both significant at beyond the .01 level.

The series of results obtained, when the relationship between trait and state anxiety is controlled for the effect of the self schema, are presented sequentially below. Covariance summary tables, the size of R^2 and the homogeneity of the beta coefficients are all given for each self percept by anxiety combination.

Table 38: Trait Anxiety Controlled for the Effect of Self Perception;
First Questionnaire Administration

Source of Variation	Sum of Squares	D.F.	Mean Square	F
Within + Residual	5038.87947	86	58.59162	
Constant	129685.26316	1	129685.26316	2213.375
Trait Within Self	2692.85737	8	328.73217	5.611
Total	137416.99990	95		

Using 8 and 86 degrees of freedom, the F ratio of 5.611 is significant at beyond the .001 level, the combination of the sum of squares give an R^2 of .963 or 96.3%; the homogeneity of the beta coefficients, associated with each octant, can be determined by referring to Table 39 overleaf.

From the table it is evident that there is some disparity in the slopes of the regressions, represented by the difference in magnitude of the eight coefficients. This suggests that the effect of controlling the trait-state anxiety relationship for the influence of self perception is not homogeneous around the interpersonal circumplex. The results for the second administration follow table 39.

Table 39:

Octant	Beta Coefficient*
AP	.620
BC	.630
DE	.594
FG	.534
HI	.707
JK	.659
LM	.707
NO	.640

* Three significant figures.

Table 40: Trait Anxiety Controlled for the Effect of Self Perception;
Second Questionnaire Administration

Source of Variation	Sum of Squares	D.F.	Mean Square	F
Within + Residual	2116.70575	51	41.50403	
Constant	72732.01667	1	72732.01667	1752.408
Trait Within Self	1164.27758	8	145.53470	3.507
Total	76013.00000	60		

Using 51 and 8 degrees of freedom, the F ratio of 3.507 is significant at the .003 level; the sum of squares give an R^2 of .972 or 97.2%; the homogeneity of the beta coefficients can be determined by referring to table 41 below:

Table 41:

Octant	Beta Coefficient
AP	.594
BC	.567
DE	.643
FG	.449
HI	.511
JK	.594
LM	.588
NO	.536

From the table, it is evident that there is some degree of discrepancy in the regression of state on trait anxiety; around the interpersonal circumplex, a factor which indicates the heterogeneity of the effect that self perception has upon the affective relationship.

The effect on the trait-state anxiety relationship of controlling not-self perception is considered in Table 42.

Table 42: Trait Anxiety Controlled for the Effect of Not-Self Perception; First Questionnaire Administration

Source of variation	Sum of Squares	D.F.	Mean Square	F
Within + Residual	4166.74804	86	48.45056	
Constant	129685.26316	1	129685.26316	2676.652
Trait Within Not-Self	3501.98880	8	437.74860	9.035
Total	137353.99990	95		

Using 86 and 8 degrees of freedom, the F ratio of 9.035 is significant at beyond the .001 level; the sum of squares give an R^2 of .969 or 96.9%; the homogeneity of the beta coefficients can be determined by referring to Table 43.

Table 43:

Octant	Beta Coefficient
AP	.538
BC	.757
DE	.682
FG	.688
HI	.651
JK	.762
LM	.459
NO	.950

From the table the difference in magnitude of the beta coefficients around the interpersonal circumplex, suggests that controlling the not-self has a heterogeneous effect upon the relationship between trait and state anxiety.

The results for the second administration are given below.

Table 44: Trait Anxiety Controlled for the Effect of Not-Self Perception;
Second Questionnaire Administration

Source of Variation	Sum of Squares	D.F.	Mean Square	F
Within + Residual	2050.70809	51	40.20996	
Constant	72732.01667	1	72732.01667	1808.806
Trait Within Not-Self	1230.27525	8	153.78441	3.825
Total	76013.00001	60		

Using 51 and 8 degrees of freedom, the F ratio of 3.825 is significant at the .001 level; the sum of squares give an R^2 equal to .973 or 97.3%; the beta coefficients associated with this particular covariate analysis are illustrated in Table 45 below:

Table 45:

Octant	Beta Coefficients
AP	.500
BC	.540
DE	.518
FG	.546
HI	.592
JK	.507
LM	.561
NO	.741

The difference in the regressions, indicated by the fluctuations in size of the beta coefficients, again suggests that controlling the not-self has a heterogeneous effect upon the relationship between trait and state anxiety.

The effect upon the anxiety regression of controlling self acceptance is summarised in Table 46.

Table 46: Trait Anxiety Controlled for the Effect of Self Acceptance;
First Questionnaire Administration

Source of Variation	Sum of Squares	D.F.	Mean Square	F
Within + Residual	4726.05096	83	56.94037	.
Constant	129685.26316	1	129685.26316	2277.563
Trait Within Self				
Acceptance	2942.68588	11	267.51690	4.698
Total	127353.99990	95		

Using 83 and 11 degrees of freedom, the F ratio of 4.698 is significant at beyond the .001 level; the sum of squares give an R^2 equal to .966, or 96.6%; the beta coefficients are illustrated in Table 47 below.

Table 47:

Discrepancy	Beta Coefficient
0	.638
23	.632
26	.544
41	.588
44	.634
66	.514
81	.675
84	.701
91	.540
105	.726
114	.587

From the above table the difference in size of the beta coefficients again indicates that the regression between trait and state anxiety is not homogeneous when the degree of self acceptance is controlled. The results for the second administration are given overleaf.

Using 49 and 10 degrees of freedom, the F ratio of 4.489 is significant at beyond the .001 level; the sum of squares give an R^2 of

of .977, or 97.7%; the beta coefficients associated with this computation are illustrated in Table 49 below.

Table 49: Trait Anxiety Controlled for the Effect of Self Acceptance;
Second Questionnaire Administration

Source of Variation	Sum of Squares	D.F.	Mean Square	F
Between + Residual	1718.4084	49	34.94711	
Constant	72732.01667	1	72732.01667	2081.203
Trait Within Self Acceptance	1568.57492	10	156.85749	4.488
Total	76012.99999	60		

Table 49:

Discrepancy ⁹	Beta Coefficient
0	.815
23	.829
26	.481
41	.727
44	.852
66	.720
68	.926
81	.780
84	.594
91	.694

From the table it is apparent that controlling the degree of self acceptance has, once again, a heterogeneous effect upon the regression between trait and state anxiety.

Analysis:

The results of the correlation coefficients, used to establish both the strength and direction of any relationships which exist between the

phenomenal percepts of the self schema and trait anxiety, all reached significance, apart from the coefficient which resulted from the second administration not-self.

However, although the results indicate the significance of almost all of the relationships (for both administrations), proposed by the initial experimental hypotheses, the shape of the regressions associated with each coefficient were found to be fundamentally different.

The relationship between self perception and trait anxiety, (η being equal to .535, $p < .01$, for the first test administration and .491, $p < .05$ for the second), revealed that the octant/anxiety regression followed an inverted 'U' shape around the interpersonal circumplex, with the level of trait anxiety increasing from AP, reaching its maximum at HI, and then reducing accordingly with each subsequent octant. Conversely, the relationship between the not-self and trait anxiety, (η being equal to .445, $P < .01$, for the first administration), revealed that the octant/anxiety regression was 'U' shaped; the increase in trait anxiety beginning at HI and FG, reaching its maximum at NO, and then reducing with each subsequent octant. The final coefficients, the product of the relationship between self acceptance and trait anxiety, both established that there is a positive, linear relationship, between the two variables; 'r' being equal to .419 for the first questionnaire administration and .590 for the second, both results being significant at beyond the .01 level.

Due to the complexity of the results which emerged from the series of covariate analyses, for both administrations, discussion at this point will be kept to a minimum, and this somewhat brief analysis will concentrate on using the results, en masse, in an attempt to further illustrate the statistical methodology and its relationship to the self schema.

The results of all the subsidiary analyses entail an acceptance of the proposed experimental hypothesis: the phenomenal perceptions of the players' self schemata do have a significant effect upon the relationship between trait and state anxiety. However, what is of major interest is the apparent heterogeneous nature of these effects. In every analysis controlling the effect of each percept within the self schema resulted in a series of different beta coefficients. A factor which indicates

that both the octants around the interpersonal circumplex, and also the degree of self acceptance, have a non-uniform effect upon the anxiety regression, (it will be remembered that the size of the beta coefficient indicates the steepness of the regression slope, in essence the steeper the slope the higher are the levels of trait and state anxiety; as the intercept is normalised it is an easy matter to contrast the different betas).

There is however a high degree of uniformity in the proportion of the variance in the state anxiety scores explained by trait anxiety, when the effects of the self schema were controlled. In each case R^2 was found to be greater than 95%.

Footnotes

1. Cochran (1954) recommends that for χ^2 tests with df larger than 1, fewer than 20% of the cells should have an expected frequency of less than 5, and no cell should have an expected frequency of less than 1. The data available for this analysis could not fulfill either of these criteria. For example, using the data as presented in Table 5 (see page 122), 85% of the expected frequencies fall below 5, and 6 below 1, making the use of χ^2 test impossible. Siegal (1956) states:

"If these requirements are not met by the data in the form in which they were originally collected, the researcher must combine adjacent categories as as to increase the E_{ij} 's in the various cells." (p.178).

2. The formula by which the raw octant scores derived from the I.C.L. are converted into Dom and Lov scores can be found on page 78. Once computed these two values are converted into standard scores using tabular values published by the Kaiser Foundation, (see Leary (1957) Table 55 p.495).
3. The method of establishing a players discrepancy score is explained in more detail on pages 80-81 or in Leary pages 498-499.
4. One of the assumptions to be met when using the parametric analysis of variance is that the variance of the sample sub-groups is equal. This can be checked by means of a test of the homogeneity of variance. This involves computing individual variances for each of the sub-groups, and then dividing the largest variance by the smallest. The result is treated as an F value, and interpreted in the usual way. Sub-group variance is given by the formula:

$$\text{Var} = \frac{\sum x^2 - \frac{(\sum x)^2}{n}}{n - 1} \quad (\text{Cohen and Holliday, 1978})$$

5. The meaning of a one-tailed rather than a two-tailed test of significance concerns an area of the sampling distribution known as the region of rejection. Siegal (1956), states that the position of this region is affected by the nature of H_1 :

"If H_1 indicates the predicted direction of difference, then a one-tailed test is called for" (p.13)

As the second research hypothesis proposes that there will be a significant difference between the teams in the homogeneity of their members self perceptions, a directional difference is implied.

The difference between a one-tailed and two-tailed test is in the location, but not the size of the region of rejection; the former being entirely at one end of the sampling distribution, the latter being located at both ends. The size of the region of rejection is expressed by α , the level of significance. Siegal comments that one-tailed tests are more powerful in that the probability of committing a Type II error is reduced.

6. During the course of converting the raw data from the questionnaires into their respective octants, a player from the Freshers XV had to be dropped from the sample. His not-self score fell at the intersection of the Dom and Lov axes, which meant that an exact interpretation of his not-self was impossible. It will be noted however that although the sample size has been reduced to 95, the expected chi square has remained at 12. It was felt that to reduce it to its correct value of 11.88 was unnecessary given the size of the chi square result.
7. Self acceptance has previously been defined as the degree of congruence between a players self and ideal self perceptions. Discrepancies between these two percepts were obtained using the table of weighted scores provided by the Kaiser Foundation on pages 498-499. Briefly the self and ideal self numeric octant scores being compared are entered into the table and standardised discrepancy scores read off. A more comprehensive description of this method is given on pages 80-81.
8. "SPSS" or "The Statistical Package for the Social Scientist" is a series of computer programmes available for processing large quantities of experimental data. Should the reader require more detailed information as to the properties of this particular programme, reference should be made to the SPSS Update, 7-9, pages 1-79, by Hull C. and Nie N. (McGraw Hill Publishing, 1981).
9. The reader will perhaps have noticed that there are both a different number of discrepancy units and also a difference in the range of the self acceptance scores associated with each administration. This is because only those units which have been used to explain the players levels of self acceptance have been reported.

Mann-Whitney 'U'

Team	U	Sig. U
Loborough	z 681	2483
Freshers	140	83
Newcastle	1125	83
Durham	565	31
York	83	38

Chapter 6

A Discussion of the Statistical Analysis of the Self-Schema and and its Relationship with Trait and State Anxiety

In the previous chapter the self-schema and its attendant methodology was empirically analysed in an attempt to quantify the players' interpersonal experiences of self, both connotative and affective.

The quantity of results alone indicate both the vagaries and complexities of the perceptual process, although many significant distributional trends and relationships linking both the cognitive and affective modes of experience were established. In that chapter however only a brief synopsis accompanied each set of results, and there was little structural continuity between the ten analyses apart from a loose sequential ordering, based upon what was thought to be a logical progression in self perception.

Although this design has the obvious merit of being able to reduce large amounts of information into concise and coherent sections, it does perhaps suggest that the cumulative effect of the self percepts, both upon each other, and upon their relationship with trait and state anxiety, is additive, rather than interactive, a factor which reduces the self-schema into a mechanistic rather than a dynamic concept.

It is the purpose of this chapter therefore, to explain the findings associated with each element of the self-schema, not only in isolation, but also in the way in which they interact with each other. In essence the product of these interactions can be regarded as a perceptual and affective Gestalt; person-specific, based upon certain self percept-octant-anxiety configurations. Consequently:

"The interactive effects of one element upon another (are) seen as changing the nature of those elements, and hence resulting in an impression, or Gestalt greater than the simple sum of the parts." (Hampson, 1982; p.106).

Before continuing with the discussion, a brief review of this theoretical position in conjunction with the self schema will be given.

For each of the elements within the self-schema, self, not-self and ideal self, the results in the previous chapter established that there

were significant perceptual distributions around the interpersonal circumplex. The full import of these distributions however, only becomes apparent when they are placed in interaction with one another, self with not-self and self with ideal self. The former indicating which interpersonal traits a player experiences as being part of, or not part of himself in a particular situation: the latter giving an insight as to the players' degree of self acceptance.

At this point, using regression techniques, the results established that certain self and not-self perceptual interactions mediated a players' degree of self acceptance. Once the differing experiential terrain of the self-schema had been statistically mapped, it was then possible to establish how these perceptual interactions influenced an individual's predisposition to general and situation specific feelings of interpersonal anxiety.

Although the above description is a somewhat simplistic theoretical representation of the actual process (and there are other variables not mentioned which have to be accounted for), it is hoped that it does convey to some extent, the methodological structure of the self-schema. The following discussion will however expand, in far greater detail, the statistical and conceptual points raised so far.

The self was previously defined as:

"The perceptions of one's characteristics and abilities; the percept and concepts of self in relation to others and to the environment."
(Rogers 1965 p. 138).

A statistical interpretation of Rogers statement established that there was a significant distributional difference around the interpersonal circumplex in the players, "percept and concepts of self", ($p < .001$). A further analysis found that the direction of this distributional difference was the same for both test administrations.

In the analysis which accompanied these results the players' perceptions were explained generally and then more specifically, by referring to the direction of their distributions around the circumplex. Before analysing the results in detail it is worth reviewing this discussion.

The generic theme which appears to influence the players' perceptions of self is that of 'strength'; either physical, intellectual or social.

This factor can be illustrated generally by using the horizontal 'Lov' axis as an interpersonal parameter, and more specifically by using the vertical 'Dom' axis of the interpersonal circumplex. The former will be considered first.

The horizontal 'Lov' axis bisects the circumplex into two halves. The top half contains octants AP, BC, DE and NO, all four being designated by Leary as representing different variations of the generic interpersonal theme of 'strength'. The lower half contains octants FG, HI, JK and LM, each one being associated with some particular manifestation of interpersonal 'weakness'. The difference between these two polar distributions becomes strikingly apparent when the numbers of players falling in each half are compared. For the first administration the four octants above the horizontal axis account for 72% of the players' self percepts, for the second administration 87%. The motivation for this concentration can perhaps be explained by using the poles of the 'Dom' axis.

Although every octant around the circumplex was used by the players to represent their perceptions of self, (a factor of importance in itself as it indicates the variation in the players self perception), the most frequent and least frequent interpersonal themes centre about the base and apex of the vertical 'Dom' axis. The full import of these distributional concentrations will become more apparent when the other elements within the self-schema, and the two components of anxiety, are brought into the equation. However, at this point the reasons for this difference in distribution can be better understood by reviewing the perceptions which accord with the poles of this axis.

At the apex of the axis are AP, the Managerial-Autocratic, and BC, the Competitive-Narcissistic octants. Together they account for 49% of the overall player perceptions for the first administration, and 58% for the second. After octant BC there is a marked decrease in the frequency of players falling in each subsequent octant, the numbers reaching a minimum at the base of the 'Dom' axis with octants HI, Self-Effacing-Masochistic and JK, Docile-Dependent. Together they account for 16% of the overall player perceptions for the first administration, and only 3% for the second. After octant JK there is then an increase in the player/octant frequencies until AP is reached again, (should the reader require a graphic illustration of these player/octant frequencies he or

she should turn to tables 5 and 6 on pages 122 and 123).

Octants AP and BC both share the same generic theme of 'strength', however the direction in which this construct is used makes them essentially different.

The Managerial-Autocratic octant (AP) reflects a self that is concerned with "strength, force, energy and leadership", (Leary 1957). However, there are many ways in which this strength can be manifested. Leary states that:

"Physical strength, especially in the case of the male, is a means of winning respect". (page 323).

The significance of this statement for the rugby player is obviously great, as it implies that psyche and soma act as joint influences upon the players' perception of self. A relationship duplicated by the game situation which itself emphasises physical, as well as cognitive skill factors, a factor which goes some way to explaining the preponderance of this particular interpersonal theme. However, there are other, more subtle reasons, for having this particular self perception.

A self which stresses power and leadership is usually 'rewarded' with feelings of being:

"(D)efended and protected. (The player) wins awe, admiration, and obedience from others. He gains feelings of certitude and organisation which serves as an illusory buffer against the mysteries and uncontrolled possibilities of existence". (Ibid. p.325).

The self-esteem of this player then is being continually fed, and also expects, a diet of "obedience, deference and respect" from the others with whom he interacts.

The Competitive-Narcissistic octant (BC) stresses similar themes but with a different interpersonal objective. The players who have a self which is based upon this octant act in a strong, arrogant manner, communicating the message that they feel superior to the "other one". They also appear independent and confident, (Leary). Leary states that:

"These individuals depend for their self-esteem on the demonstration of weakness in others and competitive strength in themselves" (p.333).

It is felt that this octant is most representative of the rugby playing sports-type described by Hardman and the other trait theorists earlier.

There is then both a fundamental similarity and difference between these two octants. They share the traits of independence, authority and confident control, but where as the AP self uses these themes to direct, manage and lead others, BC uses them in an exploitative manner in order to provoke feelings of inferiority.

The octants which comprise the opposing pole of the 'Dom' axis, HI, Self-Effacing-Masochistic and JK, Docile-Dependent, share, as did the octants above, a common theme, this time of interpersonal weakness. However, there is a fundamental difference in the way in which this weakness manifests itself.

HI characterises a self which is critically hostile towards its own attitudes and beliefs, with a strong introjection of different patterns of self depreciation. Leary states that the 'effect' on others of a self which stresses these traits is to "pull depreciation and patronising superiority from them", (p.284). Of course this reciprocal interaction will not occur in every interpersonal transaction, as Leary states: "The phenomenon of reciprocity ... is a probability statement". However, in his research Leary states that self-effacing individuals feel most secure when interacting with the competitive-narcissist, "the aggressive, exploitative character from the upper left part of the diagnostic grid", (p.285). It is readily apparent therefore how these two seemingly disparate factions can operate in a functional and productive manner within a dynamic group framework.

The other octant which completes this combination, JK, stresses a more 'benign' weakness. Leary states that:

"The interpersonal message it conveys to others is, "I am a meek, admiring person in need of your help and advice"", (p.292).

Again using Leary's theory of reciprocal relations this attitude of self "pulls strong helpful leadership from others", i.e. JK pulls AP; there is then the existence of a perceptual symbiosis which would seem to allow effective team functioning. With this criterion in mind the discussion can be expanded, and consequently made more comprehensive, by considering

the between group differences in player self perception.

The results of the analyses into the homogeneity of the players self perceptions around the interpersonal circumplex revealed that, for both administrations, there was a significant difference between the teams: $p < .10$ and $< .01$ respectively. More specifically it was established that both Loughborough and the Freshers XV were significantly more homogeneous in their players' distributions than either Newcastle and York, ($p = .012$ and $.026$) and Newcastle respectively, ($p = .05$) for the first administration. And Loughborough being significantly more homogeneous than either the Freshers XV, Newcastle or York for the second, ($p = .047$, $.015$ and $.017$).

The concept of homogeneity is a statistical representation of the degree of deviation a player's self is from his team mean. For the first administration every team had the same interpersonal mean centered about octant AP. For the second the situation was the same, except that the Loughborough mean had moved to BC. The actual differences between the teams, specified by the above results, indicates that both the players from Newcastle and York have a far greater variety of interpersonal themes than any of the other teams. And using the theory of reciprocal relations advanced above, any themes of power, authority or independence, existent in these two teams, (AP and BC), are countered with self-effacing, dependent, cooperativeness (octants HI, JK and LM). In contrast the players from both Loughborough and the Freshers XV have a far greater degree of perceptual specificity, concentrated upon the AP and BC octants. The actual differences between the teams is perhaps most graphically illustrated by their mean levels of homogeneity. For Loughborough and the Freshers XV their mean levels were 39.24 and 43.13 respectively, (perfect homogeneity is equal to zero, perfect heterogeneity being equal to 114). For York and Newcastle the mean levels were 56.10 and 59.10 respectively, Durham incidentally, fell midway between these two groups with a mean level of 45.50, and although there was no significant difference between its players' degree of homogeneity and that of any of the other teams, it has a far greater proportion of its players falling in AP and BC than either Newcastle or York.

The results for the second administration are, unfortunately, not as unequivocal, due to the reduction in sample size. However, there was an increase in the homogeneity of both the Loughborough and Durham players

self perceptions. Their mean levels of homogeneity falling to 28.39 and 34.00; both teams players' self perception centered upon AP and BC, (should the reader require to see an illustration of each teams player/octant frequencies he or she should see tables 8 and 9 on page 129).

It is evident from the above discussion that there is some kind of relationship between team membership and self perception. This relationship can best be explained as the influence generated by the players' perceptual "relation to... .. the environment", (Rogers 1965). Such an influence is also relatively stable as the temporal research design had no significant effect upon any teams level of homogeneity. Therefore, in order to analyse the nature of, and propose causal factors for, the existence of such an influence, it is necessary to review the environmental and structural ideologies of the five teams, first discussed in Chapter 4.

Both Loughborough and the Freshers XV are rugby clubs with a rigidly defined formal structure. Training is supervised by a member of the university staff, attendance being compulsory. There exists a full, democratically elected committee to run the clubs affairs, but perhaps the most important influence upon the players are (a) historical and (b) from their peer groups. Loughborough as an institution has a history for producing 'pedigree' rugby players, at club, county and national levels. Similarly to play for the rugby club is a prestigious affair which elevates one's status within the university.

Durham is similar to the above with a very formal group structure. Training is again supervised with attendance compulsory. In recent years the club has enjoyed a great deal of success, both in terms of results and also in seeing its former players obtain both county and national honours.

Conversely, both Newcastle and York, who have the most diffuse player perceptions, have very little formal organisation. Newcastle as a club has only been in existence for a short time and although there is some formal structure in terms of training and the existence of a committee, it is very loosely based. At the time of administering the questionnaire the Newcastle coach complained of the lack of interest in the club, both from a playing and spectating viewpoint. And it appears as though playing for the halls of residence in the very well organised intra-mural competitions, was regarded by the students as more desirable than playing for the university rugby club.

York however, appeared to have no discernible formal group structure at all. The club captain arranging fixtures, picking the team and organising training. The club has very little status both within and outside of the college.

The brief review above establishes that there is a difference between the groups both in their degree of formal organisation, and also in the extent of environmental influences, historical and social. It is proposed that it is these differences which account for the variation in the players perceptual distributions around the interpersonal circumplex. Consequently, where a formal group structure exists, as is the case for Loughborough, the Freshers XV and Durham, there is a perceptual contagion based upon the players shared belief in organisational and environmental norms. Themselves being the product of the bonded group process, itself grounded in historical precedent. Carson (1969) summarises this relationship between AP and the apparent consensual validation in perception by the three teams, when he states that a concentration upon the Managerial-Autocratic octant indicates:

"an implicit or explicit assumption of leadership, power or expertise within an essentially collaborative context - that is, one in which there is presumed to be a correspondence in goals among parties to the interaction" (p.107. Emphasis added).

Before leaving this discussion there is one further point which needs to be mentioned. The reader familiar with university rugby may be wondering why no overt reference has been made to the differences in skill and performance levels as possible influences upon the homogeneity of self perception. Particularly as Loughborough, the Freshers XV and Durham could be seen as being far more successful, both in terms of results and skill level, than either Newcastle or York. This was not an oversight however; it was felt that to attribute homogeneity to performance would be an extremely contentious matter as it is a difficult concept to quantify, particularly when the fixtures for each club are different. Moreover, performance is by nature of its transitory effect, more important as an historical influence. Similarly, the difference in skill level is not that great as every team had a number of players with various representative honours.

It may appear to the reader at this point that an inordinate amount of time has been spent upon these particular results. However, it was felt that the analysis and description of the players' self perceptions merited such attention for the following reason. The self is conceptually the perceptual criterion about which all the other self percepts evolve. It is therefore of necessity to give a detailed account of the players perceptual trends, not only for the sample as a whole but also for the individual teams, as the discussion which will follow will analyse the consequences of these different individual and group based perceptions.

Moreover, it is hoped that the reader will have discerned the numerous variations in both the players' perceptions and experiences of self. It is the first step in dispelling the myth of the rugby playing archetype so favoured by Kane (1978) and the other trait theorists. And although the results established that there was a significant distributional difference in the players' perceptions of self, centred about the authoritative octants of AP and BC, this should not be interpreted as indicating the existence of a rugby type for two reasons: (i) The analysis as a whole established that every octant around the circumplex was used by one or more players to represent their perception of self, and (ii) no team had a perfect or near perfect degree of homogeneity, around these two generic themes, a factor which attests to the variety of interpersonal typologies used by the players. What is of interest however is the implications which this asymmetrical distribution have for the other percepts within the self-schema and also the players levels of general and situation specific anxiety. It is to these questions that the following will be addressed.

The not-self can be defined as representing the "Goals and ideals which are perceived as having negative valence", (Rogers, 1965). The statistical analysis of this statement established that the interpersonal traits "perceived as having negative valence" were concentrated in one particular area of the interpersonal circumplex ($p < .001$ for both administrations). A further analysis revealed that the disproportionate nature of the players' perceptions were the same for both test administrations.

Reference back to tables 10 and 11 on page 132 and 133 illustrates the disparity in the not-self/octant frequencies for both administrations. And it is clear that there is a concentration of players who have a not-self summarised by FG, the Rebellious-Distrustful octant, which alone

accounts for over one-third of the total frequencies for both administrations.

A more general analysis indicates that for both administrations there is a rejection by the players of the generic theme of interpersonal hostility, whether characterised by 'hostile strength' (octants DE and to a lesser extent BC), or 'hostile weakness' (octants FG and HI). Conversely, the expressive octants, AP and NO (expressive strength), and LM and JK (expressive weakness), are only used infrequently as indicators of the not-self. These distributions will now be analysed in greater detail.

The goals and ideals represented by FG, and which are so emphatically rejected by many of the players, are defined by Leary (1957) as being indicative of "attitudes of resentment and deprivation", (P.269). He states that individuals whose self stresses the interpersonal themes characterised by FG:

"Manifest reflexes of distrust and resentment. They involuntarily provoke rejection and punishment from others. They cannot tolerate durable relationships of conformity or collaboration." (p.269).

Although FG, by frequency of use alone, is most representative of the players' perceptions of not-self, a more general analysis of the frequency distributions, based upon Leary's theory of complementarity can be used to indicate the possible cognition behind the players' perceptual concentration upon the generically hostile octants. Moreover, it enables the distribution of self perception to be compared and contrasted, in an attempt to further the discussion of the interactive nature of the self-schema.

A cognition is defined by Coles (1982) as:

"The perception and evaluation of one's ability to deal with the environment", (p.123).

Inherent in this statement is the need to negotiate successful interpersonal transactions, as they are axiomatic in delineating one's ability to deal with the (social) environment. Leary's theory of complementarity, reviewed in chapter 2 and used in an earlier part of this discussion, essentially describes the ground-rules which structure one's dealings with the interpersonal environment. Briefly he states that:

"The purpose of interpersonal behaviour... is to induce from the other person behaviour that is complementary to the behaviour proffered". (Carson, 1969, p.112)

This proposal of perceptual reciprocity was subsequently elaborated by Uriel Foa (1962) who concluded that there are three underlying "facets" which structure the interpersonal cognition of reality; content, object and mode (for a more detailed review of Foa's theory please see Chapter 3). He contends that these "facets" articulate with Leary's four 'hostile' octants in the following manner: the Self-Effacing-Masochistic octant (HI), indicates a social rejection of the self; the Rebellious-Distrustful octant (FG), an emotional rejection of the self; (DE), the Aggressive-Sadistic octant, an emotional rejection of the other; and (BC)¹, the Competitive-Narcissistic octant, the social rejection of other. Each one being used not only to establish the relationship between self and other, but also between self, other and their larger reference group.

Introducing the results for the players' perceptions of self establishes the import behind the use of Foa's "facet" profiles. The results of the two contingency tables revealed that there was, in general, an inverse 'relationship' between the players' self and not-self perceptions. This is particularly in evidence when the relationship is interpreted in terms of the octants proximity to the 'Dom' and 'Lov' axes. Consequently expressive dominance (AP, NO) rejects hostile submission (FG, HI), instrumental dominance (BC, DE), friendly submission (LM, JK) and vice-versa. Transposing this diametric relationship onto the two perceptual distributions for the sample as a whole indicates, in general terms, that the players have a self concerned with power, leadership and competitive independence (octants AP and BC) and a not-self which rejects rebellious non-conformity, distrust and social distance (FG). The motivation behind these particular self perceptions can be understood by using Foa's theory.

Foa proposed above that there is in essence a cognitive dualism motivating an interpersonal act; (a) the relationship between self and other and (b) the relationship between self, other and their reference group. The latter will be considered first.

It is axiomatic to effective team functioning that there exists some degree of trust, and of course co-operation between its members, particularly, where there is a high degree of interactive dependence (Carron and Chelladurai, 1979). Similarly there must be effective leadership and a general consensus as to the goals and norms which influence group

structure. Indeed Lenk (1969) states that:

" A sports group performs a genuine group achievement which is only engendered in cooperation, that is, it is not summed up from single and individual performances quality and efficiency of cooperation play a decisive role" (p.1).

The players acceptance of the generically 'strong' authoritative octants of AP and BC, and their rejection of the interpersonally hostile DE,FG and HI, would seem to suggest that the players see this combination as being necessary in allowing effective team interaction to take place. Particularly as the consequence of a large number of players within a team, which itself demands a high degree of task interdependence², eschewing close or co-operative interpersonal relationships, would of course be potentially devastating.

Therefore, a self which experiences reality in terms of AP and BC interpersonal behaviour, and a not-self which rejects FG establish "the social relationship between the self and the other with respect to the larger reference group", (Foa, 1962 p.350).

However, there are other, more ego-centric factors, which complete the cognitive dualism proposed earlier. Using Foa's facet profiles the four 'hostile' octants have a common denominator; rejection, either of self or other. And it is this concept of rejection, which is the important factor. Foa informs us that HI and FG, are characterised by the rejection of the self and that DE and BC, rejection of the other. The consequence of these rejections, in terms of complementarity "denies love and status to the self" from the other, as any interpersonal transaction is based upon exploitative themes. These factors can be illustrated with greater clarity by referring to the reciprocal nature of the octants themselves.

Leary (1957) describes the 'effect' of FG interpersonal behaviour as:

"invariably establish(ing) distance from others, provoking them to ignore, condemn, or disaffiliate" (p.272).

Similarly, in the case of aggressive-sadistic behaviour (DE):

"Sadistic-critical behaviour pulls resentment, distrust, fear and guilt from "others"", (ibid p.343).

And the effect of the HI interpersonal self is to:

"tend to train others to look down on him and to view him with varying amounts of contempt" (ibid p.285).

Inherent in all these descriptions is the absence of positive relations with others and consequently a loss of self-esteem, "the individual's beliefs as to how others evaluate him", (Burns 1979; p.56).

The rejection of these particular interpersonal traits indicates therefore that the players, as well as being concerned with effective interpersonal relations within the team, are also concerned with maintaining or enhancing their self-esteem through positive, expressive relations with others.

There are however a number of players whose self stressed what have been established as 'non-desirable' interpersonal traits, and who also reject what appear to be the socially acceptable octants of AP and BC. It is therefore necessary to give a brief explanation as to the consequence of these particular self perceptions and in so doing attempt to explain the anomalous rejection of BC.

It will be remembered that as a conclusion to the description of the players' perceptions of self, it was stated that although there was the presence of a significant distributional trend, centred about the apex of the vertical 'Dom' axis, it should not go unnoticed that every octant had been used by the players as a summary of their interpersonal notion of self. It is evident therefore that those players' whose self was represented by either FG, HI or JK would, using the inverse relationships indicated by the contingency tables, have a not-self which rejected octants AP and BC. This is in fact the case, as an analysis of the individual results revealed that in most cases, a self at the base of the 'Dom' axis rejected those traits at the apex.

This situation clarified what was, initially, an unexpected finding, the number of players rejecting the interpersonal themes of competitive-narcissism (BC), particularly in the first administration. It transpired that the rejection of this interpersonal theme was, for the most part, by players whose self fell at the base of the 'Dom' axis. Consequently, although the BC octant involves "the social rejection of the other" it is, by virtue of its frequency, a valued interpersonal theme. And, although

it has been discussed in connection with the other three generically hostile octants, its inclusion mainly represents the not-self perceptions of those players whose self perception falls below the horizontal 'Lov' axis. What is of interest however, is why BC rather than AP should be rejected. A factor which in all probability is attributable to its generically hostile nature.

The inverse nature of self and not-self perception and its effect on both the major and minor distributional trends can be further illustrated by analysing between group differences. The statistical analysis established that there were no significant differences between the teams in the homogeneity of their players' not-self perceptions, for either administration. However, there were some interesting findings when the between group self and not-self perceptions were contrasted.

For the first administration Loughborough, the Freshers XV and Durham all had a mean not-self falling in the FG octant. York and Newcastle's however fell in the DE octant. For the second, all had FG as their interpersonal mean, apart from the Freshers XV who had HI. The former administration will be considered first.

The initial difference between the teams interpersonal means, FG compared to DE, is an interesting finding in itself as it re-introduces the notion of formal group structures. Leary designated the FG octant as being the non-conventional pole of a conformity-nonconformity axis, and as such it represents a specific "rejection of the established, the authoritative, the conventional", (Leary 1957 p.272). The rejection of these traits is of particular interest when compared to the acceptance of the authoritative themes (AP and BC), about which the Freshers, Durham and in particular Loughborough were so homogeneous. In Loughborough's case the high degree of homogeneity is replicated for the not-self with a mean of 29.39. Again, the influence on the three teams of their formal group structure appears to affect their rejection of the non-conventional. Indeed Hollander (1960) states that there is a dimension of conformity which is interrelated with status, competence and power, the very themes which are represented by AP and BC. York and Newcastle's rejection of DE however, indicates a concentration upon more expressive traits as it represents "the emotional rejection of the other".

The general not-self/octant frequencies indicate that both York and Newcastle have a high proportion of players rejecting either AP, BC, or both (approximately 25%). Durham too have players who reject these two interpersonal themes, a factor directly attributable to their players' more heterogeneous distribution of self perception. Conversely both Loughborough and the Freshers XV have no players rejecting AP although a small number do reject BC. However, in keeping with the other teams the main concentration is about octants DE, FG and HI.

For the second administration there are some slight variations in the players not-self distributions, centred mainly about their degree of homogeneity. It is interesting to note that all the teams, apart from Loughborough and the Freshers XV, had an increase in their mean level of homogeneity. And although the decrease in the aforementioned teams was not statistically significant, it does pose some interesting questions as to the effect the situation has upon the critical acuity of the not-self.

One obvious reason which must be considered when attempting to propose reasons for the above temporal variation in team homogeneity is the effect that the reduction in sample size could have upon the not-self/octant frequency distributions. However, given that the Loughborough sample size stayed exactly the same³, it is possible that there may be a more covert reason centred about the determinants of not-self perception.

All the teams, Durham, Newcastle and York, who had effectively all but finished their competitive season at the second time of testing, manifest both an increase in homogeneity and a reduction in the numbers of players who had either AP or BC as summarising their not-self perceptions. Conversely, both Loughborough and the Freshers XV who were soon to face their sternest matches, had a decrease in homogeneity and in the case of Loughborough an increase in the number of players rejecting the "socially acceptable" octants of AP and BC. Similarly the Freshers mean not-self moved from FG to HI indicating a concern with the "social rejection of the self" (Foa 1965), or the appearance of weakness and self doubt in the presence of others.

It is proposed therefore that the critical acuity of not-self perception is situation specific, and as such is sensitive to changes in environmental stress. This concept will be developed in greater detail

during the discussion of the relationship between the self schema and anxiety.

The discussion so far has established in general that there exists; (a) a significant distributional consensus in the players' self and not-self perceptions, the former situated around the authoritative octants of AP and BC, the latter the hostile FG, HI and DE octants, and (b) that although various octants around the interpersonal circumplex are perceived by the players as having a positive valence, both in terms of effective team interpersonal relations and in maintaining, or indeed enhancing levels of self-esteem, every octant has been used to summarise notions of self. Consequently perceptual variegation should not be lost in a concentration upon measures of central tendency.

The introduction to the discussion of the third and final elemental part of the self-schema, the ideal self will enable a positive identification of the viability of the "socially acceptable" octants summarised above. It will also indicate the motives/needs behind the players' particular perceptions of their ideals. The ideal was previously defined as:

"One of the important establishments of personality an integrate of images which portrays the person at his "future best", realising all his ambitions" (Murray and Kluckhohn, 1953, p.40).

The statistical analysis of the distribution of the players' ideal self perceptions established that they were concentrated in the same three octants for both test administrations; AP, BC and NO ($p < .001$). Similarly the results attest to the stability of this particular construct as the direction of the players' perceptions were not significantly affected by the temporal nature of the research design.

The emphatic concentration of the players' ideals about the apex of the vertical 'Dom' axis is illustrated in Tables 17 and 18 on pages 142-143. It is evident from these player/octant frequencies the importance the players place upon interpersonal strength. However, the difference in the octant frequencies again indicates that there is some variation in this perceptual process.

The AP octant is unequivocally the most popular interpersonal theme, accounting for 61% of the players' ideal perceptions for the first administration and 62% for the second. Of the two remaining octants that were used

with any degree of significance, BC and NO act as more extreme and less extreme versions of AP respectively. These results will now be discussed in greater detail.

Much has already been said about the traits associated with the Managerial-Autocratic interpersonal theme, and it is not proposed to repeat that discussion here. However what is of interest (and this will supplement the above) is the particular distributions of the ideal self percepts within the octant.

A detailed examination of the players AP perceptions revealed that all 59 players from the first administration, and 41 of the 43 from the second, had an ideal which stressed the more autocratic form of this generic code, (P). Leary (1957) states that:

"The key factor in this type is the complete avoidance of weakness and uncertainty, and the compulsive desire to appear competent, organised and authoritative" (p.324).

It is evident therefore that the players' perceptions of reality are based upon an introjection of authoritarian ideals, not simply stressing power, but more specifically power over others (It is an interesting aside to note that this overwhelming concern with autocracy would, if realised, entail massive interpersonal conflict within the teams as the reciprocal effect of "power and control provokes others to obedience, deference and respect," (Leary, p.323)).

The next most popular ideal is represented by the BC octant, and as the reader will at this point be familiar with the nature of this interpersonal theme, no detailed account of this result will take place for the moment.

After BC the only other octant used with any degree of significance was NO, the Responsible-Hypernormal octant. Leary states that:

"Here we deal with the individual who attempts to present himself as a "normal person". He presents himself as strong - but his power and self confident independence are used in an affiliative way. He strives to be close to others - to help, counsel, support and sympathize" (ibid p.315).

The concentration of the players' perceptual frequencies around this particular area of the circumplex can be conceptualised as forming a

generically interconnected triad of interpersonal themes based upon self-confident independence, authority and varying degrees of expressive responsibility; the major common denominator being power over others. This concentration is in fact very similar to the results of Leary's own work into the distributions of in-patients' ideal perceptions reported in chapter 2. The following comparison indicates this similarity. Leary found that out of a sample of 207 in-patients, 53% placed their ego-ideal in the AP octant, as compared to 61% and 62% for the two test administrations; 37% had their ideal in the NO octant, as compared with the players' results of 15% and 28% respectively. Taking the circumplex as a whole, less than 2% of the patients placed their ideal in the lower generically 'weak' half of the diagnostic circle, a figure comparable to the players' results of 1% and 0%.

Leary concludes that "this homogeneity is a cultural stereotype" (p.205), and as the ideal self is conceptually that part of the self schema which introjects external value systems, it would be expected that the players would have some distributional differences from Leary's particular 'cultural stereotypes'. And indeed they do; with 23% and 24% of the players' perceptions being summarised by the 'hostile' BC octant. In order to account for the difference in effect of environmental influences it is necessary to discuss the probable motives behind the players' perceptual selections. Murray (1951), summarises the need for such an account when he states that:

"The most important thing to discover about an individual is the superordinate directionality (or directionalities) of his activities, whether mental, verbal or physical," (p.276).

In order to achieve an account of individual directionality it is necessary to borrow from Adlerian psychology (1930) and Murray's own "personology" (1938). Adler states:

"I began to see clearly in every psychological phenomenon the striving for superiority All our functions follow its direction. They strive for conquest, security, increase, either in the right or wrong direction," (op cit p.398).

It is evident that the three octants perceived by the players as representing their ideals, all entail some form of interpersonal superiority over others, whether couched in expressive or hostile themes. However, although Adler's theory accounts for the general direction of the players' ideals his emphasis upon inferiority cannot be used as the sole criterion for perceptual choice. Murray however, evolved a far more complex theory which will be used to elaborate Adler's initial concept of 'striving for superiority'. Murray (1938) proposed that the 'need' concept is the basis of motivation. He states:

"A need is a construct which stands for a force which organises perception, apperception, intellection, conation and action. A need is sometimes provoked directly by internal process of a certain kind but more frequently by the occurrence of one of a few commonly effective press (environmental forces)." (p.124. Emphasis added).

Murray's definition establishes the way in which environmental forces affect the perception of needs, and in so doing he forges a link with Leary's theory of "cultural stereotypes". However, in order to fully understand the needs behind the players' ideal perceptions it is necessary to borrow further from Murray. Once he had defined the need concept, Murray offered a classification of twenty generic needs, two are of interest here and their definition explains the probable motives behind the players' perceptions..

Murray defines need achievement as the need to:

"Master, manipulate, or organise physical objects, human beings or ideas. To do this as independently as possible. To overcome obstacles and attain a high standard. To excel oneself. To rival and surpass others. To increase self-regard by the successful exercise of talent". (ibid p.152)

and need dominance as the need:

"To control one's human environment. To influence or direct the behaviour of others by suggestion, seduction, persuasion or command. To dissuade, restrain or prohibit." (ibid p. 226)

There are obvious parallels with the needs described above and the interpersonal behaviour represented by octants AP, BC and NO. The

prevalence of the environmental pressure to 'need achieve' and 'need dominate' is illustrated by the fact that the between group analysis established that there were no significant perceptual differences between the teams, for either administration. Reference back to tables 20 and 21 on page 147 illustrates the similarity between the teams player/octant frequencies. It is evident from the results that regardless of team affiliation or indeed the degree of formal structure, the players have a predominant concern with behaviour which:

"Involves a dominant orientation shaded with elements of positive affect or friendliness" (Carson 1969, p.107).

Indeed the fact that every team has a similar pattern of ideal perceptions begs the question as to what environmental forces produce this perceptual stereotype. An explanation could be that rather than being dependent upon structural or affiliative variables, the ideals are the product of a shared expectation as to what constitutes ideal behaviour for a rugby player. These perceptions are consensually validated both by previous research into personality traits, and also by the inter-personal network of intra-team and coach/team interaction. It is interesting to note the similarity between the players' ideals and the Cattellian profiles offered by the trait theorists. Both Hardman and Sinclair (1968) describe players as being high in sociability (A), dominance (E), conscientiousness (G) and willpower (Q3), and low in sensitivity (I) and insecurity (O).

The ideal self therefore, unlike the other self-percepts, appears on the basis of these results, to be an immutable construct representing the values of the sports-type. Its function in controlling the players' perceptions by defining the parameters of acceptable/non-acceptable behaviour (sic), normal athlete/problem athlete, ensures that it transcends the boundaries imposed by formal group structure. It seems to be therefore the seminal 'pledge' of the bonded group about which self and not-self perception are evaluated and controlled.

The only slight difference between the teams which suggests that the degree of formal group structure may have a mediating influence upon the above process, is the proportion of players who have either BC or NO as their phenomenal ideal. For both administrations York and Newcastle have

a number of players falling in the NO octant. These teams octant frequencies represent 71 per cent of the total NO perceptions for the first administration, and 62 per cent of the second. This concentration around AP and NO suggests the introduction of a further motive, need affiliation:

"(The need to) draw near and enjoyably cooperate or reciprocate with an allied other"(Murray 1938; p. 162).

The remaining three teams, Loughborough, the Freshers XV and Durham all have an ideal pairing concentrated about AP and BC.

The discussion so far has established that the players' ideal self perceptions are extremely narrow, all being based upon authoritarian themes..(Only two players deviated from this pattern, one from the first administration who had HI as his ideal and one from the second who had DE). It is apparent therefore that deviations from the above norm or 'pledge', in terms of either self or not-self perception, could engender intra-psychic conflict. The consequence of which will now be discussed with reference to the construct of self acceptance.

Self acceptance has been previously defined as the product of the degree of similarity between a player's self and ideal self perceptions. A high degree of congruence would indicate a high level of personal self acceptance, a low level of perceptual congruence, a low level of self acceptance. The empirical analysis of this construct was structured so as to statistically quantify the effect the players' self and not-self perceptions had upon their degree of self acceptance. The factorial analysis established that for both administrations the joint effects of the two self percepts and the main effect of the players' perceptions of self were statistically significant. However, the effect of not-self perception on a player's level of self acceptance was only significant for the first administration.

An analysis of the main significant effects established that, for both self percepts, there was a curvilinear distribution around the circumplex. The essential difference between them being the shape of their respective regressions; an inverted 'U' for the self and a 'U' for the not-self. The implications of these results will now be discussed in detail.

The effect of the self perception upon self acceptance is essentially monotonic, reference to table 22 on page 149 illustrates this relationship.

Using the mean deviations provided in the table it is evident that AP is the most 'self-accepting' interpersonal theme, with a mean deviation of -29.83 and -20.05 for each respective administration. Given the concentration of the players' ideals about this octant a result other than this would have been surprising. Indeed Leary (1957) states that:

"The relation between self-satisfaction and power is confirmed by the empirical findings of the Kaiser Foundation research. Managerial personalities are most closely identified (consciously) with their ego ideals. They are pleased with themselves." (p. 328-329)

Similarly, the two other octants which have a high degree of self acceptance, BC and NO, are also described by Leary as being characterised by a high degree of self approval. He says of responsible-hypernormal behaviour that:

"This mode of adjustment is close to the cultural ideal. It thus brings great conscious super-ego satisfaction." (ibid p.316).

And of competitive-narcissism he states that:

"Adaptively self confident individuals received considerable admiration and social approval." (ibid p.334).

As a consequence of this positive feedback the competitive-narcissist would have a high degree of self acceptance particularly as his self perception stresses a high degree of ego strength. Sappenfield (1970), reviewed in chapter 2, summarised this relationship between self regard and self acceptance when he states that:

"Persons having normal self-esteem tend to perceive themselves as having the characteristics that they attribute to the ideal personality" (p.976).

An analysis of the circumplex as a whole confirms the truth of this statement. After AP the level of self acceptance associated with each interpersonal theme subsequently decreases; self rejection being the result when octants HI and JK are reached. Both of these octants have extremely high mean deviations; 40.89 and 42.55 for the first administration; 55.48 and 48.48 for the second. (To give some indication of the low levels of self acceptance which are associated with these octants, the maximum possible mean deviation is 70.22).

These results establish that the players whose self stresses either self-effacement or docile-dependency have a high degree of conscious self rejection. Leary (1957) states that:

"The masochistic, guilty patient (HI) is generally obsessed with matters of right and wrong and measures himself (to his own disadvantage) against his own strict ideals. This point is clearly demonstrated by the finding that the sector of the circle, which defines self-effacement is the furthest removed from the standard ego-ideal image of our culture. Their behaviour is rated in the HI sector of the circle - where as the ego-ideal is invariably located in the opposite sectors" (pgs. 286-287).

Octant JK is similarly characterised by a concern over self, with behaviour related to ruminative worries, depression, tension and indecisiveness, cognitions and affects far removed from the authoritative, independent ideals characterised by either AP, BC or NO. Indeed HI has been shown to have a negative association with dominance, the generic theme of all the ideals. Moreover, these results support Block and Thomas's (1955) findings, when they state that:

"There is support for Rogers contention that a large discrepancy between one's perceived self and ideal self goes along with maladjustment, as maladjustment is defined on the conventional Minnesota Multiphasic Personality Inventory scales. Thus the individuals expressing self-dissatisfaction earn significantly higher scores on hyperchondriasis and depression" (p.255).

Research conducted by the Kaiser Foundation using the MMPI established that HI behaviour had a profile of depression (D), and passive (mf) trends, and that JK was similarly related to depression and also ruminative worries. Although the MMPI was formulated by Hathaway and McKinley (1940; 1943) to be a psychometric device that would identify neurotic clinical syndromes (Coles 1982) (and it is not the contention that these players are neurotic), it should be pointed out that the common factors of depression are loss of self-esteem and confidence, guilt and a decrease in motor activities, (ibid. p. 131). It is apparent therefore that this ego-syntonic cycle between self and ideal self perceptions is not satisfying to the player in any degree, Block and Thomas's theory of maladjustment being a source of tension and subjective unhappiness for these players.

The effect of not-self perception upon self acceptance establishes an octant/acceptance relationship which is the inverse to that described above. Reference back to table 23 on page 150 illustrates that a rejection of either HI, JK or FG is indicative of a high level of self acceptance (these octants having mean deviations of -32.32, -15.38 and -11.63 respectively). Conversely a rejection of either AP, BC or NO indicates a low level of self acceptance, (these octants having mean deviations of 26.82, 26.86 and 41.72). Indeed a rejection of these interpersonal themes indicates a conscious rejection of one's ideals, a situation which will be elaborated below. The fact that the not-self failed to have a significant effect upon self acceptance, for the second administration, again indicates the possible situation specificity of this construct.

The joint effects of the two self percepts, summarised by the coefficient of determination, indicates both the validity and reliability of the self schema. The results of R^2 established that the self and not-self perceptual combination accounted for 70.7% of the variance in self acceptance for the first administration, and 54.1% for the second. However it must be noted here that the failure of the statistical interactive effect to reach significance should not in any way prejudice the proposal that the elements of the self schema have an interactive rather than additive effect. The following discussion will propose the perceptual basis of the interactive effect.

Taking the schema as a whole, a general perceptual pattern has been established whereby those players who are most consciously identified with their ideals and therefore most self accepting, have a self which stresses independence, authority and dominance, and a not-self which rejects either self depreciation, dependency or rebellious-distrust. Conversely the players who are most consciously dissatisfied with self are in a seemingly untenable position; a self which stresses self-effacement or docile-dependency, an authoritarian, power oriented ideal which rejects self, and a not-self which rejects these ideals, a position which would seem bound to engender psychological conflict. Yet it is an intriguing question as to why this intra-psychic conflict should be so overwhelmingly power oriented, and to answer this question one must return to the proposal of the ideal as representing the seminal group 'pledge'.

The basic question is why these players did not set themselves a more realistic, attainable ideal, perhaps situated in LM, the cooperative-

overconventional octant, which Leary states "is probably the highest stated ideal of our Western civilization" (1957 p.303).

Interestingly, not one of the players had this interpersonal theme as their ideal, even if it means, as is apparent from the results, a high level of self rejection. In order to understand the cognition behind this decision it is necessary to retrace some of our steps. During the discussion of the players' ideal selves, the motive for their particular concentration about AP, BC and NO was attributed to the need to achieve, and the need to dominate, these needs in turn being the product of the bonded group process. However, there is evidently some further motive at work by which players with self-depreciatory and dependent selves should accede to those group ideals based upon purely authoritarian themes. The reason for this situation again appears to be confined to the ideal-as-pledge and its emphasis upon power themes.

Symonds (1946) described a process by which an individual combats feelings of weakness and develops a feeling of omnipotence by taking, as models and values, those of the group. He states:

"One looks for support by acceding to the wishes of society through its laws and customs, so that one feels secure as a member of the group and derives power from the group." (in Leary 1957 p.202).

However, a consequence of this quest for interpersonal security by adopting the values of others can be that:

"The value system may play a destructive and unsettling role in the total personality structure ... self conception may fall far short of a rigid demanding set of ideals, with a resulting feeling of guilt and self dissatisfaction" (Leary 1957 p.202).

It is possible to see in Leary's statement the reasons why the self rejection, characteristic of octants HI and JK, arises out of the demanding set of ideals represented by AP, BC or NO. Although, by adopting this other centered value system the player still remains 'pledged' to the group. A position made worse by the fact that under the 'findings' of the trait theorists the self perceptions associated with octants HI, JK and LM do not exist! However, although we have addressed ourselves to the possible motive and consequence of other centered value systems, the role of power remains largely unexplained.

Alfred Adler (1930) specifically raised the whole question of inferiority and the urgent need to overcome or compensate for it. Part of his thesis was discussed in connection with the global description of ideal self perception, however his theory of achieving security through power indicates further the influence the values of the bonded sports group have upon the HI and JK ideals.

Adler states that feelings of weakness and dependency could be overcome by achieving a sense of power in some way which would be significant for the individual, either by overcoming his particular inferiority or by giving him value in the eyes of others in some alternative direction, (Guntrip 1973). It was Sullivan however who conceptualised the whole perception of power when he distinguished between the power motive and the power drive. The power drive is a neurotic over-compensation for repressed feelings of helplessness. The power motive:

"is the primary, natural and healthy need to experience the feeling of power, ability, effectiveness, or capacity to do things, to carry out one's purpose" (Sullivan 1956 p. 143).

The above discussion introduces the possibility that the needs behind the players ideal perceptions, although based on power, fulfil different motives. The self-effacing or dependent players use the needs for achievement and dominance as a means of compensating for their apparent 'weakness' and low ego-strength. By adopting the narrow ideals of the bonded group they gain access to, and acceptance by, the group. However, the consequence of controlling individual praxis by the use of a power drive entails further self derogation and a lowering of self acceptance. Conversely, the players who have confirmatory ideals have much lower levels of intrapsychic conflict, their power needs are also shaped by group expectation, but they have the facility to achieve their ideals and to facilitate forms of psychological growth.

The final statistic which emerged from the empirical analysis established that the influence on self acceptance of the two self percepts was not equivalent. Using the eta and beta coefficients the results from the first administration established that when the effect of the not-self was controlled, the influence of the self upon self acceptance was only slightly diminished; the eta of .79 was reduced to a beta of .68. Controlling the influence of the self however resulted in a marked reduction in the

effect of the not-self; the eta of .66 reduced to a beta of .32. The results for the second administration confirmed this trend. Controlling the respective perceptions resulted in the influence of the self increasing from .70 to .72, and the not-self being reduced from .42 to .25.

The results indicate therefore that the self schema cannot be thought of as homeostatic, as the self evidently has a greater effect upon self acceptance than the not-self. This point is further illustrated by referring to between group difference.

The statistical analysis established that there were significant differences between the teams in their players' levels of self acceptance. For the first administration both Loughborough and the Freshers XV were significantly more self accepting than either York, or Newcastle and York respectively. The second administration established that the players from Loughborough and York were significantly more self accepting than either the Freshers XV, Newcastle or Durham respectively.

Inherent in the above results is that there is an apparent relationship between self acceptance and team membership. And using the above discussion which traced the effects in self acceptance of the players' self and not-self perceptions, it will be possible to analyse this theoretical proposition.

It will be remembered that the between group analysis of the players' self perceptions established for the first administration that both Loughborough and the Freshers XV were significantly more homogeneous than either Newcastle or York. It later transpired that these perceptual concentrations were centred about those octants designated as the ideal interpersonal themes; AP, BC and to a lesser extent NO. As a consequence of these power oriented perceptions, the players from these two teams are closely identified with their ideals.

The players from Newcastle and York however, were much more heterogeneous in their distribution around the circumplex, with a number having self-effacing or dependent self perceptions. (The players from these two teams do in fact account for 73% of the overall total who utilised these interpersonal themes).

The results for the second administration revealed that the players from Loughborough had the most homogeneous perceptions of self, significantly more so than either the Freshers XV, Newcastle or York.

The analysis of the not-self established that there were no significant

differences between the teams for either administration, although there were a number of players, particularly from Newcastle and York, who in the first administration, rejected the ideals of octants AP and BC.

These results obtained from the between group self and not-self perceptions, when transposed on to the concept of self acceptance appear to support many of the points raised. The significant differences in the players' levels of self acceptance, for the first administration, can be interpreted in terms of the homogeneity of the players' perceptions of self. It was proposed at that time that team homogeneity was related to the degree of formal group structure which surrounded interpersonal relationships. However, there is again the question as to why both Newcastle and York (teams who have been shown to have extremely loose formal structure), should share the need for such critical ideals. One explanation is that this perceptual emphasis is related to security gained through the shared pledge for power; a situation discussed in detail above. For the purpose of this present discussion the following definition illustrates the group motive: Newcomb (1951) states that:

"(T)he distinctive thing about a group is that its members share norms about something. The range covered by shared norms may be great or small, but at the very least they include whatever it is that is distinctive about the common interests of the group members." (p.64).

Consequently, as the players from these two teams have no rigidly defined norm as to their self perception, the sharing of a value system brings some instrumental dynamism into group interaction. It is therefore as Sartre proposed, in order to preserve the group from disintegration, the group itself places severe restrictions on its members, restrictions based upon the traits of the sports-type. Consequently, the players share an identity based upon normative ideals by which they can not only feel part of one group, but feel part of the larger rugby playing community. Although, as was pointed out earlier, the result of obtaining group security through value systems based on power is again apparent with many of the players from these two teams having a low level of self acceptance.

The differences in the teams levels of self acceptance for the second administration, although following the results of the self for

the most part, did reveal some unexpected findings.

Loughborough, as was stated above, had the most homogeneous distribution of player self perception, centred almost exclusively around octants AP and BC. Similarly, they are also the most 'self accepting' team. Moreover, their increase in homogeneity from 39.24 to 28.39 over the two test administrations, was accompanied by a significant increase in group self acceptance ($p = .013$). The significant difference between York and Durham was something of a surprise, however Durham does have players whose self perception falls in the less 'socially desirable' FG, HI and LM octants.

The level of self acceptance manifested by the players from Durham is somewhat incongruous with their success, particularly when compared with Loughborough. At the time of testing Durham had recently beaten Loughborough in the final of the U.A.U. Championship and yet there is a clear disparity between the two teams in terms of their degree of homogeneity or self acceptance. The result is therefore somewhat anomalous, although it could be due to a combination of two factors; the time of testing, and the nature of self acceptance. Loughborough were given the questionnaire two weeks prior to the U.A.U. final, and at the time they were described by their coach as being tired. As a consequence of (a) the expectation of the final and (b) their level of fatigue, the players could have narrowed what was already an extremely inflexible perceptual field, covering all aspects of the self schema. The high self accepting profile which resulted from this perceptual homogeneity could therefore be a direct result of Neuringer et al's (1966) theory of 'high self concept appraisal'. They contend that:

"there is, phenotypically, stability of interpersonal relationships among high self concept individuals. But this may be due to the masking effects of social group composition" (p.321. Emphasis added).

Similarly, the curvilinear relationship between self acceptance and adjustment proposed by Crowne and Stephens (1961) and discussed in chapter 2, could explain the players' cognition behind the above statement. They state that individuals describing themselves as very close to their ego-ideals:

"tend to deny and suppress threatening features of themselves and cannot be considered mature or healthy." (p.110).

Therefore, in response to somatic fatigue and environmental tension the Loughborough players 'masked' or suppressed any threatening stimuli by becoming an "overly-integrated" unit, (Crowne and Stephens).

The discussion so far has concentrated upon enlarging the statistical analyses to encompass both the singular and interactive nature of each self percept, and as a result show the self schema as a coherent, inter-related unit. The reader will, hopefully, be aware of both 'normal' and 'abnormal' perceptual trends, and although proposals have been advanced in an attempt to explain the motives behind this diversity, the affective consequences have been ignored.

The relationship between cognition and affect is axiomatic to any psychology based upon self perception and although theories of maladjustment have been advanced in connection with certain interpersonal themes, the degree of affective arousal which accompanies these perceptions has not been mentioned. Consequently the remaining discussion will relate the 'normal' and 'abnormal' self perceptions to both general (trait) and situation specific (state) feelings of anxiety.

In chapter 2 contemporary research into the relationship between cognition and affect was described as having very little historical basis, as from the time of the classical Greek philosophers through to Freud's psychoanalytic theories, they have been regarded as mutually exclusive psychological processes. It was not until the 1950's that the holistic/humanistic psychologists and the 'philosophical psychologies' of Sartre (1956) and Merleau-Ponty (1962) began to formulate an inextricable link between the two conditions. Coles (1982) summarises the contemporary view of this link when he defines cognition as:

"The perception and evaluation of one's ability to deal with the environment. The affective component is anxiety or fear, since there is a relationship between the ability to control or predict the consequences of an event and this emotion" (pgs. 123-124).

The psychological processes involved in this relationship were also extensively detailed in chapter 2; in brief however, this cognitive-affective relationship was conceptualised as being made up of four inter-

related elements (Smith 1980); (a) the situation; (b) the cognitive appraisal of the situation; (c) physiological arousal responses, and (d) instrumental behaviour.

Briefly the situation can be classified as being constituted by either external stimuli, i.e. the forthcoming game, or internal stimuli such as thoughts and memories. The second part of the model (b) entails a cognitive appraisal of the situation (a). However as Fransella and Bannister (1977) state:

"Nobody has ever responded to a stimuli. They respond to what they perceive the stimuli to be ".(p.7).

The third (c) and fourth (d) parts of the model simply entail the degree of emotional arousal and its appropriateness to the situation.

Using the above model the following discussion will establish the way in which the eight generic interpersonal notions of self influence the players' cognitive appraisal of the group and game situation, with specific reference being made to their effect upon trait and state anxiety.

Before the discussion takes place however it is necessary to establish the construct validity of Spielberger's trait and state anxiety theorem, as it is the basis upon which all further discussion will take place. Spielberger et al (1970) define trait anxiety as representing relatively stable individual differences in anxiety (state) proneness, and state anxiety as a transitory emotional state which fluctuates over time, (see chapters 2 and 3). There is an obvious conceptual difference in the temporal nature of these two constructs, and the following correlation coefficients established that this was in fact the case. A Pearson 'r' of .744 was obtained for the test-retest analysis of the players trait anxiety scores, and a lower 'r' of .436 was obtained for their state anxiety.

The size of both coefficients are in keeping with Spielberger et al's (1970) findings. They report that:

"(T)he test-retest correlations for the A-trait scale was reasonably high, ranging from .73 to .86 while those for the A-State scale were relatively low, ranging from .16 to .54, with a median 'r' of only .32", (p.9).

It is evident from both the above results and the accompanying brief definitions that trait and state anxiety are affective responses to different stimuli; the former a general response to the interpersonal environment; the latter a more specific response to a particular stimulus, in this case the forthcoming game. As a logical consequence of this difference the relationship between the self-schema and trait anxiety will be considered first.

The results of the correlation coefficients, used to determine both the strength and direction of any relationships which exist between the various self percepts and trait anxiety, all reached significance apart from the second administration not-self, which failed to reach significance at any level.

The relationship between self perception and trait anxiety revealed that the octant/anxiety regression followed what has come to be a familiar pattern; an inverted 'U' shape around the interpersonal circumplex. The nature of this relationship is illustrated by the differences in size of the mean deviations associated with each octant in table 32 on page 177. From the table it is apparent that for both administrations there is a general increase in the mean level of trait anxiety, the further one moves away from the apex of the vertical 'Dom' axis. Moving in an anticlockwise manner, this relationship reaches its maximum at HI, and then reduces with each subsequent octant until AP is reached.

A general analysis of the above result indicates that the players' cognitive appraisal of their ability to manage the interpersonal environment is directly related to their particular self perception. More specifically, those octants which are associated with high levels of trait anxiety all fall below the horizontal 'Lov' axis, consequently all are characterised by the generic interpersonal theme of 'weakness'. These particular octants, HI and JK in the first administration, and HI and LM in the second, reflect a self perception which stresses self-depreciation, dependency or benign cooperation. All apparently see their interpersonal environment as threatening, and research completed by the Kaiser Foundation links each one with the incidence of anxiety. Leary (1957) states that those who have a self-effacing self perception (HI):

"Are overtly anxious and unhappy. They exhibit guilt and self-depreciation. Doubt, rumination and obsessive uncertainty are emphasised" (p.287).

Similarly, of JK he states that the results of MMPI profiles stress that it characterises "a person who is unhappy, anxious (D), worried and fearful(Pt)." He continues:

"The third and most pathonomonic set of symptoms characteristic of a docile, dependent personality includes the manifestation of overt free-floating anxiety" (p.296).

Finally LM is reported by Leary as being related to "generalised "nervousness" or anxiety vaguely defined" (p.307).

Conversely octants AP, BC and NO, the generically dominant interpersonal themes, are all associated with a low level of anxiety trait. Leary states that the MMPI profile of BC indicates that "the anxiety and passivity scales are low (D and Pt)" (p.336). It is apparent therefore that the players whose self stresses power, authority and independence perceive themselves as being able to manage the interpersonal environment. The basic difference between the high anxious and low anxious octants is summarised by research completed by Weitzner, Stallone and Smith (1967). Using the Edwards Personal Preference Schedule they found that:

"The personality traits measured showed the low manifest anxiety subjects to be independent, to analyse their own motives and those of others... .. The high manifest anxiety subjects, in comparison, were dependent upon the encouragement, sympathy, and affection of others"(p.164)

The relationship between the not-self and trait anxiety produced an octant/anxiety regression which was 'U' shaped. However, this relationship was only significant for the first administration, ($p < .01$). Table 35 on page 178 illustrates, using mean deviations, the nature of this relationship. From the table it is apparent that a rejection of the dominant interpersonal themes of AP, BC and NO is associated with high levels of trait anxiety. Conversely, a rejection of either FG, HI or JK is related to far more moderate levels.

It will be remembered that during the discussion of the players' self and not-self perceptions a proposal was advanced to account for the motives behind the concentrated acceptance of the generically 'strong' interpersonal themes and the concentrated rejection of the generically hostile. These motives took the form of a cognitive-dualism; (i) the desire to

share the general team experience and so ensure effective interpersonal relations by accepting dominant, independent themes (AP, BC and NO), and rejecting disruptive, self-depreciatory others and (ii) the desire to maintain or enhance one's self-esteem.

It is apparent that any deviation from these group norms will be perceived by the players as threatening, as they reject those traits which have been defined by the team as having a positive valence. Similarly using Leary's theory of reciprocal relations they will receive little if any positive feedback from others due to (a), having a dependent, self-depreciatory self and (b), a not-self which rejects those octants whose dominant orientation 'pulls' respect, admiration and obedience from others. The consequence of these perceptions is that these players lose feelings of group conformity and therefore security. They feel unable to manage their interpersonal environment because of their dependence upon others to make them feel secure and needed.

The consequence of Leary's theory of reciprocal relations in cases where the subjects have self perceptions which 'pull' hostile (HI) or leadership (JK) responses from others can be further illustrated by using research completed by Watson and Friend (1969) and Richardson and Tasto (1975). Both reported an association between a general fear of negative evaluations and high levels of trait 'social' anxiety. These findings add a further dimension to the cognitive appraisals of those players who do not manifest perceptual norms; they are further isolated from the team by the fear of rebuke from their peers.

In essence then, the derogation, guilt, and anxiety experienced by the above players is the direct result of 'deviate' self perceptions threatening the preservation of the group. The situation thus follows the implications of breaking away from the restrictive practices of the bonded group, proposed by Sartre (1982) and described in full in chapter 2. In this case the consequence of seceding the 'pledge' to the group-as-sports-type exposes the player to the 'terreur' which includes 'the fear of what the other group members will do to (he) who secedes or betrays', (Sedgewick 1982, p.80), this fear of negative appraisal placing the individual on to the periphery of group process. In order that group status is confirmed then, self is dependent upon the evaluation of the other rather than upon his own commitment.

The failure of the not-self anxiety relationship to reach significance for the second administration indicates that the interpersonal environment is not regarded as having the same degree of threat to those who expect negative appraisals from it. This factor will be detailed toward the end of this chapter.

The final relationship which proved to be statistically significant for both administrations was that between self acceptance and trait anxiety. The resulting 'r's of .419 and .590 for each respective administration established that there is a positive, linear relationship between the two variables⁴. Both of these results are in keeping with previously reported findings. Sullivan (1956), Rogers (1959, 1961, 1965), Saranson (1960) and Mowrer (1965, 1966), all report that dissatisfaction with self is associated with elevated feelings of 'moral', 'social' or general anxiety. Spielberger et al (1980) using the STAI state that:

"Research shows that it is to be expected that feelings of self-rejection will induce high A-trait" (p.95).

Similarly, Weitzner, Stallone and Smith (1967) using the Cattell 16 PF reported that:

"the means of the high and low self acceptance groups (were) significantly different for seven of the sixteen scales on the 16 PF. Furthermore, six of the seven significant differences are on the scales making a contribution to the second order factor of anxiety." (p164).

It will be remembered however that in an earlier part of this discussion self acceptance was found to be significantly influenced by both self and not-self perception, and as such it must be seen as a part, and not the whole of the cognitive mediation process. In general terms high self acceptance was found to be the product of a dominant, managerial self and a not-self which rejected all forms of hostile weakness. Conversely, a low level of self acceptance had the inverse perceptual profile to that described above. As a consequence of these relationships the players with low levels of self acceptance were found to manifest the major traits of self-depreciation, weak ego-strength and dependent attitudes, integrated with a conscious rejection of their ability to manage their interpersonal environment.

Further research by Ohnmacht and Muro (1967) found that those subjects who were both highly anxious and low in self acceptance, were also characterised on the Cattell 16 PF as manifesting tendencies toward:

"ego weakness (C-), shyness (H-), paranoid tendency (L+), guilt proneness (O+), self conflict (Q3-), and high ergic tension (Q4+) "(p.237).

Each one of these personality factors being characteristic traits of the HI and JK interpersonal themes, and the antithesis to those which define the sports-type.

It is paradoxical that in their attempt to increase their security and so reduce tension, the players who try to overcome their self perceptions of inferiority and dependence by acceding to the values of others, do no more than bolster their fear of environmental threat. In chapter 2 this relationship between anxiety and values was described by Rollo May (1980) as being based upon an individual's concern with other people and their expectations of him. Consequently:

"what makes him prey to anxiety is to be different, to stand out ...
... Some are driven to conform because of loneliness - validating the self by means of becoming like everyone else." (p.245).

Although May illustrates the way in which individuals attempt to reduce environmental threat by introjecting its value structure, he fails to attend to the consequence of self validation through other-centred conformity. It has already been established that this process only furthers intra-psychic conflict as the self and not-self perceptions are invariably incongruent with those of the environment. Thus, rather than cognitions mediating the interpersonal environment into manageable dimensions, the appraisal process confirms one's inability to direct one's existence, as it is based upon self perceptions which stress a general lack of self-efficacy (JK) and negative internal self-statements (HI).

Sartre (1956) summarises this relationship between the self-schema and anxiety with his concept of Mauvais Fois (Bad Faith); the basis of which is Being-For-Others. As a consequence of this mode of existence, dependent (JK), self-effacing (HI), or overconventional (LM) perceptions of self appraise the environment in terms of the fear of failure before, and of

negative appraisal from, the others; the self cognises the environment thus:

"I have come to see myself only as others see me Am I anything more than the dread that others have of me." (Sartre 1946, p.103).

A player's general anxiety of his interpersonal environment has been shown to be significantly related to 'other centred' dependent, and generically weak self perceptions, characterised specifically by octants HI, JK and LM. However, this is only one part of the affective response associated with a person's cognitive appraisal of his ability to manage and direct his interpersonal environment. The second component, state anxiety, is a temporary affective response to a specific environmental situation. For this experiment, characterised by the players forthcoming game.

It will be remembered that Spielberger conceptualised the affective relationship between trait and state anxiety as being that, in general, individuals high in A-Trait exhibit A-State elevations more frequently than those low in A-Trait, because of their tendency to respond to a wider range of interpersonal situations as threatening to self-esteem, (1980), (for a more detailed description of this relationship please see chapters 2 and 3).

The analysis of covariance, used to examine the influence that the different self perceptions have upon the trait-state anxiety relationship, established that self perception was a significant factor in mediating the players' A-State intensity in a situation which involved "some threat to self-esteem"(i.e. the forthcoming game). This was found to be the case for both administrations.

As the experimental design controlled trait anxiety for the influence of each self percept, it was possible to generate the hypotheses of no difference that the trait-state anxiety regression would be homogeneous for each octant around the interpersonal circumplex, and for each self acceptance discrepancy unit. However, as was stated above, the beta coefficients which accompanied each analysis established that this was not in fact the case.

The heterogeneous effect that controlling trait anxiety for the influence of self perception has upon the trait-state anxiety regression, is illustrated by the different sized beta coefficients in tables 39 and in table 40 on page 180. (It will be remembered that the size of

the beta coefficient indicates the 'steepness' of the regression between the two components of anxiety; the larger the coefficient, the higher are the trait and state anxiety scores associated with either a particular octant or self-ideal discrepancy unit).

From table 39 it is apparent that it is octants DE and FG which have the lowest beta coefficients. A somewhat surprising finding given the negative appraisal of these two interpersonal themes in a previous discussion, although it perhaps indicates the vagaries in the players' perception of what constitute a temporal ego-threat, a factor which will be discussed in greater detail below.

Octants AP and BC are both associated with relatively low anxiety regressions, (their beta coefficients being equal to .620 and .630 respectively), particularly when compared to octants HI, JK and LM, which all have 'steep' regression slopes indicating an association with higher levels of both trait and state anxiety, (their betas being equal to .707, .659 and .707).

The beta coefficients for the second administration however (illustrated in table 41), show no such degree of theoretical uniformity. Octant DE now has the steepest anxiety regression, (.643), although the more interesting phenomenon is the reduction in the slope of the anxiety regression associated with octants HI, JK and LM, (.707 to .511; .649 to .594; .707 to .588). In fact the AP regression is steeper, or as steep as each one of these generically weak interpersonal themes. The reason for these seemingly incongruous results can be better understood by comparing them with those of the first.

It is evident that the overall reduction in the size of the beta coefficients, between the two administrations, represents an increase in the players' perception of their ability to manage the interpersonal environment manifested by the forthcoming game. This is a logical occurrence as for many players the second administration of the questionnaire coincided with the end of their season. Consequently, as the "ego threat" of the forthcoming game was diminished, their state anxiety was low.

The beta coefficients for not-self perception are illustrated in tables 43 and 45, on pages 181 and 182 respectively. From table 43 it is apparent that there is little, if any, theoretical uniformity to the different sized beta coefficients, although the rejection of the expressive Responsible-Hypernormal octant (NO), has a clear effect upon

the anxiety regression as the size of the beta coefficient is .950. The other octants which would be expected to be associated with high levels of A-Trait and A-State, based upon previous results, AP and BC, have no such effect. The beta results for the second administration, illustrated in table 45, reflect the same factious distribution, with AP having the lowest anxiety regression of any octant (.500). However, it is interesting to note that it is again NO which is associated with the highest trait and state anxiety scores (.741), although in keeping with the proposal made above, all the beta coefficients apart from the one associated with LM, show a decrease in size between the two administrations. Although it is the apparent stability of the NO anxiety regression which is the most interesting finding.

When reviewing the results obtained from the statistical analyses of the players' not-self perceptions, it becomes apparent that unlike the other octants, the rejection of NO is a consistent indicator of both self rejection and high levels of trait anxiety for both administrations. For the analysis of the effect that the players' not-self perceptions have upon self acceptance, although the sample as a whole failed to reach statistical significance for the second administration, the rejection of NO is a consistent influence upon self rejection for both administrations, with mean self-ideal discrepancies of 85.5 for the first administration and 61 for the second, (the maximum possible being 114). Similarly, for the analysis of the relationship between not-self perception and trait anxiety, although again failing to reach statistical significance for the second administration, the mean deviations associated with a rejection of this interpersonal theme rose from 4.85 to 11.83, this second figure being the highest for the whole circumplex (see Table 35 on page 178).

The results confirm the apparent temporal stability of a rejection of NO as an indicator of negative self appraisal and high affective arousal. Although no measures of statistical significance can be attached to the above results it is proposed that the possible reason for this consistency is the expressive nature of the Responsible-Hypernormal octant. It is characterised by the message:

"I am a strong, competent, empathic person on whom you may count for understanding and emotional support" (Carson, 1968, p.109).

A rejection of this interpersonal theme then, involves the emotional rejection of the other (Foa 1965). As a consequence, the 'threat' posed by

either the general or more specific interpersonal environment remains constant due to one's inability to integrate into the group.

The beta coefficients which resulted from controlling trait anxiety for the influence of self acceptance, are illustrated in Tables 47 and 49 on pages 183 and 184 respectively. From Table 47 it is readily apparent that there is little uniformity to the different sized beta coefficients, although there is some evidence of a general linear increase, with the discrepancies of 81 (.675), 84 (.701) and 105 (.726) having steeper regressions than the lower discrepancy units of zero (.638), 23 (.632), 26 (.544) or 41 (.588). Although the coefficients from the second administration, illustrated in Table 49, present no evidence of theoretical uniformity, in fact there is evidence of an inverse relationship, going from a high anxiety regression of .815 and .829 associated with the low discrepancies of 0 and 23, to a low regression of .549 and .694 associated with the high discrepancies of 84 and 91. The results are further compounded by the general increase, over the two test administrations, in the size of the beta coefficients indicating an increase in the players' levels of trait and state anxiety, an anomalous situation, which at the present, cannot be accounted for.

However, although the beta coefficients are, for the most part, theoretically heterogeneous, there is a high degree of uniformity in the proportion of the variance in the state anxiety scores explained by trait anxiety when it is controlled for the influence of the self schema: R^2 was found to be greater than 95% in all cases.

The apparent theoretical disunity of the above results (apart from those from the first administration, 'Self'), can be directly attributable to the conceptual nature of the trait-state anxiety regression. Many researchers have conceptualised the interpersonal situations which will, in all probability, result in high A-trait individuals eliciting high A-state responses. Hodges (1968), McAdoo (1969), O'Neil, Spielberger and Hansen (1969), Rappaport and Katkin (1972) and Spielberger (1972):

"Have all found that high A-trait persons in ego-threatening conditions or situations report greater changes in A-state levels than do low A-trait persons. (However) in neutral or non-threatening situations, the level of A-state arousal should not be appreciably higher for high A-trait persons as compared to low A-trait persons" (Endler 1980 p.258).

Using Endler's summation as a theoretical base it is probable that as the players' perceptions of the situation are ego-syntonic, at the time of testing their cognitive appraisals categorised the situation as being neutral or non-threatening to their perception of self. As a consequence there was no theoretical uniformity to the different regressions for either the octants or self-ideal discrepancy units. However, although this argument can be justifiably proposed for the results which arose from the second administration, when the threat of the interpersonal environment could conceivably be said to have reduced, it cannot be taken as offering a comprehensive explanation for the factious variation in the results obtained from the first, due mainly to the fact that the effect on the anxiety regression of controlling A-Trait for the influence of self perception was for the most part, in keeping with the conceptual relationship between the two anxiety components.

Although octants AP and BC did not produce the lowest trait-state regression as would be expected, they were associated with relatively low levels. Conversely, octants HI, JK and LM, interpersonal themes which all correlated with high interpersonal trait anxiety, did produce the steepest anxiety regressions. A factor which suggests that these players perceived the specific interpersonal environment as threatening and responded to this threat with high A-State intensity. As each one of these octants has been shown to be characterised by weak ego-strength, the results establish the ego-centric nature of the anxiety relationship.

The remaining results however proved theoretically inconclusive, and it is proposed that there are three possible reasons which could account for this situation: (1) As the relationship between trait and state anxiety is situation specific (see Endler 1980 above) it is possible that the administration of the questionnaire did not coincide with a forthcoming match which would be perceived by the players as posing a significant interpersonal threat. However, if this was in fact the case one would expect a far more homogeneous set of beta coefficients for the not-self and self acceptance analyses. Moreover, as the results for the perception of self reflect some theoretical uniformity it does suggest that there was some differentiation in the players perception of the specific interpersonal threat posed by the forthcoming game.

The second factor entails an assessment as to the validity of the proposed self schema - trait-state anxiety relationship. Wylie (1979) in a

study of the psychotherapeutic relationship between the self concept and trait-state anxiety states:

"Although both trait and state indices were employed (in this study), I consider here only the former, because self-reported trait anxiety seems more appropriately classifiable as a specific aspect of self conception" (p.824)

Based upon the results obtained from this research this would appear to be the case, as the relationship between the self schema and trait anxiety proved to be statistically significant in all but one case for both administrations. Perhaps a more accurate assessment of the situation would be that the self schema is, in total, significantly related to self reported trait anxiety. But only a part of the schema, self perception, can be considered as having a significant influence upon the trait-state regression, possibly because it is the conceptual bedrock from which all the other self percepts radiate. The legitimacy of this proposal can be established by considering the third factor; the conceptual nature of the STAI itself.

Endler (1980) states that:

"Spielberger's (1972) trait-state theory of anxiety accurately describes the relationship between A-state, type of threat, and A-trait. However, the STAI measure is restricted to interpersonal A-traits and ignores other facets of the domain of trait anxiety" (p.260).

As a consequence Endler proposes that the STAI is unidimensional as the A-trait scale "assesses primarily A-state proneness to ego-threat" (p.259). To overcome this situation Endler proposes that we adopt a multidimensional approach to the classification of anxiety based upon three domains; the physical danger domain, the ambiguous, and the interpersonal domain. However, Endler's criticisms of the STAI can similarly be used against him. Introducing the threat of physical danger will correlate with fear not anxiety, due to its association with a specific environmental object or situation. Ambiguous anxiety would, by its very nature, be difficult to assess and could be confused with phobic reaction or any of the other negative affective conditions replete in the literature. All of which leaves only interpersonal trait anxiety, which, by its very nature is related to the self concept. Consequently it is not the 'domains' within the situation which need elaboration, it is the nature of the interaction

between interpersonal anxiety and the situation.

Leary (1957) states that:

"Interpersonal behaviour is aimed at reducing anxiety. All the social, emotional, interpersonal activities of an individual can be understood as attempts to avoid anxiety or to establish or maintain self-esteem", (p.59).

Although this proposal was rejected as it entails a conception of the self-system as being totally motivated by anxiety and as such being a neurotic phenomenon (Guntrip 1978), it can become more theoretically significant if interpersonal behaviour is regarded not as being aimed solely at reducing anxiety, but as maintaining the equilibrium of the self-schema in its interaction with the interpersonal environment. It is only when disequilibrium occurs, in the form of situational threats to self-esteem, that situation specific anxiety will occur. Implicit in this statement, regarding the nature of the person/situation interaction, is the subjective way in which we cognitively appraise our ability to deal with our present circumstances. Consequently, any disequilibrium arising out of our perceptions of the situation are person-specific, and therefore the criticism which should be levelled at both Endler (1980) and Spielberger et al (1970) is their unidimensional conception of ego-threat which, as it stands, cannot account for the multiplicity of self-situation-anxiety interactions.

No-one is free from the predisposition to be anxious, however the stimuli that elicit anxious responses are invariant with the self schema. The factor of state anxiety does not take this into account as it fails to differentiate ego-threat, and this fundamental theoretical weakness can be elaborated using Leary's interpersonal theory.

It has been proposed that ego-threat is invariant with the self schema, as such it is multi-dimensional, consequently Leary states that each generic interpersonal theme is threatened by different situations. The managerial-autocratic self has the capacity to be made anxious but only when the situation encodes the threat of "the possibility of being weak, uniformed, submissive" (p.325). Similarly the DE interpersonal self is "made most anxious in a situation which pulls for tender, agreeable or docile feelings" (p.342). Each octant has its own particular situational threat and although they are all generically linked to ego

threat it is evident that as it stands the concept is not sensitive to the vagaries of the interpersonal environment. Endler (1980) encapsulates this whole argument in the following statement:

"It is necessary to focus on persons perceptions of situations and the meanings that situations have for them. We should isolate the kinds of situations that make individuals anxious and the cues in the situations that they perceive as threatening. The message that the environment is sending may not be the message that the individual is receiving" (p.266).

It is proposed therefore, that although the results for the first administration 'self' did indicate that the trait-state regressions were generally influenced by ego-threat (octants HI, JK and LM), this alone is not sufficient to establish positive links between the self-schema and Spielberger's conception of state anxiety. Indeed if anything the result atests to the fact that state anxiety per se, is a general affective response to a specific stimuli, given that the common denominator between the three interpersonal themes is generic weakness. Other than this, based upon the failure of the other self percepts to exert any significant theoretical influence, it is difficult to elaborate. As such, and until further investigation takes place, the utility of state anxiety as an affective dimension of the self-schema is questionable. It therefore remains to follow Wylie's contention that trait anxiety is more appropriately classifiable as a specific aspect of self perception. The following will briefly discuss why this should be so.

Leary's personality traits are in essence categorising concepts and as such they do not refer to any one specific interpersonal situation, whether real or imaginary. Their function is therefore in that they:

"Perform a necessary summarising function and provide a convenient shorthand for communicating about social behaviour" (Hampson, 1982; p.160).

Trait anxiety is yet one more category, based upon individual differences in general interpersonal anxiety. Although it, like state anxiety, is directly related to ego-threat, it is by definition distinct from real anxiety (state), in that conceptually it is not anxiety at all; it does not exist as an affective response. Coles (1982) states that:

"If anxiety is an emotion, it is impossible for it to be active and neither seen nor experienced in some way" (p.126).

Trait anxiety, on the contrary, summarises a person's experience of being-in-the-world-in-general, which as we have established is mediated by the self-schema. Therefore conceptually trait anxiety is an abstract affective mode of the self-schema, whereas state anxiety is the affective response by the self-schema regarding its ability to manage a specific situation. The concluding discussion, regarding the between group differences in player affective arousal, will further illustrate some of the points already raised.

The results established that there were no significant differences between the teams in their players' levels of trait anxiety, for either administration. However, there was a significant difference between the teams in their players' levels of state anxiety for the first administration; $p < .05$. A more detailed analysis of this result established that the Freshers XV had a significantly lower level of state anxiety than either Loughborough, Durham or York.

The results, interpreted in terms of Spielberger's theoretical formula, again indicates its shortcomings, as one would expect that if the teams differed significantly in their levels of A-state, then they would also differ, to some degree at least, in A-trait and this is not of course the case. This difference between the teams however, can be attributable to the "cognitive worry" dimension of state anxiety which indicates, in general terms, that the players from Loughborough, and in particular those from the Freshers XV, see themselves as being more in control of any threat arising from their interpersonal environment. And given the Freshers results upto this time this would indeed appear to be the case, as they had won most of their previous matches by very convincing margins. It is also interesting to note these two teams' state anxiety responses for the second administration, when they were given the questionnaire a little before a very important game. As can be seen from Table 31 there is little difference between theirs and the other teams state anxiety T-distributions. In fact Loughborough has a mean score which is the equivalent to that for Spielberger's undergraduates (50 t points are equal to the mean). This finding again indicates the probable influence on the players of their formal group structure. The factor will be discussed in more detail in the concluding remarks to this chapter.

Perhaps, the most important development however is that although

there are no differences between the five teams in their players' levels of general interpersonal anxiety, every team has at least one member who perceives his interpersonal environment as threatening, and when this is linked to the previous findings associated with this cognition it is evident that not all players exhibit the same degree of "tough-minded emotional stability", and as such their interpersonal needs cannot be stereotyped.

The discussion, taken as a whole, has established that there are significant interpersonal trends which mediate the players' self perceptions; dominant-independence for the self; hostile-weakness for the not-self; authoritarianism for the ideal self. However, although these perceptual characteristics were in evidence for every team studied, the homogeneity of the players around these particular themes did appear to be influenced by particular group membership. It was proposed therefore that it was the degree of formal group structure which directly influenced the players' 'depersonalization', whereby they undergo "a change from personal to social" evaluation (Brown and Turner 1981 p.40). This process is summarised by Brown and Turner (op cit) when they state that:

"Under conditions where a shared social identification becomes salient, social behaviour tends to become more uniform both within the ingroup and towards the outgroup ... This is because, under such conditions, individuals define themselves and others in terms of their common attributes as group members and not in terms of their idiosyncratic features as unique persons" (p.40).

Left at this point the research could be interpreted as merely perpetuating the myth of the male sportstypic as being stereotypically "high in dominance, social aggression, leadership, tough-mindedness and emotional control" (Kane 1978; p.122). In the language of the interpersonal circumplex managerial-autocratic (AP) or competitive-narcissistic (BC) behaviour.

Inherent in Kane's statement is the identification and proposal of a social norm and as W.A. Scott (1958) states:

"Adjustment is necessarily determined with reference to norms of the total society or of some more restricted community (i.e. the team) within the total society. Accordingly, one may conceptually define adjustment as adherence to social norms" (p.31).

However, it was established that there were players whose self perceptions did not in fact adhere to the rugby player norm. They reported being low in dominance (JK), social aggression (HI), and leadership skills (JK, LM and HI), yet they still appear to function as an effective part of their respective teams. Their mere inclusion in the experimental sample attests to that. Moreover, there were a number of players who manifested the above self perceptions who were in positions of responsibility within the teams and also had various representative honours. It does seem however that this deviation from the norm was not without personal cost, as most in this position tried to establish some identity with the group by introjecting its value system, a situation which merely seemed to exacerbate their situation as it resulted in very low levels of self acceptance and high levels of general interpersonal anxiety.

The question which faces us now therefore, addresses the necessity of these self-depreciating and anxious responses. Are they an inevitable but justifiable consequence of an inability to conform to the team norms? There are probably still those who would answer yes, however if this is not so then how can the coaches, athletes and other researchers in the field rectify the situation? It is to this question that the comments in the concluding chapter will be addressed.

Footnotes

1. It may seem paradoxical that BC is both valued as a self preception and rejected by the not-self. However, the situation is not as incongruous as it first appears as it is a direct manifestation of the diametric relationship which exists between the self and not-self perceptions. A situation which will be described in full later in the chapter.

2. Cartwright and Zander (1968) propose that;

"a group is a collection of individuals who have relations to one another that make them interdependent to some significant degree".

Because a rugby team consists both of a number of highly specific role relationships i.e. scrum-half and hooker, scrum-half and fly-half etc., and also a high degree of physical proximity between its members, there exists a strong sense of interdependence, a necessary concomitant if effective team functioning is to take place.

3. Using a correlated groups design the table below illustrates the change in the team means.

Teams	First Administration	Second Administration
Loughborough	29.39	34.65
Freshers	42.5	45
Durham	38.7	20.2
Newcastle	38.35	38.85
York	46	39.1

4. The positive correlation between self acceptance and A-trait may at first sight seem an anomalous result i.e. high self acceptance being associated with low A-trait suggesting an inverse relationship. However, this illusion is entirely due to using Leary's discrepancy scores where perfect self acceptance is equal to zero, perfect self rejection 114. A positive relationship is therefore acceptable.

Chapter 7

Implementing the Athlete-Centred Approach:

Implications of, and Strategies for, the Coach-Athlete Interaction

"Hell is other people" (Sartre 1946).

"Self-realisation is not an anti-social principle; it is firmly based on the fact that men need each other to be themselves" (Storr 1981; p32-33).

The seemingly disparate views offered by the two authors above illustrate the fundamental paradox of the human condition. The continual threat to self's existence posed by real or imaginary others who make up each of our separate realities, interfaced with self's need of others in order to facilitate acceptance and growth of self through their continued approval, encouragement and support. The more destructive side of the Others influence is described by Leary (1957) when he proposes that some individuals, rather than face the anxiety and subsequent loss of self-esteem generated by their interpersonal relationships, choose to destroy self through suicide. An extreme but sobering example of one of the consequences of the power we invest in others. However, although it is not my intention to conclude by proposing that sport, with its emphasis upon enforcing stereotypes, is a breeding ground for suicide, the potentially devastating influence it can have upon an athlete's sense of identity cannot and should not, be ignored. The more extreme manifestation being that:

"A number of prominent athletes have sought psychiatric help and many others have abandoned promising careers publicly stating that to continue would have caused a nervous breakdown". (Patmore 1979 p.10).

A less extreme consequence of the anxiety and conflict caused by participation in sport has been reported by Yaffe (1983), who observed that out of the 418 medical complaints presented by British athletes at the Moscow Olympics, 60 (14%), were directly related to stress¹. Similarly, others such as Moore (1968), Sanderson (1977) and Rosenblum (1979), involved in monitoring athletes' general health, all report that those who manifest high levels of anxiety and intra-psychic conflict are predisposed toward either psycho-

somatic injury conditions or 'multiple injury phenomenon'². The proposed source of much of this stress and anxiety being the 'normal-abnormal' classificatory system which perpetuates the mythological sports-type. As a consequence the validation of the athlete as being an extrapolation of the Nietzschean 'ubermensch'³, either through the research of the sports psychologist or via the verbal descriptions of the coach, is a misnomer based upon a wholly inadequate paradigm. Therefore, although the athlete as sports-type falls within the tolerance of the old model, based as described in chapter 1, on a series of inadequate theoretical and methodological assumptions, a shift toward the athlete-centre approach reveals that the former has merely papered over the differences in individual athletes personality dispositions, and hence authenticated 'scientifically', the myth of the male sports-type. The way in which this theoretical proposition influenced the structure of the thesis is summarised below.

In chapter one the implications for the athlete's psychological well-being of maintaining the approach described above was considered, and it was proposed that the differentiation of athlete from non-athlete on the basis of their personality traits was a myth, used ostensibly to control and also 'facilitate' athletic performance. Control being maintained by transposing the moral system of the sports-type on to a 'normal-abnormal' classificatory system, such that any athlete whose self perceptions deviate from the normative cluster of traits is defined as a 'problem' athlete and is 'punished' by being 'expelled' to the periphery of the group. The psychological result of this breaking of the 'bonded' pledge being intra-psychic conflict and anxiety. It is via this process that the athlete as sports-type is validated and perpetuated.

In order to analyse (a), the existence and also prevalence of the sports-type and (b), its effect upon the athlete, an alternative theoretical methodology was proposed based upon the phenomenological and experiential perceptions of the athlete whilst performing. Using such an approach entailed accounting for the influence of the performance situation; the athletes interpersonal environment; his perceptions of self; and the 'intentionality', in terms of the effect upon others, of these perceptions, factors previously ignored by the traditional approach to research on athlete personality which concentrates upon validating stereotypes with the aim of enhancing performance, ipso facto winning.

This paradigm shift was likened to a move away from the emphasis upon group process, where the individual athlete's sense of self is obscured by the collective consciousness of the group, to praxis, a perspective which accounts both for the situation in which the athlete is, and also the needs, intentions and perceptions generated by the situation. To facilitate this shift a self-schema was introduced, a construct which was to represent the basic perceptual unit of being-in-the-world. The schema consists of self, not-self, and ideal self, perceptions which can be analysed individually or as part of a perceptual 'gestalt'. Moreover, it was proposed that these perceptions could be used in conjunction with self-report measures of anxiety in order to quantify the influence, on the athlete's affective threshold, of adherence to or deviations from the 'normal-abnormal' personality classification.

Chapter 2 discussed the prevalence of anxiety and intra-psycho conflict within sport in more detail, particularly the way in which such conditions were rationalised by the coach. Similarly the methods by which the athlete personality can be depersonalised were advanced. It was proposed that the sports group acts in the same way as Sartre's (1982) bonded group, whereby an athlete's loyalty to his group i.e. maintaining the sports-type and hence a definition as an athlete, is maintained through the anxiety, fear and guilt as to what the others will do, or say, if he deviates or lets them down by manifesting behaviour outside the rubric of the sports-type. The psychological process by which these unpleasant affective states are manifested was described using a model developed by Smith (1980). The relationship between the athlete's cognitions of the performance situation and his degree of affective response, being mediated by his appraisal of self's ability to cope with the demands of the situation. As an athlete's level of anxiety is dependent upon the outcome of this mediational process, then one would expect those whose sense of self deviates from the bonded group norm to perceive the demands of the performance situation as threatening to self, and respond to this threat with elevated levels of anxiety.

Chapters 3 and 4 described in detail the two psychometric techniques, La Forge and Suczek's (1955) 'Interpersonal Check List' and Spielberger et al's (1970) 'State Trait Anxiety Inventory', which were to be used to analyse the above proposals, and introduced the experimental sample of 96 rugby players from 4 universities

and one college of education. Reasons for the choice of this particular sample were advanced.

In chapters 5 and 6 the empirical analyses were described and discussed respectively. The results indicated that stereotypes existed for each aspect of the self-schema; a managerial-competitive self; a rebellious not-self; and an autocratic ideal. There were however, perceptual deviations evident in all 5 teams from the normative typologies of self and not-self. These traits, which in general terms were the antithesis to those associated with the sports-type, e.g. submissive, dependent, docile, were found to be significantly associated with high levels of both self-rejection and also general, or trait, anxiety. The influence of this 'weak' depreciatory interpersonal self perception, interpreted in terms of Smith's model, is that the athlete mediates his cognition of the game situation, using as the criterion a series of internal self-statements based upon self-rejection. The emphasis therefore, is upon self's inability to cope with this segment of reality, the competitive situation threatens to engulf self, the result being high levels of affective arousal.

Moreover, the results of the players ideal self perceptions confirmed the influence of the bonded group, as most individuals, irrespective of their self or not-self percepts, placed their ideal at the apex of the vertical 'Dom' axis of Leary's circumplex, the autocratic interpersonal octant whose traits embody those of the sportstype. It is evident from this finding that those players whose self or not-self perceptions deviated from the norm described above, attempt to compensate for their deviancy, and also retain their 'pledge' to the team, by adopting as their ideal the octant which contained the traits associated not only with the sports-type, but because of the structure of the group, their peers as well. Unfortunately however, the statistical analysis revealed that this compensatory process did little to solve their anxiety and guilt, rather it had a significant effect upon their feelings of self-rejection and also appeared to reduce their threshold of affective arousal.

The theoretical and methodological tenet of the above supported by the empirical findings, suggest that there are athletes who find that participation in sport, under the present conditions, disturbing, with possible damage not only psychologically but physiologically as well. Moreover, it must be pointed out that the sample used in this study did

not represent the top echelon of sports participation, a factor which enables the hypothesis to be generated which suggests that the stresses imposed upon top sportsmen and women must create an environment for tremendous psychological conflict, affective arousal and possible physiological injury to take place, three factors which together form a vicious circle often eased solely through the use of drugs..

The emphasis upon athlete-as-sports-type by coach, athlete, spectator, and the media in general continues, largely unabated, to structure the aim of sport in general, and the influence of the bonded group in particular. Consequently, as sport becomes more and more of a financial medium, the stress imposed upon sportsmen and women will become proportionally larger, particularly as winning, rather than entertaining, becomes the commodity at a premium. Moreover, the influence of the media exacerbates the need for 'heroes' of the track, football or rugby field, and as a consequence the myth of the male sports-type is perpetuated by these printed or visual symbols, as well as by those involved in promoting the success of the athlete; the coach. Indeed it is perhaps the coach-athlete interaction which must accept most of the blame. Dr. Peter Sperryn (1983), secretary of the British Association of Sport and Medicine, comments that:

"The stress on top athletes has become extreme. This is not adequately understood by the public, the media sports officials or, ironically, the athlete and his coach." (in the Guardian p.14).

Nowhere have these stresses been manifested in greater detail than in the number of British athletes who, due to mysterious virus or muscle injury, had to either drop out of, or compete below their best at the World Athletic Championships in Helsinki. This problem however, is not solely limited to athletes in the United Kingdom, (where the British malaise does appear to differ though, it is in the concentration upon the purely physiological factors), but as was pointed out at the beginning of this chapter, many injuries are merely physiological symptoms of the psychological stresses imposed by the in-group and out-group demands of participation in sport.

The overriding question is therefore what steps can be taken to allow athletes freedom of individual expression by abolishing the covert classification of personality based upon a criteria of normal-abnormal

behaviour, while maintaining a sensitivity to the needs of each individual athlete, his perceptions of, and participation in, the performance situation. The paradigm shift employed by this thesis suggests that it is up to the coach and to a lesser extent the athlete, to facilitate this change.

Of course the range of this study is, of necessity, limited, and much more work needs to be undertaken. It is suggested that future research could concentrate upon using Kelly's (1955) repertory grid technique, rather than standardised trait inventories, as the type of constructs elicited would be a more valid representation as to the extent and also influence of the sports-type. The use of this psychometric technique could be backed up with a selection of in-depth interviews and, where possible, participant observation. Different sports, age-groups, particularly using school children, and levels of competition would, of necessity, have to be compared. Similarly given the apparent gender-bias (see Riesman 1967, Tiger 1968, and Millet 1977 in chapter 4) of the sports-type, sex differences in sport would be a useful criterion.⁴ And a seemingly fruitful area would be to monitor how participation in sport transfers into the other areas of an athlete's life. These suggestions concentrate mainly upon analysing the influence of the sports-type and the stresses associated with this influence. The other side of the coin, as the title of this final chapter suggests, is how the current concern with the athlete as sports-type can be replaced by an athlete-centred approach. Consequently, the remainder of this conclusion will speculate as to the practical implications, firstly for the coach, and secondly for the athlete, of implementing an athlete rather than a performance (sports-type) centred approach.

1. The Coach and the Athlete-Centred Approach

The traditional view of the 'successful' coach's personality sees him as being:

"Dominant, authoritarian, hard-working, artless, tough-minded and manipulative: task oriented rather than player-centred" (Straub 1978 p.261).

Similarly, the emphasis placed by these interpersonal reflexes during the coach-athlete interaction stresses the dominance of the former and the submission of the latter. Indeed Straub (op cit) comments:

"In the mid-1940s leadership was often defined as a form of dominance in which followers more or less willingly accepted direction and control by another person. Many people would probably agree that this definition holds true today in the sports environment."(p.258).

Much of the contemporary research into the coach-athlete interaction supports Straub's comments: Cooper and Payne (1972), who analysed the coaching methods used in the four divisions of the English professional football league found that task-oriented coaching was the 'best' predictor of team 'success', a particular approach in which the coach emphasises job-completion, problem solving and a persistent work-rate, rather than interaction orientation which is concerned with maintaining harmonious relationships between coach and athlete. Toward the less extreme end of the 'coaching scale' Nygaard (1971) found, when looking at the behaviour of 40 physical education teachers, that they used verbal behaviour which had a 'direct' influence upon the student; that they did most of the talking; and that they viewed themselves as authority figures. Cheffers and Mancini (1978) who carried out similar research reported that during the teacher-athlete interaction there was "virtually no acceptance of student feelings and ideas, praise or questioning behaviour." The current status of both the coach and athlete, and the pattern of their role relationship, is perfectly summarised by the work conducted by Carron (1978). Questioning both coach and athlete he reports that the coaches were perceived both by themselves and the athletes as being dominant and in control. Conversely, the athletes were perceived as being submissive and recipients of control. Moreover, the coaches eschewed warm, personal friendships, they saw themselves as being the recipients of these expressive traits.

Perhaps Sage (1978) concludes the whole ideology of the current coaching methods when he states:

"It is easy to see how this system may produce coaching behaviour which emphasises the treatment of players for what they can do for the coach - win, rather than the treatment of players based upon what coaches can do for the personal social growth of the athlete as an individual" (p.154).

It is apparent therefore that the current role of the coach is an extrapolation from the bonded group process whereby control, through dominance, is maintained. If we accept the contention however that sport is a

microcosm of society in general, then the current coaching techniques represent antiquarian management practices. Unfortunately though, many coaches can answer this charge with some degree of conviction in that 'this is all very well but our methods have been shown to facilitate high levels of performance', the question however is - at what cost? Moreover, just because one method has been shown to be 'successful' (and one wonders in whose terms), it does not follow that it cannot be improved. It also must be pointed out at this juncture that the shift toward the athlete-centred approach does not entail a move away from a high standard of performance or necessarily the desire to win or to do well in competition. What it does mean is that the coach and athlete re-define competition and performance. Consider the following statement by Galloway (1982):

"What is seldom recognised is that the need to prove that you are better than someone else is based on insecurity and self-doubt. Only to the extent that one is unsure about who and what he is does he need to prove himself to himself or to others.

It is when competition is thus used as a means of creating a self-image relative to others that the worst in a person comes out" (p.147).

The basis of the bonded group is therefore 'neurotic competition', self-worth gained through 'successful' performance, a positive attitude to self achieved by winning, but winning adhering to the stricture of the sports-type. However, if neurotic competition exists then so must 'normal' competition, but under what conditions can a transformation take place? The first step must be a collaborative goal-setting between the coach and athlete, such that they set their own standards of performance or execution of a skill, upon which they both agree, and which is imposed from within the coach-athlete interaction and not from the mores of the neurotic-competitive situation. How though can this equanimity between coach and athlete be achieved? There has been a paucity of alternatives to coaching from the basis of neurotic competition. Cratty (1978), was concerned as to the rate of psychological morbidity attributed to the traditional coaching practices, and as an alternative he suggested a series of 'models of maintenance' as a means of reducing anxiety and conflict. The basis of these 'models' is that a professional psychiatrist or counsellor is enlisted by the coach to assist in the expressive side of coaching. Such an approach has been used by a number of professional football teams,

and two psychologists calling themselves the 'Sporting Bodymind' are available for consultation upon such topics as 'body awareness', 'relaxation' and 'concentration'.⁵ For most however, Cratty's ideas, although representing a large step forward, involve too radical and expensive a first step. There are very few institutions which can afford to employ, whether on a full or part-time basis, the services of a psychologist. Moreover, as the title of Cratty's model suggests, the aim is on maintenance rather than upon the prevention of the emotional problems caused by participation in sport under the present system. Thus the athlete is still seen as presenting the problem and no attempt is made to adapt coaching techniques or expectations. Cratty's aims therefore combat the effects but not the cause of the emotional disturbances.

George Sage (1978) has probably proposed the most fundamental alternative to current coaching practices. In his paper entitled 'Humanistic Psychology and Coaching' he argues that in the past:

"Instead of coaching from the expressive foundation of personal fulfillment, coaches often adopt a production profile in working with athletes Under the banner of efficiency, personal relationships give way to distance and manipulation." (p.155)

He proposes, as an alternative to the above perspective, the humanistic method of coaching:

"The humanistic coach places individual expression above group conformity, self-discipline above authority, independence above dependence. She makes an effort to give attention to every player on the team." (p.159)

There is within Sage's proposal, the beginnings of a more athlete-centred environment, fostered by the coach, within which the athlete can grow psychologically as well as physically. However, although both Sage and Cratty have identified and proposed solutions for the effects of the traditional coach-athlete relationship, neither is particularly specific in his approach as to the means of implementing, and also the practical implications of an athlete-centred coach-athlete relationship. Within this problem there is of course the dilemma of replacing one inflexible stereotype with another. A way round this is to first ask the coach to

reflect upon himself as, by definition, he is part of the interaction. It should be realised therefore that there are 'problem' coaches as well as the ubiquitous 'problem' athlete.

The most important factor of the athlete-centred approach is that the coach must believe that such an interaction will be more fulfilling, and hopefully have an influence upon the psychological growth and health of his athletes generally. It should not be regarded as being just another gimmick with which to enhance performance. Moreover, the main resource for employing such a technique need only be the availability of his time.

Argyle (1969), comments that in order for a compatible interaction to be possible: -

"two people must agree on the role-relations between them ... they must agree on the definition of the situation, and be prepared to play socially defined parts in it." (cited in Carron 1980 p.143).

At present the role-relationship is based upon the interpersonal reflex of dominance-submission and it is proposed that any interaction which is athlete-centred must (a) be based upon an environment, fostered by the coach, where problems may be aired and the athlete's personal growth facilitated, and (b) communication engendered by this environment should reveal, as much as possible, the phenomenal self perceptions of the athlete, such that, where necessary, coping strategies for stress or conflict can be implemented or support offered. This point will be described in more detail in section 2 below. In order for (a) to be achieved the coach must realise that by definition he or she is in a position of directive leadership. However, the extent of this direction can be tempered by the coach questioning the objectives and self perceptions which shape his leadership style. A simple but useful exercise would be to answer the following questions: As a coach: (i) Do I trust the capacity of the athlete to meet the problems with which we are faced, or do I basically trust only myself; (ii) Do I free the athlete for creative discussion by being willing to understand, accept and respect all attitudes, or do I find myself trying subtly to manipulate discussions so that they come out my way; (iii) Do I trust the athlete to his 'job'; (iv) When tensions occur, do I try and make it possible for them to be brought out into the open, (adapted from Rogers, 1965). The intentions contained in the

above represents the desire for a more equal coach-athlete interaction, their roles being based upon a mutual trust and respect of, and for, each other's abilities. As such there is a collective model of leadership or direction in which:

"a coach can directly involve his athletes in a collaborative goal-setting and thereby influence them into a kind of psychological contacting with themselves." (Botterill 1976. Cited in Straub 1980 p.59).

Of course the problem of implementing an athlete-centred approach is exacerbated when the coach is dealing with a sports group, such as the rugby team used in this study. Tensions between members and the need for a collective approach make collaborative goal-setting more difficult, but not impossible. Unfortunately the major problems of group dynamics are beyond the scope of this thesis although the principles outlined above should still be implemented. There are however, other factors which can be added. Team-members should be shown that the group works synergetically,⁶ in that it is the result of the combined or coordinated action of all its members. As such the coach should endeavour to get the various task-groups within the team to discuss their function i.e. in rugby the Hooker and the two Prop Forwards, in soccer the goalkeeper and his defenders. This can then be supplemented by inter-mixing the members of each individual task-group so that the players gain an understanding of the perceptions and actions of their team-mates with whom they are not usually in direct contact. To achieve this however, the coach must organise the physical as well as social environment. For instance the coach must realise that if he wishes a group discussion to take place the players should be seated in a circle or semi-circle so that each player can see and be seen by his team-mates.⁷ This simple but effective manipulation of the physical environment helps prevent the more established team-members monopolising the group discussion.

It is by using the above points, whether upon individual or groups of athletes, that the coach begins to understand the athlete's perceptions of himself as a being-in-the-world, and as a consequence, should a particular athlete manifest conflict and anxiety, based upon a cognitive set of negative self appraisals, the coach can help, as opposed to merely defining the athlete as a problem with an uncharacteristic show of weakness. The final section below will consider how the athlete can learn, utilising

where possible the more 'therapeutic' coaching environment,⁶ to reduce the stress involved in sports participation under the influence of the sports-type and the bonded group process.

2. Coping Strategies and the Athlete-Centred Approach

One of the objects of this thesis has been to illustrate the incidence of psychological conflict and anxiety within a sample of 96 rugby players, the cause of which was attributed to the predominant influence of the male sports-type as the athletes' role model. However, although the discussion below represents an extension of the athlete-centred environment described in section one above, it must be made clear that its existence is not necessarily contingent upon it (see footnote 6 above). In essence it entails not only a recognition of the stresses involved in participation in sport, but specific coping strategies for the athlete to use in order to reduce the level of affective arousal by developing a more positive self-image.

The role of the athlete within the athlete-centred coaching interaction is that he or she must take responsibility, and offer some direction for his or her actions. This entails that the athletes perceptions of the coach must transcend the directive, dominant stereotype, and replace it with the need for a more equal relationship. Moreover, athletes should help each other to recognise signs of stress or conflict. This shift towards a more expressive manifestation of the bonded group enables players to start to become self rather than other centred. However, regardless of the quality of the coaching interaction the athlete will, at some stage, manifest high levels of affective arousal, the response to the vagaries of the (neurotic) performance environment. It is at this point that the coach should help the athlete recognise his loss of control, and this can be achieved by monitoring the signs of rising levels of arousal and also disturbances in concentration. Nideffer (1981) lists several such signals which need to be monitored:

1. Any change in the athletes arousal level, for example a significant or decrease in activity.
2. Increased tension in the muscles, particularly those of the upper body and neck.

3. Changes in breathing, especially hyperventilation or the incidence of asthmatic attacks.
4. The presence of small facial tics and twitches.
5. An increase in the muscle tension of the jaw.
6. Alterations in the ability to shift attention.
7. A change in the frequency of natural tension reducers, such as yawning, stretching and coughing.

Other signs which can be monitored solely by the athlete include: headaches; dizziness; blurred vision; palpitations; backache and the presence of a 'nervous rash'. Of course these symptoms could be caused by some physiological ailment and it is obviously important that the athlete be screened medically, before using a psychologically oriented programme to acquire independence and control. The stress management programme borrowed from Smith (1980), offers a method by which the cognitive appraisal of the performance situation can be enhanced and the level of affective arousal reduced, via a cognitive-affective stress management programme. It will be remembered that Smith's model, used throughout this thesis, proposed that an individual's level of anxiety is the result of the interaction between the situation and the person's cognition of his ability to cope with that situation. High levels of anxiety are therefore, the product of an inadequate coping mechanism based upon negative or irrational statements about self. The stress management programme (S.M.P.) has been applied to a variety of clinical and nonclinical populations, including pre-adolescent, college and professional athletes in a variety of individual and team sports. The S.M.P. consists of five partially overlapping phases, each one will be described in detail below. Before beginning this description however, it must be made clear as to why this particular programme has been included. There are many other stress management or coping strategies available which could be used instead of the S.M.P.. This particular technique was preferred however, as it has actually been used in sport, although its inclusion is solely to give the reader an

idea as to what such a programme entails. There are a number of points inherent in the S.M.P. which are contiguous with other techniques - these will be defined below, after the description of the S.M.P., in an attempt to summarise the major aims of a coping strategy.

(a) Pre-treatment Assessment:

This phase attempts to assess the nature of the individual's stress responses, its effect upon performance and other behaviours. Assessment is also directed towards an evaluation of the athlete's behavioural and cognitive skills, i.e. how well can the person voluntarily relax; how aware is he or she of the cognitive processes that elicit affective arousal, or conversely reduce stress and improve behavioural efficiency. In essence the assessment attempts to define the athlete's strengths so that they can be built on, and identify the deficit areas where new coping skills are required.

(b) Treatment Rationale:

The training programme starts by helping the athlete understand the nature of their stress response in terms of the cognitive-affective model. Smith comments that it is fairly easy to ensure that the athlete arrives at the conceptual model on their own simply by asking them to describe their stress responses; 'When did it happen?' 'What was it like?' and so on.

Two important points are emphasised during this phase. One is that the S.M.P. is an educational and not a psychotherapeutic programme. The second point is that it is a programme of self control, the goal being to ensure that positive changes are attributed by the athlete to him or herself rather than to the actions of the coach. Smith reports that test-anxious college students who took part in the programme showed significant gains on a measure of self-efficacy (Nye 1979).

(c) Skill Acquisition:

The skill acquisition phase consists of learning a muscle relaxation technique paired with an analysis of thought processes, and replacement of stress-eliciting self-statements with specific cognitions designed to reduce stress and improve performance.

The voluntary muscle relaxation technique used was formulated by Jacobson (1938). Individual muscle groups are tensed, slowly relaxed halfway, and then slowly relaxed completely. Eventually, as training proceeds, increasingly larger groups of muscles are combined until the entire body is being relaxed as a unit.

During the course of relaxation training special emphasis is placed upon deep breathing to facilitate relaxation. Deane (1964) reports that respiration amplitude and frequency can affect heart-rate as well as subjective feelings of anxiety. The athlete is asked to breathe slowly and deeply and to emit the mental command to relax upon exhalation. This stimulus-response pairing becomes important as, at a later stage, the command becomes an eliciting cue for relaxation.

During this phase the athlete is required to identify his or her maladaptive self-statements. To facilitate identification and their replacement by adaptive self-statements the athlete is asked to list the emotion they experienced prior to, and during the performance situation, what they must have told themselves about the situation in order to have become upset, and what they might have told themselves instead to have prevented their upset. Once completed the athlete and coach can discuss the stress-eliciting and anti-stress substitute. Of the former the athlete's responses are legitimized and it is pointed out that others feel the same way.

Smith proposes that up until this point the programme is simply a form of cognitive restructuring, however the work of Michenbaum (1977), has resulted in the addition of self-instruction training elements to the cognitive coping skills training. This entails that specific, task-relevant self-commands are developed by the athlete so that they can be emitted in the performance situation, a simple one would be 'take a deep breath and relax'.

(d) Skill Rehearsal:

Like any athletic skill, stress coping skills, to be effective, must be rehearsed and practised under conditions which approximate the situation in which they will be employed. Smith proposes the use of the procedure known as induced affect, which generates high levels of emotional arousal which are then reduced by the athlete, using the coping responses acquired in the preceding phase above. Basically the athlete is asked to imagine the performance situation as vividly as possible and focus on the feeling that the situation elicits. The coach suggests that as (s)he focuses on it the emotion will grow. When a high level of arousal is obtained the subject is instructed to reduce it with the coping responses. As the athlete inhales he or she emits a stress-reducing self-statement; at the peak of the inhalation the athlete says the word 'so' and while slowly exhaling instructs him or herself to 'relax' and induce muscle relaxation.

(e) Evaluation:

Smith reports that because of the subject matter involved in this type of work, subjective self-reports of individuals, experimental research into the efficacy of the techniques is problematic. However, his research using athletes where measures of performance are available suggests that the S.M.P. is a useful method for reducing the degree of an athlete's negative self-appraisal and also affective arousal.

Perhaps the most important factor stressed by Smith in the above programme is that it is an educative rather than a therapeutic process. As such the coach could simply concentrate upon implementing the second phase and introduce the athlete/s to the nomenclature of anxiety, a situation I feel would be invaluable given the way in which the causes of anxiety are largely ignored. It would also legitimise affective responses as the athlete could see and understand its universality. This definition of affective arousal could then be paired with the relaxation exercises, and as the athlete becomes more proficient in being able to relax, use the relaxation condition to visualise the performance situation and focus his (her) attention on a series of realistic goals. In essence then the whole of the above programme does not need to be implemented, the

coach, or more importantly the athlete on his or her own can use just section of it. The main thing being that they understand the rationale behind each section's use. The programme can be summarised then into four sections: (i) Anxiety defined; (ii) Relaxation; (ii) Visualisation; (iv) Anxiety into energy.

At the end of the last chapter I asked the question as to whether conflict and high levels of affective arousal were inevitable by-products of participation in sport. The question can be answered in two ways. It is inevitable as long as the coach endorses the aims of the bonded group, and the researchers into sports personality blame the reliability of the measuring instrument because it shows variation in the athlete's perceptions of self. However, as more and more people begin to use sport as a medium for self-expression (i.e. the number running marathons and jogging), it need not be inevitable if process becomes praxis and if we re-define the concept of competition. Under this new definition the athlete:

"Is not out to show himself or the world how great he is, but is simply involved in the exploration of his latent capacities. He directly and intimately experiences his own measures and thereby increases his self-knowledge." (Gallwey 1982 p.153).

This is not a esoteric or quasi-mystical phenomena but a definition of what being-in-sport is. Borrowing from the existentialists credo - et fac quod vis - realise that you are free.

Footnotes

1. The exact diagnoses of these medical complaints were insomnia (40); headache (13); depression (3); anxiety state (3) and hysteria (1).
2. In dynamic activity, the sequence of muscle tension and relaxation is termed the motor unit firing sequence. Marshall (1976) explains "athletes capable of replicating the proper motor unit firing sequence for their particular activity enjoy athletic successes". However for athletes who manifest high levels of affective arousal, this excessive tension not only hinders the above sequence and deters performance but also increases the incidence of muscle injury. (Tomayko 1978)
3. The connection between the ideals of the sportstypc and the Nietzscheian superman are contained in Warnock's comments on the latter in that he "aims in all his perception and judgement to dominate his world, and to bring it within his power," (1971, p.20).
4. I was talking to a colleague who ran a successful women's rugby team at Loughborough, and he expressed disappointment that the players seemed to have taken the men as their role models both on and off the field. However, how much of this aggression and violence was due to having male rugby players as role models, and how much was the women expressing themselves for themselves would be an interesting study.
5. Chris Connolly and John Syer of the Sporting Bodymind commented in conversation that one of the difficulties they had when at Tottenham Hotspur Football Club was that the manager forbade the words psychology or psychologist to be used in connection with his team. This outlines the fundamental problem when applying psychological principles to any sport, that of stigma.
6. It should be pointed out that even in traditional coaching and competitive environments the athlete can still employ these techniques to help himself.
7. Connolly and Syer comment that one of the first changes they made at Tottenham F.C. was to put the players in a circle for the Monday group discussion and a straight line for the Saturday pre-match talk. The former facilitating group dialogue, the latter concentration solely upon the manager. Prior to their arrival the situations had been reversed and both meetings were described as 'problematic'.

Appendix A: The Questionnaire.

Name of University _____

Date of Administration _____

To All Respondents

Please read the instructions accompanying this questionnaire carefully and ensure that you answer every question.

Thank you for your cooperation.

Please Turn Over.

In order to complete the questionnaire please read the accompanying instructions carefully. Could you also note the following:

- Do not hesitate to ask any questions if you are not sure about something.

- There are no 'right' or 'wrong' answers to any of the questions.

- Every questionnaire will be treated with the strictest of confidence.

- If you make an error please ensure that it is completely erased before putting in your corrected response.

- The questionnaire may seem 'bulky' but it should only take between twenty to thirty minutes to complete.



To answer please put a tick in the appropriate box unless asked to do otherwise.

		Please leave blank				
Name	_____	<table border="1" style="display: inline-table;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>				1-3
		<table border="1" style="display: inline-table;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px; text-align: center;">1</td></tr></table>		1	4	
	1					
Age		Years <table border="1" style="display: inline-table;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>			5-6	
How many years have you played rugby football?		Years <table border="1" style="display: inline-table;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table>			7-8	
During this time have you had any representative honours?		Yes <table border="1" style="display: inline-table;"><tr><td style="width: 20px; height: 20px;"></td></tr></table>		Please leave blank		
		No <table border="1" style="display: inline-table;"><tr><td style="width: 20px; height: 20px;"></td></tr></table>		<table border="1" style="display: inline-table;"><tr><td style="width: 20px; height: 20px;"></td></tr></table> 9		

Please Turn Over.

If your answer to the previous question was yes please specify what the honours were.

- County Schoolboy
- Schoolboy International
- U.A.U. Representative
- Senior County Representative
- Under 23 International
- Senior International
- Any others (Please specify)

	10
	13
	15
	16

How long have you been at this university? (If less than one year put the number of months).

Years

--

 Please leave blank

Months

--

--

 17

How many times have you played for the 1st. XV this season? (If you have never played put a zero in the box).

		18-19
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How many times (approximately), did you play for the 1st. XV last season. (If you never played put a zero in the box).

		20-21
--	--	-------

Do you play for another club when not attending university?

Yes

--

 Please leave blank

No

--

--

 22

If your answer to the above question was yes which club do you play for ?

Please leave blank

	23
--	----

What is your current position on the field?
(Please specify just one position, eg Right wing).

Please
leave
blank

--	--

24-25

What is your regular position on the field?
(Please specify just one position)

Please
leave
blank

--	--

26-27

What is your preferred position on the field?
(Please specify just one position)

Please
leave
blank

--	--

28-29

Please Turn Over.

A number of statements which people have used to describe themselves are given below. Read each statement and then tick in the appropriate column, situated to the right of the statement, the category which indicates how you generally feel. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

	Almost Never	Some- times	Often	Almost Always	Please do not write here
I feel pleasant.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 30
I tire quickly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 31
I feel like crying.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 32
I wish I could be as happy as others seem to be.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 33
I feel rested.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 34
I am 'cool, calm and collected'	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 35
I feel that difficulties are piling up so that I can't overcome them.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 36
I worry too much over something that really doesn't matter.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 37
I am happy.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 38
I am inclined to take things hard.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 39
I lack self-confidence.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 40
I feel secure.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 41
I try to avoid facing a crisis or difficulty.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 42
I feel down.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 43
I am content.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 44

Please Turn Over.

Using the instructions described overleaf.....

	Almost Never	Some- times	Often	Almost Always	Please do not write here
Some unimportant thought runs through my mind and bothers me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 45
I take disappointments so keenly that I can't put them out of my mind.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 46
I am a steady person.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 47
I become tense and upset when I think about my present concerns	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 48
I am losing out on things because I can't make up my mind soon enough.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 49

<input type="checkbox"/>	<input type="checkbox"/>	50-51
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Total T.A.S.

Please Turn Over.

A number of statements which people have used to describe themselves are given below. Read each statement and then tick in the appropriate column, situated to the right of the statement, the category which indicates how you feel right now, that is, at this moment, about the forthcoming game. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	Not at All	A Little	Quite a Lot	Extremely So	Please do not write here
I feel calm.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	52
I feel tense.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	53
I feel secure.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	54
I am regretful.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	55
I feel at ease.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	56
I feel upset.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	57
I am presently worrying over possible misfortune..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	58
I feel rested.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	59
I feel anxious.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	60
I feel comfortable.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	61
I feel self-confident.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	62
I feel nervous.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	63
I am jittery.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	64
I feel 'highly strung'....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	65
I am relaxed.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	66
I feel content.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	67
I am worried.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	68
I feel over-excited and rattled.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	69
I feel joyful.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	70
I feel pleasant.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	71
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	72-73

Total S.A.S.

Please Turn Over.

In order to respond to the list of statements below you are required to describe the sort of person that you think you are when you are playing with your team-mates during the course of a game:

- If you agree with the statement put a tick in the column headed 'Like Me'.

- If you think that the statement is not at all like you put a tick in the column headed 'Not Like Me'.

- If you think that the statement is not applicable in describing the sort of person you are put a tick in the column headed 'Not Applicable'.

- If you don't know put a tick in the column headed 'Don't Know'.

Please respond to every statement on the questionnaire. Do not spend too much time on any one statement but base your 'answers' upon first impressions.

When I am playing with my team-mates during the course of a game I think that....

Please do not write here

	Like Me	Not Like Me	Not Applicable	Don't Know	
I am Able to Criticize Myself.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5
I am Able to Doubt Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Cooperative.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Able to Take Care of Myself...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Act Importantly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Accept Advice Readily.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10
I Admire and Imitate Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Affectionate and Understanding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I agree With Everyone.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Dictatorial.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14
I am Always Giving Advice.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Resent Being Bossed.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Apologetic.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	17

Please Turn Over.

When I am playing with my team-mates during the course of a game I think that....

	Like Me	Not Like Me	Not Applicable	Don't Know	Please do not write here
I am Appreciative.....					18
I am Big Hearted and Unselfish....					
I am Bitter.....					20
I am Boastful.....					
I am Bossy.....					
I am Businesslike.....					
I Can be Frank and Honest.....					
I Can be Indifferent to Others....					25
I Can be Obedient.....					
I Can be Strict if Necessary.....					
I Can Complain if Necessary.....					
I am a Clinging Vine.....					29
I am Cold and Unfeeling.....					30
I am Complaining.....					
I am Considerate.....					
I Usually Give In.....					
I am Critical of Others.....					
I am Cruel and Unkind.....					35
I am Dependent.....					
I am Over-Sympathetic.....					
I am Easily Fooled.....					
I am Dominating.....					
I am Eager to Get Along With Others					40

Please Turn Over.

When I am playing with my team-mates during the course of a game I think that....

	Like Me	Not Like Me	Not Applicable	Don't Know	Please do not write here
I am Easily Embarrassed.....					41
I am Overprotective of Others..					
I am Self-Respecting.....					
I am Egotistical and Conceited..					
I am Always Ashamed of Myself..					45
I Enjoy Taking Care of Others..					
I Expect Everyone to Admire Me..					
I am Firm But Just.....					
I am Fond of Everyone.....					
I am Forceful.....					50
I Forgive Anything.....					
I am Frequently Angry.....					
I am Frequently Disappointed....					
I am Friendly.....					
I am Able to Give Orders.....					55
I am Generous to a Fault.....					
I am Resentful.....					
I am a Good Leader.....					
I am Grateful.....					
I Will Confide in Anyone.....					60
I am Hard Hearted.....					
I Hardly Ever Talk Back.....					
I am Hard to Impress.....					63

Please Turn Over.

When I am playing with my team-mates during the course of a game
I think that....

	Like Me	Not Like Me	Not Applicable	Don't Know	Please do not write here
I am Helpful.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 64
I am Impatient With Others Mis- takes.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 65
I am Independent.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am Irritable.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am Jealous.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am Kind and Reassuring.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I Lack Self Confidence.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 70
I Give Freely of Myself.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I Like Everybody.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I Like to be Taken Care Of.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I Like to Compete With Others...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I Love Everyone.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 75
I Make a Good Impression.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I Manage Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am Submissive.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I Like Responsibility.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am Modest.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 80
I Obey Too willingly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 3 4 5
I am Often Admired.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am Often Gloomy.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 7

Please Turn Over.

When I am Playing with my team-mates during the course of a game I think that....

	Like Me	Not Like Me	Not Applicable	Don't Know	Do Not Write Here
I am Often Helped by Others....					8
I am Often Unfriendly.....					9
I am Outspoken.....					10
I Let Others Make Decisions....					
I Want Everyones Love.....					
I am Passive and Unaggressive..					
I am Proud and Self-Satisfied..					
I Rebel Against Everything.....					15
I am Respected by Others.....					
I am Always Pleasant and Agreeable.....					
I am Selfish.....					
I am Sarcastic.....					
I am Self-Confident.....					20
I Encourage Others.....					
I Distrust Everybody.....					
I am Self-Reliant and Assertive					
I am Easily Led.....					
I am Self-Seeking.....					25
I am Shrewd and Calculating....					
I am Shy.....					
I am Sceptical.....					
I am Slow to Forgive a Wrong...					
I am Sociable.....					30
I am Somewhat Snobbish.....					
I am Spineless.....					32

Please Turn Over.

When I am playing with my team-mates during the course of a game I think that....

	Like Me	Not Like Me	Not Applicable	Don't Know	Do not write here
I Spoil People With Kindness....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	33
I am Stern but Fair.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	34
I am Straightforward and Direct.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	35
I am Stubborn.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Tender and Soft-Hearted....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Think Only of Myself.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Timid.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Touchy and Easily Hurt.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	40
I am Too Easily Influenced by Friends.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Too Lenient with Others....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Too Willing to Give to Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Try to be Too Successful.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Try to Comfort Everyone.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	45
I am Trusting and Eager to Please.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Friendly All the Time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Very Anxious to be Approved Of.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Very Respectful to Authority.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Want Everyone to Like Me.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	50
I am Self-Punishing.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Want to be Led.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am a Warm Person.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I am Well Thought Of.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	54

Please Turn Over.

When I am playing with my team-mates during the course of a game

I think that...

	Like Me	Not Like Me	Not Applicable	Don't Know	Do not write here
I Will Believe Anyone.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 55
I am Neighbourly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 56
I am Tough-Minded When Necessary..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 57

Total:

AP	<input type="checkbox"/>	58
BC	<input type="checkbox"/>	59
DE	<input type="checkbox"/>	60
FG	<input type="checkbox"/>	61
HI	<input type="checkbox"/>	62
JK	<input type="checkbox"/>	63
LM	<input type="checkbox"/>	64
NO	<input type="checkbox"/>	65

Please Turn Over.

In order to respond to the list of statements below you are required to describe the sort of person that you would ideally like to be when you are playing with your team-mates during the course of a game.

- If you agree with the statement put a tick in the column headed 'Like Me'.

- If you think that the statement is not at all like the sort of person that you would ideally like to be, put a tick in the 'Not Like Me' column.

- If you think that the statement is not applicable in describing the sort of person that you would ideally like to be, put a tick in the column headed 'Not Applicable'.

- If you don't know put a tick in the column headed 'Don't Know'.

Please respond to every statement printed on the questionnaire. Do not spend too much time on any one statement and base your answers upon first impressions. (you may duplicate your responses to the previous questionnaire where necessary).

When I am playing with my team-mates during the course of a game I would ideally like to be...

	Like me	Not Like Me	Not Applicable	Don't Know	Do not write here
Able to Criticize Myself.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	66
Able to Doubt Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	67
Cooperative.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	68
Able to Take Care of Myself.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	69
Act Importantly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	70
Accept Advice Readily.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Admire and Imitate Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Affectionate and Understanding.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Agree with Everyone.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Dictatorial.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	75
Always Giving Advice.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Resent Being Bossed.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Apologetic.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Appreciative.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	79

Please Turn Over.

When I am playing with my team-mates during the course of a game
I would ideally like to be....

	Like Me	Not Like Me	Not Applicable	Don't Know	Do not write here
Big Hearted and Unselfish...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bitter.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Boastful.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bossy.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Businesslike.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Frank and Honest.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Indifferent to Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Obedient.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strict if Necessary.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Complain if Necessary.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A Clinging Vine.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cold and Unfeeling.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Complaining.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Considerate.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I Would Like to Usually Give In.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Critical of Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cruel and Unkind.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dependent.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Over-Sympathetic.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Easily Fooled.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dominating.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Eager to Get Along With Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please Turn Over.

When I am playing with my team-mates during the course of a game
I would ideally like to be....

	Like Me	Not Like Me	Not Applicable	Don't Know	Do not write here
Easily Embarrassed.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	27
Overprotective of Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	28
Self-Respecting.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	29
Egotistical and Conceited....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	30
Always Ashamed of Myself.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to Enjoy Taking Care of Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to Expect Everyone to Admire Me.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Firm but Just.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Fond of Everyone.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	35
Forceful.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to Forgive Anything.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Frequently Angry.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Frequently Disappointed.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Friendly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	40
Able to Give Orders.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Generous to a Fault.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Resentful.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A Good Leader.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Grateful.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	45
I Would like to Confide in Anyone.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Hard Hearted.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	47

Please Turn Over.

When I am playing with my team-mates during the course of a game
I would ideally like to be...

	Like Me	Not Like Me	Not Applicable	Don't Know	Do not write here
I Would like to Hardly Ever Talk Back.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	48
Hard to Impress.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	49
Helpful.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	50
Impatient With Others Mistakes.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Independent.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Irritable.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Jealous.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Kind and Reassuring.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	55
I Would like to Lack Self Confidence.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to Give Freely Of Myself.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to like Everybody.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Taken Care of.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Compete With Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	60
I Would like to Love Everyone.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to Make a Good impression.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to Manage Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Submissive.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to like Responsibility.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	65
Modest.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	66

Please Turn Over.

When I am playing with my team-mates during the course of a game I would ideally like to be....

	Like Me	Not Like Me	Not Applicable	Don't Know	Do not write here
I Would like to Obey Too Willingly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	67
Often Admired.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	68
Often Gloomy.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	69
Often Helped by Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	70
Often Unfriendly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Outspoken.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Let Others Make Decisions...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to Want Everyones Love.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Passive and Unaggressive....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	75
Proud and Self-Satisfied....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to Rebel Against Everything.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Respected by Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Always Pleasant and Agreeable.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Selfish.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	80
Sarcastic.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5 4
Self-Confident.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5
I Would like to Encourage Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to Distrust Everybody.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Self-Reliant and Assertive.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Easily Led.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10
Self-Seeking.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11

Please Turn Over.

When I am playing with my team-mates during the course of a game I would ideally like to be....

	Like Me	Not Like Me	Not Applicable.	Don't Know	Do not write here
Shrewd and Calculating.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12
Shy.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	13
Sceptical.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	14
Slow to Forgive a Wrong....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	15
Sociable.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Somewhat Snobbish.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Spineless.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to Spoil People With Kindness.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Stern but Fair.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	20
Straightforward and Direct.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Stubborn.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tender and Soft Hearted....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to Think Only Of Myself.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Timid.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	25
Touchy and Easily Hurt.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Too Easily Influenced By Friends.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Too Lenient With Others....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Too Willing to Give to Others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to Try to be Too Successful.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	30
I Would like to Try to Comfort Everyone.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	31

Please Turn Over.

When I am playing with my team-mates during the course of a game
I would ideally like to be..

	Like Me	Not Like Me	Not Applicable	Don't Know	Do not write here
Trusting and Eager to Please	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	32
Friendly All the Time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	33
Very Anxious to be Approved of.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	34
Very Respectful To Authority.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	35
I Would like to Want Everyones Love.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Self Punishing.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
I Would like to Want to be Led.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
A Warm Person.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Well Thought of.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	40
I Would like to Believe Anyone.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Neighbourly.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tough-Minded When Necessary.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	43

Total:

AP	<input type="checkbox"/>	<input type="checkbox"/>	44-45
BC	<input type="checkbox"/>	<input type="checkbox"/>	46-47
DE	<input type="checkbox"/>	<input type="checkbox"/>	48-49
FG	<input type="checkbox"/>	<input type="checkbox"/>	50-51
HI	<input type="checkbox"/>	<input type="checkbox"/>	52-53
JK	<input type="checkbox"/>	<input type="checkbox"/>	54-55
LM	<input type="checkbox"/>	<input type="checkbox"/>	56-57
NO	<input type="checkbox"/>	<input type="checkbox"/>	58-59

Appendix BRevision of the Affective 'Intensity' ScaleinSpielberger et al's State Anxiety Inventory

The strength of any questionnaire is in its ability to be understood by each and every respondent so that there is no ambiguity or discrepancy between what the interviewer and interviewee think a certain word, statement, or category means. Such a discrepancy seems to have arisen over the 4-point scale posited by Spielberger et al in their State Anxiety Inventory, by which they differentiate differing degrees of situation specific affective arousal. This interpretive problem first arose during a pilot study of the questionnaire where it was discovered that many respondents expressed difficulty in (a) differentiating, and (b) quantifying the categories of 'somewhat' and 'moderately so'. Figure 1 below illustrates how they appear on the S.A.I.

Figure 1:

	NOT AT ALL	SOMEWHAT	MODERATELY SO	VERY MUCH SO
I feel calm	0	0	0	0

The implication of using a 4-point rating scale with which to differentiate individual responses is that it is not the items contained in the inventory which are scaled, as they are all of equal value, it is rather the individual's responses to these items; the "scaling" comes about through the sums of the individual's responses to the above categories. The consequence therefore of using an ambiguous rating scale is that the validity and also reliability of the individual "scaling" will be impaired. In terms of the present interpretive problem this impairment includes; confusion as to which category matches one's present level of affective arousal; this confusion could in fact distort a respondent's level of A-State; both of these in turn affect the construct validity of the inventory items.

The problem thus seems to be that Spielberger et al have provided an inadequate 'scale' of affective intensity, chiefly represented by his two 'middle' descriptive categories. With this in mind it was decided to investigate just what meaning, in terms of levels of arousal, people would attribute to these two scaler items. An alternative group of words were also proposed with the idea of replacing the Spielberger et al originals if they were found easier to rate by our respondents.

Methodology:

It was decided to replace Spielberger et al's 4-point scale with one that extended from 0 to 10, as it was thought that this would give a more accurate representation as to each category's affective connotation. It was expected therefore that given a proper spread of 'intensity';

0 = Not at all; 3 = Somewhat; 7 = Moderately so; and 10 = Very much so. Similarly, with the replacement categories; 0 = Not at all; 3 = A little; 7 = Quite a lot; and 10 = Extremely so. It was thought that by proposing all the categories, and not just those in direct contention, that it was more likely to find which group provided the most reliable scale.

The testing took place on a busy Sheffield pedestrian precinct between 11.30 a.m. and 12.50 p.m. Two interviewers placed either side of the precinct, stopped pedestrians at random and asked them to look at the questionnaire which has been reproduced in Figure 2 below.

Figure 2: The Questionnaire

Affective Intensity Scale 1.

Somewhat

Not at all

Moderately so

Very much so

Affective Intensity Scale 2.

A little

Not at all

Quite a lot

Extremely so

Scale 1 proposed by Spielberger et al, was administered first and its order was changed so that each word was defined on its own so that any contamination from the progressive intensity of the other word-categories was avoided. Each respondent was told to think of the word 'calm', and then asked to rate, using the numbers on the 'intensity' scale, how calm they would be if they were; 'somewhat calm'; 'not at all calm'; 'moderately calm'; and 'very much calm'. The responses were noted. They were then shown Scale 2, which had been kept covered during the first part of the interview, and asked to repeat the procedure with the alternative categories. After this they were told that the interview had finished. Thirty-two people responded in all.

Results:

The raw data obtained from the above is presented in footnote 1, from these results it is possible to show how, by using the mean intensity score for each category, the scales match the spread of intensity proposed above.

Category	Mean Score	Proposed Intensity
Somewhat	5.25	3
Moderately so	5.31	7
A little	3.06	3
Quite a lot	7.69	7

A 't' test for independent samples² was then used to establish whether the above means differ significantly from the proposed intensities. The results are given below.

Category	Score	Proposed Intensity	't'	Significance
Somewhat	5.25	3	7.23	p < .001
A little	3.06	3	0.205	N.S.
Moderately so	5.31	7	7.60	p < .001
Quite a lot	7.69	7	3.38	p < .001

Finally by simply looking at the percentage 'mix-up' in the affective intensities represented by the categories. Fifteen people, or forty-seven per cent, placed 'somewhat' as either higher or as having the same intensity as 'moderately so' on the rating scale. Where-as only one person or three per cent placed 'a little' above or equal to 'quite a lot' on the rating scale.

Summary:

The results of the 't' tests establish that there is a significant difference between Spielberger et al's categories and the perceived intensity of those categories; p < .001 for both 'somewhat' and 'moderately so'. Conversely, there was no significant difference between the category of 'A little' and its perceived intensity, and although 'Quite a lot' differed significantly from its proposed intensity of 7, the mean of 7.60 indicates that it has a greater affinity with the proposed degree of affective arousal than the original, 'moderately so' (5.31 compared to 7). Indeed it is evident that by simply comparing the means for 'somewhat' and moderately so' that people have found difficulty in differentiating between them. Results of 5.25 and 5.31 clearly illustrate the scales' ambiguity. The alternative scale however appears a much more valid representation of differing degrees of affective arousal with mean

scores being almost identical to those proposed; 3.06 as compared to 3, and 7.60 as compared to 7. Perhaps the most conclusive factor which indicates the confusion inherent in Spielberger et al's scale is the number of people who inverted the two categories. Forty-seven per cent rated 'somewhat' as representing a higher degree of calm than 'moderately so', a sure indication of the inadequacy of the scale used in the A-State inventory.

Conclusion:

The results clearly indicate that the categories devised by Spielberger et al to indicate a gradient of situation specific affective arousal are inadequate. With this in mind the alternative scale is proposed as a replacement as it is felt that it avoids the linguistic ambiguities which appear inherent in the A-State inventory as it stands.

Footnotes:

1. The data is presented in the sequence that it was shown to the various respondents, (see questionnaire design). The results are as follows:

Somewhat:.....	68693763556635456495325657572546
Not At All:.....	02010220000202212020001406031000
Moderately So:...	44466557365556557656754778655533
Very Much So:...	999101099109101010881010979109109101099998
A Little:.....	23331633238124321382222554223332
Not at All:.....	00000220000000100040001200002001
Quite A Lot:....	778888587894109988878869878878878
Extremely So:...	101091010109101010610101010101010101010109999

2. The formula for computing 't' is as follows:

$$t = \frac{\sum X_1}{N_1} - \frac{\sum X_2}{N_2}$$

$$\sqrt{\frac{[\sum X_1^2 - \frac{(\sum X_1)^2}{N_1}] + [\sum X_2^2 - \frac{(\sum X_2)^2}{N_2}]}{N_1 + N_2 - 2}} \left(\frac{N_1 + N_2}{N_1 N_2} \right)$$

Where, $\sum X_1$ = Sum of scores, group 1,
 $\sum X_2$ = Sum of scores, group 2,
 $\sum X_1^2$ = Sum of squares, group 1,
 $\sum X_2^2$ = Sum of squares, group 2,
 N_1 = Numbers in group 1, and,
 N_2 = Numbers in group 2.

Degrees of freedom is given by the formula: d.f. = $N_1 + N_2 - 2$

Appendix C:

Presentation of the Raw Data with Respect
to Team-Membership

Team	Team Self		Team Not-Self		Team Ideal	
	1	2	1	2	1	2
Loughborough	AP	BC	FG	FG	AP	AP
Freshers XV	AP	AP	FG	HI	AP	AP
Durham	AP	AP	FG	FG	AP	AP
Newcastle	AP	AP	DE	FG	AP	AP
York	AP	AP	DE	FG	AP	AP

Key: The alphabetical notations above represent the generic themes of the interpersonal circumplex; AP, Managerial-Autocratic; BC, Competitive-Narcissistic; DE, Aggressive-Sadistic; FG, Rebellious-Distrustful; HI, Self-Effacing-Masochistic; JK, Docile-Dependent; LM, Cooperative-Overconventional; NO, Responsible-Hypernormal. 1 and 2 refer to the test administrations. The data presented overleaf has been ordered in terms of the magnitude of the players trait anxiety scores, (first administration). The figures 1 and 2 again refer to the respective test administrations, the alphabetical and numerical notations, Leary's eight generic themes.

Loughborough:

Number	Trait		State		Self		Code		Not-Self		Code		Ideal		Code		Self-Acceptnce.	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
001	54	45	54	43	7	7	LM	LM	2	2	BC	BC	1	1	AP	AP	81	81
002	50	46	33	43	2	3	BC	DE	6	8	JK	NO	1	2	AP	BC	44	44
003	44	49	41	57	3	3	DE	DE	7	8	LM	NO	2	3	BC	DE	44	--
004	42	38	39	33	2	1	BC	AP	4	5	FG	HI	1	1	AP	AP	41	--
005	41	36	50	34	7	2	LM	BC	4	3	FG	DE	2	2	BC	BC	84	23
006	41	36	42	37	2	1	BC	AP	5	4	HI	FG	1	1	AP	AP	41	23
007	40	39	43	36	3	3	DE	DE	6	5	JK	HI	2	2	BC	BC	44	44
008	38	40	37	45	4	2	FG	BC	3	3	DE	DE	2	2	BC	BC	66	23
009	38	40	39	38	1	1	AP	AP	4	4	FG	FG	1	1	AP	AP	23	23
010	38	38	38	36	8	1	NO	AP	4	4	FG	FG	1	1	AP	AP	41	--
011	37	39	41	39	8	2	NO	BC	4	4	FG	FG	1	2	AP	BC	44	--
012	37	36	39	37	2	3	BC	DE	2	6	BC	JK	1	2	AP	BC	41	41
013	35	41	57	47	2	1	BC	AP	6	4	JK	FG	1	1	AP	AP	44	--
014	35	35	30	30	2	2	BC	BC	3	3	DE	DE	1	1	AP	AP	41	41
015	33	33	36	35	8	2	NO	BC	3	4	DE	FG	1	1	AP	AP	41	41
016	32	29	42	38	1	2	AP	BC	5	5	HI	HI	1	1	AP	AP	--	44
017	30	30	21	23	8	8	NO	NO	4	4	FG	FG	1	1	AP	AP	44	41
018	29	26	31	34	1	1	AP	AP	4	4	FG	FG	1	1	AP	AP	--	--
019	28	30	29	30	1	1	AP	AP	4	1	FG	AP	2	1	BC	AP	26	--
020	28	30	27	29	3	2	DE	BC	4	3	FG	DE	1	1	AP	AP	66	41
021	26	26	23	23	1	2	AP	BC	4	5	FG	HI	1	1	AP	AP	23	44
022	26	26	33	21	2	2	BC	BC	5	6	HI	JK	2	2	BC	BC	--	--
023	24	24	22	21	1	2	AP	BC	4	4	FG	FG	2	2	BC	BC	44	23

Freshers XV:

Number	Trait		State		Self		Code		Not-Self		Code		Ideal		Code		Self-Acceptnce.	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
024	45	41	30	38	3	3	DE	DE	7	7	LM	LM	2	2	BC	BC	44	44
025	43	36	25	36	6	8	JK	NO	3	4	DE	FG	8	1	NO	AP	66	44
026	41	44	40	53	2	1	BC	AP	2	5	BC	HI	1	8	AP	NO	41	44
027	40		34		7		LM		2		BC		1		AP		66	
028	40	28	24	35	1	8	AP	NO	4	3	FG	DE	1	1	AP	AP	23	44
029	39		38		1		AP		4		FG		1		AP		--	
030	38	37	39	36	7	6	LM	JK	2	2	BC	BC	8	1	NO	AP	41	84
031	38		20		3		DE		7		LM		1		AP		66	
032	38		36		8		NO		4		FG		8		NO		41	
033	37	37	36	41	8	1	NO	AP	4	4	FG	FG	8	8	NO	NO	--	44
034	37	39	35	45	3	1	DE	AP	5	3	HI	DE	2	1	BC	AP	41	23
035	37		50		4		FG		*				2		BC		66	
036	34		33		1		AP		6		JK		1		AP		--	
037	34	31	29	26	2	2	BC	BC	6	6	JK	JK	1	1	AP	AP	44	44
038	33	34	33	34	2	3	BC	DE	5	5	HI	HI	2	2	BC	BC	--	44
039	32	30	29	33	2	2	BC	BC	6	6	JK	JK	2	2	BC	BC	--	--
040	30	28	29	34	1	2	AP	BC	5	5	HI	HI	1	1	AP	AP	--	44
041	29	32	27	27	1	2	AP	BX	5	5	HI	HI	1	1	AP	AP	--	44
042	28	28	32	31	1	8	AP	NO	4	4	FG	FG	1	1	AP	AP	--	44
043	28	26	28	33	7	8	LM	NO	3	3	DE	DE	1	1	AP	AP	66	41

* This players not-self standard score fell at the intersection of the 'Dom' and 'Lov' axes, and as a consequence I was unable to classify his not-self perception in terms of one of Leary's generic themes.

Durham:

Number	Trait		State		Self		Code		Not-Self		Code		Ideal		Code		Self-Acceptnce.	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
044	54	49	51	30	5	4	HI	FG	2	4	BC	FG	5	1	HI	AP	23	84
045	51	41	51	35	6	5	JK	HI	3	3	DE	DE	1	1	AP	AP	84	91
046	48	41	34	37	1	1	AP	AP	5	5	HI	HI	1	1	AP	AP	--	--
047	48	53	36	32	2	1	BC	AP	1	3	AP	DE	1	2	AP	BC	41	26
048	43	32	35	27	1	1	AP	AP	4	4	FG	FG	1	1	AP	AP	23	23
049	40	42	57	39	3	2	DE	DE	8	6	NO	JK	1	2	AP	BC	66	--
050	39		50		2		BC		6		JK		2		BC		--	
051	38	44	34	35	2	1	BC	AP	4	4	FG	FG	1	2	AP	BC	44	44
052	36		37		2		BC		1		AP		8		NO		66	
053	35		47		1		AP		4		FG		1		AP		--	
054	35		32		2		BC		5		HI		2		BC		--	
055	35	34	39	36	6	1	JK	AP	2	4	BC	FG	1	8	AP	NO	105	44
056	29		23		1		AP		4		FG		1		AP		--	
057	29	29	32	27	8	7	NO	LM	4	3	FG	DE	1	1	AP	AP	44	81

Newcastle:

Number	Trait		State		Self Code				Not-Self		Code		Ideal Code		Self-Acceptance.		
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	
058	52		56		7		LM		3		DE		8		NO		44
059	48	47	38	36	5	7	HI	LM	1	3	AP	DE	1	1	AP	AP	91 66
060	46	39	42	44	6	7	JK	LM	2	3	BC	DE	8	8	NO	NO	81 44
061	43	46	36	46	1	3	AP	DE	4	4	FG	FG	8	1	NO	AP	41 66
062	43	38	39	39	5	8	HI	NO	1	4	AP	FG	1	1	AP	AP	114 41
063	40		39		7		LM		3		DE		1		AP		81
064	39	31	20	26	2	3	BC	DE	1	2	AP	BC	1	1	AP	AP	41 66
065	38	43	32	27	7	8	LM	NO	4	3	FG	DE	1	1	AP	AP	66 41
066	37	34	31	38	6	4	JK	FG	4	5	FG	HI	1	8	AP	NO	84 68
067	36	37	35	32	2	2	BC	BC	4	5	FG	HI	1	1	AP	AP	41 41
068	36	26	35	46	2	2	BC	BC	5	5	HI	HI	2	1	BC	AP	-- 44
069	35	34	43	33	6	8	JK	NO	2	3	BC	DE	1	1	AP	AP	84 44
070	33	32	38	25	2	2	BC	BC	4	5	FG	HI	2	2	BC	BC	-- --
071	33	33	28	32	3	3	DE	DE	3	2	DE	BC	2	2	BC	BC	41 41
072	33		37		7		LM		3		DE		8		BC		44
073	32	33	33	34	1	1	AP	AP	4	3	FG	DE	1	1	AP	AP	23 --
074	30		24		4		FG		3		DE		2		BC		66
075	30		36		2		BC		6		JK		1		AP		44
076	29		29		3		DE		6		JK		2		BC		41
077	27	28	46	22	1	1	AP	AP	3	4	DE	FG	1	1	AP	AP	23 --

York:

Number	Trait		State		Self		Code		Not-Self		Code		Ideal		Code		Self-Acceptnce.	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
078	56		63		5		HI		2		BC		2		BC		105	
079	53	54	54		6	7	JK LM		3	3	DE DE		1	8	AP NO		84	44
080	53		42		6		JK		3		DE		1		AP		84	
081	48	37	50		3	3	DE DE		8	6	NO JK		8	1	AP AP		105	81
082	47		48		6		JK		2		BC		1		AP		105	
083	47	48	39		2	3	BC DE		2	8	BC NO		1	1	AP AP		41	81
084	40	42	53		1	8	AP NO		4	4	FG FG		8	8	NO NO		44	--
085	40	35	40		1	1	AP AP		4	4	FG FG		1	1	AP AP		--	--
086	39	40	50		2	2	BC BC		6	5	JK HI		2	1	BC AP		23	44
087	39	31	28		3	2	DE BC		7	5	LM HI		8	8	NO NO		105	81
088	38		39		7		LM		4		FG		8		NO		41	
089	37		42		5		HI		2		BC		2		BC		84	
090	37	34	33		2	1	BC AP		5	5	HI HI		1	1	AP AP		44	--
091	35		35		5		HI		2		BC		1		AP		91	
092	33		31		8		NO		3		DE		1		AP		41	
093	33		31		2		BC		4		FG		8		NO		66	
094	32		28		8		NO		3		DE		1		AP		44	
095	31	31	40		2	2	BC BC		4	7	FG LM		1	2	AP BC		44	--
096	30		45		8		NO		4		FG		8		NO		--	

There are no state anxiety scores available for the second administration due to the time of testing. Please see chapter 4 for more details.

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