PREDICTORS OF MORAL BEHAVIOUR IN FOOTBALL

by

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ABSTRACT

The purpose of the present thesis was to investigate predictors of prosocial and antisocial aspects of morality in football. In Study 1, moral identity, task, and ego orientations were included to predict prosocial and antisocial judgement and behaviour. Prosocial judgement was predicted by task orientation at low levels of ego orientation. Antisocial judgement and behaviour was positively predicted by ego orientation and negatively predicted by moral identity. In Study 2, social goals were included with task and ego orientations as predictors of prosocial and antisocial behaviour. Prosocial behaviour was positively predicted by task and social affiliation orientations and negatively predicted by social status orientation. Antisocial behaviour was positively predicted by ego and social status orientations. In Study 3, prosocial and antisocial behaviours were observed in two experimental and one control condition. Participants in the task-involving condition engaged in more prosocial choices and participants in the ego-involving group engaged in more antisocial behaviour when compared to the other two groups. Females engaged in more prosocial behaviour than males. In Study 4, the stability and reciprocal relationships between task and ego orientations, task and ego involving climates, and prosocial and antisocial behaviour were explored over a competitive season. Variables were moderately stable. Early season moral behaviours predicted late season motivational variables and a reciprocal relationship was identified between antisocial behaviour and an ego-involving climate. Findings are discussed in relation to theory, past research and their practical application.

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Hallelujah.

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The present thesis includes the following papers. Each paper represents an original empirical study.

1. Sage, L., Kavussanu, M., & Duda, J. L. (2006). Goal orientations and moral identity as predictors of prosocial and antisocial functioning in male association football players. *Journal of Sports Sciences, 24*, 455-466.

2. Sage, L., & Kavussanu, M. (2007). The effects of goal involvement on moral behavior in an experimentally manipulated competitive setting. *Journal of Sport & Exercise Psychology, 29*, 190-207.

3. Sage, L., & Kavussanu, M. (in press). Multiple goal orientations as predictors of moral behaviour in youth soccer players. *The Sport Psychologist.*

4. Sage, L., & Kavussanu, M. (under review). An exploratory study of the temporal stability and reciprocal relationships between goal orientations, motivational climate, and prosocial and antisocial behaviour in youth soccer. *Journal of Sports Sciences.*

In addition, data from the current thesis resulted in the following abstract:

Sage, L., & Kavussanu, M. (2004). Multiple goals as predictors of prosocial behaviour, antisocial behaviour, and well-being in youth association football. *Conference Proceedings for the Association for the Advancement of Applied Sport Psychology*, Minneapolis, Minnesota, 15-16.

CHAPTER 1

"All that I know most surely about morality and obligations, I owe to football."

Albert Camus (1957), philosopher and goalkeeper.

Introduction

Morality is a ubiquitous construct within all spheres of life. Regardless of one's culture, race, political doctrine, or social strata, moral issues play a key role in human behaviour. Specific interpretations of morality reflect the adopted theoretical perspective but a broad description is provided by Arnold (1994): Morality is said to involve concern for others as well as one's self and the differentiation of right from wrong and good from bad. Although the concept of morality is universally recognised, values and behaviours are determined by the context. One context of particular relevance to the study of morality and of significant importance to all cultures is sport.

Traditionally, sport has been heralded as a vehicle for character development, a concept inherently linked to morality. However, detractors from the notion that sport participants benefit from social and moral development (e.g., Kohn, 1986) argue that if you want to build character, try something else (Ogilvie & Tutko, 1971). Debate on the vices and virtues of sport prompted a prominent line of empirical research in sport psychology (e.g., Bredemeier, 1985; Bredemeier & Shields, 1984, 1986). Initially, the investigation of negative moral variables (e.g., unsportsmanlike play and approval of aggressive behaviour) dominated the literature but recent work on positive dimensions of morality (e.g., sportspersonship) provides a clearer understanding of the dual aspects of morality in sport. Research progressed on to studying *why* certain moral judgements and behaviours occur. Grounded in similar

theories of morality and motivation, this thesis continues previous work examining personal and environmental predictors of positive and negative aspects of morality in sport.

Theoretical Perspectives of Morality

The first of three theories of morality that dominate the sporting literature is social learning theory. Proponents of the social learning paradigm (e.g., Bandura, 1977) define moral behaviour as action that conforms to social norms learned through interaction with socialising agents (Bandura, 1986). For example, cooperative, aggressive, or altruistic behaviour is shaped through modelling and reinforcement from significant adults and peers. The underlying concepts of social learning models include classical and operant conditioning where punishments, positive, and negative reinforcements are used to teach and modify behaviour. For example, the use of positive feedback from a coach to reinforce a good play increases the likelihood that his/her athlete will attempt to repeat the desirable play. The aim of behavioural modification is to teach self-regulation, and in a moral sense, this involves the regulation of socially defined good and bad behaviours. In spite of the abundance of writings on social learning theory and morality (e.g., Althof & Berkowitz , 2006; Bandura, 1986; Rottschaefer, 1991), research in the moral domain is relatively scarce.

Strictly speaking, the closest pure social learning theorists have come to studying moral issues, is work on the social learning of aggression. Bandura's (see Bandura, 1977) seminal Bobo doll studies show how aggression in children can be learnt through an adult model. Carlo and colleagues (Carlo, Fabes, Laible, & Kupanoff, 1999) have reviewed the research pertaining to family, peers, school environment, culture, and nationality correlates of prosocial and moral development. Focusing largely on moral behaviour, Carlo et al. (1999) concluded that the research was at an 'embryonic' stage. Since then, work has continued on moral behaviour but has adopted more holistic frameworks. In spite of the strength of social

learning theory in accounting for environmental influences on learning and behaviour, the theory neglects the role of genetic predisposition or the cognitive processing that features so prominently in alternative schools of thought.

The second theory of morality is structural developmental theory. In contrast to the social learning approach that centres on behaviours that conform to social norms, the structural developmental theorists (e.g., Haan, 1977, 1991; Kohlberg, 1976, 1981; Piaget, 1965; Rest, 1984) consider how individuals reason and judge behaviour. Morality is defined in terms of judgements on the appropriateness of behaviour (Bredemeier & Shields, 1998). The moral reasoning structure, that determines what is right and wrong behaviour, develops through stages by processes of cognitive maturation and social interaction. As such, individuals are active participants in interpreting morality by interacting with others.

In contrast to research on social learning theory, there are a plethora of studies that have adopted structural developmental perspectives. Constructs of moral reasoning, judgement, and intention have been extensively studied in relation to correlates such as age, sex (e.g., Bredemeier & Shields, 1986), socio-economic status, IQ, education (Colby et al., 1983), and delinquency (Krettenauer & Eichler, 2006). Work using interventions such as moral education programmes have shown them effective at raising levels of moral reasoning (Schlaefli, Rest, & Thoma, 1985). Despite their focus on moral thought, researchers have also been keen to establish relationships with moral behaviour but with little success (see Gibbs, 2003 for review). A lack of causal evidence linking moral thought to moral action (Krebs & Denton, 2006) represents limitations of structural developmental research which has led to widespread denunciation of the theory.

Although structural developmental theories are equipped to account for some aspects of morality, a more general framework is needed that employs a more pragmatic approach

(Krebs & Denton, 2006). Krebs & Denton highlight the narrow focus on cognitions, the simplicity of the moral stages, and the use of unsuitable hypothetical dilemmas as the main shortcomings of structural developmental theories. Further, Bandura (1991) suggests that a reliance on tests that generally include only a few restricted moral dilemmas is a shaky empirical basis to support a theory of morality. Accurately measuring moral thought is notoriously difficult (Bredemeier & Shields, 1999), and provides a major challenge to work in this area. While structural developmental theory accounts for the cognitive components of morality and social learning theory represents the behavioural and environmental factors, neither approach fully accounts for the interaction of all these variables.

The third paradigm, social cognitive theory, is a more holistic approach to the study of morality than previous perspectives. Bandura (1986, 1991, 1999) continues to focus on overt behaviour but extends previous social learning theory by acknowledging personal factors such as moral thought and affective responses. The contention is that personal factors, environmental influences, and moral behaviour operate interactively in a reciprocal way, termed triciprocal causation. Although social cognitive theory has been used to explain any behaviour, theorists such as Eisenberg (1986) and Bandura (1999) wrote specifically on the subject of moral behaviour.

Eisenberg (1986, 1995; Eisenberg & Fabes, 1998) used a social cognitive perspective in an integrated approach to the study of prosocial behaviour. Eisenberg defined prosocial behaviour as those intentional actions that benefit another individual or group of individuals (Eisenberg, 1986). Her heuristic model includes a variety of personal competencies and environmental factors that interact to influence the expression of prosocial behaviour. Although Eisenberg's model remains largely theoretical, it provides a fundamental structure for research.

Eisenberg's research group has led the way in moral research that has adopted a social cognitive perspective. Moral behaviour (particularly prosocial aspects) and moral reasoning have been linked to personal constructs of prosocial dispositions, perspective taking (Eisenberg et al., 1999a), moral emotion and regulation (e.g., Eisenberg, Fabes, Guthrie, & Reiser, 2000), as well as social factors such as parental socialisation (e.g., Eisenberg et al., 1999b). The strength of Eisenberg's studies lies in their longitudinal design and objective ratings of behaviour. Further, although Eisenberg's work initially focused on prosocial behaviour, recent studies have incorporated problem behaviours and cheating.

The fact that there is a positive aspect of morality implies that there is also a negative counterpart, reflected by good and bad behaviours respectively. A notable contribution of Bandura's (1999) social cognitive approach to moral issues is the duality of morality, which proposes proactive and inhibitive aspects of morality. The proactive aspect is the power to behave humanely, the inhibitive aspect is the power to refrain from behaving inhumanely. In this thesis, prosocial behaviours represent the proactive dimension. Examples of prosocial behaviour include acts of honesty, support and encouragement. Sporting instances of prosocial behaviour are helping an opponent off the floor and encouraging others to perform well. Refraining from behaving badly is inversely related to bad behaviour; therefore, the inhibitive aspect of morality is represented in this thesis by levels of antisocial behaviour. In contrast to prosocial behaviour, antisocial behaviours are defined as intentional acts that harm or disadvantage one or more others. Examples of antisocial behaviour include cheating, aggression, physical and verbal abuse. In sport, injuring or verbally abusing an opponent would be classified as antisocial. High levels of morality are achieved through engaging in prosocial behaviour whilst refraining from antisocial behaviour.

In light of all the main theories of morality, social cognitive theory provides the main theoretical framework for this thesis. By including the behavioural and environmental factors of social learning theory and the personal factors of structural development theory, the social cognitive perspective is a more holistic approach. Further, incorporating prosocial and antisocial moral dimensions represents Bandura's two aspects of morality. The adoption of social cognitive theory in the current thesis follows recent development in the area moral research. The study of morality has been adopted by various disciplines but attention now turns to the context of sport, with the present work focusing primarily on association football.

The Study of Morality in Sport

Owing to debate on the vices and virtues of sport, theories of morality have been widely popularised in this context. The old adage that 'sport builds character', with character being defined as the consistent display of moral action (Shields & Bredemeier, 1995), has been argued on two fronts. Historically, sport has been encouraged as a means to develop moral virtues of respect, loyalty, cooperation etc. Since the 1970's, however, there has been a growing body of evidence suggesting that the only characters being developed in sport are character disorders (see Arnold, 1994 for discussion). Recent research on youth sport participants, their parents, and coaches indicated that significant ethical problems exist in North American youth sport programmes (Shields, Bredemeier, LaVoi, & Power, 2005). For example, 1 in 10 athletes between the age of 9 and 15 years reported cheating, 13% admitted attempting to hurt an opponent, 31% argued with officials, 13% made fun of lesser skilled athletes, and 27% indicated that they had acted like 'bad sports'. Further, youth athletes reported coaches who encouraged cheating (7%) and hurting (8%) an opponent. A survey on sportspersonship confirms the present moral bankruptcy with reports that high school sports

are filled with cheating, improper gamesmanship (i.e., manipulation of the competitive contract), and confusion about sportspersonship (Josephson Institute of Ethics, 2004).

The nature of sport may have deviated from its traditional values and this has been highlighted in association football. The present thesis focuses on football because of recent anecdotal reports that the game is in a state of moral crisis (Collins, 2003; Fordyce, 2004) Further evidence for the changing face of football comes from a grass roots initiative entitled "clean up our game", which aims to 'give us back the game we knew and loved' (The Non-League Paper, 2005). The perspective that sport in general is in moral decline could be exacerbated by a media that sensationalises scandalous incidents at the expense of acts of good will. For many, the enduring memory of the 2006 World Cup in Germany will be the infamous head butt carried out by Zinadine Zidane. The evolution and portrayal of bad behaviour are notable issues but of prime importance to sport psychologists is *why* athletes behave the way they do. Thus, the changing balance between good and bad behaviour in sport, and particularly football, has prompted an expanding area of research that seeks to understand the motivation behind athletes' moral behaviour. Adding empirical substance to anecdotal evidence and theory may help identify the factors that influence athletes' moral behaviour and ultimately reassert the traditional values of sport.

Studies of morality in sport have been grounded on social learning, structural developmental, and social cognitive theories in investigating a variety of moral issues. Initially, the structural developmental approach was adopted by examining attitude shifts resulting from socialisation in competitive sport (e.g., Webb, 1969). Subsequent field work by researchers using social learning paradigms compared moral behaviours in competitive and non-competitive conditions (e.g., Kleiber & Roberts, 1981; Orlick, 1981). Social learning

theory also provides the basis for investigations on observational learning of moral behaviour from role models within sport (e.g., Mugno & Feltz, 1985).

With the emergence of structural developmental theory (e.g., Rest, 1984), focus shifted to the development of moral reasoning and relationships with cognitive and behavioural outcomes. Bredemeier and colleagues instigated the scientific study of moral development in sport. Comparisons of moral reasoning were made between sporting and life dilemmas, males and females, college and high school athletes, and basketball players, swimmers and non-athletes. Lower levels of moral reasoning were found in the sporting dilemmas, males, college athletes, and basketball players (Bredemeier & Shields, 1984, 1986). It was also reported that life-sport differences in moral reasoning started to appear between 12 and 13 years of age (Bredemeier, 1995). Finally, moral reasoning has been related to perceived legitimacy of and behavioural tendencies toward aggressive and unfair play (Bredemeier, 1985, 1994; Bredemeier & Shields, 1986; Bredemeier, Weiss, Shields, & Cooper, 1987). Despite links between thought and behaviour, unexplained variance coupled with differences between life and sport contexts incited Shields and Bredemeier (1995) to attribute further variance in moral behaviour to individual (e.g., moral judgements, values, and beliefs) and social environmental factors (e.g., collective norms, motivational climate, and structure of sport).

Moral research that acknowledges the roles of individual and environmental variables is grounded on social cognitive theory. In their 12-component theory of morality, Shields and Bredemeier (see Shields & Bredemeier, 1995 for discussion) include personal and social environmental factors as influential on moral action. Individual differences in motivation and the importance of morality to one's identity are two proposed personal factors termed the self-structure (Shields & Bredemeier, 1995). The investigation of one's moral identity has yet to

breech the literature. Individual differences in motivation, however, have consistently been linked with cognitive and behavioural moral variables (e.g., Duda, Olson, & Templin, 1991; Dunn & Causgrove-Dunn, 1999; Kavussanu & Roberts, 2001; Stuntz & Weiss, 2003). In keeping with the focus on motivational variables, research has progressed to linking social environmental motivational factors to moral behaviour (Kavussanu, 2006) and sportspersonship (Gano-Overway, Guivernau, Magyar, Waldron, & Ewing, 2005; Miller Roberts, & Ommundsen, 2004; Ommundsen, Roberts, Lemyre, & Treasure, 2003). The assessment of personal and environmental variables, particularly motivational constructs, has become an increasingly popular focus of attention.

In short, the progression of the literature has gone from investigating the state of morality in sport to exploring the predictors of moral variables. Attempts to explain why athletes engage in good or bad behaviours have led to a plethora of studies linking morality to motivational constructs (e.g., Duda et al., 1991; Kavussanu & Roberts, 2001; Kavussanu, 2006). The investigation of motivation and moral variables is continued in the present thesis. However, before introducing the theory of motivation that has been adopted in this field of work and related research, attention returns to the importance of morality to one's identity.

Moral Identity

A remarkable absence from sports moral research is the self-concept. Despite being discussed in the literature (e.g., Bandura, 1991; Shields & Bredemeier, 1995) and having established links between multiple dimensions of the self to achievement behaviour (Harter, 1999), the moral self-concept has been overlooked. This omission is considered relevant because without the self-concept, moral thought will not necessarily lead to moral behaviour (Blasi, 1984; Aquino & Reed, 2002). The study of the moral self is believed to be an area of great potential (Ebbeck & Gibbons, 2003; Weiss & Smith, 2002) and is represented in this

research by a concept taken from mainstream psychology, termed moral identity.

Identity is rooted in the core of one's being and involves being true to oneself in action (Erikson, 1964). Engaging in behaviour that is in congruence with the self is mirrored in the definition of moral identity as 'a commitment to one's sense of self to lines of action that promote or protect the welfare of others' (Hart, Atkins, & Ford, 1998, p. 515). Blasi (1984) views moral identity as a collection of moral traits that vary in content and importance from one individual to another. It has been described as a self-regulatory mechanism that motivates moral action (Blasi, 1984; Erikson, 1964; Hart et al., 1998). From another perspective, Shields and Bredemeier (1995) recognise moral identity as a component of the self-structure. Echoing previous works (Blasi, 1984; Erikson, 1964), the self-structure is a means by which people apprehend their identity and values and is proposed to influence moral thought and action (Shields & Bredemeier, 1995). In light of theory and evidence (Aquino & Reed, 2002; Reed & Aquino, 2003) that moral identity is instrumental in moral thought and action, its absence from sports moral research needs addressing.

Achievement Goal Theory

The second component of Shields and Bredemeier's (1995) self-structure is a person's motivation, which together with social environmental motivational factors, contribute to popular theories that help explain *why* athletes behave as they do. A social cognitive approach to motivation that provides valuable information on both personal and social environmental differences in achievement contexts is Achievement Goal Theory (AGT; e.g., Ames, 1984, 1992; Dweck, 1986, 1999; Dweck & Leggett, 1988; Maehr & Nicholls, 1980; Nicholls, 1984, 1989). Adapted from work in educational settings, AGT has provided the main theoretical framework for research in the area of sports motivation and morality. A number of theories have been proposed that include the central theme of goals to explain variations in thought

and behaviour. Martin Maehr, John Nicholls, Carol Dweck, and Carole Ames all suggested theoretical paradigms that accounted for differences in individuals' choice of challenges and persistence of effort. Despite idiosyncrasies between the approaches, they are bound by common themes.

Central to all achievement goal theories is the construct of ability. According to Nicholls (1984, 1989), the demonstration of ability is the primary concern for those involved in achievement contexts. An individual's interpretation of ability determines their criteria for successful goal achievement, which subsequently accounts for variations in cognitions, behaviour, and affective responses (Duda, 2001). Nicholls (1989) contends that in achievement contexts conceptions of ability are determined by states of goal involvement. Theories of achievement motivation agree that goal involvement is a multidimensional construct manifested by a combination of individual differences and social environmental factors. The individual differences are represented by dispositional goal orientations or the tendency to adopt a particular state of goal involvement. The environmental influence is the goal perspective that is emphasised by significant others and is known as the motivational climate (Ames, 1992). In short, the goal orientations and motivational climate determine the situational goal involvement, which in turn determines the choice of task, level of effort, persistence, perceptions of ability and definitions for success and failure.

Task and Ego Orientations

Theory has settled on two motivational states, task and ego-involvement (e.g., Nicholls, 1989). An individual's tendency to adopt task and ego-involvement is reflected by their respective task and ego orientation. These goal orientations are thought to be orthogonally related, meaning that an individual can be high or low in task or ego orientation at any given time (Nicholls, 1984, 1989). Whilst the presence of goal orientations is expected

to be simultaneous, with fluctuations in their influence on goal involvement, states of task and ego-involvement are distinct and independent. Specifically, Nicholls suggests goal involvement can fluctuate between task and ego-involvement throughout an achievement context but only goal orientations can be experienced at the same time (Treasure et al., 2001).

Task and ego orientations represent contrasting perceptions of ability and definitions of success. An ego orientated individual perceives ability and success from a normative perspective. Superiority over peers and outperforming others are the valued goals and success is achieved in victory. The activity is undertaken as a means to an end. While perceptions of ability are high, ego orientated individuals are expected to choose challenging activities and exert effort; however, self-doubts over ability lead to maladaptive motivational processes (Duda, 2001). Avoidance of challenging tasks, lack of effort and giving up are all symptomatic of individuals high in ego orientation and low in perceived ability. In contrast, a task orientated individual perceives ability and success from a self-referenced perspective. The desire is to accomplish personal competence in an activity through learning, collaboration, problem solving, self-improvement, mastery, and enjoyment goals. A task orientation is expected to lead to adaptive motivational patterns that facilitate the initiation of challenge seeking activities involving learning, cognitive engagement, effort and persistence. For individuals high in task orientation the focus is on the process rather that the product.

Task and ego orientations are also believed to represent distinct world views about what is valued (Nicholls, 1989) with links being extended to matters of morality. Nicholls states that ‘a preoccupation with winning may well be accompanied by a lack of concern about justice and fairness…..when winning is everything, it is worth doing anything to win’ (1989, p. 133). In addition, task orientation has been suggested to be associated with a concern for fair play (Duda et al., 1991). Overall, an ego orientation is the predisposition to be

ego involved and has implications for maladaptive motivational patterns that include moral issues. A task orientation is the predisposition to be task involved with implications for adaptive motivational patterns.

The investigation of links between task and ego orientation and moral variables has grown over the last 10 years. After initially finding that goal orientations were linked to morality (Duda et al., 1991), it was not until the turn of the century that links between task and ego orientation with moral variables became firmly established. Positive relationships have been established between ego orientation and attitudes towards unsportsmanlike play (Duda et al., 1991; Stuntz & Weiss, 2003), perceived legitimacy or approval of aggressive behaviour (Duda et al., 1991; Dunn & Causgrove-Dunn, 1999; Kavussanu & Roberts, 2001), and low levels of moral functioning (Kavussanu & Roberts, 2001; Kavussanu & Ntoumanis; 2003). In addition, negative relationships were revealed between an ego orientation and dimensions of sportspersonship (Dunn & Causgrove-Dunn, 1999; Lemyre, Roberts, & Ommundsen, 2002). For task orientation, positive relationships have been found with sportspersonship (Dunn & Causgrove-Dunn, 1999; Lemyre et al., 2002) and high levels of moral functioning (Kavussanu & Ntoumanis, 2003), whilst negative relationships have been identified with antisocial behaviour (Kavussanu, 2006) and unsportsmanlike attitudes (Duda et al., 1991; Stuntz & Weiss, 2003). In general, the research exhibits positive relationships between ego orientation and negative aspects of morality, and between task orientation and positive aspects of morality.

Social Goal Orientations

Although task and ego orientations have dominated the literature on achievement motivation, early AGT also included social goals (Maehr & Nicholls, 1980). Originally Maehr and Nicholls (1980) claimed that a social approval orientation was partly responsible

for participation, effort, persistence and definitions of success and failure in achievement contexts. Rather than the demonstration of ability, social approval orientated goals emphasise the desire to indicate virtuous intent and thereby gain social approval (Maehr & Nicholls, 1980). Subsequent work has detailed several types of social goals (see Ford, 1992; Wentzel, 1993) that have been broadly defined as the perceived social purposes of achievement or failure (Urdan & Maehr, 1995).

The present thesis centres on the goal orientations of social affiliation, social recognition, and social status. These social goals have recently been validated in a physical education setting (Allen, 2003). Social affiliation orientation is the desire to develop and maintain mutually satisfying relationships. Social recognition orientation is the motivation to validate oneself through social approval. Social status orientation is the motivation to validate oneself through social standing. In spite of calls for the inclusion of social goal orientations in achievement goal research (e.g., Allen, 2003; Blumenfield, 1992; Jarvinen & Nicholls, 1996; Urdan & Maehr, 1995; Wentzel, 1991) and their suggested influence on cognitive, behavioural and affective consequences (Urdan & Maehr, 1995), work in this area is scarce.

Despite the claim that social goals are an indicator of virtuous intentions, rather than ability (Maehr & Nicholls, 1980), direct conceptual links to moral variables have yet to follow. Urdan and Maehr (1995) suggest that the consequences of pursing social goal orientations will vary, depending on the type of social goal being pursued. In an academic setting, peer relationships have been strongly linked with friendliness, cooperation, perspective taking, and altruistic behaviour (see Bukowski & Sippola, 1996). Extending these links to social affiliation suggests potential links with this orientation and prosocial variables. Social status has been theoretically linked to an ego orientation, with both centred on social comparisons (White & Duda, 1994). It is therefore suggested that competition with others for

status may lead to antisocial behaviour, particularly if the context values such behaviours. Indeed, the goals of social status and recognition are largely dependent on the values of others (Urdan & Maehr, 1995). Therefore, the prediction of moral variables from status and recognition goals may be mediated by the respective values placed on antisocial and prosocial behaviour by significant others in the sporting context. For example, if coaches, peers, or parents all condone antisocial behaviour in football then those high in social approval or status orientations are likely to engage in antisocial acts. As social goals have been marginalised in achievement goal theory, links to potential moral consequences remain largely speculative.

The investigation of social goal orientations in sports moral research is limited to just one study. The role of friendship, peer acceptance and coach praise goals in predicting intentions to engage in unsportsmanlike play was examined amongst a sample of physical education students (Stuntz & Weiss, 2003). Results showed that when the class did not condone unfair play, girls who were coach praise orientated were less likely to intend to engage in unsportsmanlike play. When peers condoned unfair play, boys who were orientated by friendship and peer acceptance were more likely to intend to use unsportsmanlike play. Further, findings for social goals were over and above any effects from task and ego orientation. In view of the encouraging findings for social goals, calls for their inclusion in moral research (e.g., Stuntz & Weiss, 2003; Weiss & Smith, 2002), and the validation of further social goal orientations in sport (Allen, 2003), research should continue to develop in this area.

Motivational Climate

According to Nicholls (1989) goal involvement is determined by the interplay between goal orientations and the motivational climate, so it is to the environmental or social

contextual factors that attention now turns. Ames (1992) identified key aspects of the motivational climate that influenced the likelihood of adopting either task or ego-involving goals. Specifically, the design of the learning activity, distribution of authority, use of rewards, and methods of evaluation used by significant others (e.g., coaches, parents, and peers) all contribute to the motivational climate. Ames and Archer (1988) differentiate between a performance or ego-involving climate and a mastery or task-involving climate. The terms preferred in this thesis are a task and ego-involving climate. An ego-involving climate provides normative comparison, fosters interpersonal competition, and entails punishment of mistakes. A task-involving climate encourages hard work, effort, self-referenced improvement and learning, and provides opportunities for co-operation. Dweck and Leggett (1988) contend that when environmental motivational cues are weak, an individual's dispositional goal orientations would predict situational goal involvement. Alternatively, if situational cues are strong, they may override dispositional goal orientations and function as the primary influence on motivational processes.

With motivational climate being associated with cognitions, affects, and behaviour (Nicholls, 1989), it was only a mater of time before links were made to moral variables. It was Shields and Bredemeier (1995), in their 12 component model of morality, who first suggested the influence of motivational climate on morality. In support, Kavussanu and colleagues claim that when the team's emphasis is on comparison of ability, it is reasonable to expect that athlete's may try to use any means possible to demonstrate high ability, including inappropriate action (Kavussanu, Roberts, & Ntoumanis, 2002). Thus, a perceived ego-involving climate was suggested to facilitate moral dysfunction. Ommundsen and colleagues (Ommundsen et al., 2003) add that players may resort to cheating, violation of the rules, and behave aggressively as a means of coping with an environment that is perceived as

emphasising normative ability and performance. Conceptually, an ego-involving climate is therefore positively linked to antisocial variables

In contrast, when a task-involving climate prevails, the preoccupation with progress and improvement is suggested to make players more likely to interpret competition as striving with others (Ommundsen et al., 2003). Bredemeier (1999) argue that opposing athletes can be seen as co-creators of an experience that can help both parties to excel. Ommundsen et al.(2003) contend that an emphasis on understanding, progress, improvement and learning may reduce the pressure to win and outperform others and reduce the temptation to cheat, violate rules and behave aggressively. A task-involving climate was also considered to elicit the development of prosocial norms and foster perceptions that it is inappropriate to aggress against opponents (Guivernau & Duda, 1998). Further, the task-involving climate includes the dimension of cooperation, which is a subtype of prosocial behaviours (Eisenberg & Fabes, 1998). Thus, a task-involving climate is suggested to be negatively linked to antisocial variables but positively linked to prosocial variables.

Before supporting the theory with empirical evidence, it is important to clarify the measurement of motivational climate. Rather than assessing the actual motivational climate it is the interpretation of the environmental cues by each individual that determines the expression of their goal orientations. The focus of measurement in the following studies is, therefore, the athletes' *perception* of the motivational climate emphasised by the coach (Ames, 1992).

Over the last five years the greatest growth in motivational and moral research has been in the area of motivational climate. Identifying links between ego-involving and task-involving climates to moral variables has become a popular focus of attention. A perceived ego-involving climate has been positively associated with low levels of sportspersonship

(Miller et al., 2004; Ommundsen et al., 2003) and moral functioning (Kavussanu & Spray, 2006; Ommundsen et al., 2003), antisocial behaviour (Kavussanu, 2006), and acceptance of rough play and cheating (Boixadós, Cruz, Torregrosa, & Valiente, 2004). In contrast, a perceived task-involving climate has been positively linked to prosocial behaviour (Kavussanu, 2006) and sportspersonship (Gano-Overway et al., 2005; Miller et al., 2004; Ommundsen et al., 2003). On the whole, research indicates ego-involving climates associate with negative moral variables whilst task-involving climates associate with positive moral variables.

Limitations of the Research

Although past work has made great strides in the understanding of achievement motivation and morality, there are some notable limitations of the research. The first is a preoccupation with measuring the cognitive variables of moral judgement, reasoning, and intention (e.g., Bredemeier, 1984, 1994, 1995; Bredemeier & Shields, 1986; Duda et al., 1991; Dunn & Causgrove-Dunn, 1999; Lemyre et al., 2002; Miller et al., 2004). Whilst behaviours have more consequence to others than cognitions, it is the latter that receive the greater attention in the sports literature. With moral thoughts (reasoning, judgements, and intentions) being far from a perfect predictor of actions (see: Kohlberg, 1981; Eisenberg & Fabes, 1995; Krebs & Denton, 2006 for discussion), and behaviours having a direct effect on the environment, it is necessary to increase research on moral behaviour. Direct observations of moral behaviour are ideal as they are not so susceptible to the biases that limit self-report methods. To date, only a few studies have investigated moral behaviour in sport (e.g., Jones, Bray, & Olivier, 2005; Kavussanu, 2006; Kavussanu, Seal, & Phillips, 2006). Thus, more work is required on sporting moral behaviour and when practical, using direct observation methods.

A second shortcoming is the research focus on negative aspects of morality. Popular variables include likelihood to aggress against an opponent (Stephens 2000, 2001; Stephens & Bredemeier, 1996), tendencies toward aggressive and unfair play (Bredemeier, 1985, 1994; Bredemeier & Shields, 1986), perceived legitimacy of aggressive behaviour (Silva, 1983), and the endorsement of aggressive actions (Bredemeier, 1985; Duda et al., 1991; Dunn & Causgrove-Dunn, 1999). Although it is acknowledged that sportspersonship includes some positive aspects, it also includes neutral (i.e., respect for social conventions) and negative dimensions. Only recently has research targeted behaviours that actually benefit others, namely prosocial acts (e.g., Kavussanu, 2006).

Limitations also extend to the study of motivational variables. First, even though AGT is centred on situational goal involvement, previous studies have only investigated moral variables in relation to dispositional goal orientations and perceptions of the motivational climate. Second, the investigation of interactions between the goal orientations is rare and has been restricted to a median split approach that analysed high and low combinations of task and ego orientation (Dunn, & Causgrove-Dunn, 1999). Such techniques have been criticised as they fail to reveal the interaction effect between the variables across a range of values (see Aiken & West, 1991 for further discussion). Third, scant attention has been placed on social goal orientations. In essence, there is plenty of scope for the exploration of goal involvement, interaction effects between the motivational constructs, and social goal orientations in moral research.

Further shortcomings in the study of achievement goals and morality in sport relate to the methods of investigation. A reliance on self-report methods that are snapshot in nature restricts conclusions on cause and effect or direction of causality between the variables. Early experimental work (e.g., Kleiber & Roberts, 1981; Orlick, 1981) was succeeded by structural

developmental research that measured moral thought using subjective questionnaires. Although relationships can be established between variables measured by self-reports, evidence that one variable (i.e., goal orientations) causes an effect in another (i.e., moral behaviour) can only be established in experimental work. As well as depending heavily on self-report methods, there is a distinct lack of recent experimental work in sports moral research. Further, the paucity of longitudinal work in moral research (Vallerand & Losier, 1994; Priest, Krause, & Beach, 1999) and the absence of any links with achievement motivation over time, limits predictions on the direction and nature of the causal ordering between these variables. Expanding on longitudinal work may reveal reciprocal relationships and temporal changes between achievement motivation and moral constructs. A greater variety of research methods are required to broaden understanding beyond simple relationships between variables.

Summary

Stemming from social learning, structural developmental, and social cognitive theories, the study of morality has flourished in the context of sport. Debate continues as to whether the traditional purposes for sports participation, as a vehicle for character development, have been replaced by breeding grounds for immorality. Detractors from the argument that sport builds character prompted a line of research focusing on the negative aspects of moral thought and behaviour. Attempts to explain why athletes behave immorally have led to links with constructs of AGT. Ego orientation and ego-involving climates have generally been associated with antisocial moral variables. In contrast, task orientation and task-involving climates have tended to be linked with positive aspects of morality. Although the research has proved informative it has its limitations. The scarcity of studies relating to behaviours that benefit others, situational goal involvement, social goal orientations, and the

self-concept highlight possible areas for research development. Further, methodological limitations of previous work add support to the need to utilise experimental and longitudinal designs. Guided by moral theory and past research, the purpose of the four studies that make up this thesis was to advance the understanding of any links between achievement motivation, the self-concept and the dual aspects of morality in sport.

Purposes of Studies 1 to 4

The purpose of Study 1 (Chapter 2) was to examine the main and interactive effects of task orientation, ego orientation, and moral identity on prosocial and antisocial judgement and behaviour. Bandura's (1991) proactive dimension was represented by prosocial behaviours and judgements. The inhibitive dimension was represented by antisocial behaviours and judgements. Building on past work with goal orientations, interaction effects between task and ego orientation were examined over a range of values. Moreover, predictive effects of goal orientations were investigated along with the proposed second concept of the self-structure (Shields & Bredemeier, 1995), namely moral identity. This study focused on personal predictors of the dual aspects of morality.

The purpose of Study 2 (Chapter 3) was to extend links with dispositional goal orientations by examining social goals, along with task and ego orientations, as predictors of prosocial and antisocial behaviour. Following the discovery that friendship, peer acceptance and coach approval goals predicted antisocial moral variables (Stuntz & Weiss, 2003), the present study used recently validated (Allen, 2003) social affiliation, social recognition, and social status orientations to predict prosocial and antisocial dimensions of moral behaviour. Moreover, the effects of social goals were examined above and beyond the effects of task and ego orientation.

After examining individual differences and self-reported moral variables, the next stage was to examine the effect of situational goal involvement on actual prosocial and antisocial behaviour. Study 3 (Chapter 4) employed a lab-based experimental design to manipulate participants' goal involvement in an inherently competitive task akin to sport. The direct observation of prosocial and antisocial behaviours, coupled with manipulation checks for the motivational involvement, allowed for definite conclusions to be drawn on the effects of task and ego involvement on moral behaviour. Goal involvement is an important construct as it reflects the situational interaction of dispositional goal orientations and the perceived motivational climate. As task and ego involvement have not previously been examined, knowing the motivational state at the time the moral behaviours are being recorded represents a key advancement in the research. A second purpose of Study 3 was to examine any differences in moral behaviour between the sexes. Previous work revealing sex differences in levels of morality (Bredemeier, 1994; Duda et al., 1991; Kavussanu & Roberts, 2001; Kleiber & Roberts, 1981) has yet to be replicated in the controlled conditions of the laboratory. Comparing the effects of situational goal involvement and sex on observed moral behaviour in an experimentally manipulated achievement context represents an original approach to this research area.

Finally, the purpose of Study 4 (Chapter 5) was to build on the previous three studies by including dispositional goal orientations, perceived motivational climate and moral behaviour in an exploratory model of their interrelationships and temporal stability. The simultaneous assessment of personal (e.g., goal orientations) and environmental (e.g., motivational climate) variables represents an increasingly popular interactional approach to the study of morality (e.g., Kavussanu, 2006; Kavussanu & Spray, 2006; Gano-Overway et al., 2005; Ommundsen et al., 2003; Stuntz & Weiss, 2003). This study expands on previous

work by sampling the motivational and moral variables at the beginning and end of a regular season. The first advantage of longitudinal research is that the stability of the variables could be tested over time. Secondly, the direction of the relationships between variables can be determined when measured at two time points. Based on Bandura's (1991) model of triciprocal causation, interrelationships were explored between the personal, environmental and behavioural factors. Study 4 is a first attempt at modelling reciprocal relationships between goal orientations, motivational climate and moral behaviour in sport.

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CHAPTER 2

Study 1: Goal Orientations and Moral Identity as Predictors of Prosocial and Antisocial Functioning in Male Association Football Players

Abstract

The purpose of this study was to examine the effects of task and ego goal orientation and moral identity on prosocial and antisocial judgement and behaviour in football. The interaction between task and ego orientation in predicting these variables was also examined. Participants were 210 adult male footballers (*M* age = 25 years, *SD* = 6) competing at recreational (*n* = 133) and semi-professional (*n* = 77) levels. They completed questionnaires measuring task and ego goal orientation, the importance of moral identity, prosocial and antisocial judgement, frequency of prosocial and antisocial behaviours in football, and social desirability. Regression analysis revealed no main effects for goal orientations and moral identity on prosocial judgement and behaviour. However, a significant interaction effect between task and ego orientation emerged in relation to prosocial judgement. Specifically, task orientation positively predicted prosocial judgement only at low levels of ego orientation. Ego orientation emerged as a positive predictor of antisocial judgement and behaviour, whereas moral identity negatively predicted these variables. The differentiation between prosocial and antisocial aspects of morality was supported. Further, it was concluded that examining moral identity and interactions between task and ego orientation adds to the understanding of the influence of these variables on prosocial and antisocial functioning in sport.

Introduction

Although many assume that football builds character, reports suggest that the English game is in a moral crisis (e.g., Fordyce, 2003). In a recent article, elite English football was described as a society of 'different morals, different outlooks…a different planet, in which young men live in a cocoon that they believe absolves them not just from any normal convention of decency but the rule of the law' (Collins, 2004). In addition to recent reports highlighting moral decline in football, sports moral literature has tended to focus on the negative aspects of morality (e.g., Bredemeier & Shields, 1986; Kohn, 1986; Stephens, 2000, 2001). This attention detracts from the traditional purposes of sport as a means of developing virtues such as fairness, loyalty, and teamwork (Shields & Bredemeier, 1995). Whilst empirical evidence supports the incidence of immoral thoughts and actions in sport (see Weiss & Smith, 2002 for review), investigations into positive variables are rare.

With the exception of Vallerand's work on sportspersonship (Vallerand, Briere, Blanchard, & Provencher, 1997; Vallerand, Deshaies, Cuerrier, Briere, & Pelletier, 1996) and related empirical research (e.g., Dunn & Causgrove-Dunn, 1999; Lee, Whitehead, Ntoumanis, & Hatzigeorgiadis, 2001; Lemyre et al., 2002) the vast majority of studies examining moral issues in sport have focused on negative aspects of morality. Examples that feature in the literature are likelihood to aggress against an opponent (Stephens, 2000, 2001; Stephens & Bredemeier, 1996), tendencies toward aggressive and unfair play (Bredemeier, 1985, 1994; Bredemeier & Shields, 1986), perceived legitimacy of aggressive behaviour (Silva, 1983), and the endorsement of aggressive actions (Bredemeier, 1985; Duda et al., 1991; Dunn & Causgrove-Dunn, 1999). Moreover, research examining judgement, intention and behaviour as indices of moral functioning (e.g., Kavussanu & Roberts, 2001; Kavussanu & Ntoumanis, 2003) has investigated athletes' responses to situations pertaining to aggressive or cheating

behaviours, and inferred high levels of moral functioning from low scores on these respective measures.

Investigating negative aspects of morality is important but to support the use of sport as a vehicle for the development of character, research examining positive aspects of morality in sport is crucial. A class of moral behaviours that have received minimal attention in sport are prosocial behaviours. Prosocial behaviours have been defined as behaviours intended to benefit another individual or group of individuals (Eisenberg, 1986). Examples of prosocial behaviour in sport are helping an opponent off the floor, congratulating an opponent on good play or returning the ball to the opposition. Although prosocial behaviours can be performed for non-altruistic reasons, their defining characteristic is that they have beneficial effects for others and are therefore important in their own right. It is worth noting that Vallerand et al.'s (1997) measurement of sportspersonship orientations includes items that are prosocial by definition. However, positive dimensions of sportspersonship reflect a combination of social convention, respectful, and prosocial behavioural tendencies. In contrast, this study focuses exclusively on frequency of prosocial behaviours. Further, an antisocial behaviour dimension was included here to refer to behaviours intended to harm or disadvantage the recipient. Examples of antisocial behaviours in sport are faking an injury or trying to injure an opponent to take an advantage. Essentially, these actions reflect unfair play and have negative consequences for others.

In addition to the interest in prosocial and antisocial behaviour, moral judgements were investigated in the present study and were similarly distinguished into prosocial and antisocial dimensions. To date, the broadly defined concept of moral judgement has been investigated extensively in sports research as one of Rest's (1984) four components of morality (e.g., Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001; Ommundsen et

al., 2003; Stuart & Ebbeck, 1995), as Kohlberg's (1984) deontic (i.e., moral obligation) and responsibility judgement (e.g., Stephens & Bredemeier, 1996), or as the perceived legitimacy of intentionally injurious acts (Bredemeier, 1985; Duda et al., 1991; Silva, 1983). The latter variable has been referred to in the literature as legitimacy judgements, and it has been argued that these judgements constitute moral judgements (Weiss & Bredemeier, 1990). Previous research has not distinguished between prosocial and antisocial judgements but this was attended to in the present study by determining footballers' perceived appropriateness of both prosocial and antisocial behaviours (e.g., Kavussanu & Roberts, 2001; Ommundsen et al., 2003; Stuart & Ebbeck, 1995). The terms prosocial and antisocial functioning were used to refer to prosocial and antisocial judgements and behaviours respectively.

In a heuristic model of prosocial behaviour, Eisenberg (1986) has identified a number of personal and situational variables that have the potential to influence prosocial action. Among the personal variables that have been suggested to have direct links to prosocial action are personal goals and self-identity. In sports moral research, personal goals and self-identity have been identified as components of the self-structure (Shields & Bredemeier, 1995). The self-structure is the 'psychological conceptual system through which people apprehend their identity and value' (Shields & Bredemeier, 1995) and has been proposed to influence moral action through its influence on moral intention. Although highly complex, the self-structure has been reduced into two dimensions that determine the prioritisation of moral values over conflicting values and resemble Eisenberg's (1986) personal goals and self-identity characteristics. These dimensions are the motivational goal orientation and moral identity and are now discussed separately.

Whilst Eisenberg's (1986) model of prosocial behaviour includes the global concept of personal goals, in sports research goals have been investigated from an achievement goal

perspective (Nicholls, 1989) that exclusively reflect achievement contexts. The central assertion of achievement goal theory is that, in achievement contexts, individuals are motivated to demonstrate competence. The perception of demonstrated competence is held to vary in accordance with two orthogonal goal orientations. An ego orientation represents the tendency to perceive competence and success relative to others, while a task orientation reflects the tendency to perceive competence and success using self-referenced criteria. When an ego orientation prevails, concern is with outperforming or gaining superiority over others and the activity is viewed as a means to an end. A task orientation represents a concern for skill improvement and the intrinsic facets of the sporting experience. Nicholls (1989) has argued that a focus on demonstrating superiority over others may lead to a lack of concern for justice, fairness, and the welfare of competitors. In contrast, because the predominantly task orientated individual is concerned with partaking in an activity for its own sake and uses self-referenced criteria to judge competence, cheating and aggressing against another individual is irrelevant. Accordingly, when task orientation prevails, the individual is more likely to be concerned with fair play (Duda et al., 1991).

To date, empirical research has supported these predictions. For example, ego orientation has been associated with the endorsement of unsportsmanlike cheating (Duda et al., 1991) and rating aggressive acts as legitimate (Duda et al., 1991; Kavussanu & Roberts, 2001) among basketball players. This goal has also been related to legitimacy of and intention to engage in unsportsmanlike play among physical education students (Stuntz & Weiss, 2003), the endorsement of cheating and gamesmanship in youth sport competitors (Lee et al., 2001), and low levels of moral judgement, intention, and behaviour in college athletes (Kavussanu & Roberts, 2001; Kavussanu & Ntoumanis, 2003). Other work has found no relationship between ego orientation and likelihood to aggress against an opponent in young

soccer or basketball players (Stephens, 2000, 2001; Stephens & Bredemeier, 1996). Finally, in studies investigating predictors of sportspersonship a negative relationship has been identified between ego orientation and some dimensions of sportspersonship (e.g., Dunn & Causgrove-Dunn, 1999; Lemyre et al., 2002). In the above studies, task orientation has emerged as a positive predictor of some sportspersonship orientations (Dunn & Causgrove-Dunn, 1999; Lee et al., 2001; Lemyre et al., 2002), has been negatively related to unsportsmanlike attitudes (Duda et al., 1991; Stuntz & Weiss, 2003) and has weakly corresponded to high levels of moral functioning (Kavussanu & Ntoumanis, 2003). No significant associations, however, have been identified between task orientation and legitimacy judgements (Duda et al., 1991; Dunn & Causgrove-Dunn, 1999), self-reported likelihood to aggress against an opponent (Stephens, 2000, 2001; Stephens & Bredemeier, 1996), or indices of moral functioning (Kavussanu & Roberts, 2001).

One of the assumptions of achievement goal theory (Nicholls, 1989) is that goal orientations are orthogonal, that is one can be high on one goal orientation and low on the other, high on both, or low on both. Thus, it is possible that goal orientations interact in predicting outcome variables. Indeed, past work has identified significant interaction effects between task and ego orientations in predicting beliefs about success in sport (Roberts, Treasure, & Kavussanu, 1996). Even though goal orientations are assumed to be orthogonal, interaction effects in relation to moral variables in sport have rarely been examined. Using the median split approach to classify participants in goal profiles, Dunn and Causgrove-Dunn (1999) found that low task orientation combined with high ego orientation was the most detrimental motivational pattern for sportspersonship, whereas a high task orientation combined with a low ego orientation was the most beneficial for sportspersonship. These findings indicate that examining the interaction between task and ego orientation in predicting

moral variables is important. In addition, it has been suggested (Hardy, 1998) that task orientation may moderate the detrimental effects of ego orientation on moral variables found in past research. Interaction effects were therefore explored in the present study.

A variable that has yet to be investigated in relation to morality in sport is moral identity. The value of examining moral identity with moral functioning has been highlighted by sport psychologists investigating moral issues in sport (e.g., Ebbeck & Gibbons, 2003; Weiss & Smith, 2002). Moral identity has been defined as 'a commitment to one's sense of self to lines of action that promote or protect the welfare of others' (Hart, Atkins, & Ford, 1998, p. 515), and represents the importance of a set of moral traits to the self. It has been described as the mechanism that motivates moral action (Blasi, 1984) and constitutes the second dimension of the self-structure linked to morality by Shields & Bredemeier (1995).

Blasi (1984) has offered two assertions about moral identity that are assumed in this study. The first is that even though there may be nonoverlapping moral traits that compose unique moral identities, a set of common moral traits exists, that is likely to be central to most people's moral self-definition. Using Blasi's assumption as a theoretical framework, recent work by Aquino and Reed (2002) has identified and validated nine moral traits (e.g., caring, compassionate, fair etc.) amongst a sample of college and high school students in the US. The second assumption is that being a moral person may occupy different levels of importance to each individual's self-concept. Over a series of studies, Aquino and Reed (2002) found evidence supporting Blasi's second assumption. When rating the importance of the nine moral traits collectively, some participants considered morality more central to their sense of self than others.

Further to Blasi's two assumptions, there are also two dimensions of moral identity known as internalisation (private) and symbolisation (public). The internalisation dimension

taps the degree to which moral traits are central to the self-concept, while symbolisation reflects how much these traits are represented in the world. Research has shown that both dimensions of moral identity predict self-reported volunteering but only the internalisation dimension predicted actual donation behaviour among college students (Aquino & Reed, 2002). In addition, a highly self-important internalised moral identity has been positively associated with an expansive circle of moral regard toward out group members, a more favourable evaluation of a relief effort, and monetary donations (Reed & Aquino, 2003). Due to poor predictive qualities of the symbolisation dimension and its ambiguous relevance to the football environment (e.g., participants are asked whether they read books, wear clothes or purchase products that identify them as having characteristics of moral identity), only the internalisation dimension was considered in the present study.

In sum, the purpose of this research was to investigate the relative contribution of goal orientation and moral identity, as well as potential interaction effects between task and ego goal orientations, in the prediction of prosocial and antisocial functioning (i.e., judgement and behaviour) among football players. Based on past research, ego orientation was expected to positively predict antisocial judgement and behaviour, whereas importance of moral identity was hypothesised to positively predict prosocial functioning and negatively predict antisocial functioning. As previous research has revealed inconsistent findings, no predictions were made about task orientation. Similarly, based on suggestions from previous work (e.g., Hardy, 1998) interaction effects were explored but no hypotheses were provided.

Method

Participants

The study included 210 male football players from UK north-western, south-eastern and midland regions. The focus on male footballers was due to the prevalence of reported moral transgressions within this sample at the UK elite level (e.g., Fordyce, 2003). Players were drawn from recreational club (n = 133) and semi-professional (n = 77) competitive levels. Ages ranged from 16 to 40 years (M = 25, SD = 6). The majority of participants were white Europeans (n = 189) but the sample also included other races (n = 17). Experience of playing competitive football ranged from 0 to 32 years (M = 12.4, SD = 6.8) and time spent playing football per week ranged from 1 to 23 hours (M = 5.1, SD = 3.6).

Procedure

Data collection took place towards the end of a competitive season (April and May) using three methods. The first two methods involved contacting 50 association football clubs by letter to establish interest in participating in the study (see Appendix 3a). Telephone contact resulted in a personal visit to collect data after a practice session or match (8 clubs), a request for a pack of questionnaires to be sent (15 clubs, 310 questionnaires), or no further interest in the study (35 clubs). The third method involved approaching known players outside the football environment and requesting their participation in the study (n = 25).

The majority of the data were collected using method 1, where the clubs (8 clubs, n =120) were visited personally. Participants were asked to complete the consent form and answer the questionnaire honestly. Verbal and written instruction (Appendix 3b) repeatedly reminded participants of the importance of answering items on their own; coaches and club staff intervened on any conferring. It was stressed that responses would be kept confidential. Identical verbal instructions were presented for method 3. In the case of method 2, packs of

questionnaires were either posted (n = 220) or delivered by hand (n = 90) and included instruction on the appropriate procedure for distribution; 65 were returned. A one-way MANOVA revealed no significant differences in goal orientation, moral identity, and moral variables as a function of method of data collection. In addition, a MANOVA indicated that collecting data during a practice session or match had no significant influence on any of the reported variables, F (3, 206) = 1.10, p = .35.

The multi-section questionnaire included items assessing demographic information, goal orientation, importance of moral identity, prosocial and antisocial judgements specific to football, prosocial and antisocial behaviours specific to football, and social desirability. To control for potential response bias in ratings of moral judgement and behaviour, the order of presentation of these scales was reversed in half of the questionnaires.

Measures

Goal orientation. Task and ego goal orientations were measured using the Perception of Success Questionnaire (POSQ; Roberts, Treasure, & Balague, 1998). The POSQ consists of twelve sport specific items that were related to football with the stem 'When playing football I feel most successful when…' The scale includes two six-item subscales measuring task orientation (e.g., "I show clear personal improvement"; "I perform to the best of my ability") and ego orientation (e.g., "I beat other people"; "I outperform my opponents"). Participants respond on a Likert scale anchored by the scores of 1 (*strongly disagree*) and 5 (*strongly agree*). In this study, mean scores for the two subscales were calculated separately by adding scores for related items and dividing by six (i.e., the number of items). The POSQ has demonstrated adequate internal consistency with satisfactory alpha coefficients for both the task (α = .88) and ego (α = .88) subscales (e.g., Roberts et al., 1998).

Moral identity. The internalisation dimension of the Self-Importance of Moral Identity Scale (Aquino & Reed, 2002) was used to measure moral identity. Participants were presented with nine traits, validated as necessary characteristics of a moral person, and asked to respond to a total of 5 items related to these nine traits. The nine traits are: caring, compassionate, fair, friendly, generous, helpful, hardworking, honest, and kind. Examples of items assessing the importance of the characteristics are: "It would make me feel good to be a person who has these characteristics" and "I strongly desire to have these characteristics." Participants responded on a Likert scale anchored by the scores of 1 (*strongly disagree*) and 5 (*strongly agree*) and the mean scale score was calculated. Previous studies have shown a high internal consistency for the internalisation subscale items (α = .85; Reed & Aquino, 2003).

Prosocial and antisocial functioning. Prosocial and antisocial behaviours were assessed with a measure developed specifically for this study. As behaviour was measured with a questionnaire, the term in this study refers to reported rather than actual behaviour. The items were developed based on previous research (e.g., Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001) and discussions with football players, officials and coaching staff, who were asked to specify prosocial and antisocial behaviours occurring in football. The definitions of prosocial and antisocial behaviour as well as a list of 25 behaviours were given to twelve football experts, each with a minimum of 20 years experience in coaching, officiating or playing at a competitive level and three sport psychologists; these individuals were asked to classify behaviours as prosocial, antisocial or neither using the definitions provided (see Appendix 2a). This is a procedure recommended for assessing validity in scale development (John & Benet-Martinez, 2000). The behaviours investigated in the current study were classified as prosocial or antisocial by 87% of the judges (13 out of 15). From the original list 5 items were dropped, leaving 21 items in the measure that was distributed to the

footballers. Subsequent reliability and principal component analysis (see results section) reduced the final list to 11 behaviours. Four items measured prosocial behaviours and seven items measured antisocial behaviours. A full list of the final items used in this study is presented in Table 2.1.

Participants were asked to report on how often they had engaged in the 11 behaviours during the current season. This is consistent with the way behaviour has been measured in previous research (e.g., Eisenberg et al., 2002; Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001; Ommundsen et al., 2003). Footballers responded to the stem: "how often did you engage in these behaviours?" Responses were made on a 6-point Likert scale with the choice of responses being 1 (*never*), 2 (*rarely*), 3 (*sometimes*), 4 (*often*), 5 (*very often*), and 6 (*always*). Each subscale was scored separately by adding responses on each item and dividing by the number of items on each subscale.

Prosocial and antisocial judgements were assessed using the same items as the behaviour scale. Respondents were presented with the 11 behaviours and were asked to indicate how appropriate they thought they were in football. The stem for each item was "How appropriate are these behaviours…?" Responses were made on a six point Likert scale with the choice of answers being 1 (*never appropriate*), 2 (*rarely appropriate*), 3 (*sometimes appropriate*), 4 (*often appropriate*), 5 (*very often appropriate*), and 6 (*always appropriate*). Similar formats have been employed in previous studies assessing moral judgement in sport (e.g., Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001; Ommundsen et al., 2003). The prosocial and antisocial dimensions were scored separately by adding responses on each item and dividing by the number of items on each subscale.

Social desirability. When responding to items tapping moral variables, individuals may portray themselves in a favourable manner. Therefore, a measure of social desirability

was included to control for any such potential bias. Specifically, a shortened version of the Marlowe-Crowne (Crowne & Marlowe, 1960) social desirability scale was used to assess how favourably participants rate socially desirable attributes. The short version comprises 10 items and respondents are asked to indicate whether the statement is true or false as it relates to them personally. Examples of items are "I like to gossip at times", "I always try to practice what I preach", and "I have never deliberately said something to hurt someone's feelings." When scoring the scale, one point was allocated to a socially desirable response and zero for a socially non-desirable response. Possible scores ranged from 0 to10. A KR-20 (see Kuder & Richardson, 1937) score of .65 showed adequate reliability of the scale in this study.

Results

Scale Analyses

Principal Component Analysis (PCA) was conducted on the 11 items of moral judgement and behaviour scales. PCA was chosen because it is the recommended analysis when the objective is to combine a set of measured variables into summary indices (Floyd & Widaman, 1995) and to assess unidimensionality of a scale (Cortina, 1993). Prior to performing PCA, the suitability of the data was checked. Kaiser values of .81 for moral judgements and .74 for moral behaviours, both exceeded the recommended value of .6 (Tabachnick & Fidell, 1996) indicating sampling adequacy. Further checks were made for missing data and outliers, none were found. PCA using oblimin rotation revealed the presence of two components, with eigen values exceeding 1, for each of the judgement and behaviour scales. A factor structure was also revealed for varimax rotation. The antisocial items from the judgement and behaviour scales loaded on Factor 1, while the prosocial items loaded on Factor 2. The item loadings on each factor together with internal reliability scores and means are presented in Table 2.1.

The internal reliability of all scales was examined using Cronbach's (1951) alpha coefficients, and the values are presented in Table 2.2. All scales had an alpha above or very close to the recommended criterion of .70 except for prosocial behaviour, which had an alpha of .62. Although some scales had alpha levels lower than the recommended .70 criterion, it should be noted that alpha coefficient is highly dependent upon the number of items (Cortina, 1993; Schmitt, 1996). A low number of items could partly explain the marginal alpha values of the two prosocial scales (4 items each) and the measure of moral identity (5 items). Having already dropped 10 items from each of the moral measures distributed to the participants, no other combination of items yielded an improved internal reliability. A point of note is that results involving these scales should be interpreted with caution.

Table 2.1

Principal Component Analysis (Oblimin Rotation): Judgements and Behaviours

Item		Judgement factors			Behaviour factors	
	M ± *SD*	1	2	*M* ± *SD*	1	2
1. Trying to get an opponent injured	1.80 ± 1.14	.76		2.19 ± 1.23	.73	
2. Retaliating to a bad tackle e.g., kicking out	2.16 ± 1.15	.72		258 ± 1.10	.68	
3. Diving to fool the referee	2.10 ± 1.15	.69		2.07 ± 1.25	.64	
4. Elbowing an opposition player	1.72 ± 1.03	.69		1.84 ± 1.04	.69	
5. Body checking an opposition player	2.97 ± 1.27	.68		2.96 ± 1.23	.65	
6. Deliberate hand ball	2.11 ± 1.10	.58		2.01 ± 1.08	.67	
7. 'Winding up' opposition players	3.34 ± 1.31	.51		3.69 ± 1.38	.51	
8. Apologising to opponent e.g., helping off floor	3.71 ± 1.21	– .43	.72	3.29 ± 1.13		.72
9. Congratulating the opposition on good play	2.78 ± 1.31		.65	2.89 ± 1.37		.59
10. Returning ball to opponent for a throw in, free kick, etc.	3.80 ± 1.26		.63	3.49 ± 1.30		.64
11. Kicking the ball out of play if an opponent is injured	4.98 ± 1.00	– .43	.51	4.34 ± 1.24		.66
Eigen value		3.63	1.93		3.23	1.85
% of variance		33.00	18.00		29.00	17.00
Internal reliability		.81	.69		.79	.62
Factor correlations			–.18			–.11

Note. Minimum loadings = .40

Descriptive Statistics and Correlation Analyses

Descriptive statistics and zero order correlations were computed for all variables and are presented in Table 2.2. Most footballers reported that they sometimes or often engaged in prosocial behaviours during the season and they had rarely or sometimes engaged in antisocial behaviours. On average, they judged prosocial behaviours as sometimes appropriate, whereas they judged antisocial behaviours as rarely appropriate. Interestingly, participants reported higher scores for prosocial judgements and behaviours, compared to antisocial judgements and behaviours. Mean scores for motivational variables were moderately high on ego and fairly high on task orientation, while scores for moral identity and social desirability were both moderate.

The relationship between all the variables was examined using zero order correlations (see Table 2.2) with partial correlations controlling for potential effects of social desirability. Zero order correlations indicated low negative relationships between prosocial and antisocial variables. Prosocial judgement was negatively correlated with both antisocial variables, while prosocial behaviour was negatively correlated with antisocial judgement. Judgements were highly and positively correlated with behaviours for both prosocial and antisocial variables. Ego orientation was positively related to both antisocial judgement and behaviour, while moral identity was negatively correlated with both antisocial variables. Finally, task orientation was positively correlated with moral identity and ego orientation. Correlations among variables controlling for social desirability were also computed. When compared to zero order correlations, social desirability was shown to have a negligible effect on the relationships among variables with no changes in level of significance. The greatest deviance from the zero order correlations was a value of .04 between prosocial judgement and moral identity.

Table 2.2

Descriptive Statistics and Zero Order Correlations among Variables (N = 210)

Scale	*M* ± *SD*	Zero order correlations									
		1	2	3	4	5	6	7	8	9	10
1. Prosocial judgement	3.82 ± 0.86	(.69)									
2. Prosocial behaviour	3.50 ± 0.86	.66**	(.62)								
3. Antisocial judgement	2.30 ± 0.80	–.21**	–.16*	(.81)							
4. Antisocial behaviour	2.48 ± 0.79	–.14*	–.12	.68**	(.79)						
5. Moral identity	3.82 ± 0.57	.01	.12	–.22**	–.39**	(.68)					
6. Ego orientation	3.76 ± 0.77	–.12	–.09	.18**	.22**	–.02	(.84)				
7. Task orientation	4.15 ± 0.51	.07	.05	–.06	–.03	.28**	.20**	(.74)			
8. Age	25.00 ± 6.10	.04	.10	–.16*	–.20**	.25**	–.13	–.01	_		
9. Social desirability	4.59 ± 2.30	.00	.11	–.01	–.11	–.03	–.22**	.03	–.05	(.65)	
10. Football experience	12.34 ± 6.76	–.07	.06	.02	.05	.08	–.11	–.03	.58**	.07	_

Note. Ranges of scores were 1-6 for judgements and behaviours; 1-5 for task, ego, and moral identity; 16-47 for age; 0-10 for social desirability; and 1-32 for football experience. Alpha coefficients are in parenthesis across the diagonal. **p* <.05, ***p* <.01.

Regression Analyses

The aim of the present study was to investigate the relative contribution of goal orientations and internalised moral identity in predicting prosocial and antisocial judgements and behaviours, as well as to explore interaction effects between goal orientations. To examine this purpose, four hierarchical regression analyses were conducted, two for the prosocial variables and two for the antisocial variables. Before running the main analyses the residual scatter plots were examined to determine whether the assumptions of normality, linearity, and homoscedasticity underlying regression analysis were met (see Tabachnick & Fidell, 2001). No violations of the assumptions were revealed.

As recommended by Aiken and West (1991), prior to conducting the analyses task and ego orientation were centred by subtracting the mean of each variable from the individual variable scores. The interaction term was created by multiplying centred task with centred ego. This procedure is essential in order to avoid multicollinearity, and it does not alter the regression coefficients, standard errors, or significance tests (Aiken & West, 1991; Cohen, Cohen, West, & Aiken, 2003).

Each regression analysis involved three steps. As the sample used in this study varied in both age and competitive level, these variables were entered in step 1, in order to control for their effects on prosocial and antisocial variables. Recreational standard was coded as 0, while semi-professional standard was coded as 1. Ego and task orientation as well as internalised moral identity were entered in step 2, in order to examine their relative influence on prosocial and antisocial variables. The interaction term between task and ego orientation was entered in the final step to examine whether interaction effects were significant after the main effects were partialed out (Aiken & West, 1991; Cohen et al., 2003).

Prosocial functioning. Age, competitive level, moral identity and goal orientations did not significantly predict prosocial judgement or behaviour. However, a significant interaction between task and ego orientation emerged for prosocial judgement, F (1, 203) = 4.0, $p < .05$, $R^2 = .02$. The effect size was $f^2 = .02$. Cohen (1992) indicates that effect sizes of .02 are considered small, .15 medium, and .30 large. Although the interaction effect for prosocial behaviour was in the same direction, it did not reach significance, F (1, 203) = 1.9, $p = .18$.

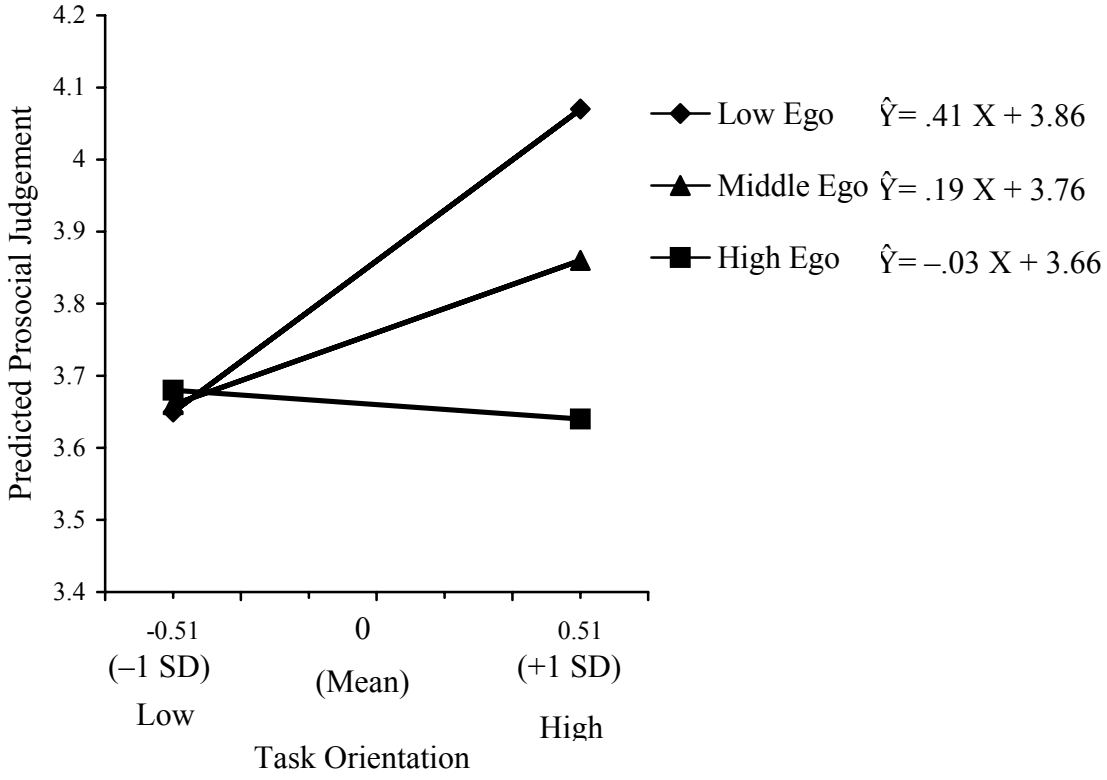
As recommended by Cohen et al. (2003), the significant interaction was further explored by plotting three regression lines at three values of ego orientation (see Fig. 2.1), and subsequently testing whether the slopes of these lines are significantly different from 0. The values of ego orientation chosen to plot the interaction were the mean, one *s* below the mean (-.77), and one *s* above the mean (.77). These values were substituted in the regression equation (Y = .19 X + –.13 Z + –.29 XZ + 3.76) to yield three simple regression equations (see Fig. 2.1), which were then plotted to display the interaction. Post hoc analyses, calculated by hand using an equation provided by Aiken & West (1991), indicated that the gradient of only one regression line was significantly different from zero. That was the regression of prosocial judgement on task orientation at one *s* below the mean of ego orientation, $t = 2.3$, $p < .05$, 95 % $CI = .07 \leq B$ Y on X at $Z_L \geq .77$. Thus, under conditions of low ego orientation, as task orientation increases there was a significant increase in predicted prosocial judgement. The regressions of prosocial judgement on task orientation at mean and high levels of ego orientation were non-significant indicating that when players' ego orientation was at average or high levels, task orientation did not significantly predict prosocial judgement.

Table 2.3
Hierarchical Regression of Prosocial Judgements and Behaviours (N = 210)

	Prosocial judgement				
Variable	*B*	*B 95% CI*	β	*t*	Δ R^2
Step1					.01
Age	.00	– .02 < > .02	.03	.35	
Competitive level	– .10	– .02 < > .48	– .06	– .79	
Step 2					.03
Age	– .00	– .02 < > .02	– .01	– .10	
Competitive level	– .13	– .39 < > .13	– .07	– 1.00	
Ego	– .15	– .31 < > .01	– .13	– 1.85	
Task	.17	– .08 < > .42	.10	1.31	
Moral identity	.07	– .15 < > .30	.05	.65	
Step 3					.02*
Age	– .00	– .03 < > .02	– .03	– .40	
Competitive level	– .13	– .39 < > .13	– .07	– 1.01	
Ego	– .13	– .29 < > .03	– .11	– 1.60	
Task	.19	– .06 < > .44	.11	1.50	
Moral identity	.06	– .16 < > .28	.04	.55	
Task x Ego	– .29	– .58 < > – .00	– .14	– 2.00*	
R^2 total					.05
	Prosocial behaviour				
Step1					.01
Age	.01	– .01 < > .03	.09	1.19	
Competitive level	– .08	– .33 < > .17	– .05	– .63	
Step 2					.02
Age	.01	– .01 < > .03	.05	.67	
Competitive level	– .10	– .36 < > .15	– .06	– .79	
Ego	– .10	– .25 < > .06	– .09	– 1.21	
Task	.10	– .15 < > .34	.06	.75	
Moral identity	.13	– .09 < > .35	.09	1.17	
Step 3					.01
Age	.01	– .02 < > .03	.04	.46	
Competitive level	– .10	– .36 < > .15	– .06	– .79	
Ego	– .08	– .24 < > .08	– .07	– 1.03	
Task	.11	– .14 < > .36	.07	.88	
Moral identity	.12	– .10 < > .35	.08	1.10	
Task x Ego	– .21	– .50 < > .09	– .10	– 1.40	
R^2 Total					.04

Note. $\Delta R^2 = R^2$ unique to each step. **p* <.05, ***p* <.01, ****p* <.001; CI = Confidence Interval

Figure 2.1. Task orientation predicting prosocial judgement at three values of ego orientation.



Antisocial functioning. Results of the regression analyses examining predictors of antisocial functioning are presented in Table 2.3. Competitive level was a significant predictor of antisocial judgement indicating that semi-professional players (coded as 1) were more likely than recreational players to consider antisocial behaviours as appropriate. Age and competitive level together accounted for 4% of the variance in antisocial judgement, F (2, 207) = 4.48, p = .01, and behaviour, F (2, 207) = 4.51, p = .01. Ego orientation was a significant positive predictor of both antisocial judgement and behaviour, whereas internalised moral identity was a significant negative predictor of these variables. No interaction effects between task and ego orientation in predicting antisocial functioning were found. Goal orientations and moral identity together explained 7% of the variance in antisocial judgement,

Table 2.4
Hierarchical Regression of Antisocial Judgements and Behaviours (N = 210)

	Antisocial judgement				
Variable	*B*	*B 95% CI*	β	*t*	Δ R^2
Step1					.04*
Age	– .02	– .03 < > .00	– .12	– 1.71	
Competitive level	.22	–.01 < > .45	.13	1.86	
Step 2					.07**
Age	– .01	– .03 < > .01	– .05	– .70	
Competitive level	.25	.02 < > .48	.15	2.12*	
Ego	.19	.05 < > .33	.18	2.63**	
Task	– .11	– .33 < > .12	– .07	– .93	
Moral identity	– .25	– .45 < > –.06	– .18	– 2.52*	
R^2 total					.11
	Antisocial behaviour				
Step1					.04*
Age	–.02	– .04 < > .01	– .19	– 2.65**	
Competitive level	.07	– .16 < > .30	.04	.59	
Step 2					.17***
Age	–.01	– .03 < > .01	– .07	– .99	
Competitive level	.08	– .13 < > .30	.05	.78	
Ego	.21	.08 < > .34	.20	3.10**	
Task	.04	– .16 < > .25	.03	.41	
Moral identity	– .52	– .70 < > –.34	– .38	–5.60***	
R^2 Total					.21

Note. $\Delta R^2 = R^2$ unique to each step. *p <.05, **p <.01, ***p <.001; CI = Confidence Interval

F (3, 204) = 5.10, $p < .01$, and 17% of the variance in antisocial behaviour, F (3, 204) = 14.28, $p < .001$. The corresponding effect sizes were $f^2 = .08$ for antisocial judgement and $f^2 = .21$ for antisocial behaviour. Thus, goal orientations and moral identity had a relatively small effect on antisocial judgement and a medium effect on antisocial behaviour (Cohen, 1992).

Discussion

Research examining moral issues in sport has primarily focused on negative or antisocial aspects of morality such as aggressive tendencies or behaviour, unsportsmanlike conduct and judgements about the legitimacy of injurious acts (see Weiss & Smith, 2002 for review). However, when sport is often heralded as a vehicle for character development (Shields & Bredemeier, 1995), then questions need to be asked of the prevalence and predictors of prosocial functioning. This offers a more holistic approach to examining moral issues in sport. The purpose of the present study, therefore, was to examine goal orientation and moral identity as predictors of both prosocial and antisocial judgement and behaviour in football.

An important finding of this study is that prosocial and antisocial functioning are two independent constructs as indicated by the results of factor analyses as well as the low correlation between the prosocial and antisocial scales. The distinctiveness of these positive and negative dimensions of morality highlight the need to assess both constructs, rather than assuming high scores on antisocial functioning imply low scores on prosocial functioning and vice versa. It is also interesting to note that this sample of footballers reported relatively higher prosocial judgement and behaviour in comparison to the antisocial variables. This finding suggests that footballers are likely to view prosocial behaviours as appropriate in the context of football.

Predicting Prosocial Functioning

Regression analyses revealed no main effects for goal orientations and moral identity in predicting prosocial judgement or behaviour. Whilst moral identity may not predict prosocial functioning in this sample of footballers, a significant interaction effect between task and ego orientation was found in predicting prosocial judgement. The interaction between the goal orientations suggests that the relationship between task orientation and prosocial judgement varies depending upon a footballer's level of ego orientation. Specifically, task orientation was a significant predictor of prosocial judgement *only* when ego orientation was low. That is, when individuals do not consider outperforming others a salient way of defining success, conceptualising success in terms of learning, mastery, and improvement predicts judging prosocial behaviour as appropriate. It appears that at average or high levels of ego orientation, the positive effect of task orientation on prosocial judgement is suppressed.

The finding of an interaction highlights the complexity of the relationship between goal orientations and moral variables and underscores the importance of examining interaction effects between task and ego orientation when predicting moral variables. In the occurrence of an interaction effect, main effects have to be interpreted in light of this interaction. Specifically, when an interaction effect exists between two variables, main effects reflect the influence of one predictor on the outcome variable at the *mean* of the other predictor (see Aiken & West, 1991; Cohen et al., 2003). Thus, task orientation did *not* predict footballers' prosocial judgement when their ego orientation value was *average* (i.e., the mean of this sample) but emerged as a significant predictor when ego orientation was low. In studies that have not examined interaction effects (e.g., Kavussanu & Roberts, 2001; Stephens, 2000), significant findings for task orientation could have been overlooked under

certain conditions (i.e., low ego orientation). Moreover, a failure to examine interactions may partly explain the inconsistency in findings linking task orientation to moral variables. Even in the interaction analysis of this study, the variance explained in prosocial judgement was low and borderline significant.

The absence of main effects of task orientation on prosocial variables is inconsistent with the positive links found with dimensions of sportspersonship in some studies (Dunn & Causgrove-Dunn, 1999; Kavussanu & Ntoumanis, 2003; Lee et al., 2001; Lemyre et al., 2002). Explanations may hinge on the fact that whilst sportspersonship includes elements of prosocial functioning, overall the construct reflects mutually beneficial behaviours characterised by social convention, fair play, respect and commitment to sport. In isolation, however, it appears that prosocial judgement and behaviour benefit the opposition to the point where self-interest may be undermined. For example, kicking the ball out of play if an opponent is injured may be at the expense of a goal scoring opportunity. Such behaviour could benefit the opposition but have negative consequences for one's team. Although task orientated individuals are not preoccupied with outperforming opponents, it is possible that task goals do not predict behaviour or judgement that could be disadvantageous to the athlete's own performance outcomes. A second explanation may be that task orientation is not a strong predictor of prosocial functioning in the adult male populations sampled in this study. Conjecture on the relationship between task orientation and prosocial functioning in adult male populations remains speculative and requires further investigation.

Previously identified relationships between moral identity and prosocial functioning (Aquino & Reed, 2002; Reed & Aquino, 2003) were not found in the football environment. Two explanations are suggested for this inconsistency. Firstly, Aquino and Reed's (2002, 2003) research was not carried out in the achievement context of sport. In spite of the

moderate frequency of prosocial judgement and behaviour, the football context could suppress typically higher levels of prosocial functioning that may exist outside of sport. As suggested by the theory of bracketed morality (Shields & Bredemeier, 1995), features of the sport context form 'brackets' of regressed sport morality that is set apart from the broader morality of everyday life. The variation in scores for prosocial functioning in football may differ from the range of scores for prosocial functioning in other contexts and could explain why prosocial judgement and behaviour were unrelated to the global measure of moral identity. A second explanation may be the different measures employed in the two studies to assess prosocial variables. Whereas Aquino and Reed (Aquino & Reed, 2002; Reed & Aquino, 2003) measured the perceived worth of food and money and actual donations of these resources to less well-off groups, this study relied on self-reported appropriateness and frequency of behaviours towards fellow footballers. The validity of these explanations may be determined by future research.

A final explanation for the nonsignificant findings in relation to prosocial variables is the low internal reliability of the instruments, in particular the prosocial behaviour measure. It is well known (Cohen et al., 2003) that the internal reliability of a scale places a limit on the maximum correlation that can be achieved between two variables, with lower scale alpha values leading to lower correlations between variables. It is possible that relationships between goal orientations, moral identity and prosocial variables went undetected because of the low alphas of the prosocial judgement and behaviour scales. Future research should attempt to improve the psychometric properties of these scales and examine motivational and moral identity predictors of prosocial variables with other samples.

Although analysis revealed some interesting findings, it is recognised that motivational and moral identity variables predicted a small proportion of the variance in

prosocial functioning. Clearly, other aspects play a role in determining prosocial functioning. For example, additional personality characteristics such as sociability, social competence, self-esteem, and emotionality (see Eisenberg & Fabes, 1998) may be influential in predicting prosocial behaviour and judgement, as might be environmental variables such as motivational climate and moral atmosphere (Kavussanu, Roberts, & Ntoumanis, 2002; Stephens, 2000, 2001).

Predicting Antisocial Functioning

In accordance with the hypothesis and past research, ego orientation was found to significantly predict both antisocial judgement and behaviour. Thus, footballers' endorsement of ego goals heightened the likelihood of judging antisocial acts as appropriate and reporting engaging in antisocial behaviours such as injuring, retaliating, elbowing, and winding up the opposition. These findings are consistent with Nicholls' (1989) theoretical framework, which proposes that individuals high in ego orientation have a preoccupation with winning, which may be accompanied by a 'lack of concern about justice and fairness…….When winning is everything, it is worth doing anything to win' (Nicholls, 1989, p. 133). Links between ego orientation and antisocial functioning (judgement and behaviour) found in this study are consistent with previous research reporting associations between ego orientation and unsportsmanlike attitudes, legitimacy rating of aggressive acts (Duda et al., 1991; Dunn & Causgrove-Dunn, 1999; Kavussanu & Roberts, 2001) as well as moral judgement and moral intentions (Kavussanu & Roberts, 2001). From an applied perspective, determining success by winning and losing is likely to lead to antisocial functioning.

No significant interaction effects were identified between task and ego orientation in predicting antisocial functioning. It has been suggested (e.g., Hardy, 1998) that the negative effects of ego orientation on levels of morality may be moderated by task orientation;

therefore, ego orientation may not be as detrimental to moral behaviour when task orientation is high. The present findings, however, do not support this assertion. Ego orientation was found to predict antisocial functioning across *all* values of task orientation. Thus, even when an individual is concerned with improvement and doing their best in the sporting context, a preoccupation with winning may still result in unsportsmanlike conduct. Although this is an important finding, it should also be noted that interaction effects in regression analysis are difficult to detect (Chaplin, 1991; Cohen et al., 2003) and future research should replicate the present findings using larger samples.

In congruence with past studies (e.g., Kavussanu & Roberts, 2001; Stephens, 2000, 2001), no significant findings were revealed between task orientation and antisocial judgement or behaviour. According to Nicholls (1989), task orientation involves people tending to judge their competence and success with self-referenced criteria and perceiving the activity as an end in itself. The focus of task goals on self-improvement and the sporting pursuit may explain why they do not predict 'other-orientated' constructs of prosocial and antisocial functioning.

Of all the predictor variables in this study, moral identity explained the greatest variance in antisocial variables and negatively predicted both antisocial judgement and behaviour. These results support theoretical speculation and research that suggests placing high importance on moral identity positively relates to higher levels of moral judgement and behaviour (Aquino & Reed, 2002; Reed & Aquino, 2003). The highest levels of morality, expressed as prosocial functioning, may be distorted by sporting contexts. However, antisocial judgement and behaviour are both inherently linked to the centrality of morality to footballers' self-identities, i.e., their moral identity. Thus, evidence is provided in a sporting

context to indicate that the greater importance placed on morality, the less antisocial thoughts and actions will occur.

Limitations of the Study and Directions for Future Research

Whilst this study revealed some interesting findings that enhance the understanding of prosocial and antisocial functioning in sport, there are some limitations. One limitation is that alpha coefficients for some scales fell slightly below the acceptable level of .70. Although low alphas may be partly attributed to the low number of items (Cortina, 1993; Schmitt, 1996), the findings involving these subscales must be interpreted with caution. The present results should be replicated to include additional prosocial behaviours that would provide a more complete picture of the football context and may strengthen the alpha coefficients. Measures should also be extended to include observations of actual behaviour which would serve as a more accurate assessment than self-report methods. A second limitation is the use of only adult male footballers as participants. Findings may only concur with similar populations. Future research needs to replicate and extend these to female populations, youth participants and different sport contexts.

Future studies need to explore the contribution of moral identity variables, together with motivational variables and their interaction effects, to develop understanding of the individual differences that contribute to the prediction of prosocial and antisocial functioning. Finally, the investigation of other potentially influential personal variables such as concern about social approval (Eisenberg & Fabes, 1998), together with their interaction effects with the social environmental variables of motivational climate and moral atmosphere, may help reveal the complex nature of moral functioning. Longitudinal studies using the personal, environmental and moral behaviour variables would also reveal the direction of any relationships.

Conclusion

To date, the majority of sports moral research has focused on negative aspects of morality. The present results support the existence of prosocial functioning (judgement and behaviour) in association football and indicate that prosocial and antisocial functioning are independent constructs. Further, the present findings underscore the importance of examining interaction effects between task and ego orientation in predicting moral variables. It is suggested that the relationship between motivational and moral variables in sport is complex and researchers need to consider the interplay between task and ego orientation and whether the one goal moderates the influence of the other on moral variables. Finally, including the importance athletes place on moral identity as a predictor of morality appears promising and warrants a line of research focusing exclusively on the moral self. The present research, however, continues by focusing on the motivational predictors of moral behaviour.

This study was the first in a series of four that overlap on their central themes whilst providing distinct contributions to the research area. In Study 1, attention was on individual differences that predict moral thoughts and actions. In the next chapter, a second self-report study is presented that uses similar analyses to predict different variables amongst a younger sample of footballers. Continuing with individual differences, a closer focus on AGT was represented by an expansion of goal orientations to include social goals. Further, in line with emergent social cognitive theories (e.g., Bandura, 1999), moral variables were refined to centre solely on moral behaviour. The rationale for these changes was to provide a greater focus on motivational predictors and moral behaviour, which is of greater consequence to others than moral judgement. In addition, the measure of social desirability was dropped due to its negligible effects as a control variable and poor reported reliability, a finding that has been replicated in similar moral studies (e.g., Kavussanu & Ntoumanis, 2003).

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CHAPTER 3

Study 2: Multiple Goal Orientations as Predictors of Moral Behaviour in Youth Football

Abstract

The purpose of this study was to examine task, ego and social goal orientations as predictors of prosocial and antisocial behaviour in youth football. Participants were 365 male (n = 227) and female (n = 138) youth footballers (M age = 13.4 years, SD = 1.8), who completed questionnaires measuring task and ego orientation, the goals of social affiliation, social recognition, and social status, prosocial and antisocial behaviour, and demographics. Regression analyses revealed that prosocial behaviour was predicted positively by task orientation and social affiliation and negatively by social status. In contrast, antisocial behaviour was predicted positively by ego orientation and social status and negatively by task orientation. Findings for task and ego orientation are consistent with previous work. Social goal orientations predicted further variance in prosocial and antisocial behaviour and their inclusion in future moral research is encouraged.

Introduction

Sport provides an excellent opportunity for youths to exercise fundamental interpersonal skills. However, the prevalence of negative social behaviours (see Kavussanu, Seal, & Phillips, 2006; Kohn, 1986), may undermine potential benefits gained through social interaction in sport. Research concerned with moral issues in sport has primarily investigated achievement goals, which reflect individual differences in the criteria one tends to use to evaluate competence (Nicholls, 1989), as predictors of negative social behaviours such as faking an injury or trying to injure an opposing player (e.g., Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001). Social goals and positive social behaviours, such as helping an opponent off the floor or supporting a team-mate after poor play, have received relatively little attention, perhaps because these goals are less directly linked to competence striving. The present study examined multiple goal orientations as predictors of both positive and negative social behaviours in youth football.

Social cognitive theory of moral thought and action (Bandura, 1991) provides the framework for the moral variables investigated in this study. This theory is primarily concerned with overt behaviour; importantly, behaviour is defined as moral based on its consequences for others (Bandura, 1991). Moreover, Bandura (1999) differentiates between two dimensions of morality: proactive and inhibitive. The proactive dimension is manifested when one engages in behaviour that benefits others and is represented in this study by the term prosocial behaviour. Prosocial behaviours are actions intended to help or benefit one or more people other than oneself (Batson, 1998; Eisenberg & Fabes, 1998). Helping an opponent off the floor or returning the ball to an opponent for a restart are examples of prosocial behaviour in sport. Inhibitive morality is manifested when one refrains from engaging in behaviours that are detrimental to others. In this study the term antisocial

behaviour was used to refer to inhibitive morality: High levels of inhibitive morality are indicated by low levels of antisocial behaviour. Antisocial behaviour has been defined as behaviour intended to harm or disadvantage another (Sage et al., 2006). Sporting examples are deliberately fouling or injuring an opponent and diving to fool the referee. In this study, the term moral behaviour is used to refer to both prosocial and antisocial conduct. High levels of morality are manifested by engaging in prosocial behaviour whilst refraining from engaging in antisocial action. Although prosocial and antisocial behaviours are conceptually opposite, initial findings indicate that they are unrelated (Sage et al., 2006). Thus, a simultaneous investigation of prosocial and antisocial behaviours is necessary to gain a full understanding of the range of social moral conduct that takes place in sport.

A social cognitive approach that has been used to examine motivation in relation to morality in sport is achievement goal theory (Nicholls, 1989). Achievement goal theory provides the framework for the motivational variables examined in this study and centres on two orthogonal goal orientations, namely task and ego orientation. Ego orientation refers to the tendency to perceive competence and define success relative to others, whereas task orientation refers to the tendency to perceive competence and define success relative to oneself. With regard to ego orientation, Nicholls (1989, p. 133) has stated that ‘a preoccupation with winning may well be accompanied by a lack of concern about justice and fairness.’ Drawing from Nicholls theory, Duda and colleagues (Duda et al., 1991) have proposed that because a task orientated person is concerned with skill improvement, this individual is more likely to display rule compliance and fair play. For task orientated individuals, efforts to advance skills through cheating or foul play would undermine the valued process of skill acquisition. Thus, task and ego orientation have been hypothesised to be differentially related to moral variables.

The hypothesised differential links between task and ego orientation and moral variables have been supported by empirical evidence. Specifically, ego orientation has been positively related to the endorsement of attitudes towards unsportsmanlike play (Duda et al., 1991), reported likelihood to aggress and approval of unsportsmanlike behaviour (Dunn & Causgrove-Dunn, 1999), low moral judgement and intention (Kavussanu & Roberts, 2001), antisocial judgement and behaviour (Sage et al., 2006), and low levels of sportspersonship (Lemyre et al., 2002). In contrast, positive relationships have been identified between task orientation and moral functioning (Kavussanu & Ntoumanis, 2003), as well as with the sportspersonship dimensions of respect for opponents, rules and officials, social conventions, and commitment to sport (Dunn & Causgrove-Dunn, 1999; Lemyre et al., 2002). Finally, task orientation has been shown to predict prosocial judgement at low levels of ego orientation (Sage et al., 2006).

Research on task and ego orientations has made a considerable contribution to the understanding of morality in sport. However, explaining behaviour in achievement settings by task and ego orientations alone is incomplete as these goals exclude the social definitions of success (Urdan & Maehr, 1995). Achievement goal theorists have suggested that more than two goal orientations may operate in achievement contexts (e.g., Jarvinen & Nicholls, 1996; Maehr & Nicholls, 1980). For example, Maehr and Nicholls (1980) included a social approval goal orientation in their initial conceptualisation of achievement goals. Since then, there have been numerous calls for research on social goals to explain achievement behaviour (Allen, 2003; Jarvinen & Nicholls, 1996; Urdan & Maehr, 1995; Wentzel, 1993).

The goal orientations of social affiliation, social recognition, and social status have recently been identified as social goals pursued by girls in a physical education setting (Allen, 2003). A *social affiliation* orientation reflects a focus on positive social experiences and

developing reciprocal relationships and is exampled by individuals who feel things go well for them in their sport when they make friends, socialise, and enjoy their time with similar others. A *social recognition* orientation reflects a focus on validating oneself through approval from others. Individuals adopting a social recognition orientation feel things go well for them in sport when their ability and performance are recognised by others. Finally, *social status* orientation reflects a focus on validating oneself through achieving popularity among peers. Individuals pursuing a social status goal, feel that things go well for them in sport when they are one of the popular players within the group. Whether motivated by developing relationships, gaining recognition from others or becoming the most popular person on the team, all three social goal orientations are likely to have an impact on sporting behaviour (Allen, 2003).

Proposed effects of social goal orientations on moral behaviour are largely based on conjecture and links with similar concepts. The development of meaningful interpersonal relationships requires positive social interaction; therefore, individuals motivated by social affiliation are expected to interact prosocially to improve the quality of their relationships. Resultant friendships are regarded as a fundamentally moral phenomenon (Bukowski & Sippola, 1996) and, based on the writings of Aristotle, moral virtues are considered inherent in reciprocated relationships. Moreover, Eisenberg & Fabes (1998) consider prosocial behaviours to be of fundamental importance to the quality of social interactions. Finally, prosocial behaviours have been linked with constructs that facilitate the development of relationships, such as sociability (e.g., Silva, 1992) and social competence (Eisenberg & Fabes, 1998). Based on the above, it was expected that social affiliation would positively predict prosocial behaviour and negatively predict antisocial behaviour in football.

The role of the social recognition orientation on social moral behaviour is ambiguous. Although there is a dearth of research pertaining to this construct, social recognition is thought to be largely dependent on perceptions of others' approval. Urdan and Maehr (1995) have discussed a similar social approval goal in relation to the values of the person(s) from whom one seeks approval. Further, perceived social approval from significant others has been related to the moral behaviour of youth basketball players (Stuart & Ebbeck, 1995). Thus, social recognition *per se* may not predict social moral behaviour as it is likely to be moderated by perceptions of what significant others deem as appropriate behaviour.

With regard to the social status orientation, drawing on links between this goal and ego orientation (Duda, 1989; White & Duda, 1994), with both defining success in relation to others, it is proposed that the social status orientation will parallel the effects of ego orientation and positively predict antisocial behaviour. Whether the objective is to be the most popular or the best player, both goals are concerned with gaining superiority over others when individuals are likely to do anything to achieve their objective, including antisocial behaviour. However, similar to the social recognition goals, gaining social status within the team depends on the values of other individuals directly linked to the team such as the coach and team-mates, and antisocial behaviours may be inhibited if the group opposes such acts.

In spite of the general support for the hypothesised links between social goal orientations and morality, empirical evidence from physical activity settings is scarce. To date, only one study has investigated the relationship between social goals and moral variables in a physical activity context. The social goals of friendship, peer acceptance and coach praise have been examined in relation to intentions to engage in unsportsmanlike play (Stuntz & Weiss, 2003). Despite some overlap with Allen's (2003) operationalisation of social goal orientations, the goals of friendship, peer acceptance and coach praise are distinct

from those proposed by Allen (2003) and used in the present study. Friendship orientated individuals define success in terms of having a close relationship with another individual. Individuals orientated by peer acceptance define success when gaining the liking or approval of a group of peers, whilst coach-praise orientated individuals define success by gaining the approval of a coach (Stuntz & Weiss, 2003). Conceptually, the goals examined by Stuntz and Weiss (2003) focus specifically on individual affiliation, peer affiliation and approval, and coach approval.

Stuntz and Weiss (2003) found that the social goals of friendship, peer acceptance and coach praise predicted intentions towards unsportsmanlike play above and beyond the contribution of task and ego orientations in a sample of physical education students. The findings differed for boys and girls. Specifically, girls orientated toward coach praise reported lower intention to engage in unsportsmanlike play when the team also disagreed with unfair play. For boys, friendship and peer acceptance goals were positive predictors of intentions to engage in unsportsmanlike play towards an opponent across a variety of contexts. Although this study has made an important contribution to the literature, it is limited by its exclusive focus on negative moral variables (i.e., intentions to use unsportsmanlike play) in physical education settings. Accordingly, investigating social goals in relation to both prosocial and antisocial behaviours amongst male and female sport participants would extend the literature.

The present study examined the predictive effects of multiple goal orientations on moral behaviour in youth football. Based on past research, task orientation was hypothesised to positively predict prosocial behaviour (Dunn & Causgrove-Dunn, 1999; Lemyre et al., 2002; Sage, et al., 2006), while ego orientation was expected to positively predict antisocial behaviour (Duda et al., 1991; Kavussanu & Roberts, 2001; Sage et al., 2006). It was hypothesised that social affiliation orientation would positively predict prosocial behaviour

(see Eisenberg & Fabes, 1998) and that social status would positively predict antisocial behaviour (Duda, 1989). With no supporting evidence from the literature, no predictions were made for the relationship between social status orientation and prosocial behaviour or social recognition orientation and prosocial and antisocial behaviour. Finally, based on previous research (Stuntz & Weiss, 2003) and the fact that the two sets of goals are conceptually distinct, it was anticipated that social goals would predict moral behaviour over and above the effects of task and ego orientations.

In addition to the motivational variables included thus far, a further three covariates were included due to their links with moral variables. The first variable was football experience, operationally defined as years (i.e., seasons) of playing football. Years of experience (or number of seasons) in contact sports that include football have been positively linked to less mature moral reasoning, aggressive tendencies (Bredemeier et al., 1986) and perceived legitimacy of aggressive behaviour (Conroy, Silva, Newcomber, Walker, & Johnson, 2001), and low levels of moral functioning (Kavussanu & Ntoumanis, 2003). The second variable was age, which has been positively linked to perceived legitimacy of aggression (Conroy et al., 2001) and low levels of moral reasoning (Bredemeier, 1995). The final variable was sex: Males have been found to be higher than females in aggressive tendencies (Bredemeier, 1994), unsportsmanlike attitudes (Duda et al., 1991), and perceived legitimacy of injurious acts (Duda et al., 1991; Kavussanu & Roberts, 2001), and lower than females in indices of moral functioning (Kavussanu & Roberts, 2001) and prosocial behaviour (Kleiber & Roberts, 1981). Thus, years of experience playing football, age and sex were included in the main analyses.

Method

Participants

The study included 365 male (n = 227) and female (n = 138) youth football players from 30 school and club teams in the midlands, UK. Participants were of mixed ability, from beginner to elite, and their ages ranged from 11 to 18 years (M = 13.4, SD = 1.8). The majority of participants were White Europeans (n = 292); the sample also included White non-Europeans (n = 6), Black Caribbeans (n = 23), Black Africans (n = 4), Asians (n = 10), mixed (n = 18), and other races (n = 7). The remainder of the participants did not report their ethnic background (n = 5). Experience of playing competitive football ranged from 1 to 13 years (M = 4.8, SD = 2.4) and time spent playing football per week ranged from 1 to 25 hours (M = 3.6, SD = 2.8).

Procedure

Names and contact information for youth football clubs and school teams were obtained from a football development officer and the internet. Preliminary letters were sent out to clubs and schools informing them of the study's intentions (see Appendix 3a) and subsequent phone calls determined interest in participation. Of the initial 50 teams that were approached, 30 teams participated in the study. Questionnaires were administered towards the middle of the season (October to January). The primary researcher, or a trained research assistant, visited the teams during a practice session and distributed and collected questionnaires from consenting participants. Teams with players under the age of 16 were sent parental consent forms in advance of data collection; these were completed and returned prior to questionnaire distribution (see Appendix 3c).

The questionnaire included an information sheet (see Appendix 3d) that encouraged honesty and explained that there were no right or wrong answers. Participants were also

informed that questions needed to be completed individually and all answers would be kept confidential. The investigator or research assistant present addressed any queries. Questionnaires were completed in approximately 15 minutes and included sections on demographics, goal orientations and prosocial and antisocial behaviours. Questions on demographics always appeared first but to avoid potential response bias the order of the remaining scales was counterbalanced throughout the printing of the questionnaires.

Measures

Goal orientation. Task and ego goal orientations were measured using the Perception of Success Questionnaire (POSQ; Roberts et al., 1998). The POSQ consists of twelve sport-specific items that start with the stem "When playing football I feel most successful when…" The scale includes two six-item subscales measuring task orientation (e.g., "I show clear personal improvement" and "I perform to the best of my ability") and ego orientation (e.g., "I beat other people" and "I outperform my opponents"). Participants responded on a Likert scale anchored by the scores of 1 (*strongly disagree*) and 5 (*strongly agree*). In this study, mean scores for the two subscales were calculated separately by adding scores for related items and dividing by six (i.e., the number of items). The POSQ has demonstrated high internal consistency with alpha coefficients of .88 for both the task and ego scales respectively (e.g., Roberts et al., 1998).

Social goal orientations. The 15-item Social Motivational Orientation Scale for Sport (SMOSS; Allen, 2003) was used to assess participants' degree of social affiliation (7 items), social recognition (4 items) and social status (4 items). For the purpose of this study, items were slightly amended to be specific to the context of football. The stem for each item was "I feel things have gone well in football when…." An example of a social affiliation item is "I make some good friends in the team." A social recognition item is "I receive recognition from

others for my accomplishments" while a social status item is "I belong to the popular group in the team." Participants indicated their degree of agreement with each item on a 5-point Likert scale anchored by 1 (*strongly disagree)* and 5 (*strongly agree*). Total scores were divided by the number of items from each subscale to calculate a mean score. Satisfactory alpha coefficients have been reported for social affiliation (α = .87), social status (α = .86) and social recognition dimensions (α = .77) (Allen, 2003).

Moral behaviour. Prosocial and antisocial behaviours were assessed using a measure expanded from a previous study (Sage et al., 2006) that measures the frequency of social moral behaviours during a football season. As behaviour was measured with a questionnaire, the term refers to reported rather than actual behaviour. Based on discussions with players, officials and football experts (involved in competitive football for 15 + years), a list of behaviours that fulfilled the guiding definitions of prosocial and antisocial acts was drawn up. As stated earlier, prosocial behaviours were defined as actions intended to help or benefit others whereas antisocial behaviours were defined as actions intended to harm or disadvantage others. Previous items were adapted to include a greater diversity of behaviours and the updated list of 26 items (see Appendix 2b) was distributed to 21 independent judges who had extensive knowledge and expertise in football or psychological measures. Definitions of prosocial and antisocial behaviour were provided and judges were asked to classify each of the behaviours as (a) prosocial, (b) antisocial, or (c) neither. This is a typical procedure recommended for assessing content validity in scale development (Haynes, Richard, & Kubany, 1995; John & Benet-Martinez, 2000).

The list distributed to the participants comprised 8 prosocial behaviours and 13 antisocial behaviours. With the exception of one item which was dropped in preliminary factor analyses (i.e., "asking the referee not to book or send off an opponent"), a full list of the

items is presented in Table 3.1. On the actual questionnaire, prosocial and antisocial items were randomised to control for order effects. Participants were asked to indicate the frequency in which they engaged in the 21 behaviours during the current season. This is consistent with the way moral and prosocial behaviours have been measured in previous research (e.g., Eisenberg et al., 2002; Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001; Ommundsen et al., 2003; Sage et al., 2006). Participants responded to the stem: "How often did you engage in the following behaviours this season?" and responses were made on a 5-point Likert scale with the choice of responses being 1 (*never*), 2 (*rarely*), 3 (*sometimes*), 4 (*often*), and 5 (*very often*). Each subscale was scored separately by adding responses on each item and dividing by the number of items on each subscale.

Football experience. Football experience was measured by a single item that asked each participant how many years they had been playing competitive football. Similar single item measures have been used in past research (Bredemeier et al., 1986; Conroy et al., 2001; Kavussanu & Ntoumanis, 2003).

Results

Scale Analyses

Exploratory Factor Analysis (EFA). A Principal-axis factor analysis using varimax rotation (because the factors were uncorrelated) was conducted on the 21 prosocial and antisocial behaviour items. In this study, principal-axis factor analysis was preferred over principal component analysis (Study 1) as the former only analyses the variance that each observed variable shares with other observed variables. The removal of error and unique variance is based on the belief that such variance can confuse the underlying factor structures (Tabachnick & Fidell, 2001). Prior to performing factor analysis checks were made for normality, linearity, singularity, missing values, and outliers in the data. No violations of the

assumptions were revealed. Further, sampling adequacy was checked and at .9 it exceeded the recommended Kaiser-Meyer-Olkin value of .6 (Tabachnick & Fidell, 2001). In all analyses the minimum factor loading was set at .40. Originally, four factors emerged with eigen values greater than 1. Eigen values were 6.80, 2.43, 1.27, and 1.09 for factors 1, 2, 3, and 4, respectively. All antisocial items loaded on factor 1; one prosocial item (i.e., asking the referee not to book or send off opponent) also loaded on this factor but was eliminated from all subsequent analyses as it clearly is a problematic item. Factor 2 contained 4 prosocial items, while factors 3 and 4 contained only one item each (prosocial in both cases) with loading above .40. When only one variable loads on a factor the factor is poorly defined (Tabachnick & Fidell, 2001). In addition, inspection of the scree plot revealed the presence of two major factors. For the above two reasons, a two-factor model was accepted and a second EFA was conducted using 20 items and specifying two factors. In this analysis, all antisocial items loaded on Factor 1, which accounted for 33% of the variance (eigen value = 6.61). All prosocial items loaded on Factor 2 which accounted for 12% of the variance (eigen value = 2.34). Factor loadings of this analysis are presented in Table 3.1.

Confirmatory Factor Analysis (CFA). Having established a two-factor solution for the prosocial and antisocial behaviour scale using EFA, a CFA was conducted using EQS version 6.1 (Bentler & Wu, 2002) to test the hypothesised two-factor model. Conducting CFA after EFA is a logical progression in scale development. The more stringent CFA offers greater tenability of the factor structure by forcing cross-loadings to be zero, accounting for measurement error, and producing modification indices as well as indices of overall model fit to the data (Kline, 1994).

As there is diversity in opinion on the best index of overall fit used in CFA (Hoyle & Panther, 1995) a few different fit indices were used in this study to evaluate the CFA solution.

The Satorra-Bentler scaled chi-square test (χ^2), the robust Comparative Fit Index (CFI), the Root Mean Square Error of Approximation (RMSEA), and its 90% Confidence Interval (CI), and the Standardised Room Mean Square Residual (SRMR) were used. A good model fit is indicated by a non significant chi square. However, it is well known that chi square is highly dependent on sample size and in large enough samples, substantively trivial discrepancies between the sample covariance matrix and the fitted model covariance matrix can lead to rejections of an otherwise satisfactory model (Hu & Bentler, 1995). Therefore, the use of other fit indices is essential. The CFI varies on a continuum of 0 to 1 and values greater than .90 and .95 typically reflect acceptable and very good model fits, respectively. A RMSEA of less than .05 represents a close fit, while values less than .08 represent a reasonable fit; the lower bound of the 90% CI of the RMSEA should include the value of .05 (Browne & Cudeck, 1993). Finally, values of the SRMR that are less than .10 are considered favourable (Kline, 2005).

As indicated earlier, based on the results of the EFA, a two uncorrelated factor model was specified and tested using CFA. All prosocial behaviour items were specified to load on one factor representing prosocial behaviour, while all antisocial behaviour items were specified to load on a second factor representing antisocial behaviour. Given that the normalised estimate of Mardia's coefficient of multivariate kurtosis was high (46), the Robust Maximum Likelihood estimation method was used. This method produces more accurate standard errors, chi-square values and fit indices when the data are not multivariate normally distributed (Bentler, 1995; Bentler & Wu, 2002) as was the case in this study. The ratio of sample size to free parameters in the model was approximately 8:1, exceeding the minimum ratio of 5:1 recommended by Bentler & Wu (2002). The hypothesised two-factor structure resulted in a less than adequate model fit: Satora-Bentler scaled χ^2 (170, N = 365) = 384.28,

CFI = .87, RMSEA = .06, 90% RMSEA CI = .05 to .07, SRMR = .08. Examination of the standardised residuals and the Langrange Multiplier Test suggested that deleting one item (i.e., kicking the ball out of play if an opponent is injured) would result in significant improvements in model fit. CFA without this item resulted in a satisfactory model fit: Satora-Bentler scaled χ^2 (152, N = 365) = 306.29, CFI = .90, RMSEA = .05, 90% RMSEA CI = .04 to .06, SRMR = .07. All parameter estimates were significant and are presented in Table 3.1. As can be seen in this table, the antisocial behaviour factor included 13 items, while the prosocial behaviour factor included six items. These items were used to compute scores for antisocial and prosocial behaviour, respectively.

Internal Reliability

Internal reliability values for the measures used in this study were satisfactory and are presented in Table 3.2. All scales had internal consistencies above the recommended level of .7 (Nunnally & Bernstein, 1994) except for prosocial behaviour, which marginally fell below this criterion.

Descriptive Statistics and Correlation Analyses

Descriptive statistics for all variables are presented in Table 3.2. Most football players reported that they ‘sometimes’ to ‘often’ engaged in prosocial behaviour during the current season and on average they had ‘rarely’ engaged in antisocial behaviour. Mean scores for motivational variables were high for task orientation and social affiliation, moderately high for social recognition and moderate for ego and social status orientations. Table 3.2 also presents correlations among all variables. Prosocial behaviour was positively correlated with task, social affiliation and social recognition orientations, whereas antisocial behaviour was positively associated with ego and social status orientations.

Table 3.1
Descriptive Statistics, EFA and CFA Factor Loadings for Prosocial and Antisocial Behaviours (N=365)

			EFA		CFA		
Item	*M*	*SD*	1	2	1	2	Uniqueness
1. Deliberately hitting or kicking an opponent	1.72	1.04	.76		.77		.63
2. Pushing an opponent from behind	2.02	1.11	.75		.75		.67
3. Intentionally elbowing an opponent	1.67	1.01	.72		.74		.68
4. Trying to injure an opponent	2.07	1.18	.71		.73		.68
5. Deliberately committing a bad tackle	1.94	1.02	.71		.71		.70
6. Retaliating to a bad tackle	2.36	1.21	.71		.70		.71
7. Deliberately obstructing (i.e., body checking) an opponent	2.25	1.10	.69		.68		.75
8. Diving to fool the referee	1.77	1.15	.67		.67		.75
9. Trying to get an opponent booked	1.91	1.16	.67		.67		.74
10. Shirt pulling	2.08	1.09	.64		.63		.80
11. 'Winding-up' an opponent	2.39	1.23	.61		.59		.81
12. Deliberate hand-ball	1.49	0.86	.56		.55		.83
13. Faking an injury	1.58	0.96	.55		.53		.85
14. Helping an opponent off the floor	3.07	1.18		.56		.63	.76
15. Apologizing to an opponent after fouling them	3.41	1.12		.53		.54	.82
16. Congratulating an opponent on good play	3.35	1.18		.49		.40	.89
17. Congratulating a team-mate on good play	4.46	0.81		.43		.44	.92
18. Returning ball to opponent for a throw in, free-kick	3.86	1.18		.42		.46	.92
19. Supporting a team-mate after their poor play	3.80	0.89		.42		.40	.94
20. Kicking the ball out of play if an opponent is injured	3.25	1.30		.41			

Table 3.1
Descriptive Statistics, EFA and CFA Factor Loadings for Prosocial and Antisocial Behaviours (N=365)

			EFA		CFA		
Item	*M*	±*SD*	1	2	1	2	Uniqueness
1. Deliberately hitting or kicking an opponent	1.72	1.04	.76		.77		.63
2. Pushing an opponent from behind	2.02	1.11	.75		.75		.67
3. Intentionally elbowing an opponent	1.67	1.01	.72		.74		.68

Table 3.2

Descriptive Statistics and Zero Order Correlations among Study Variables (N=365)

			Zero order correlations								
Variable	*M*	±*SD*	1	2	3	4	5	6	7	8	9
1. Prosocial behaviour	3.66	0.64	(.64)								
2. Antisocial behaviour	1.94	0.77	–.07	(.92)							
3. Task orientation	4.10	0.57	.26**	–.01	(.77)						
4. Ego orientation	3.35	0.77	.07	.25**	.44**	(.84)					
5. Social affiliation	4.09	0.61	.36**	.02	.41**	.25**	(.84)				
6. Social recognition	3.84	0.73	.22**	.10	.49**	.57**	.46**	(.83)			
7. Social Status	3.27	0.87	–.01	.26**	.22**	.49**	.45**	.50**	(.84)		
8. Sex	0.38	0.49	.11*	–.07	–.01	–.09	.08	–.05	–.10*	-	
9. Age	13.36	1.85	–.15**	.09	.01	.12*	–.17**	–.05	–.05	–.05	-
10. Football experience	4.82	2.44	.03	.22**	.10	.23**	.08	.19**	.18**	–.13*	.40**

Note. Ranges of scores were 1-5 for behaviours, task, ego and social goals; 11-18 for age. Sex was coded as 0 for males and 1 for females. Football experience ranged from 1-13 years. Alpha coefficients are in parenthesis across the diagonal. *p<.05, **p <.01.

Regression Analyses

The purpose of the present study was to investigate multiple goal orientations as predictors of prosocial and antisocial behaviour in football. This purpose was examined using hierarchical regression analyses. Prior to running the analyses the residual scatter plots were examined to determine whether the assumptions of normality, linearity, and homoscedasticity underlying regression analysis were met (see Tabachnick & Fidell, 2001). All assumptions were met for prosocial behaviour. In the case of antisocial behaviour there was slight heteroscedasticity in the data and slight deviation from normality, but these were not deemed substantial enough to warrant further screening. In addition, the Durbin-Watson statistic (Durbin & Watson, 1971) was computed to examine the independence of residuals assumption. This statistic indicated independence of the residuals for both prosocial and antisocial behaviour, $d = 1.87$ for prosocial behaviour, and $d = 1.64$ for antisocial behaviour.

Step one of the regression analyses controlled for the effects of age, football experience, and sex. However, sex was dropped in the final analyses as it was found to be non significant in predicting prosocial and antisocial behaviour (see Cohen et al., 2003). For the same reason, analyses were not conducted separately by sex. Steps two and three were reversed for each dependent variable. Specifically, ego and task orientations were initially entered in step 2 of the regression analysis followed by social goal orientations in step 3. Then social orientations were entered in step 2 followed by task and ego orientations in step 3. Inverting steps 2 and 3 allowed for the examination of the effects of each set of goal orientations after controlling for the effects of the other set of goal orientations. In addition, two-way and three-way interaction effects were examined between task, ego, and the three social goal orientations following guidelines by Aiken and West (1991). These analyses revealed no significant interaction effects.

Prosocial behaviour. Results for the prediction of prosocial behaviour are presented in Tables 3.3 and 3.4. Age negatively predicted prosocial behaviour and together with football experience explained 4% of its variance. When task and ego orientations were entered in step two, task orientation was a positive significant predictor and the two goals explained an additional 7% of the variance in prosocial behaviour. At step three, social affiliation was a positive predictor, while social status was a negative predictor of prosocial behaviour. The social goal orientations accounted for a further 11% of unique variance in prosocial behaviour.

In the second set of analyses (Table 3.4), social goal orientations were entered prior to task and ego orientations. All three social orientations emerged as significant predictors of prosocial behaviour. Social affiliation and social recognition positively predicted prosocial behaviour, whereas social status was a negative predictor. The three social goal orientations explained 17% of the variance in prosocial behaviour. When entered in step three, task and ego orientations combined did not significantly predict prosocial behaviour and explained only 1% of the variance over and above the effects of social goal orientations. Overall, the motivational variables moderately predicted prosocial behaviour and explained 18% of its variance with the social orientations being more influential than task and ego orientations.

Antisocial behaviour. Tables 3.5 and 3.6 present the results of the regression analyses conducted to examine predictors of antisocial behaviour. Football experience emerged as a significant predictor indicating that the longer the participants had been playing competitive football, the more frequently they reported engaging in antisocial behaviours. Football experience, together with age, explained 4% of the variance in antisocial behaviour; age did not significantly predict antisocial behaviour. Task orientation was a negative predictor and ego orientation a positive predictor of antisocial behaviour; together they explained 7% of the

variance. Social goal orientations accounted for an additional 3% of unique variance in antisocial behaviour. Of the three social orientations, however, only social status was a significant and positive predictor of antisocial behaviour.

In the second set of analyses, social goal orientations were entered into the regression analysis at the second step followed by task and ego orientations at the third step (Table 3.6). When entered prior to task and ego orientations, social goals explained 7% of the variance in antisocial behaviour. Task and ego orientations accounted for an additional 3% of unique variance in step 3, but the effects of task orientation when entered in this step became non-significant. In total, the motivational variables explained 10% of the variance in antisocial behaviour. The most important predictors were ego orientation and social status orientation.

Table 3.3

Hierarchical Regression of Prosocial Behaviour on Multiple Goal Orientations with Task and Ego Orientations Entered Before Social Goal Orientations (N=365)

Variable	*B*	*B* 95% CI	β	*t*	ΔR^2
Step1					.04**
Age	–.06	–.10 <> –.02	–.18	–3.18**	
Football experience	–.01	–.04 <> .03	.03	–0.46	
Step 2					.07***
Age	–.06	–.09 <> –.02	–.17	–3.08**	
Football experience	–.01	–.04 <> .02	–.04	–0.69	
Task	.33	.21 <> .45	.29	5.26***	
Ego	–.06	–.15 <> .03	–.07	–1.30	
Step 3					.11***
Age	–.04	–.07 <> –.00	–.11	–2.08**	
Football experience	–.02	–.05 <> .02	.05	–1.00	
Task	.15	.02 <> .28	.14	2.33*	
Ego	–.02	–.12 <> .09	–.02	–0.34	
Social affiliation	.40	.28 <> .52	.38	6.45***	
Social recognition	.06	–.01 <> .17	.07	1.00	
Social status	–.18	–.27 <> –.09	–.25	–4.07***	
R^2 Total					.22***

Note. $\Delta R^2 = R^2$ unique to each step. R^2 total F (7,357) = 13.90, $p < .001$.
*p <.05, **p <.01,***p <.001. CI = Confidence Interval.

Table 3.4

Hierarchical Regression of Prosocial Behaviour on Multiple Goal Orientations with Social Goal Orientations Entered Before Task and Ego Orientations (N=365)

Variable	*B*	*B* 95% CI	β	*t*	Δ R^2
Step1					.04**
Age	–.06	–.10 <> –.02	–.18	–3.18**	
Football experience	–.01	–.04 <> .03	–.03	–0.46	
Step 2					.17***
Age	–.04	–.07 <> .00	–.10	–1.95	
Football experience	–.02	–.05 <> .01	–.05	–1.06	
Social affiliation	.44	.33 <> .56	.42	7.46***	
Social recognition	.10	.00 <> .20	.11	1.98*	
Social status	–.20	–.28 <> –.11	–.27	–4.70***	
Step 3					.01
Age	–.04	–.07 <> .00	–.11	–2.08*	
Football experience	–.02	–.05 <> .02	–.05	–1.00	
Social affiliation	.40	.28 <> .52	.38	6.45***	
Social recognition	.06	–.01 <> .17	.07	1.00	
Social status	–.18	–.27 <> –.09	–.25	–4.07***	
Task	.15	.02 <> .28	.14	2.33*	
Ego	–.02	–.12 <> .09	–.02	–0.34	
R^2 Total					.22***

Note. Δ R^2 = R^2 unique to each step. R^2 total F (7,357) = 13.90, p < .001.
*p <.05, **p <.01,***p <.001. CI = Confidence Interval.

Table 3.5

Hierarchical Regression of Antisocial Behaviour on Multiple Goal Orientations with Task and Ego Orientations Entered Before Social Goal Orientations (N=365)

Variable	*B*	*B* 95% CI	β	*t*	Δ R^2
Step1					.04**
Age	.01	–.04 <> .06	.02	0.42	
Football experience	.06	.03 <> .10	.18	3.21***	
Step 2					.07***
Age	.00	–.04 <> .05	.01	0.10	
Football experience	.05	.01 <> .09	.14	2.54*	
Task	–.19	–.34 <> –.04	–.14	–2.50*	
Ego	.28	.17 <> .39	.28	4.92***	
Step 3					.03**
Age	.01	–.04 <> .05	.01	0.23	
Football experience	.05	.03 <> .10	.13	2.31*	
Task	–.12	–.29 <> .04	–.09	–1.49	
Ego	.21	.08 <> .34	.21	3.17**	
Social affiliation	–.09	–.25 <> .06	–.07	–1.18	
Social recognition	–.08	–.22 <> .07	–.07	–1.07	
Social status	.20	.09 <> .31	.22	3.49***	
R^2 Total					.14***

Note. Δ R^2 = R^2 unique to each step. R^2 total F (7, 357) = 7.37, p < .001. *p <.05, **p <.01, ***p <.001. CI = Confidence Interval.

Table 3.6

Hierarchical Regression of Antisocial Behaviour on Multiple Goal Orientations with Social Goal Orientations Entered Before Task and Ego Orientations (N=365)

Variable	*B*	*B* 95% CI	β	*t*	Δ R^2
Step1					.04**
Age	.01	–.04 <> .06	.02	0.42	
Football experience	.06	.03 <> .10	.18	3.21***	
Step 2					.07***
Age	.01	–.03 <> .06	.03	0.59	
Football experience	.05	.01 <> .09	.14	2.46*	
Social affiliation	–.14	–.29 <> .01	–.11	–1.88	
Social recognition	–.02	–.14 <> .11	.02	–0.28	
Social status	.26	.16 <> .37	.30	4.88***	
Step 3					.03**
Age	.01	–.04 <> .05	.01	0.23	
Football experience	.05	.01 <> .08	.13	2.31*	
Social affiliation	–.09	–.25 <> .06	–.07	–1.18	
Social recognition	–.08	–.22 <> .07	.07	–1.07	
Social status	.20	.09 <> .31	.22	3.49***	
Task	–.12	–.29 <> .04	–.09	–1.49	
Ego	.21	.08 <> .34	.21	3.17**	
R^2 Total					.14***

Note. Δ R^2 = R^2 unique to each step. R^2 total F (7, 357) = 7.37, p < .001. *p <.05, **p <.01, ***p <.001. CI = Confidence Interval.

Discussion

The motivation of moral behaviour in sport has been investigated in past research using achievement goal theory to predict primarily negative social variables (e.g., Kavussanu & Roberts, 2001; Stephens, 2000, 2001). The present study proposed that extending this line of work to include social goal orientations would advance the understanding of morality in youth football. The different predictors identified for prosocial and antisocial behaviour and the low correlation between the two factors highlight the importance of examining both aspects of moral behaviour in sport and is consistent with previous work in this area (Sage et al., 2006).

Predicting Prosocial Behaviour

The hypothesis stated that task orientation would positively predict prosocial behaviour and was supported by the present findings. This is consistent with past research, which has reported links between task orientation and positive variables such as sportspersonship (e.g., Dunn & Causgrove-Dunn, 1999; Lemyre et al., 2002). Explanations of why task orientation predicts positive sporting behaviour centre on the use of self-referencing criteria to evaluate competence and the value of the activity as an end in itself (Nicholls, 1989). Individuals motivated by their improvement at football should play fairly. However, prosocial behaviours in this study extend beyond fairness to actions that benefit opponents or team-mates.

Despite a lack of supporting evidence, potential explanations are offered for the link between prosocial behaviour and task orientation. Prosocial acts with opponents (e.g., returning ball to opponent, helping an opponent off the floor) or team-mates (e.g., supporting a team-mate after their poor play) can maintain continuity of play and sustain concentration on the task. They may also generate a mutual respect that buffers against antisocial behaviour and distractions from the task at hand. Further, prosocial behaviour with team-mates and

opponents should provide a supportive environment for learning and group development, both conducive to the fulfilment of task orientated goals.

The hypothesis that social affiliation orientation would positively predict prosocial behaviour was also supported. Athletes motivated by social affiliation strive to establish mutually satisfying relationships. Prosocial behaviours help to establish social bonds between two or more people by benefiting the recipient(s). Once a social bond has been recognised the beneficiary of the prosocial behaviour may be more likely to reciprocate this action, thereby strengthening the bond and initiating the development of a friendly relationship that benefits both athletes. Thus, those players wishing to develop mutually satisfying relationships within football are more likely to achieve this goal through prosocial behaviours such as congratulating or apologising to team-mates and opponents. Promoting positive relationships creates the type of supportive environment that helps optimise individual and collective potentials (Ryan, Deci, & Grolnick, 1995). These findings support the notion that friendship and morality are closely linked (Bukowski & Sippola, 1996) and suggest that encouraging these relationships would benefit sport participants.

Social status was negatively related to prosocial behaviour. Youth footballers that are motivated by their relative popularity within the team are seemingly less likely to engage in behaviours that will benefit others. An explanation for this finding is that being seen to engage in behaviours that benefit opposition players, such as apologising to or helping an opponent, could be perceived as detrimental to the team and potentially jeopardise the instigator's team status. Further, prosocial behaviours toward team-mates could be evaluated as weakness amongst peers in the football environment and are unlikely acts amongst individuals who compete with their fellow players for status. How prosocial behaviours are viewed in football largely depends on the specific group norms that are prevalent within each

team as well as the wider football culture. These group norms or moral atmosphere may moderate the effects of the social status goal on prosocial behaviour. Although the precise mechanisms by which social goal orientations may influence prosocial behaviour remain speculative, an important finding is that even after accounting for the effects of age, football experience, and task and ego orientation, social orientations explained additional variance in these behaviours.

Predicting Antisocial Behaviour

The hypothesis stated that ego orientation would predict antisocial behaviour and was supported even after controlling for the effects of football experience. This finding is in line with studies of negative dimensions of morality that have consistently linked ego orientation to attitudes towards unsportsmanlike play (e.g., Duda et al., 1991), low levels of moral functioning (e.g., Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001; Ommundsen et al., 2003) and antisocial judgement and behaviour (Sage et al., 2006). Nicholls has stated that 'when winning is everything, it is worth doing anything to win' (1989, p. 133). The win at all costs mentality, characteristic of ego orientated individuals, corresponds to behaviours that will disadvantage opponents. Consequently, footballers motivated by gaining superiority over others are more likely to push, pull, elbow, hit, kick, foul or cheat in order to achieve their objective.

Contrary to findings for ego orientation, task orientation negatively predicted antisocial behaviour after controlling for football experience. This is consistent with previous research (Kavussanu & Ntoumanis, 2003) that has revealed a negative relationship between task orientation and antisocial behaviours such as rule breaking and lying to an official. The negative effect of task orientation on antisocial behaviour may be explained by the attention placed on self-referenced improvement. Task orientated players, may avoid behaviours that

distract attention from the type of game play that ultimately leads to individual progress. Focusing on fouling, injuring, provoking, or obstructing opponents can have adverse consequences on game play by diverting concentration away from skills such as passing, control, clean tackling, positioning etc. Although task orientation predicted antisocial behaviours, its effects were weak and ego orientation was more influential in this study.

In line with the hypothesis, social status orientation predicted antisocial behaviour and explained unique variance above the effects of football experience, task and ego orientation. These findings parallel previous work (Stuntz & Weiss, 2003) which revealed that a peer acceptance orientation predicted intentions towards unsportsmanlike play in male youths. Mirroring the effects observed with prosocial behaviour, it is likely that youth football players who focus on being popular within the team may engage in antisocial behaviours towards opponents as a means of improving their within group status. Being perceived as tough is generally valued in the context of football and antisocial behaviours such as hitting, kicking, pushing, injuring, or elbowing an opponent may be valued as tough acts by peers.

The Importance of Social Goal Orientations

A revealing feature of the present findings is the predictive effects of social goal orientations on social moral behaviour and in particular prosocial behaviour. Social goals explained unique variance in moral behaviour even after controlling for age, football experience, task and ego orientations. The effect of social affiliation and status goals on morality, beyond the contribution of task and ego orientation, supports the findings of male athletes in a previous study (Stuntz & Weiss, 2003). Furthermore, it is worth noting that when social goal orientations were entered into the regression equation first, the effect of task orientation on prosocial and antisocial behaviour became non-significant. Social goal

orientations play an important role in explaining the non-performance variables of moral behaviour and further the understanding of motivation in youth sport.

The only social goal that failed to predict the moral variables over and above task and ego orientation was social recognition. The role of social recognition goals in moral behaviour is complex, as gaining recognition from others depends on the approval or disapproval of the respective behaviour by the instigators of the feedback (coaches, parents, team-mates, and opposition). When significant others approve antisocial behaviour, youth sport participants are more likely to engage in antisocial behaviour (Stuart & Ebbeck, 1995). Similarly, when significant others approve prosocial behaviour, this may subsequently be the likely mode of conduct. This dependence on others' approval or disapproval of moral behaviour may explain why social recognition, in the absence of known social moral values of significant others, did not account for *unique* variance in prosocial and antisocial behaviour beyond the effects of task and ego orientation.

Another potential explanation for the fact that social recognition did not account for unique variance in behaviours, in comparison to the social status, is the different reference points of social agents for the two social goals. Specifically, items assessing social status refer to the in-crowd, the popular group, and the players. The important social agents are team-mates, friends, and peers. In contrast, three of the four items assessing social recognition include a broader range of social agents referred to by the term 'others'. It is possible that social recognition did not predict unique variance in prosocial and antisocial behaviours in the present study due to this broader reference point. Future research should examine whether social recognition specifically sought from team-mates and peers predicts behaviours in the context of youth football.

Applied Implications

The findings of this study have several implications for promoting prosocial behaviour and decreasing antisocial behaviour in football. To promote prosocial behaviour significant others such as coaches, parents, and sport psychologists should encourage primarily task and social affiliation orientations and to a less degree a social recognition orientation. In their interactions with players during practices and games, coaches should focus on skill mastery, recognise the efforts of everyone in the team, and provide opportunities for cooperation among players. Such practices will facilitate the development of task orientation in athletes. Similarly, parents and all significant others involved in the athletes' sport experience need to teach youngsters to value learning and individual skill improvement. To encourage social affiliation orientation the football context should be structured to allow players to interact with each other and develop friendships. Time can be allocated for social interaction before, during, and after practice, as well as outside the football environment. Finally, social recognition can be promoted by giving positive feedback, and recognizing good performance.

To minimise antisocial behaviour in football, significant others should try to suppress ego and social status orientations. Coaches and other sport practitioners should avoid recognizing the accomplishments of only the best players, favouring some players over others, and should refrain from punishing players for their mistakes. The orientation toward social status could be discouraged by treating everyone as equal, and devaluing social rankings and cliques. Finally, team-building activities could be employed to emphasise squad and club unity. Overall, increasing the likelihood of players focusing on task and social affiliation orientations whilst suppressing ego and social status orientations should facilitate prosocial behaviour and discourage antisocial behaviour in football.

Limitations of the Study and Directions for Future Research

This study revealed some key findings and provided evidence for the importance of social goal orientations on prosocial and antisocial behaviour in football. However, some limitations exist that could be addressed in future research. One shortcoming is the cross-sectional nature of the study which restricts conclusions regarding cause and effect relationships. A second limitation involves the reliability of the prosocial behaviour measure which was below the generally accepted level of .70. Although the relatively small number of items may in part be responsible for the relatively low alpha (Cortina, 1993), the findings involving the prosocial behaviour measure should be interpreted with caution. Future studies should attempt to identify a set of prosocial behaviours that reflect suitable levels of internal consistency.

A third limitation concerns the results of factor analyses. Specifically, the EFA and CFA solutions of the prosocial and antisocial behaviour scales were obtained from the same sample. Thus, there is a risk of capitalising on chance by producing solutions that may not generalise to other samples (MacCallum, Roznowski, & Necowitz, 1992). Future studies should cross validate the present findings with independent samples. Even though the model achieved a satisfactory CFI of .90, Hu and Bentler (1999) have proposed that values close to .95 indicate a good model fit. Thus, there is potential for improvement in the fit indices of the present model. In addition, the original EFA revealed three lower-order factors for prosocial behaviour with eigen values greater than 1. Although two of these factors comprised only one item and were therefore disregarded, these findings suggest that prosocial behaviour might constitute more than one factor. Future research should employ a greater number of items to measure prosocial behaviour and explore the presence of other factors.

Future research could also explore other social goals such as social welfare (Urdan & Maehr, 1995), social solidarity, or social compliance goals (Weiss & Smith, 2002) and expand contemporary work on achievement goal theory (e.g., Elliot & McGregor, 2001) by including approach and avoidance dimensions to the task, ego, and social goal orientations. Moreover, examining social recognition goals with team-mates, friends, and peers as the reference point may reveal stronger effects of these social goals on moral behaviour. Moral atmosphere, team norms, and motivational climate, could also be examined in order to explore the complexity of interaction effects that might exist among these variables and task, ego, and social goal orientations. Finally, the development of a heuristic framework of prosocial and antisocial behaviour could help explain greater variance in these variables.

Conclusion

Research examining motivation in relation to moral behaviour in sport has primarily focused on negative moral variables using task and ego goal orientations. The present study extended this line of work by revealing the unique effects of social goal orientations, above and beyond the contribution of task and ego orientations on prosocial and antisocial behaviour. Developing new friendships and establishing status within the team may influence youth football players' social moral behaviours. Including social goal orientations broadens the understanding of the complex motivational processes that take place in sport. The present findings have important implications for sport practitioners who are interested in promoting prosocial behaviour and eliminating antisocial behaviour from the context of youth football.

Having measured self-reported goal orientations, moral judgements and behaviours in Studies 2 and 3, attention now turns to the manipulation of goal involvement and the direct observation of moral behaviour. The experimental procedure of Study 3 manipulated a competitive setting to determine the effects of task and ego-involvement on observed

prosocial and antisocial behaviour. This methodology explores causal relationships between the variables and rather than predicting variance in moral behaviour, the following chapter sought to identify actual effects of situational motivation on incidences of reported prosocial and antisocial behaviour in Table football.

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CHAPTER 4

Study 3: The Effects of Goal Involvement on Moral Behaviour in an Experimentally Manipulated Competitive Setting

Abstract

This experiment examined the effects of task and ego involvement on three measures of moral behaviour (i.e., prosocial choice, observed prosocial behaviour, and observed antisocial behaviour) in a competitive setting. Sex differences in moral behaviour were also investigated. Male (n = 48) and female (n = 48) college students were randomly assigned to a task-involving, an ego-involving, or a control condition. Participants played two ten-minute games of table football and completed measures of prosocial choice, goal involvement, goal orientation, and demographics. The two games were recorded and frequencies of prosocial and antisocial behaviour were coded. Players assigned to the task-involving condition were higher in prosocial choice than those in the ego-involving or control condition. Individuals in the ego-involving condition displayed more antisocial behaviours than those in the task-involving or control conditions. Finally, females displayed more prosocial behaviours than males.

Introduction

Competitive settings can be pivotal in determining participants' behaviour. When a competitive dichotomy of winning and losing is emphasised competitors are likely to engage in negative social behaviours. Indeed, research has shown that in competitive sport environments behaviours such as cheating, breaking the rules, and intentionally injuring an opponent are not uncommon (e.g., Kavussanu et al., 2006). However, the popular belief that sport builds character suggests that competition may also support positive social behaviours. Identifying the characteristics of competitive settings that are associated with positive and negative social behaviours is vital in promoting the type of social moral conduct that can benefit the majority of participants.

Social cognitive theory of moral thought and action (Bandura, 1991) provides the framework for the moral variables examined in this study. In this theory the focus is on behaviours that can be directly observed. Although intention plays a role in Bandura's (1991) theory, intention is not the decisive definer of moral conduct. Behaviour is defined as moral based on its consequences. For example, the act of helping an opponent off the floor would be regarded as moral because it has positive consequences for the recipient. Thus, the reasons or motives for performing the behaviour are not considered in defining behaviour as moral.

Bandura (1999) has also distinguished between proactive and inhibitive aspects of morality. Proactive morality is manifested by engaging in positive behaviours that benefit others. Inhibitive morality is manifested by *refraining* to engage in behaviours that are detrimental to others. The inhibitive aspect of morality is also positive in that it prevents harm. In the present study, both aspects of morality were examined, and the terms prosocial and antisocial behaviour were used to refer to the proactive and inhibitive aspects, respectively. Examples of prosocial behaviour in sport are helping, sharing equipment, and

congratulating an opponent, whereas examples of antisocial acts are using abusive language, deliberately cheating, and breaking the rules. A high level of morality is manifested when one engages in prosocial behaviours and/or refrains from engaging in antisocial behaviours.

Although moral behaviour includes both proactive and inhibitive dimensions, sports psychological research has primarily focused on the inhibitive aspect of morality. Typically, high levels of morality have been inferred from low reported frequencies of negative behaviours such as faking an injury, pushing, and intentionally injuring an opponent (e.g., Kavussanu & Roberts, 2001; Ommundsen et al., 2003). More recently, research has started to examine *both* aspects of morality by investigating prosocial and antisocial behaviour in sport (Kavussanu, 2006; Kavussanu et al., 2006; Sage et al., 2006). These studies have shown that both prosocial and antisocial behaviours occur in sport, and these behaviours are independent of each other: that is, high levels of prosocial behaviour do not necessarily imply low levels of antisocial action. Therefore, both prosocial and antisocial behaviours need to be considered to fully understand moral behaviour in sport.

A second issue of past research concerns the measurement of moral behaviour. In previous studies, moral behaviour has been primarily examined based on athletes' self-reports (e.g., Kavussanu & Roberts, 2001; Ommundsen et al., 2003; Sage et al., 2006). However, subjective reports of moral behaviour are likely to be influenced by social desirability. Although in some studies researchers have controlled for social desirability (e.g., Kavussanu & Ntoumanis, 2003; Sage et al., 2006), this work has used a measure of social desirability (i.e., shortened version of the Marlowe & Crowne [1960] scale of social desirability) that has often displayed low reliability. To date, very few studies have investigated observed moral behaviour in sport. In this work, both prosocial and antisocial behaviours were recorded (Kavussanu et al., 2006) or aggressive behaviours were coded (e.g., Jones et al., 2005; Kirker,

Tenenbaum, & Mattson, 2000; Sheldon & Aimar, 2001). Although some of these studies have examined aggressive behaviour, aggression may be conceptualised and investigated as a moral issue (see Bredemeier, 1983). In these studies, high frequency of aggressive behaviours would indicate low levels of inhibitive morality. The dearth of research on observed moral behaviour as well as the limitation of self-reports highlights the need to investigate actual moral behaviour in sport.

A third issue of past research is the methodology employed to examine moral behaviour in physical activity contexts. With the exception of a few intervention studies (e.g., Bredemeier et al., 1986; Gibbons & Ebbeck, 1997; Gibbons, Ebbeck, & Weiss, 1995), in the vast majority of past work, moral behaviour has been examined using cross-sectional designs (e.g., Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001; Miller et al., 2004; Ommundsen et al., 2003). These designs, however, limit conclusions on cause and effect relationships. To address this limitation, experimental studies are needed. The present study examined actual prosocial and antisocial behaviours in an experimentally manipulated competitive setting akin to sport.

Recently, many studies examining moral issues in competitive sport have centred on the link between achievement motivation and morality (e.g., Kavussanu, 2006; Kavussanu & Roberts, 2001; Lemyre et al., 2002; Miller et al., 2004). Research has largely been guided by achievement goal theory (Nicholls, 1989). A main premise of this theory is that individuals engage in achievement contexts to demonstrate competence. The theory also distinguishes between two states of motivational involvement (Nicholls, 1989): task involvement and ego involvement. These states reflect different criteria for defining success and evaluating competence and different goals adopted by the participants. In task involvement, individuals define success and evaluate competence using self-referenced criteria and their goal is to learn

something new, improve skills, or master a task. In ego involvement, individuals define success and evaluate competence in relation to others and their goal is to outperform others. These two states of involvement represent the regulators of achievement behaviour and are influenced by task and ego goal orientation. Goal orientation is the tendency to be task or ego-involved in a given achievement context (Nicholls, 1989).

Nicholls (1989) proposed that an individual's goal orientation may have implications for his or her behaviour toward others. Specifically, the focus on demonstrating superiority over others that characterises ego-orientated people may result in a lack of concern about justice, fairness, and the welfare of opponents in a competitive setting (Nicholls, 1989). In contrast, individuals high in task orientation are expected to want to play by the rules and experience a fair competition (see Duda et al., 1991). Empirical research has largely supported these predictions. Ego orientation has been linked to attitudes towards unsportsmanlike play (Duda et al., 1991), approval of intentionally injurious acts (Dunn & Causgrove-Dunn, 1999), low levels of moral judgement, intention, and behaviour (Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001), low levels of sportspersonship (Lemyre et al., 2002), and antisocial judgement and behaviour (Sage et al., 2006). In contrast, task orientation has been associated with some dimensions of sportspersonship (Dunn & Causgrove-Dunn, 1999; Lemyre et al., 2002), high levels of moral functioning (Kavussanu & Ntoumanis, 2003), and prosocial behaviour (Kavussanu, 2006).

A second influence on task and ego involvement is the situational goal structure, or motivational climate (Ames, 1992). The motivational climate of a context is created by significant others (i.e., coaches, parents, or teachers), who emphasise different criteria for success through reinforcement, feedback, rewards, and other means (Ames, 1992). Two types of motivational climate have been described and labelled mastery or task-involving and

performance or ego-involving (Ames, 1992; Ames & Archer, 1988; Newton, Duda, & Yin, 2000). A task-involving climate is prevalent when significant others reinforce learning and personal improvement, whereas an ego-involving climate is salient when significant others emphasise normative success and reward athletes with high ability. Although the motivational climate is created by significant others, individuals in the same team vary in their perceptions of the climate (see Ames, 1992). Therefore, in sport psychological research, participants' *perceptions* of the climate have been typically measured (e.g., Kavussanu et al., 2002; Newton et al., 2000). Perceived task-involving and ego-involving motivational climates facilitate task and ego involvement respectively (Ames, 1992; Nicholls, 1989) and have been the focus of recent research on morality in sport (e.g., Miller et al., 2004; Ommundsen et al., 2003).

Empirical evidence supports links between perceived motivational climate and moral variables in sport. Specifically, perceptions of a high task-involving climate in one's team have been positively associated with prosocial behaviour (Kavussanu, 2006) and sportspersonship (Gano-Overway et al., 2005; Miller et al., 2004; Ommundsen et al., 2003) but inversely linked with attitudes towards rough play (Boixadós et al., 2004). In contrast, athletes' perceptions of an ego-involving climate have corresponded to antisocial behaviour (Kavussanu, 2006) and low levels of sportspersonship (Miller et al., 2004; Ommundsen et al., 2003). In comparisons of perceived motivational climate profiles that address high and low combinations of task and ego-involving climates, the low task and high ego-involving group reported the strongest approval of amoral behaviour (e.g., Ommundsen et al., 2003). Finally, a perceived ego-involving climate corresponded to low levels of moral functioning in youth football players (Kavussanu & Spray, 2006). Overall, the evidence suggests that perceived motivational climate has implications for morality in sport.

Generally, the extant literature indicates that goal orientations and motivational climates are related to a variety of moral variables. As mentioned earlier, goal orientations are dispositional tendencies to adopt particular achievement goals in specific situations. Motivational climate represents the social environmental influence on the adoption of these goals. However, the direct regulators of behaviour in a given achievement context are the achievement goals adopted in that context (see Elliot, 2005; Nicholls, 1989): that is task and ego involvement. Despite this, researchers examining motivation and morality in sport from an achievement goal perspective have only investigated the effects of dispositional and/or environmental motivational variables on morality. No study has examined the effects of *situational* motivation (i.e., task and ego involvement) on moral behaviour in a competitive setting.

The investigation of the effects of goal involvement on moral behaviour is important for an additional reason: To understand the motivation of *actual* moral behaviours, these behaviours need to be observed in a *specific* situation. This will enable the examination of the effects of situational motivation on moral behaviour and will substantially enhance the ability to predict actual behaviours. Indeed, past literature suggests that prediction is maximised when the independent and dependent variables are measured at the same level (see Ajzen & Fishbein, 1977; Vallerand, 1997). Thus, it is important to investigate the effects of task and ego involvement, representing situational motivation, on moral behaviour observed in a specific situation.

When examining moral behaviour, an important variable that should be considered is participants' sex: Sex differences on moral variables have been consistently identified in past research. Specifically, in past work, males were higher than females in aggressive tendencies (Bredemeier, 1994) and unsportsmanlike attitudes (Duda et al., 1991) and more likely to

judge injurious acts as legitimate (Duda et al., 1991; Kavussanu & Roberts, 2001). Males also scored lower than females in indices of moral functioning (Kavussanu & Roberts, 2001), maturity of moral reasoning (Bredemeier & Shields, 1986), and prosocial behaviour (Kleiber & Roberts, 1981). Finally, males tend to be higher in ego and lower in task orientation than females (e.g., Duda et al., 1991; Kavussanu & Roberts, 2001). Due to the sex differences identified in both motivational and moral variables in past research, some authors have proposed that the different goal orientations held by males and females may *partly* explain these differences (e.g., Duda et al., 1991; Kavussanu & Roberts, 2001). Thus, it is important to examine sex differences on moral variables and consider the role of goal orientations when examining these differences.

In summary, researchers investigating motivation and moral behaviour in sport have: (a) focused primarily on negative social behaviours; (b) relied mainly on self-reports; and (c) investigated goal orientation and motivational climate using cross-sectional designs. In this study these limitations were addressed by examining the effects of goal involvement on three measures of moral behaviour namely prosocial choice, observed prosocial behaviour, and observed antisocial behaviour in an experimentally manipulated competitive setting. Table football was used to create the competitive setting because of the opportunities this game presents for moral behaviour, its suitability to the limited laboratory space, and its comparable characteristics with organised sport (i.e., direct competition with opposition and involvement of physical skills). It was hypothesised that task involvement would lead to higher prosocial choice, more prosocial behaviours, and less antisocial behaviours than ego involvement. Sex differences were also examined in moral behaviour with expectations that female competitors would score higher in prosocial choice and engage in more prosocial and less antisocial

behaviours than males. Finally, any sex differences were anticipated to be accounted for by goal orientation.

Method

Participants

A total of 96 participants completed the experiment. However, data from only 90 people (45 males and 45 females) were included in the analyses. Four participants were excluded due to incomplete observation data, and two participants were excluded because they were identified as multivariate outliers in preliminary analysis (see results section). Participants' mean age was 21.5 years (*SD* = 5.01 years), and they were recruited from sport and exercise science courses at a British University. The sample was predominantly white Caucasian (*n* = 82) with the remainder coming from Asian (*n* = 4), black African (*n* = 1), and mixed race (*n* = 3) backgrounds. Students participated competitively in a range of sports (*n* = 20) and had an average sport experience of 9.23 years (*SD* = 5.02 years). Finally, participants reported playing table football on average 2 times per year (*SD* = 0.97 years).

Equipment

The equipment used was a football table and a video camera. The football table was a Garlando G-500 (143 x 75 cm) that included 11 playing figures per team and two goals. A timer, two scoring counters, and 10 balls were also used. The balls were dispensed at either end of the table and entered into play via two chutes, situated at either side of the half-way line. A digital video camera was used to record behaviour. The camera was situated behind a two-way mirror so that participants were unaware that they were being filmed. The camera was operated by remote control. A hidden microphone was placed under the table.

Measures

Prosocial choice. Prosocial choice was measured using the Social Behaviour Scale (SBS; Knight & Kagen, 1977), which assesses behaviours of altruism and equality versus rivalry and superiority. The measure provides a continuum of four choices that differ in the outcomes they provide and the social motives they satisfy. In this study the outcome was the accumulation of bonus goals for the participant and their opponent. Players were informed that bonus goals would be added to their final goal total, which would lead to the award of raffle tickets for use in a £50 cash-prize draw.

When completing the SBS, participants were asked to make a confidential decision on a continuum of four choices. In all choices, the participant allocated three bonus goals to him or herself. The choices differed on the number of goals the participant allocated to the opponent. This number corresponded to the score assigned to each choice. Thus, the first choice allocated one goal to the opponent and received a score of 1; the second choice allocated two goals and received a score of two; the third choice allocated three goals and received a score of three; the fourth choice allocated four goals and received a score of four. The four choices represented rivalry and superiority, superiority, equality, and altruism and group enhancement for choices one, two, three, and four, respectively. The choices were clearly marked on an A4-sized poster (see Appendix 4e). Participants were handed four cards representing the four choices and were asked to give the experimenter the card indicating their choice. The presentation of the four choices marked on the poster was reversed in half the trials to control for response bias.

Observed prosocial and antisocial behaviours. Visual and auditory videotaped information from two ten-minute games of table football was coded to assess observed prosocial and antisocial behaviours. The coding of observed behaviours was conducted using

the standard method of video playback (e.g., Jones et al., 2005). First, a shortlist was created of all the behaviours in table football that were consistent with the definitions of prosocial and antisocial behaviour. Prosocial behaviour was defined as voluntary action intended to benefit another individual (Eisenberg & Fabes, 1998), whereas antisocial behaviour was defined as voluntary action intended to harm or disadvantage the recipient (Sage et al., 2006). In these definitions intent refers to the goal of the behaviour rather than the intentions or motives of the person. Independent judges (N = 12) with regular experience of table football (minimum of one game per week) were provided with these definitions and asked to classify the provisional list as prosocial, antisocial, or neither. Behaviours that gained a 90% and above inter-rater agreement on their classification rating were retained for subsequent coding. From an original list of 29 behaviours 26 were retained.

A standard observation form that included the 20 behaviours was used to record behaviour frequencies (see Appendix 4d). Behaviours were classified as prosocial or antisocial, and these were further subdivided into verbal and physical categories to facilitate scoring. Written definitions of all behaviours were included on a separate sheet to ensure objective recording and minimise disagreement among observers (see Appendix 4c). Three observers, who were blind to the experimental condition, recorded all incidents of the listed prosocial and antisocial behaviours for each participant that they observed. First, a principal observer viewed all videotaped games and tallied behaviours under their respective categories. Then, two other independent observers were informed of the purposes of the study, provided with observation forms and definitions of the 20 behaviours, and given instruction on the scoring procedure. After a practice run, when the principal observer was present to clarify ambiguity, three more random test sessions (20 minutes each) were scored.

Scores from the three observers were compared using intraclass correlation coefficient, which was .97.

A list of all recorded behaviours appears in Table 4.1. This table also presents mean frequencies of prosocial and antisocial verbal and physical behaviours across the two games as a function of experimental condition. As a large number of different prosocial and antisocial behaviours were recorded, one composite score was computed for all prosocial behaviours and one for all antisocial behaviours. These scores were used in the main data analyses. This strategy was chosen for the presentation of results because: (a) the primary interest was in overall behaviours rather than the subcategories, and (b) there was no theoretical reason to expect that findings would be different for the physical and verbal behaviours.

Goal orientation. Task and ego goal orientations were measured using the Perception of Success Questionnaire (POSQ; Roberts et al., 1998). The POSQ consists of twelve sport-specific items that start with the stem "When playing sport I feel most successful when…" The scale includes two six-item subscales measuring task orientation (e.g., "I show clear personal improvement") and ego orientation (e.g., "I outperform my opponents"). Participants respond on a Likert scale anchored by the scores of 1 (*strongly disagree*) and 5 (*strongly agree*). Mean scores for the two subscales were calculated and used in the analysis. The POSQ has demonstrated high internal consistency with alpha coefficients of .88 for both the task and ego scales (Roberts et al., 1998).

Goal involvement. An adapted 14-item questionnaire (Standage, Duda, & Pensgaard, 2005) was used to assess the degree to which participants found the experimental setting to be task-involving (7 items; e.g., "trying hard to improve was important") and ego-involving (7 items; e.g., "doing better than other players was important"). Using the stem "In today's

experiment…" responses were made on a five-point Likert scale anchored by 1 (*strongly disagree*) and 5 (*strongly agree*). Mean scores for each subscale were calculated and used in the analysis. The two subscales had high internal consistency with alpha coefficients of .86 for task and .90 for ego involvement.

Manipulations

Three conditions were used in this study: a task-involving condition, an ego-involving condition, and a control condition. The manipulations for all conditions were presented through a Microsoft Power-Point slide show containing 16 slides. The timing of the slides was automated to standardise the length of each presentation while allowing ample time to absorb the information. The three conditions also included a description of three rules officially recognised by the International Table Football Federation: First, no spinning of the rods with spinning defined as more than a 360^{o} rotation of the moulded players before or after contact with the ball; second, no jarring, sliding, or lifting of the table; third, no handling of the ball within the playing area unless the ball goes dead; then both players had to agree that it was unplayable before picking it up. On the first violation of these rules, the offending player had to forfeit possession of the ball while on the second he or she had to give away a free attempt on goal. Finally, players were informed that they were responsible for officiating on play. The content of the three manipulations is detailed below.

Task-involving condition. (Appendix 4f) The title slide for the task-involving condition was 'The Table Football Challenge'. As the goal of task-involved individuals is to learn and improve, participants were invited to take part in a challenge to learn three skills. The skills of passing, controlling, and kicking in table football were introduced and instruction was given on how to *improve* these skills. Still images of recommended hand positions and grips for the different skills were included. Emphasis was on learning and

individual improvement on the three skills at a personal pace. Instruction on each skill also included a short video clip that demonstrated an expert executing that skill in real time and slow motion. Another video clip showed all the skills together in sequence. Finally, prior to Game 1, players were informed that skill improvement would be rewarded with one raffle ticket for use in a £50 cash-prize draw. Improvement was measured by an increase in goals scored from Game 1 to Game 2. The reward aimed to strengthen the focus on personal improvement thereby facilitating task involvement. Two slides were presented between Games 1 and 2 to refresh the manipulation. The first slide emphasised personal improvement and effort. The second slide provided instruction on the skills of passing, trapping, and kicking.

Ego-involving condition. (Appendix 4g) The introductory slide for the ego-involving condition was 'The Table Football Competition'. As the goal of ego-involved individuals is to outperform others, the focus was on outscoring their opponent and competitors from other testing sessions. Players were informed that their scores would be displayed on the School's web page and Notice Board. A standardised leader board displayed a fictional top ten of total goals scored for each sex and in the ego-involving condition this information was placed on a white board next to the table football. Three tips were presented on how to outperform opponents: Watching the time, forcing the ball towards goal by any means possible, and trying to surpass the skills and goals seen in the video demonstrations. Unlike the task-involving condition, where the videos were presented as an expert performing some skills to practise at a personal pace, in the ego-involving condition participants were encouraged to outperform the expert. Players were informed that they could receive raffle tickets for entering a £50 prize draw by gaining a greater total goal tally than their opponent and by making it onto the all time top-ten leader board. It was emphasised that higher positions on

the leader board would receive more raffle tickets. Between Games 1 and 2, two additional slides were presented to refresh the manipulation. The first slide emphasised the need to outperform opponents in order to succeed. The second slide reviewed the three tips and reminded participants that all scores would be publicised.

Control condition. (Appendix 4h) The control condition was titled 'A Background to Table Football'. Slides included a history of table football and Garlando table manufacturers together with still images of the different table models. The information presented was exclusively factual and made no reference to learning, outperforming opponents, or other factors that could influence the players' motivational state.

Procedure

Volunteers attended a 45-minute laboratory session. Pairs of players, matched for sex to minimise cross-sex self-presentation concerns (Jones & Pittman, 1982), were randomly assigned to one of the three conditions. Participants received written instructions about the procedure (see Appendix 4a) and a brief verbal explanation of the sequence of events. On completion of a consent form, participants sat in front of a computer monitor. A slide show presented the manipulation / control condition and the rules of the game. After verbal checks on the clarity of the procedure, players were allowed five minutes of practice followed by two ten-minute games of table football.

Prior to Game 1, participants were informed that the experimenter would not be present during game play because his presence could influence their behaviour. The video camera was then set to record by remote control. Participants were unaware that they were being filmed. The countdown timer started, and the experimenter left the room. Once ten minutes elapsed the alarm on the timer signified the end of Game 1, and the experimenter returned to the laboratory. Participants were then presented with a two-minute summary of the

main points from the previous slides. As with Game 1, the timer started, and the experimenter left the room for the start of Game 2. Two games were included to allow a break to refresh the manipulation.

At the end of Game 2, the SBS was presented to participants as an opportunity to gain bonus goals for themselves and their opponent. Players were told that the total goals scored would count towards raffle tickets to be entered in a £50 cash-prize draw. The presence of the reward was essential for providing bonus goals with some value and consequently giving meaning to the choices made on the SBS. For example, the altruistic choice of giving more bonus goals to the opponent than to oneself (score of 4) only has meaning if there is some value or reward associated with these goals. Each participant was asked to confidentially choose one of four alternatives by handing the experimenter a card from a set of four representing the four options. Finally, players completed a questionnaire containing items on demographics, a measure of goal involvement that served as the manipulation check, and a measure of goal orientation. Goal orientations were assessed at the end of the experiment to avoid presenting clues on the nature of the experiment that could potentially influence participants' responses to the manipulation.

The session concluded with a written and verbal debrief. General purposes of the study were communicated, and the experimenter probed for suspicion of being filmed. No one suspected that they had been filmed. Participants were then requested to give written consent to the use of video footage for data analysis (see Appendix 4b). Everyone granted permission. Next, information was provided on the number of raffle tickets each player earned. All participants received one ticket for participating. Those who accomplished their objective received two tickets regardless of what was stated in each manipulation. Finally, participants

were asked not to reveal any details of the study to fellow students and were thanked for their time and effort.

Results

Preliminary Analyses

Preliminary analyses were conducted to clean up the data and examine the effectiveness of the experimental manipulation. First, missing values of items omitted in the questionnaires were replaced by mean scores. Next, assumptions of normality, linearity, and homogeneity of variance underlying multivariate analysis were examined. No serious violations of the assumptions were noted. In addition, no multicollinearity was present in the data; correlations ranged from .03 to .11. Finally, multivariate outliers were examined by comparing Mahalanobis distances with critical values (Tabachnick & Fidell, 2001a). Two cases were removed from further analysis as they exceeded the critical value for multivariate outliers, χ^2 (2, N = 90) = 13.82, $p < .001$.

In order to examine the effectiveness of the experimental manipulation, a one-way MANOVA was performed to determine differences among the three conditions in reported task and ego involvement. A significant multivariate main effect emerged, Wilks' lambda = .18, $F(4, 172) = 58.80$, $p < .001$, partial $\eta^2 = .58$[1]. Subsequent univariate ANOVAs indicated significant differences among the three conditions in perceptions of both task involvement, $F(2, 87) = 74.80$, $p < .001$, partial $\eta^2 = .63$, and ego involvement, $F(2, 87) = 98.31$, $p < .001$, partial $\eta^2 = .69$. Planned comparisons revealed that participants in the task-involving

[1] The strength of association (i.e., effect size) between a factor and a dependent variable in ANOVA is indicated by η^2 which is equal to R^2 (Tabachnick & Fidell, 2001b) and represents the proportion of total variation in the dependent variable attributable to the factor. Values of .02, .13, and .26 for R^2 represent small, medium, and large effect sizes, respectively (Cohen, 1992). However, these guidelines should be viewed as approximate because in this study partial η^2 was reported as the estimate of effect size. Partial η^2 represents the proportion of total variation attributable to the factor, *after* the influence of other factors has been eliminated and is recommended as a measure of effect size in multi-factor designs (Tabachnick & Fidell, 2001b).

condition perceived this condition to be significantly more task-involving (M = 4.42, SD = 0.41) compared to participants exposed to either the ego-involving ($p < .001$; M = 2.87, SD = 0.67) or the control conditions ($p < .001$; M = 2.78, SD = 0.64). Similarly, participants exposed to the ego-involving condition perceived this condition to be significantly more ego-involving (M = 4.51, SD = 0.44) than did those in either the task-involving ($p < .001$; M = 2.41, SD = 0.68) or the control conditions ($p < .001$; M = 3.47, SD = 0.59). These results indicated that the experimental manipulation was successful.

Effects of Goal Involvement and Sex on Behaviour

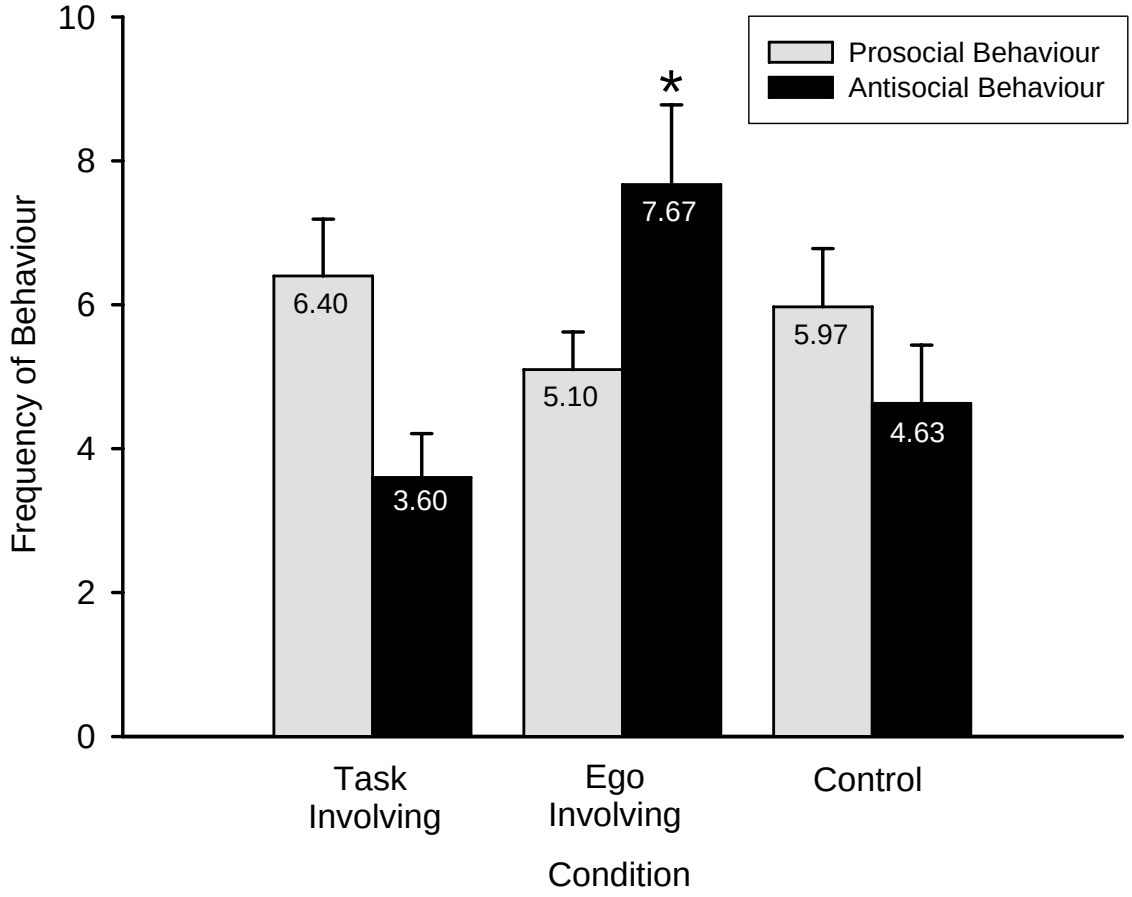
A 3 (Condition) X 2 (Sex) MANOVA was used to examine the effects of goal involvement and sex on prosocial choice and observed prosocial and antisocial behaviour. Significant multivariate effects were found for both Condition, Wilks' lambda = .77, $F(6, 164) = 3.89$, $p = .001$, partial $\eta^2 = .13$, and Sex, Wilks' lambda = .89, $F(3, 82) = 3.25$, $p = .03$, partial $\eta^2 = .11$. Follow-up univariate ANOVAs indicated significant effects of Condition on prosocial choice, $F(2, 84) = 3.93$, $p = .02$, partial $\eta^2 = .09$, and antisocial behaviour, $F(2, 84) = 6.87$, $p = .002$, partial $\eta^2 = .14$. Planned comparisons showed that prosocial choice was significantly greater in the task-involving condition than both the ego-involving ($p = .02$) and control conditions ($p = .01$). In addition, participants in the ego-involving condition engaged in significantly more antisocial behaviours[2] than did those in the task-involving ($p = .001$) and control conditions ($p = .01$). Descriptive statistics for all dependent variables as a function of experimental condition are presented in Figures 4.1 and 4.2. With regard to sex, the only statistically significant finding was for prosocial behaviour, $F(1, 84) = 7.66$, $p = .01$, partial η^2

[2] When verbal and physical behaviours were separately examined, antisocial *physical* behaviours were significantly more frequent in the ego-involving than in the task-involving and control conditions, $F(2, 84) = 6.07$, $p = .003$, partial $\eta^2 = .13$. The three conditions did not differ significantly on the frequency of antisocial verbal, prosocial verbal, or prosocial physical behaviours.

= .08. Specifically, females engaged in more prosocial behaviours (M = 6.91, SD = 4.26) than males (M = 4.73, SD = 3.29). No other significant results were found.

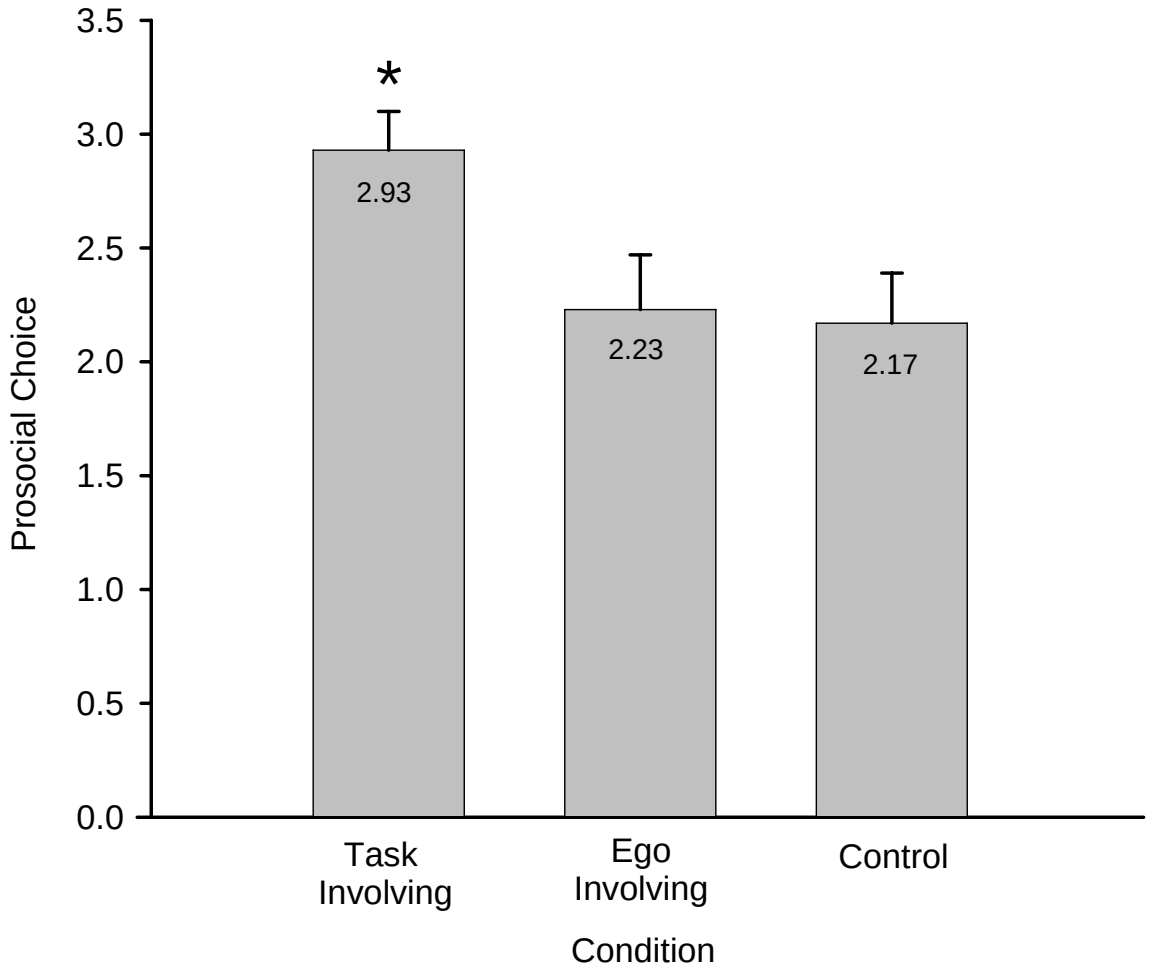
As goal orientations have been linked to morality in sport (Duda et al., 1991; Kavussanu & Roberts, 2001), sex differences in prosocial behaviour were examined using a one-way ANCOVA with task and ego orientations as covariates. The purpose of this analysis was to examine sex differences in prosocial behaviour after the scores of prosocial behaviour were adjusted for differences associated with goal orientation (see Tabachnick & Fidell, 2001b). Essentially, this analysis examined whether sex differences in prosocial behaviour would remain significant if males and females had the same scores in goal orientation. Prior to the analysis, the homogeneity of regression was tested by examining whether significant interaction effects existed between the independent variable and the covariates. No significant interaction effects were found supporting the homogeneity of regression assumption. ANCOVA indicated that previously identified sex differences in prosocial behaviour remained significant after controlling for task and ego orientations, $F(1, 86) = 4.99$, $p = .03$, partial $\eta^2 = .06$. Even though sex differences remained significant, it is worth noting that there was a decrease in the significance level and effect size. These findings suggest that goal orientations had a small effect on sex differences in prosocial behaviour.

Figure 4.1. Mean frequency (+*SE*) of prosocial and antisocial behaviours as a function of task (*n* = 30), ego (*n* = 30), and control (*n* = 30) conditions.



Note: Scores ranged from 0-18 for prosocial behaviour and 0-23 for antisocial behaviour. An asterisk (*) indicates that a mean value is significantly different from other groups' scores on the same outcome variable.

Figure 4.2. Mean frequency (+*SE*) of prosocial choice as a function of task (*n* = 30), ego (*n* = 30), and control (*n* = 30) conditions.



Note: Scores ranged from 1 - 4. An asterisk (*) indicates that a mean value is significantly different from other groups' scores.

Table 4.1
Mean Frequencies of Prosocial and Antisocial Behaviours as a Function of Experimental Condition (N = 90)

Observed behaviours	Experimental condition		
	Task-involving *M* ± *SD*	Ego-involving *M* ± *SD*	Control *M* ± *SD*
Prosocial physical			
Handing ball to opponent after goal / dead-ball / leaving table	0.47 ± 0.97	0.17 ± 0.38	0.27 ± 0.58
Allowing an illegal goal	0.17 ± 0.53	0.03 ± 0.18	0.40 ± 1.45
Shaking hands / applauding opponent	0.13 ± 0.35	0.07 ± 0.25	0.00 ± 0.00
Moving on opponent's goal counter	0.20 ± 0.76	0.17 ± 0.65	0.63 ± 1.90
Prosocial verbal			
Friendly discussion / joking and laughing with opponent	1.67 ± 0.61	1.17 ± 0.59	1.47 ± 0.78
Congratulating / encouraging / instructing opponent	2.90 ± 3.03	2.73 ± 2.20	2.07 ± 2.50
Calling own foul / declining foul / apologising / thanking	0.70 ± 1.18	0.67 ± 1.02	1.03 ± 2.22
Alerting opponent to missed goal counts	0.13 ± 0.35	0.17 ± 0.59	0.10 ± 0.31
Antisocial physical			
Breaking of rules	1.03 ± 1.00	1.93 ± 2.67	1.07 ± 1.28
Displays of anger / Abuse of table	0.33 ± 1.06	1.03 ± 1.52	0.30 ± 0.65
Serving ball out of turn or when opponent not ready	0.60 ± 1.33	1.53 ± 2.30	1.33 ± 3.01
Deliberate cheating e.g. over counting of goals	0.03 ± 0.18	0.03 ± 0.18	0.10 ± 0.31
Antisocial verbal			
Winding up / taunting / sledging opponent	0.83 ± 1.80	1.67 ± 2.82	0.83 ± 1.32
Abusive language	0.73 ± 1.17	1.23 ± 2.76	0.80 ± 1.49
Arguing	0.03 ± 1.18	0.17 ± 0.38	0.23 ± 0.57

Discussion

The primary purpose of this study was to investigate the effects of task and ego involvement on moral behaviour in an experimentally manipulated competitive setting. In addition, sex differences were examined on moral behaviour. Before discussing the findings as they pertain to each purpose, it is noted that the experimental manipulation was successful in inducing task and ego involvement under controlled conditions, as indicated by the manipulation check. In addition, observation of participants' behaviours revealed that both prosocial and antisocial behaviours occurred in the competitive setting. The occurrence of both types of behaviours supports Bandura's (1999) distinction of the proactive and inhibitive aspects of morality. In Bandura's (1999) view, moral conduct involves doing good things as well as refraining from doing bad things.

Goal Involvement and Moral Behaviour

Prosocial choice. Consistent with the hypothesis, participants in the task-involving condition displayed higher prosocial choice than did those in the ego-involving and control conditions. On average, these participants donated approximately equal bonus goals to themselves and to their opponent. Participants in the ego-involving and control conditions tended to give themselves more bonus goals than they did to their opponent. These findings indicate that when motivated by learning and improvement, individuals adopt principles of fairness. In contrast, individuals who were motivated to outperform their opponent, or whose motivation had not been manipulated, displayed a more egocentric behaviour.

The significant difference in prosocial choice between the task-involving and the other two conditions may be partly attributed to the lower prosocial choices made by participants in the ego-involving and control conditions. This might have been the result of the nature of these conditions. Specifically, participants in the ego-involving condition were explicitly

instructed to outperform their opponent; the inherent characteristics of the competitive game may have also resulted in competition between the players in the control condition. Indeed, Kleiber and Roberts (1981) have shown that engaging in a two-week competitive tournament reduced prosocial behaviour in children.

Our results are consistent with past research that has linked motivational and moral variables. Specifically, task orientation has been shown to predict prosocial behaviour (Kavussanu, 2006), higher levels of moral functioning (Kavussanu & Ntoumanis, 2003), and sportspersonship (Dunn & Causgrove-Dunn, 1999). Further, perceptions of an ego-involving climate have been positively associated with reported prosocial behaviour (Kavussanu, 2006) and the sportspersonship dimensions of respect for opponents, social conventions, and rules and officials (Miller et al., 2004; Ommundsen et al., 2003). Taken together with past research, the present findings suggest that task involvement can facilitate prosocial behaviour and lead participants to make choices that reflect fairness.

Observed prosocial behaviour. Contrary to the hypothesis and the finding for prosocial choice, no significant differences were revealed among the three conditions for observed prosocial behaviour. One explanation for this finding is that the recorded prosocial behaviours might represent norms in sport. For example, it is generally expected that sport participants display positive social behaviours toward the opponent. If these behaviours are well established, it would be more difficult to influence their occurrence through a short experimental manipulation. However, this is a tentative explanation as no empirical data exists to document the prevalence of these specific behaviours in sport. It is also worth noting that the highest frequency of prosocial behaviours was among participants assigned to the task-involving condition. The difference among the three conditions though was small as

indicated by the small effect size (partial $\eta^2 = .02$). Consequently, the observed statistical power to detect significant differences was low (.21).

Even though goal involvement was hypothesised to affect both prosocial choice and observed prosocial behaviour, the experimental manipulation clearly had a weaker effect on the latter variable. The discrepancy in these findings could be due to differences in the measurement of the two variables. Specifically, observed behaviours were measured during the entire game play, whereas the choices were made at the end of game play. Thus, observed behaviours were seen by the opponent whereas the choices were not. This could have influenced participants' responses. For instance, ego-involving and control condition individuals may have engaged in observed prosocial behaviours to appear friendly towards their opponent during game play but these appearances were not necessary when responses were confidential. Prosocial behaviours during game play clearly differ from behaviours at the end of the session when prosocial choices were made.

Observed antisocial behaviour. In support of the hypothesis, individuals in the ego-involving condition demonstrated significantly more antisocial behaviours (e.g., taunting opponents and breaking the rules) than did those assigned to the other two conditions. Thus, playing table football with the explicit goal of doing better than one's opponent can lead participants to engage in significantly more antisocial behaviours than if the goal is to improve skills, or if goal involvement is not manipulated. These results are consistent with past research that has reported a relationship between ego orientation and unsportsmanlike attitudes, legitimacy judgements, low levels of moral functioning, and antisocial behaviour (e.g., Duda et al., 1991; Kavussanu, 2006; Kavussanu & Roberts, 2001; Sage et al., 2006). Further, perceptions of an ego-involving climate have been associated with antisocial behaviour (Kavussanu, 2006) and low levels of moral functioning (e.g., Kavussanu & Spray,

2006; Ommundsen et al., 2003). Overall the findings of this study support past work and are consistent with Nicholls' (1989) claim that ego-orientated individuals prioritise superiority over issues of justice and fairness.

Sex and Moral Behaviour

A second purpose of this study was to examine sex differences in moral behaviour. Males displayed fewer prosocial behaviours than females and support the hypothesis. This finding is consistent with past research on sportsmanlike attitudes (Duda et al., 1991) and moral functioning (Kavussanu & Roberts, 2001) that has also identified sex differences on moral variables. Sex differences in prosocial behaviour remained significant even when after controlling for goal orientation. Although there was a change in the significance level and effect size, the findings indicate that goal orientation has a very small effect on the prosocial behaviour of male and female participants.

With regard to prosocial choice, no sex differences were identified on the number of goals awarded. Assessing prosocial behaviour with a measure similar to the one used in this study for prosocial choice, Kleiber and Roberts (1981) reported lower prosocial behaviour for boys than girls in a competitive sport setting. However, differences were only found in the last trial of ten and the competitive condition lasted two weeks. As sex differences in the Kleiber and Roberts (1981) study did not appear in the first nine trials, and their experimental procedure lasted much longer than this study, it is possible that a longer competitive experience is necessary to reveal sex differences in prosocial choice. Perhaps men and women are largely similar in their altruistic tendencies, with men showing less altruism than women only after an intense competitive experience. Further work is required using this measure in a longer lasting intervention to determine potential sex differences.

Contrary to the hypothesis, no significant sex differences were found in antisocial behaviour. The finding of this study is inconsistent with previous research which has reported sex differences on moral variables (e.g., Bredemeier, 1994; Duda et al., 1991; Kavussanu & Roberts, 2001). Two explanations are offered for this finding. First, sex differences on antisocial behaviour may be more pronounced in the real-world sport context. Second, the recorded behaviours were different from the ones measured in past research. The behaviours recorded in this study were either verbal intimidation or cheating, whereas previous studies have generally included more extreme antisocial behaviours such as pushing or trying to injure an opponent (e.g., Kavussanu & Roberts, 2001). It is possible that males differ from females when more extreme behaviours are examined but not on milder antisocial behaviours.

Limitations of the Study and Directions for Future Research

The present study was successful in experimentally manipulating motivational involvement to examine differences in moral behaviour. However, these findings should be considered in light of the study's limitations. First, as with all laboratory-based studies, ecological validity is not as strong as it would have been in the field. Second, as the activity used was the game of table football, the present findings should only be generalised to similar contexts. Third, all participants were sport and exercise science students to ensure that they were sports competitors. Consequently, the findings can only be generalised to a similar population. Finally, it is possible that the presence of the £50 cash prize introduced extrinsic motivation to participants. Although recent work suggests that intrinsic and extrinsic motivations are not mutually exclusive (Covington & Müeller, 2001), introducing extrinsic motivation could be considered a limitation of the study. Future research should attempt to address these limitations by examining the effects of goal involvement on prosocial and

antisocial behaviour in other games and sports, select participants from other populations, and replicate the present findings with and without an extrinsic reward.

Conclusion

In this study, goal involvement was experimentally manipulated in a competitive setting and effects were observed on moral behaviour. Although the research was conducted in a laboratory the inclusion of a familiar and competitive game strengthened the ecological validity of the findings. Applying the current findings to a sporting context could help coaches and athletes counter the unsportsmanlike behaviours that are characteristic of highly competitive situations and promote the kind of character development that is beneficial to all sport participants.

After experimenting with goal involvements and their effect on moral behaviour, the focus of this thesis returns to self-reported motivation and moral behaviour variables measured over the course of a youth football season. To complete the investigation of all the constructs of AGT, Study 4 incorporated perceived motivational climate with the inclusion of task and ego-involving climates. Bandura's (1999) social-cognitive theory continues as the framework for moral behaviour and is now extended to personal and environmental factors in a model of triciprocal causation. Categorising goal orientations as the personal factors and the motivational climate as the environmental influence on moral behaviour, Bandura (1999) suggests the personal, environmental, and behaviour variables operate as interacting determinants that influence one another bidirectionally. Until now, all the relationships that have been investigated were unidirectional in nature. Despite the strength of Study 3's methodology, the longitudinal design of the last study provides the opportunity to explore the direction of causality between variables and across a larger sample. This method also allows for the assessment of stability in the variables from early to late season. Refinement and

improvement of the prosocial measure was one aim of the following study but of greater importance was the modelling of dispositional goal orientations, perceived motivational climate, and moral behaviour across two time points.

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CHAPTER 5

Study 4: An Exploration of Temporal Stability and Reciprocal Relationships between Goal Orientations, Motivational Climate and Moral Behaviour in Youth Football

Abstract

This study examined the temporal stability and reciprocal relationships among task and ego orientation, task and ego-involving climates, and prosocial and antisocial behaviour in sport. Male (n = 156) and female (n = 24) youth footballers (M age = 14.11 years, SD = 1.75) completed questionnaires towards the beginning (Time 1) and end of a regular season (Time 2). Questionnaires measured goal orientation, perceived motivational climate, and frequency of moral behaviours. Structural equation modelling indicated moderate temporal stability of the variables between Time 1 and 2. Subsequent analysis indicated that prosocial behaviour at Time 1 positively predicted a task involving climate at Time 2. Antisocial behaviour at Time 1 positively predicted both ego orientation and an ego-involving climate at Time 2 and a reciprocal relationship was revealed whereby ego-orientation at Time 1 positively predicted antisocial behaviour at Time 2. Task orientation at Time 1 negatively predicted an ego-involving climate at Time 2. All cross-lagged relationships were weak. Findings are discussed in relation to past work and limitations of this exploratory study.

Introduction

The integrity of sport has been questioned as lacking in morality (e.g., Kohn, 1986) and such accusations have led to an expanding line of research on moral functioning in sport. Methods of enquiry, however, rely on cross-sectional designs that are limited in their conclusions. Inferences on the nature of the relationship between variables and their temporal stability are only possible when measurements are taken at two or more time points. The reliance on snapshot studies (e.g., Studies 1 and 2) has restricted holistic models of moral behaviour that include motivational characteristics of the athlete and the sporting environment. The present study is a first step to investigating a triciprocal model linking dispositional motivation, motivational climate, and moral behaviour over a youth football season.

Although sport has been rebuked as a breeding ground for antisocial behaviour (e.g., Ogilvie & Tutko, 1971), its traditional purpose was to encourage positive virtues of loyalty, fairness and cooperation. In order to account for both positive and negative dimensions of morality, Bandura's (1986, 1991, 1999) social cognitive theory provides the framework for the moral variables in this study. The theory defines behaviour as moral based on its consequences to the recipient. According to Bandura (1991), the exercise of moral agency has dual aspects, proactive and inhibitive. The proactive dimension is the power to behave humanely and is represented in this study by prosocial behaviour. Prosocial behaviours have been defined as behaviours that benefit another individual or group of individuals (Batson, 1998; Eisenberg & Fabes, 1998). For instance, helping an opponent off the floor, or congratulating an opponent on good play are prosocial behaviours encountered in sport. In contrast, the inhibitive aspect of morality is the power to refrain from behaving inhumanely and is represented in this study by antisocial behaviour. Antisocial behaviour refers to actions

that harm or disadvantage the recipient (Sage et al., 2006). Examples of antisocial behaviours in sport include deliberately trying to injure an opponent, time wasting, obstructing opponents and goading opposition players.

Moral behaviour incorporates both prosocial and antisocial behaviour. Although past work infers high levels of morality from low scores on antisocial measures (e.g., Kavussanu & Roberts, 2001; Ommundsen et al., 2003), overlooking the prosocial or proactive aspect provides an incomplete account of morality. Previous studies have shown prosocial and antisocial behaviour to be unrelated (Sage et al., 2006). It would therefore be misleading to infer high levels of prosocial behaviour from low levels of antisocial behaviour or vice versa. Moreover, Bandura's proactive and inhibitive aspects of morality have been suggested to provide their own motivational and cognitive regulators (Bandura, 1999). For example, prosocial behaviour has been positively predicted by task orientation (Kavussanu, 2006) and social affiliation (Sage & Kavussanu, 2004), whereas antisocial behaviour has been positively predicted by ego orientation (Kavussanu, 2006; Kavussanu & Roberts, 2001) and social status orientation (Sage & Kavussanu, 2004). Differences between the dual aspects of morality justify the inclusion of both prosocial and antisocial behaviour in the current study, for a more complete understanding of moral behaviour.

Attempts to further knowledge of moral behaviour have focused on linking morality to characteristics of the individual or environment. Theoretical models of moral behaviour include individual characteristics of motivation (Rest, 1984) or personal goals (Eisenberg, 1986). An environmental characteristic that is thought to influence moral behaviour is the contextual goal structure created by significant others (Shields & Bredemeier, 1995), known as the motivational climate (Ames, 1992). Investigating both individual motivation and motivational climate embodies an interactional approach (e.g., Shoda, 1999) to the study of

behaviour. Previous work (e.g., Kavussanu & Roberts, 2001; Ommundsen et al., 2003; Sage et al., 2006) has focused on predicting behaviour from motivational variables, however, social cognitive theory (Bandura, 1986) explains behaviour within a model of triadic reciprocal causation. In this theory, internal personal factors (i.e., cognitive events), behavioural patterns, and environmental events (i.e., motivational climate and interaction with significant others) all operate as interacting determinants that influence one another bidirectionally. Despite Bandura (1999) globalising personal and environmental concepts, the appreciation of motivational factors is prevalent within his theory. Before reflecting on the nature or direction of the relationships between individual, environmental and behavioural variables, concepts of motivation and motivational climate are firstly introduced.

In order to explain athletes' moral behaviour, research has used motivational theories and particularly Nicholls' (1989) Achievement Goal Theory (AGT; e.g., Duda et al., 1991; Dunn & Causgrove-Dunn, 1999; Kavussanu & Roberts, 2001; Sage et al., 2006; Stuntz & Weiss, 2003). The rubric of AGT is that in achievement contexts such as sport, individuals strive to attain competence. The judgement of competence is determined by an individual's interpretation of success, which is reflected by their goal orientations (Nicholls, 1989). According to AGT, the expression of goals varies according to a combination of personal and situational factors. The degree of involvement in the respective goals is a function of dispositional goals together with the motivational climate shaped by significant others (Ames, 1992). Both goal orientations and motivational climate are included in the present study to represent the personal and situational factors respectively.

The personal variables, or individual characteristics, that are examined in this study are the central constructs within Nicholls' (1989) AGT. Nicholls asserted that individuals are motivated by two orthogonal goal orientations. Ego orientation represents the perception of

competence and success relative to others with the activity seen as a means to an end. An ego orientated athlete is concerned with the demonstration of superiority over others. A task orientation reflects perceptions of competence and success that are self-referenced; here the athlete is concerned with skill improvement and the activity itself, rather than any end product. Theoretical links have been made between ego orientation and a possible lack of concern for justice, fairness and welfare of competitors (Nicholls, 1989). Further, task orientation has been theoretically linked to a concern with fair play (Duda et al., 1991). In support of the theory, empirical evidence has emerged that confirms the links between task and ego orientation to various moral variables.

Research generally substantiates the theory that ego orientation is related to low levels of moral functioning, a term that embraces moral judgements, intentions and behaviours. Ego orientation has been associated with the endorsement of unsportsmanlike play (Duda et al., 1991), rating aggressive acts as legitimate (Duda et al., 1991; Kavussanu & Roberts, 2001), legitimacy of and intention to engage in unsportsmanlike play (Stuntz & Weiss, 2003), low levels of moral judgement, intention and behaviour (Kavussanu & Roberts, 2001; Kavussanu & Ntoumanis; 2003), antisocial judgement (Sage et al., 2006) and behaviour (Kavussanu, 2006; Sage et al., 2006). Only the last four of these studies measure reported behaviours and few assessments have been made with the proactive dimension of morality. Concerning this aspect, ego orientation negatively predicted prosocial behaviour (Kavussanu, 2006) and task orientation has been found to predict prosocial judgement only when levels of ego orientation are low (Sage et al., 2006). Further indication of the link between ego orientation and positive behavioural variables was the finding of its negative relationship to some dimensions of sportspersonship (Dunn & Causgrove-Dunn, 1999; Lemyre et al., 2002). Overall, ego

orientation appears to be positively associated with antisocial variables and negatively associated with prosocial variables and sportspersonship.

Compared to ego orientation, findings for task orientation are less clear. Task orientation has emerged as a positive predictor of prosocial behaviour (Kavussanu, 2006; Sage, & Kavussanu, 2004) and sportspersonship (Dunn & Causgrove-Dunn, 1999; Lemyre et al., 2002), weakly corresponded to high levels of moral functioning (Kavussanu & Ntoumanis, 2003), and has been negatively related to antisocial behaviour (Kavussanu, 2006) and unsportsmanlike attitudes (Duda et al., 1991; Stuntz & Weiss, 2003). No significant associations, however, have been found between task orientation and legitimacy judgements (Duda et al., 1991; Dunn & Causgrove-Dunn, 1999), self-reported likelihood to aggress against an opponent (Stephens, 2000, 2001; Stephens & Bredemeier, 1996), indices of moral functioning (Kavussanu & Roberts, 2001) or prosocial and antisocial functioning (Sage et al., 2006). It can be concluded from the research that a main effect for task orientation on moral variables is apparent in some samples and situations but not others.

Following the investigation of goal orientations, research progressed to investigating athletes' perceptions of the sporting environment. Shields and Bredemeier (1995) have identified motivational climate as a contextual influence on an individual's sporting morality. An athlete's task or ego-involvement is shaped by situational cues, which are reflected by respective mastery and performance climates (Ames, 1992). The term mastery climate is synonymous with a task-involving climate and is salient when significant others (e.g., coach) define success and failure in terms of skill mastery and individual improvement. A performance climate is tantamount to an ego-involving climate and is salient when significant others define success and failure in normative terms, with an emphasis on outperforming team-mates and opponents. In this study, task and ego-involving climate are the preferred

terms. One of the greatest influences on motivational climate, and the focus of measurement, is the athletes' *perception* of their coach (Ames, 1992; Treasure, 1997). Athletes perceiving task-involving climates view their coach as defining success in terms of effort, teamwork, and embracing one's potential. Athletes perceiving an ego-involving climate identify their coach as defining success in relation to superiority over others. In comparing the two climates, adaptive motivational processes and outcomes are said to be promoted by a task-involving climate but prevented by an ego-involving climate (Ames, 1992). In line with Nicholls' (1989) tenet of ego orientation leading to a lack of concern about justice and fairness, similar maladaptive consequences are expected with an ego-involving climate.

The relationship between motivational climate and moral variables has been empirically supported. A perceived ego-involving climate in youth football has been linked to low levels of sportspersonship (Miller et al., 2004; Ommundsen et al., 2003) and moral functioning (Kavussanu & Spray, 2006; Ommundsen et al., 2003), antisocial behaviour (Kavussanu, 2006), and acceptance of rough play and cheating (Boixadós et al., 2004). However, no relationships were found between an ego-involving climate and moral functioning of collegiate basketball players (Kavussanu et al., 2002) or sportspersonship of female volleyball players (Gano-Overway et al., 2005). In contrast, a perceived task-involving climate in youth footballers has been linked to prosocial behaviour (Kavussanu, 2006) and sportspersonship (Miller et al., 2004, Ommundsen et al., 2003). Further, a task-involving climate positively related to the sportspersonship dimension of respect for the game in female volleyball players (Gano-Overway et al., 2005). No relationships were found between a task-involving climate and indices of moral functioning (Ommundsen et al., 2003). Collectively, the research indicates relationships between an ego-involving climate with antisocial variables and a task-involving climate with prosocial behaviour and sportspersonship.

Having established unidirectional relationships between motivational and moral variables, a further stage of inquiry is to investigate the stability and proposed reciprocal relationships between these variables. A collective limitation of previous studies is their cross-sectional design. Conclusions on the temporal stability and the direction of influence between goal orientations, motivational climate and moral indices require longitudinal designs. Whilst support is offered for the prediction of moral variables from goal orientations and motivational climate, any changes in the variables over time or potential reciprocal effects have been largely overlooked.

One advantage of longitudinal research is the capability to explore variations or stability in the variables. A solitary study has explored changes in motivation and sportspersonship over the course of a 5 month ice hockey season (Vallerand & Losier, 1994). Findings revealed a significant drop in sportspersonship and self-determined motivation from the beginning (Time 1) to the end of the season (Time 2). Although no detailed explanation was offered, the decrease in levels of these variables was suggested as being triggered by the highly competitive context. This competitiveness is expected to peak towards the end of the season when the focus on outcomes is at its greatest. In the only study measuring goal orientations over a competitive season, scores for task and ego orientation were reported to be higher in the early season compared to late season (Williams, 1998). However, the lack of statistical support for any differences in goal orientations detracts from the significance of these findings. Although morality and motivation appear to decrease over a season, more empirical support is needed to confirm this preliminary evidence.

A second benefit of longitudinal designs is the ability to infer the direction of the relationships between variables. Models of moral behaviour (Eisenberg, 1986; Rest, 1984) include feedback and feed-forward loops between their components. These loops, coupled

with Bandura's (1986) model of triadic reciprocal causation, indicate bi-directional relationships between motivational variables and behaviour. In addition to the links with moral behaviour, the motivational variables of goal orientations and motivational climate can be assimilated to the hypothesised interrelationship between personal and environmental variables (Bandura, 1999). Over time, task-involving climates have been suggested to foster task orientation and ego-involving climates to foster ego orientation (Ames, 1992). Any reciprocal effects of goal orientations on perceptions of the motivational climate have yet to be investigated. Longitudinal designs that would add some empirical support to the theory have been slow to emerge.

Longitudinal studies of motivational and moral behavioural variables are scarce. Vallerand and Losier (1994) proposed that over time cheating and unsportsmanlike behaviour could cause athletes to focus on outdoing others rather than surpassing oneself, thereby influencing their levels of ego orientation. Expectations of a positive bi-directional relationship between sportspersonship and motivation were confirmed using a cross-lag correlational design (Vallerand & Losier, 1994). Subsequent regression analysis, however, only confirmed a path from early-season motivation to late-season sportspersonship over a five-month period. The effect of early-season sportspersonship on late-season motivation fell below the level of significance after controlling for early-season motivation. Longitudinal studies on the relationships between goal orientations and perceived motivational climate have only explored the effect of the climate and early season goal orientations on late season goal orientations (Williams, 1998). Results showed that late-season task orientation was most strongly predicted by a perceived task-involving climate, followed by early-season task orientation, and unexpectedly, an ego-involving climate. Late-season ego orientation was only significantly predicted by early-season ego orientation. Additional longitudinal evidence is

required to substantiate any bidirectional relationships between goal orientations, motivational climate, and moral variables.

In light of the previous work on motivation and morality in sport, the aim of the present study was to investigate the relationship between goal orientations, perceptions of motivational climate, and moral behaviour at the beginning and end of a regular youth football season. The study focused on two purposes. The first purpose, represented by Model 1, was to ascertain the stability of all the variables across a six-month season. Subsequent examination of mean values revealed the direction of any change in motivation or behaviour. Based on past research (Vallerand & Losier, 1994), prosocial behaviour was expected to decrease across the season whilst antisocial behaviour was expected to increase. The significance of changes in goal orientation and motivational climate has yet to be rigorously tested over time; therefore, no predictions were made on the stability of these variables.

The second purpose, represented by Models 2a and 2b, was to assess interrelationships between the variables over time. Results from cross-sectional studies led to expectations that task orientation and a perceived task-involving climate at Time 1 would be positively linked to prosocial behaviour at Time 2. Conversely, ego orientation and a perceived ego-involving climate at Time 1 were expected to be positively linked with antisocial behaviour at Time 2. Previous research has been dominated by cross-sectional studies that give no indication of the direction of the relationships between the motivational goal orientations, motivational climate and moral behaviours. However, theoretical offerings (e.g., Ames, 1992; Bandura, 1986, 1999; Eisenberg, 1986; Rest, 1984) coupled with one longitudinal study (Vallerand & Losier, 1994) suggest the potential of bidirectional relationships between the personal, environmental, and behavioural variables. Thus, in the hypothesised model, all expected relationships between the goal orientations, motivational climates, and moral behaviours are explored

reciprocally to identify the nature of the links between the variables (see Figure 5.1). Prosocial behaviour at Time 1 is expected to positively link to task orientation and a perceived task-involving climate at Time 2. Antisocial behaviour at Time 1 is expected to positively link to ego orientation and a perceived ego-involving climate at Time 2. As well as the noted positive relationships, past research also indicates potential negative relationships (e.g., Kavussanu, 2006; Ommundsen et al., 2003). Antisocial behaviour at Time 1 should be negatively linked to task orientation and a perceived task-involving climate at Time 2. In contrast, prosocial behaviour at Time 1 should negatively predict ego orientation and an ego-involving climate at Time 2. Finally, positive reciprocal relationships are expected between task orientation and a task-involving climate as well as with ego orientation and an ego-involving climate.

Method

Participants

A total of 319 (male = 243, female = 76; *M* age = 14.02 years, *SD* = 1.73) youth footballers were recruited at Time 1. Incomplete data sets (*n* = 136) and outliers (*n* = 3) were removed to leave 180 participants (male = 156, female = 24) in the final analysis. Ages ranged from 11 to 18 years (*M* = 14.11 years, *SD* = 1.75). The ethnicity of players was predominantly white European (*n* = 153) but a range of other races were also included (*n* = 27). Participants were recruited from competitive club (*n* = 7) and school (*n* = 22) teams based in the Midlands, UK. The majority of the final pool of players (*n* = 150) reported playing both school (team) and club football at various levels of competition, local league to elite. Competitive football experience ranged from 1 to 13 years (*M* = 4.98, *SD* = 2.8), while time spent playing football ranged from 1 to 20 hours per week (*M* = 7.84, *SD* = 5.21).

Procedure

Coaches (N = 15) and teachers (N = 15) were initially contacted by letter (see Appendix 3a) and follow up phone calls established their interest in study participation. On agreement from the schools (N = 11) and clubs (N = 7), parental consent forms (see Appendix 3c) were forwarded and distributed to prospective participants under the age of 16 (n = 255). Meetings were arranged with the relevant coach or teacher to coincide with a practice session when players were available to complete a 10-15 minute questionnaire.

The primary investigator visited the clubs and schools on two separate occasions. The initial testing session was undertaken at the start of the youth football season (October to November). A second visit to clubs and schools was made six months later when the season was drawing to a close (April to May). The content and distribution of the questionnaires were identical for each testing session. The questionnaire included items assessing demographic information, goal orientation, perceived motivational climate, and prosocial and antisocial behaviours specific to football. A cover sheet included full written instructions, a guarantee of anonymity, and a consent form (see Appendix 3d). After consenting to the study, participants were encouraged to respond honestly and on their own. The investigator prevented conferring between participants and was available to answer any queries. Collection of the questionnaires was undertaken immediately on completion when gratitude was expressed for respondents' time and effort.

Measures

Goal orientations. Task and ego goal orientations were measured with the Perception of Success Questionnaire (POSQ; Roberts et al., 1998). The scale was adapted to the context of football by using the stem "When playing football I feel most successful when…" The

measure consists of two six-item subscales assessing task orientation (e.g., "I work hard"; "I overcome difficulties") and ego orientation (e.g., "I am clearly superior"; "I am the best"). Participants responded on a Likert type scale with the choices being 1 (*strongly disagree*), 2 (*disagree*), 3 (*neutral*), 4 (*agree*), and 5 (*strongly agree*). Mean scores for the two subscales were calculated separately by adding scores for related items and dividing by six (i.e., the number of items). The POSQ has demonstrated adequate internal consistency with satisfactory alpha coefficients for both the task (α = .88) and ego (α = .88) subscales (Roberts et al., 1998). In this study, similar reliabilities were achieved for each subscale (see Table 5.1).

Perceived motivational climate. Athletes' perceptions of the motivational climate of their team were assessed using the Perceived Motivational Climate in Sport Questionnaire 2 (PMCSQ-2; Newton et al., 2000). The PMCSQ-2 consists of thirty three sport specific items that are preceded by the stem "On this team…" The measure includes task and ego-involving subscales that each consists of three sub dimensions. The dimensions found to underlie a task-involving climate are effort / improvement (e.g., "the focus is to improve each game / practice"; "trying hard is rewarded"), important role (e.g., "players at all skill levels have an important role on the team"), and cooperative learning (e.g., "the players help each other to get better and excel"). The ego-involving motivational climate includes the sub dimensions of intra-team member rivalry (e.g., "the players are encouraged to outplay the other players"), unequal recognition (e.g., "the coach gives most of his or her attention to the stars"), and punishment for mistakes (e.g., "the coach gets mad when a player makes a mistake"). Participants respond on a Likert scale, choices being 1 (*strongly disagree*), 2 (*disagree*), 3 (*neutral*), 4 (*agree*), and 5 (*strongly agree*). In this study, mean scores for the task and ego-involving subscales were calculated separately by adding scores from each of the dimensions

and dividing by the respective number of items. The PMCSQ-2 has demonstrated adequate internal consistency with satisfactory alpha coefficients for both the task-involving (α = .88) and ego-involving (α = .87) subscales (see Newton et al., 2000). Acceptable alpha coefficients were also recorded in the present study (see Table 5.1).

Moral behaviour. Prosocial and antisocial behaviours were assessed with a measure adapted from a previous study (Sage & Kavussanu, 2004; Sage et al., 2006). Items were added (e.g., help out an injured opponent, signal to players to stop play for an injured opponent), dropped (returning ball to opposition for a throw in, free kick) and adapted from a previous version to form a total of 21 behaviours. The final list comprised 8 prosocial behaviours (e.g., "kicking the ball out of play if an opponent is injured", "congratulating the opposition on good play") and 13 antisocial behaviours (e.g., "elbowing an opposition player", "trying to injure an opponent", and "diving to fool the referee"). The footballers were asked to think about the matches they play in and indicate how often they engage in each of the 21 listed behaviours. As behaviour was measured subjectively the term in this study refers to reported rather than actual behaviour. Subjective measures are the practical option when large sample numbers are required. Participants responded on a 5-point Likert type scale with the choice of responses being 1 (*never*), 2 (*rarely*), 3 (*sometimes*), 4 (*often*), and 5 (*very often*). Prosocial and antisocial scales were scored separately by adding responses for each item and dividing by the number of items on the respective subscale. Internal reliability has been reported at .91 for antisocial behaviour and .65 for prosocial behaviour (Sage & Kavussanu, 2004). Values for the present study both exceed suitable levels and are presented in Table 5.1.

Results

Descriptive Statistics and Reliabilities

Descriptive statistics of all variables are presented in Table 5.1. Mean values for moral behaviour across the season show that, in general, players sometimes to often engaged in prosocial behaviour and rarely to sometimes engaged in antisocial behaviour. Levels of task orientation were higher than ego orientation at both Time 1 and Time 2, and perceptions of a task-involving climate were higher than perceptions of an ego-involving climate at both time points.

Pearson's zero order correlations revealed the following relationships. Prosocial behaviour at Time1 was positively and moderately correlated with task-involving climates at Time 1 and 2 and weakly related to task orientation at Time 1 and 2. Prosocial behaviour at Time 1 was negatively and weakly correlated with antisocial behaviour at Time 1 and 2 and an ego-involving climate at Time 1. Prosocial behaviour at Time 2 was positively and weakly correlated with a task orientation at Time 2 and task-involving climates at Time 1 and 2. Antisocial behaviour at Time 1 and 2 was positively and weakly correlated with ego orientation at Time 1 and 2 and moderately correlated with ego-involving climates at Time 1 and 2. Task orientation at Time 1 was positively and moderately correlated with a task-involving climate at Time 1 and weakly correlated with the task-involving climate at Time 2. Task orientation at Time 2 was positively and moderately correlated with a task-involving climate at Time 2 and weakly correlated with a task-involving climate at Time 1. Ego orientation at Time 1 was positively and weakly correlated with an ego-involving climate at Time 1 and these findings were repeated with ego orientation and an ego-involving climate at

Time 2. A final notable finding is the moderate and positive correlations between task and ego orientation at Time 1 and 2 respectively.

Alpha coefficients presented across the diagonal of Table 5.1 show that the measures attained satisfactory levels of internal consistency with values all greater than recommend levels of .70 (Tabachnick & Fidell, 2001).

Table 5.1
Descriptive Statistics and Zero Order Correlations Among Study Variables (N = 180)

Variable	*M*	*SD*	Zero order correlations											
			1	2	3	4	5	6	7	8	9	10	11	12
1. Prosocial Behaviour T1	3.46	.64	(.74)											
2. Antisocial Behaviour T1	2.30	.68	–.23**	(.86)										
3. Task Orientation T1	4.23	.56	.24**	.02	(.80)									
4. Ego Orientation T1	3.65	.72	–.02	.21**	.45**	(.83)								
5. Task-Inv Climate T1	4.02	.49	.37**	–.13	.37**	.12	(.89)							
6. Ego-Inv Climate T1	2.64	.59	–.21**	.36**	–.04	.20**	–.27**	(.86)						
7. Prosocial Behaviour T2	3.50	.59	.54**	–.12	.01	–.06	.22**	.00	(.72)					
8. Antisocial behaviour T2	2.25	.75	–.15*	.57**	–.10	.15*	–.14	.36**	.02	(.91)				
9. Task Orientation T2	4.22	.58	.17*	–.02	.34**	.21**	.22**	–.05	.26**	–.01	(.84)			
10. Ego Orientation T2	3.55	.80	–.07	.24**	.17*	.50**	.02	.14	.02	.26**	.44**	(.85)		
11. Task-Inv Climate T2	3.90	.58	.33**	–.13	.21**	.06	.49**	–.27**	.28**	–.17*	.53**	.14	(.92)	
12. Ego-Inv Climate T2	2.63	.62	–.11	.32**	–.17*	.05	–.12	.48**	.06	.43**`	.09	.22**	–.16*	(.88)

Note. Ranges of scores were 1-5 for all the variables. T1 = Time 1, T2 = Time 2; Task-Inv and Ego-Inv Climate represent perceptions of a Task or Ego-Involving Climate. Alpha coefficients are in parenthesis across the diagonal. **p*<.05, ***p* <.01.

Main Analyses

This study employed path analysis to examine temporal stability of moral behaviour, goal orientations, and perceived motivational climate (Bentler, 1995; Mullaik & Millsap, 2000). In addition, cross-lagged panel analysis explored bidirectional relationships between the variables. First, a less restricted base model was specified (Model 1) in which covariance stabilities of task orientation, ego orientation, task-involving climate, ego-involving climate, prosocial behaviour and antisocial behaviour were estimated. The first regression model was an isolated stability model meaning autoregressions were included but there was no cross-lagged or simultaneous regression of goal orientations, perceived motivational climate or moral behaviours at Time 1 with the variables at Time 2. The dependent variables of Time 2 were regressed on their matching independent variables at Time 1. For example, prosocial behaviour at Time 2 was regressed on prosocial behaviour at Time 1 and this was replicated for each pair of variables. Model 1 pertained to the first purpose of this study that investigated the stability of prosocial and antisocial behaviour, goal orientations, and perceived motivational climate across the season. The second purpose, investigating the interrelationships between the variables, was examined by a cross-lag model (Model 2). Model 2 had the same path structure as Model 1 but also explored cross-lagged relationships between the variables at Time 1 with the variables at Time 2. Retaining the paths of Model 1 isolates the unique effects of the cross-lagged paths which would otherwise be affected by any instability of the variables.

Parameters of the models were assessed using AMOS (version 6) statistical software and maximum likelihood method (Bentler, 1995). Adequacy of Model 1 and Model 2 was determined by fit indices. The adequacy of a model is commonly determined using the chi-square goodness of fit test (χ^2), which estimates discrepancies between the model-implied and observed covariance matrices. The lower the value of the χ^2 statistic, the better the adequacy

of a model. Accompanying significance testing deems non-significant *p* values as an acceptable fit of the model. With the χ^2 statistic criticised by its sensitivity to sample size (Cohen, 1988; Marsh, Balla & McDonald, 1988) and the relatively small sample in this study ($N \leq 200$), additional indices of fit were considered. The Comparative Fit Index (CFI), Root Mean Square Error of Approximation (RMSEA), and Standardised Root Mean Square Residual (SRMR) were used to evaluate model fit. Research has shown that these fit indices display restricted random variation under various conditions of model misspecification, sample size, and estimation methods (Fan, Thompson, & Wang, 1999). CFI values over .90 indicate an adequate fit while .95 represents a very good fit between the model and the data (Hu & Bentler, 1999). Values below .06 for RMSEA and .08 for SRMR signify an adequate model (Hu & Bentler, 1999). Finally, modification indices were used to indicate improvements in the fit of the model by freeing specified parameters. For reasons of parsimony and clarity, parameters with estimates above the .05 level of significance were removed from the hypothesised model (Figure 5.1).

Path analysis showed that Model 1 approached constancy (CFI = .90, constancy is reached when CFI = 1) in the isolated autoregression of goal orientations, perceived motivational climates and moral behaviours at Time 2 with their respective variables at Time 1. The CFI, RMSEA and SRMR values approached the criteria for good fit (see Table 5.2). In order of magnitude, antisocial behaviour showed the highest stability and was moderate in value. This was followed by moderate stability for ego orientation, task-involving climate, prosocial behaviour and perceived ego-involving climate. Finally, the stability for task orientation was low to moderate (see Figure 5.2). A follow up repeated measure ANOVA indicated that only the perceived task-involving climate significantly declined over time, $F(1, 179) = 9.0$, $p = .003$, partial $\eta^2 = .05$.

The statistics for Model 2b showed good fit indices after removing parameters from Model 2a. Initially, all cross-lagged possibilities specified in Figure 5.1 were tested but the poor fit indices led to an examination of modification indices and subsequent improvements in the model. Remaining parameters revealed that prosocial behaviour at Time 1 positively and weakly predicted a perceived task-involving climate at Time 2. Antisocial behaviour at Time 1 weakly predicted both ego orientation and a perceived ego-involving climate at Time 2. In addition, a perceived ego-involving climate at Time 1 positively and weakly predicted antisocial behaviour at Time 2. Thus, a bi-directional relationship was found between a perceived ego-involving climate and antisocial behaviour. Finally, in the only addition to the hypothesised parameters, task orientation at Time 1 negatively and weakly predicted a perceived ego-involving climate at Time 2.

In both models, covariances were included between the variables at Time 1 and between errors in the variables at Time 2. All covariances were small in magnitude. At Time 1, significant covariances were evident between task orientation with ego orientation, a task-involving climate, and prosocial behaviour. Ego orientation correlated with an ego-involving climate and antisocial behaviour. Task-involving climate positively correlated with prosocial behaviour and negatively correlated with an ego-involving climate. An ego-involving climate also negatively correlated with prosocial behaviour but positively correlated with antisocial behaviour. At Time 2, there were positive error correlations between task orientation with ego orientation, a task-involving climate, and prosocial behaviour. Finally, errors were also positively correlated between an ego-involving climate and antisocial behaviour. It is noted that error covariances added from the hypothesised model must be viewed with scepticism. Data-driven model modifications can undermine the generalizability of the findings (MacCallum et al., 1992).

Table 5.2
Fit Indices of Tested Models

	χ^2(df)	CFI	RMSEA (90% CI)	SRMR
Model 1: Isolated stability model	105.44 (47)***	.90	.08 (.06 - .10)	.04
Model 2a: Hypothesised model	177.00 (39)***	.77	.14 (.12 - .16)	.10
Model 2b: Cross-lagged model	75.26 (42)***	.94	.07 (.04 - .09)	.03

Note: *** $p < .001$. CFI = Comparative Fit Index; RMSEA = Root Mean Squared Error of Approximation;

90% CI = 90% Confidence Interval of RMSEA; SRMR = Standardised Root Mean square Residual.

Figure 5.1. Hypothesised model of the interrelationships among goal orientation, perceived motivational climate, and moral behaviour.

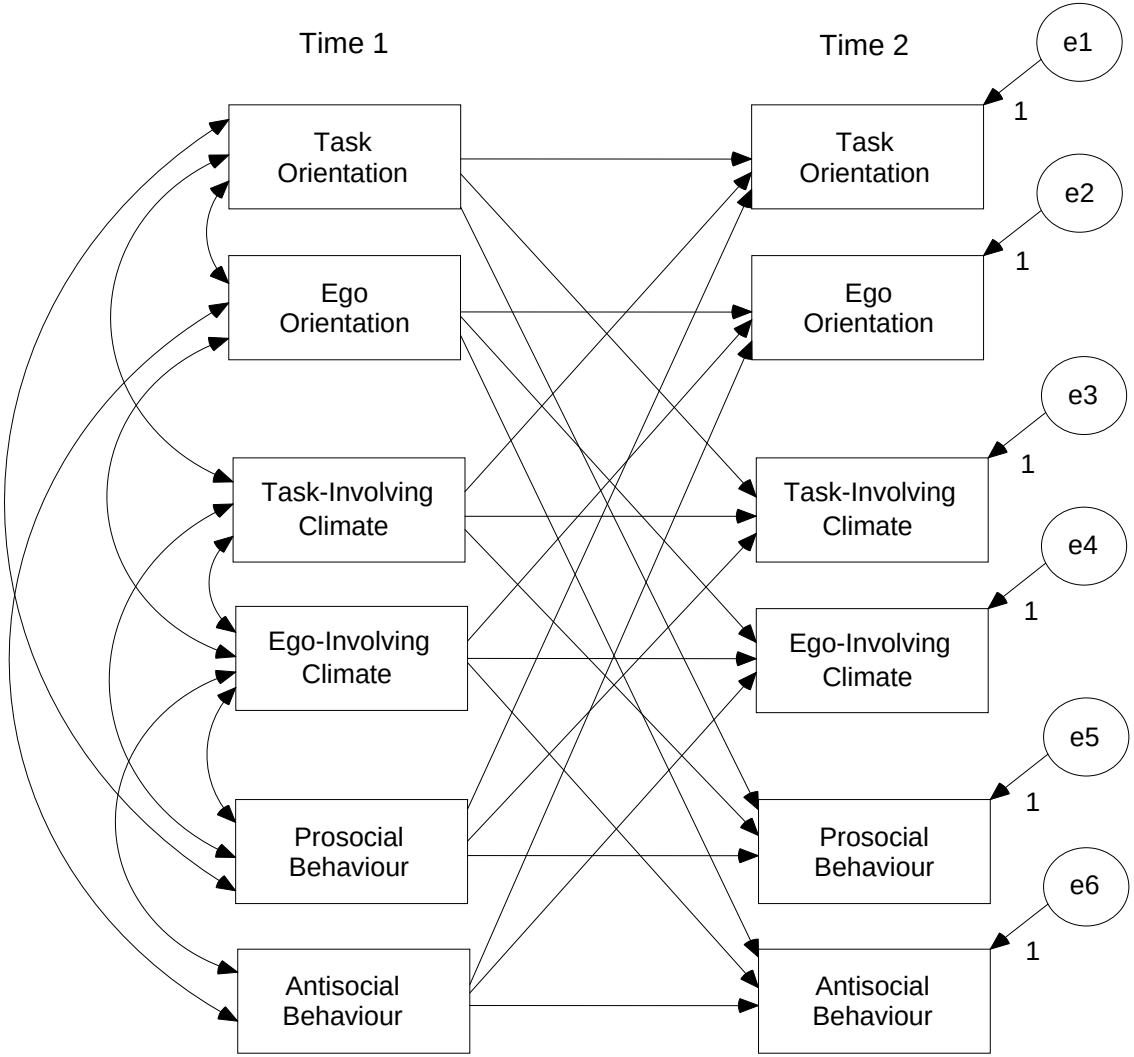
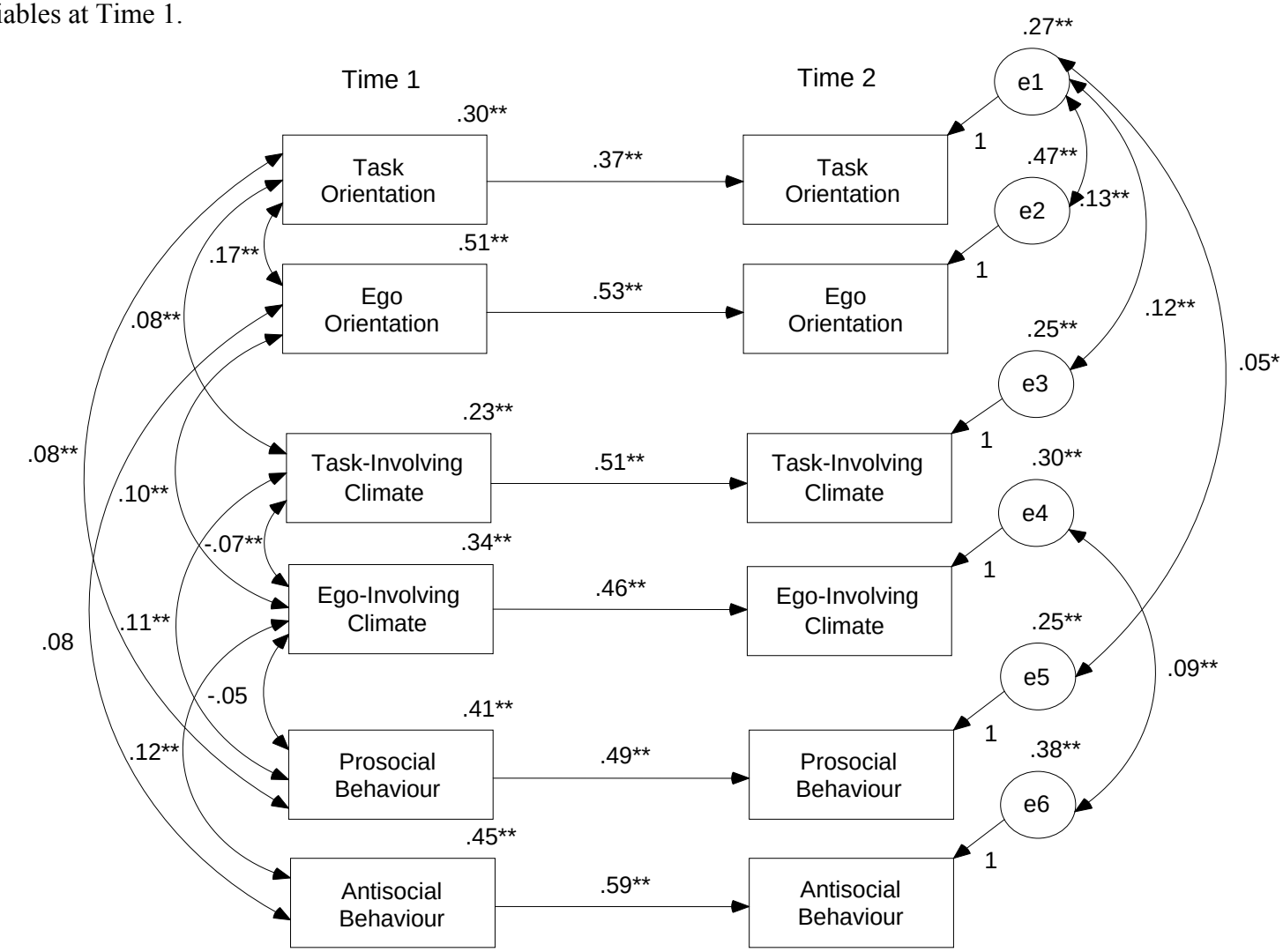
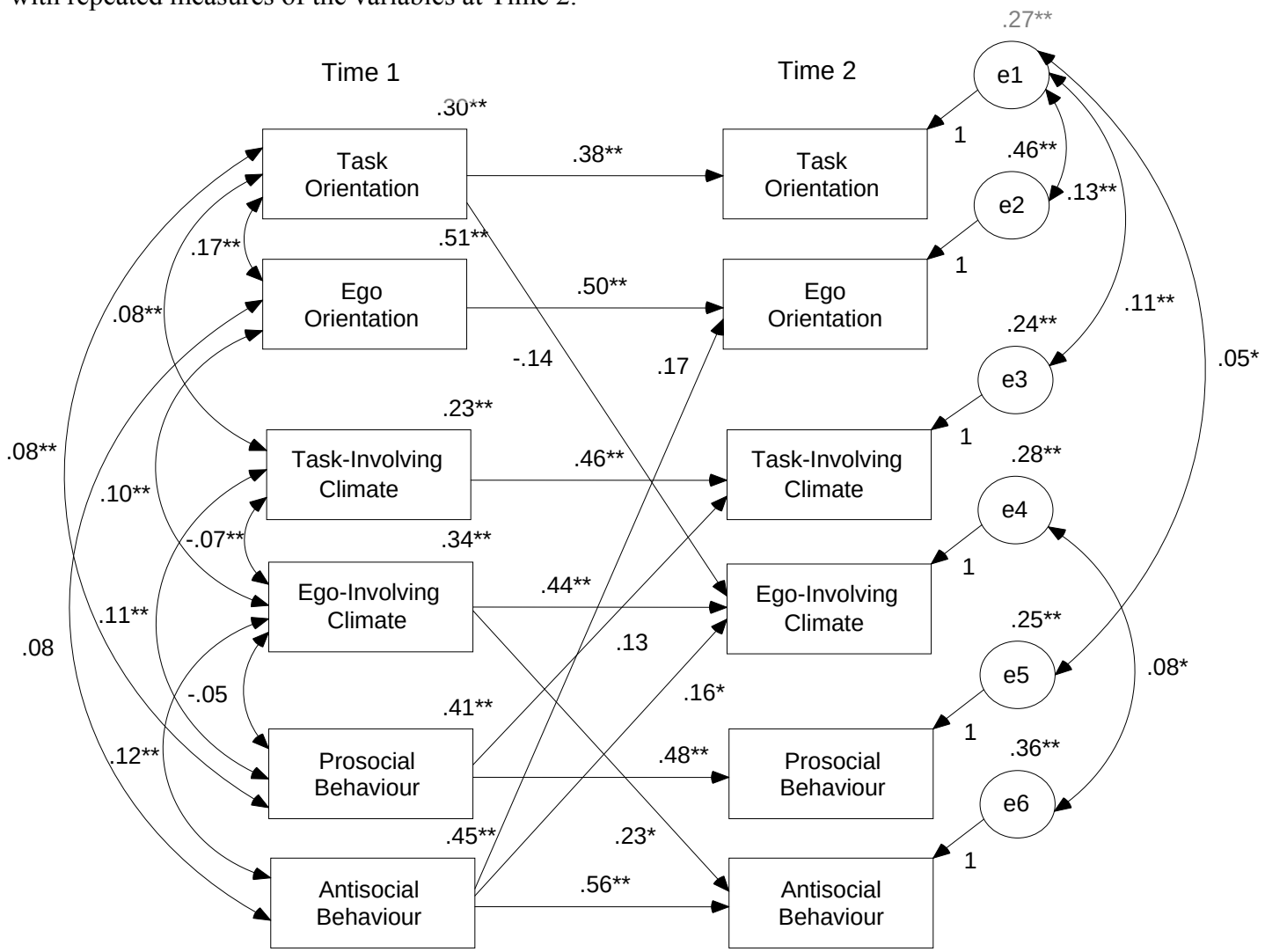


Figure 5.2. Isolated model of goal orientations, motivational climates, and moral behaviours at Time 2 autoregressed onto variables at Time 1.



Note. All parameter values are significant at the value $p < .05$. * $p < .01$, ** $p < .001$

Figure 5.3. A cross-lagged model of the relationships between goal orientations, motivational climate, and moral behaviour at Time 1 with repeated measures of the variables at Time 2.



Note. All parameter values are significant at the value $p < .05$. * $p < .01$, ** $p < .001$

Discussion

Sports motivational moral research has focused on how constructs of AGT relate to moral variables. Cross-sectional studies have identified links among goal orientations and perceptions of the motivational climate with prosocial and antisocial aspects of morality as well as the construct of sportspersonship. In spite of the empirical evidence that supports these links, the direction of the relationship between motivational and moral variables or their temporal stability, has yet to be fully investigated. In a first step towards addressing these limitations, the present study utilised a longitudinal design. Path analysis was employed to assess isolated and cross-lagged models between personal, environmental and behavioural variables measured at two time points. The first purpose was to investigate the stability of motivational (task orientation, ego orientation, perceived task-involving and ego-involving climates) and moral variables (prosocial and antisocial behaviour) across a youth football season. The second purpose was to investigate the reciprocal effects between the variables over the course of a season.

Isolated Stability Model

Findings revealed moderate temporal stability for the goal orientations, perceived motivational climates, and moral behaviours, as represented by Model 1 (Figure 5.2). Confirmation of the similarity between all the variables in Time 1 with their respective variables in Time 2 was established by subsequent analyses, which revealed that only the perceived task-involving climate declined across the season. Hypotheses predicted instability in moral behaviour and were therefore not supported.

The finding of a decline in the perception of a task-involving climate may be accounted for by less emphasis on this motivational climate at Time 2. Perceptions may change from a task-involving climate at the start of the season to a reduced focus on task-

involving cues at the end of the season when the importance placed on outcomes can increase with the deciding of promotion, relegation, and championship places. A further possibility is an actual decrease in the amount of task-involving information expressed by the coach or a reduction in the players' attention on their coaches' comments pertaining to learning and skill mastery. These explanations may be attributed to waning enthusiasm for teaching or learning as the season draws to an end with lethargy replacing the effort and enthusiasm that is generally present at the beginning of the season.

A decrease in perceptions of a task-involving climate may result in less adaptive patterns of behaviour (Ames, 1992), if this trend is indeed symptomatic of youth football. A declining emphasis on learning and skill mastery may cause some players to gradually lose interest over the season and may even lead to decisions to withdraw from the sport (e.g., Sarrazin, Vallerand , Guillet, Pelletier, & Cury, 2002). It is important to identify and explain such trends to practitioners of sport. Strategies can then be implemented that maintain an emphasis on self-referenced learning and skill mastery in order to prevent any maladaptive consequences that may prevail when the emphasis on a task-involving climate is low.

Expectations of an overall decrease in prosocial behaviour and increase in antisocial behaviour over the season were largely based on the findings of Vallerand and Losier (1994). Despite similarities in the samples (i.e., age), the present study included more than twice as many participants, incorporated female participants, and used football rather than ice hockey players. The number of participants increased the power of the statistics. Females have been shown to be higher in levels of morality than males (e.g., Bredemeier, 1994; Duda et al., 1991; Kavussanu & Roberts, 2001; Lemyre et al., 2002). Moreover, sports have also been shown to differ in various aspects of morality (Bredemeier et al., 1986; Conroy et al., 2001; Kavussanu & Ntoumanis, 2003), which may extend to fluctuations in moral behaviour across

the season. For example, aggression is an inherent part of ice hockey that may become more prevalent and hostile as the cost of winning and losing increases at the end of the season. In semi-contact sports such as football, the early penalisation of aggression may stabilise these behaviours over the season. Any of these differences in the samples may have influenced the diversity of findings between the two studies.

Other discrepancies between the studies lie in the measures. Firstly, whilst Vallerand and Losier (1994) consider intrinsic and extrinsic motivation from the perspective of Self-Determination Theory (Deci & Ryan, 1985), this study employed Nicholls' (1989) AGT in the assessment of motivation. Changes in intrinsic and extrinsic motivation are not necessarily correspondent with variations in task and ego orientation. Secondly, although sportspersonship orientations have similarities with aspects of morality, they also differ from prosocial and antisocial behaviour. Despite including some prosocial and antisocial items, sportspersonship focuses on respect for conventions, opponents, commitment, and rules and officials, rather than exclusively tapping behaviours that are beneficial or a hindrance to others. A further difference is that the sportspersonship scale measures orientations towards behaviours while the prosocial and antisocial instruments assess frequencies in behaviour. Thus, sampling and measurement issues may have led to contrasting findings. In this study, motivation and moral behaviour remained moderately constant over the youth football season.

The simultaneous stability in goal orientations, an ego-involving climate, and moral behaviour may have been coincidental but it is suggested that they could be linked over time, if only indirectly. Personnel, such as the coach and team-mates, tends to remain constant over the season and their collective influence on the expression of goal orientations, an ego-involving climate and moral behaviour is also expected to be constant. From a developmental perspective, any changes in moral behaviour or motivation of youth footballers may occur

from one season to the next, rather than during the season itself. At youth levels, and particularly school teams, coaches tend to stay with the same age groups and football players can experience a different coach each season or year. Further, player transfers often take place between seasons. Thus, stability of motivation and behaviour within the season may be attributed to consistency in personnel, compared to the changes in players, coaches etc. from one season to the next.

Cross-lagged Model

Model 2b identified five cross-lagged parameters that improved the fit indices from the hypothesised Model 2a. Prosocial behaviour at Time 1 positively predicted a perceived task-involving climate at Time 2. Antisocial behaviour at Time 1 predicted both ego orientation and perceived ego-involving climate at Time 2. Further, in the only indication of a reciprocal relationship, perceived ego-involving climate at Time 1 positively predicted antisocial behaviour at Time 2. Finally, task orientation at Time 1 negatively predicted perceived ego-involving climate at Time 2. In spite of the differences with the hypothesised model, the identified parameters were suitably nested within the theoretical and empirical evidence provided.

The first of the identified free parameters corresponded to a temporal relationship between prosocial behaviour and a task-involving climate. The association between a task-involving climate and positive aspects of morality is supported by past research with sportspersonship (Miller et al., 2004; Gano-Overway et al., 2005); longitudinal links with prosocial behaviour expand on this work. In addition, rather than the motivational climate predicting morality, the reverse was explored in this study with prosocial behaviours at Time 1 positively predicting the perception of a task-involving climate at Time 2. The link from behaviour to the environment was theoretically proposed by Bandura (1999) but not without a

reciprocal relationship in the reverse direction. In this sample, it appears that prosocial behaviours at the start of a season predict perceptions of an emphasis on learning, skill mastery, and individual improvement towards the end of a youth football season. It seems that when prosocial behaviour is evident, perceptions of the environment may adjust over time to focus on similar proactive behaviours such as the sharing of knowledge and other forms of cooperation that support learning and personal development.

The second significant cross-lagged parameter concerns the temporal link between antisocial behaviour and ego orientation. There are several studies that predict antisocial behaviour from ego orientation (Kavussanu, 2006; Kavussanu & Roberts, 2001; Sage & Kavussanu, 2004; Sage et al., 2006) but the current finding is the first exploration of a reverse effect with antisocial behaviour at the start of a season predicting ego orientation at the end of a season. Antisocial behaviour may initiate the resentment and rivalry that eventually predicts the win at all cost approach that is characteristic of ego orientation. Disadvantaging team-mates or opponents could result in the instigator of antisocial behaviours outperforming their rivals. Experiencing victory may then motivate the athlete to continue to strive for superiority over others.

The next two parameters correspond to the only finding of a reciprocal relationship, which was revealed between antisocial behaviour and an ego-involving climate. The existence of a bidirectional relationship is an important finding that supports the link between behavioural and environmental variables in Bandura's social cognitive theory (1986, 1999). Relationships between an ego-involving climate and antisocial aspects of morality are supported by past research (e.g., Ommundsen et al., 2003; Kavussanu, 2006; Kavussanu & Spray, 2006). Previous cross-sectional studies have investigated the relationship from the perspective of perceptions of the environment predicting behaviour. The present findings

extend the relationship from motivational climate to moral behaviour by identifying the association between an ego-involving climate and antisocial behaviour over the course of a season. Further, this study indicates that a two-way process may exist whereby antisocial behaviour at the start of a season predicts the perception of an ego-involving climate towards the end of a season. Thus, as well as a perceived emphasis on rivalry and superiority over opponents and team-mates predicting behaviours that disadvantage others, the reverse may also be true over time. Thus, antisocial behaviour could prompt athletes to attend to the rivalry that exists in the sport and this focus subsequently leads to further acts of immorality.

The last parameter that is included in the final model is task orientation at the start of a season negatively predicting a perceived ego-involving climate at the end of a season. Although not included in the hypothesised model, the modification indices revealed that freeing this parameter would significantly improve the fit indices; this finding is not entirely unexpected. It is suggested that a focus on learning and improvement from a self-referenced perspective could divert a player's perceptions away from a coach's focus on rivalry and superiority. Over time task orientated individuals could undermine any emphasis on outperforming others by disregarding the communications of an ego-involving climate. The indifference of task orientated players to an ego-involving climate may even shape the coach so that any stress on superiority and rivalry may decrease over the season.

Despite similarities between the findings from the cross-lagged model and past research, not all the hypothesised relationships were identified. The only link between the goal orientations and motivational climate was a negative path from task orientation to an ego-involving climate. None of the variables predicted prosocial behaviour and only one reciprocal relationship emerged. The lack of findings could be due to a number of reasons. Firstly, the predictions made in the hypothesised model (Figure 5.1) were based on all the

possible relationships between the variables found in various cross-sectional studies. It was unlikely that these findings would be replicated exactly in the limited sample of the present longitudinal study. Secondly, many of the variables included in previous research differed from the ones used in this study. Thirdly, the rigorous statistical procedures, which controlled for covariances between all the variables, may have suppressed relationships that have emerged from less conservative means of analysis. Given that error laden composite variables were used and autoregression values were included in Model 2, it is reasonable that there were so few cross-lagged paths and all with low coefficients (see Hertzog & Nesselroade, 1987; MacCallum & Browne, 1993). Finally, this was a first attempt to explore reciprocal relationships between variables that had previously only been tested unidirectionally. The model of triciprocal causation between personal, environmental and behavioural variables is a general theory that remains untested in any domain. Thus, there was only a small likelihood that *all* the specified parameters would remain in the final model, especially within a specialised context such as sport.

Although this study only partially supported the hypotheses, it represents an important longitudinal exploration of the relationships between motivational and moral variables. Expected paths from moral behaviour to motivational variables and the presence of a reciprocal relationship between antisocial behaviour and an ego-involving climate were confirmed in a sample of youth footballers. Coupled with past research, these findings indicate the possibility of bidirectional relationships in a holistic model of motivation and morality. The present study extends previous work by including constructs of AGT, prosocial and antisocial behaviour in an exploration of their interrelationships over a youth football season. In addition to the possibilities that this study offers for future research, there are practical implications for promoting prosocial behaviour, task orientation and a task-involving

climate, while suppressing antisocial behaviour, ego orientation and an ego-involving climate. This study indicates that interventions aimed at both moral behaviour and motivational processes could have reciprocal benefits that would improve their effectiveness over time.

Limitations of the Study and Directions for Future Research

The general nature of the theoretical backdrop used in this study (e.g., Bandura, 1986, 1999; Eisenberg, 1986), coupled with a scarcity of longitudinal designs in motivational and moral research, led to a broad hypothetical model which was later modified and interpreted accordingly. Although common in the literature, respecification of the parameters sacrifices control over Type I error and can lead to situations in which idiosyncrasies of the data should not be interpreted as reliable (MacCallum et al., 1992). Also, including error covariances and additional parameters further increases the likelihood of capitalisation on chance. In order to substantiate the findings of this study, the model requires cross-validation with similar samples. Further, broadening participants to include more females and using a greater range of age groups and sports would increase the generalizability of the current findings.

Another ideal direction for future research would be to increase the number of sampling time points. Repeating measurements three or four times, across two or three seasons, would represent a more reliable means of assessment that should reveal the true nature of the interrelationships between the variables. In addition, detailed explanations of the processes that account for links between the variables can only be achieved from studies over longer time frames and with large enough sample sizes to include a range of latent variables. Theory proposes potential mediating variables between behaviour and personal characteristics (Eisenberg, 1986). Thus, including behavioural consequences such as affective and emotional responses could explain additional variance in paths from moral behaviours to goal orientations.

Finally, the method of analysis undertaken in this study restricts the interpretation of findings to an individual level. With football being a team sport, it would also be useful to analyse the data on a team basis. Multilevel analyses allow researchers to explore both team and individual effects in a hierarchical model (see Snijders & Bosker, 1999). Thus, while individual analysis of motivational variables may not predict moral behaviour, the collective effect of individuals' perceptions of the motivational climate at a team level could well reveal significant predictions on the teams' prosocial or antisocial behaviour. Future research exploring individual and team effects is strongly encouraged.

Conclusion

The present study revealed temporal stability of goal orientations, motivational climate, and moral behaviour over a regular youth football season. This stability is ideal when prosocial behaviour is high and antisocial behaviour low, however, with concerns over high levels of antisocial behaviour in sport, changes may need implementing. In a second cross-lagged model, there was only one significant path from early season motivational variables to moral behaviour at the end of the season. However, three paths were revealed from early season moral behaviour to late season motivational variables. Overall, paths between moral behaviour and the motivational climate were more prevalent than any links with motivational goal orientations. The exploratory nature of this study means findings should be interpreted with caution and further research is encouraged that challenges the present models. Future work can help establish the validity of social cognitive theory and provide useful direction for sport practitioners.

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CHAPTER 6

General Discussion

The purpose of the four studies that make up this thesis was to advance the understanding of the links between achievement motivation and the dual aspects of morality in sport, particularly football. Study 1 investigated the main and interaction effects of task orientation, ego orientation and moral identity on prosocial and antisocial judgement and behaviour. Study 2 included social goal orientations with task and ego orientation in predicting prosocial and antisocial behaviour. Study 3 experimentally examined the effect of task and ego involvement on observed prosocial and antisocial behaviour. Finally, Study 4 explored the temporal and reciprocal relationships between task and ego orientations, task and ego-involving climates, and prosocial and antisocial behaviours. The following discussion presents the key findings of these studies, their theoretical implications, practical applications, and suggests directions for future research.

Overview of Findings

The results revealed that moral identity, dispositional, situational, and environmental motivational variables all predicted prosocial and/or antisocial moral variables. Collectively, the four studies support positive links between the prosocial dimension of morality and social recognition (Study 2), task orientation (Studies 1 and 2), task involvement (Study 3) and a task-involving climate (Study 4). In contrast, the antisocial dimension of morality was consistently and positively linked with ego orientation (Studies 1, 2 & 4), ego involvement (Study 3), an ego-involving climate (Study 4), and social status orientation (Study 2). Finally, moral identity was negatively linked to antisocial judgement and behaviour. With the exception of the prediction of prosocial behaviour from social affiliation and status

orientations (Study 2), the links between the antisocial dimension of morality, moral identity and motivational constructs were stronger than the links to the prosocial dimension.

The findings confirm the presence of dual aspects of morality. Although a response bias is likely when assessing morality, manifested by participants scoring themselves favourably on the self-reported moral measures, the mean frequency of reported prosocial behaviours was higher than antisocial behaviour in Studies 1, 2, and 4. In support, over the there conditions of Study 3, more prosocial behaviours were observed than antisocial behaviours. Weak correlations between the prosocial and antisocial dimensions suggest that being high in one dimension will not necessarily mean a low score in the other dimension. In the past, however, researchers have inferred high levels of morality from low scores on antisocial measures and have overlooked the prosocial aspects of morality (e.g., Kavussanu & Roberts, 2001; Kavussanu & Ntoumanis, 2003; Kavussanu & Spray, 2006; Ommundsen et al., 2003). Essentially, high levels of morality are reflected by high levels on the prosocial dimension with simultaneously low levels on the antisocial dimension.

The importance of considering both aspects of morality is highlighted by differences in the predictors of prosocial and antisocial variables and the consistency of these predictors. For example, over the four studies, the antisocial variables were predicted by the ego constructs of AGT, along with moral identity, social status, football experience, and competitive level. In contrast, prosocial judgement in Study 1 was predicted by an interaction between task and ego orientation. Prosocial behaviour was predicted by task orientation in Study 2 but not in Studies 1 or 4. Study 2 also revealed significant predictions of prosocial behaviour from social affiliation and status orientations. Finally, task involvement only predicted prosocial variables when the competitive situation had ceased in Study 3. Of all the variables included in the four studies, social status was the only one that clearly predicted

both prosocial and antisocial aspects of morality[1]. Findings suggest that these predictor variables may not be consistent across samples and situations, especially for the prosocial dimension. Although both dimensions of morality are prevalent in football, prosocial behaviour appears to be more complex. Thus, in order to fully understand all the predictors of morality, prosocial and antisocial aspects require investigation and comparison across a variety of samples and situations.

Predicting Prosocial Variables

Of the two dimensions of morality, prosocial variables proved to be less predictable by the variables of achievement motivation and moral identity. Compared to the antisocial dimension fewer and less consistent predictions were made for the prosocial dimension. No predictors were found for adults' prosocial behaviour in Study 1 and whilst repeated testing of task orientation revealed it to be a predictor of youths' prosocial behaviour in Study 2, this relationship was not extended over time. In Study 4, early season task orientation failed to predict late season prosocial behaviour. Inconsistency in the relationship between motivational and prosocial variables is supported by Study 3. Although experimental condition had no effect on prosocial behaviour observed during game play, participants in the task-involving condition scored significantly higher than participants in the ego-involving and control conditions on a prosocial behaviour measure (i.e., prosocial choice) taken immediately after competition. Discrepancy in the findings between Studies 1 and 2 could be partly attributed to differences in the sample. Overall, however, irregularities in predicting prosocial behaviour can largely be explained by the nature of this aspect of morality and its sensitivity to situational factors.

[1] Although task orientation predicted both prosocial and antisocial behaviour in Study 2, these findings were not replicated and the prediction of antisocial behaviour was non-significant when social goals were entered into the regression equation first.

Sport is an inherently competitive context where engaging in behaviours that benefit others may at times contradict a purpose to outscore an opponent. Limited opportunities for prosocial behaviour require pro-activity on behalf of athletes to initiate such actions. Helping out team-mates is understandable but assisting opponents can go against one's self-interest and may be moderated by any number of individual differences. Prosocial behaviours towards opponents could also be moderated by any number of situational factors that may need to prevail over motivational forces for prosocial behaviour to occur. For example, the score, importance of the game, behaviours of the opposition, referee and supporters, or the moral atmosphere of each game could all influence the likelihood of prosocial activity. When every game is so unique any interactions with a number of individual characteristics becomes complex. As well as goals and values, temporary affective states (i.e., moods), temperamental sociability, shyness, social competence, assertiveness, dominance, self-esteem, regulation, and emotionality have all been identified as personal antecedents of prosocial behaviour (see Eisenberg & Fabes, 1998 for review). Thus, predicting pro-active behaviours that are in opposition to the competitive nature of sport may require a greater appreciation of situational, environmental, and individual difference variables that in combination may temporarily override typical achievement behaviours.

Despite the seemingly inconsistent nature of prosocial judgements and behaviours the overall trends observed in the present studies concur with past research. Links between task orientation and prosocial behaviour (Study 2) have recently been replicated (Kavussanu, 2006) in a similar sample of youth footballers. A task-involving climate has also been shown to positively predict prosocial behaviour (Kavussanu, 2006) and as goal involvement is a product of dispositional goals and motivational climate, there is some support for the finding that task involvement influenced prosocial choices in Study 3. Identified positive relationships

between sportspersonship, task orientation and a task-involving climate (e.g., Dunn & Causgrove-Dunn, 1999; Lemyre et al., 2002; Miller et al., 2004; Ommundsen et al., 2003) provide additional backing for links connecting positive dimensions of morality with task constructs of AGT.

Findings of differences in prosocial behaviour between the sexes also supports past research. Females engaged in more prosocial behaviours than males (Study 3) and this confirms previous work on sex differences in morality (e.g., Bredemeier, 1994; Duda et al., 1991; Kavussanu & Roberts, 2001; Kleiber & Roberts, 1981). Further, suggestions that sex differences in moral variables were due to differences in dispositional goals between males and females (e.g., Duda et al., 1991; Kavussanu & Roberts, 2001) were partially supported by a drop in sex effects after controlling for task and ego orientation. Sex differences, however, were not identified in Studies 2 and 4; this could be attributed to characteristics of football and its female participants. British football is traditionally male dominated and there is a possibility that youth females who are socialised into this sport are higher than average in levels of masculinity. Gender differences in levels of masculinity and femininity have yet to be investigated in sports moral research but could prove decisive factors in explaining sex effects on prosocial aspects of morality.

The complexity of prosocial variables is further substantiated by their relationship with multiple goal orientations, potential moderators, and an interaction effect between task and ego orientation. Main effects in the prediction of prosocial behaviour emerged for task, social affiliation and social status orientation (Study 2). Besides being moderately predicted by three goal orientations, social goals are dependent on the values of others (Urdan & Maehr, 1995). The potential moderating effects of significant others on social goals could explain additional variance in prosocial behaviour but would further complicate the nature of the

relationships between prosocial variables and their predictors. The one moderating effect that was identified by this research was that of ego orientation on task orientation in the prediction of prosocial judgement (Study 1). Task only predicted prosocial judgements at low levels of ego orientation. Assessing the relative effects of goal orientations from their mean values could conceal the true nature of their relationship with morality. Exploring moderating variables across a full range of values can therefore be crucial to revealing the full intricacies of prosocial variables in sport. These findings on goal orientations are unique in sports moral research and continuing the exploration of multiple goals and their interaction could help in future predictions of prosocial judgements and behaviour.

Predicting Antisocial Variables

A clear pattern emerges in the prediction of antisocial moral variables. Ego orientation (Studies 1 and 2), social status (Study 2), ego involvement (Study 3), and an ego-involving climate (Study 4) were all positively related to antisocial behaviour. Ego orientation also positively predicted antisocial judgement, whilst moral identity negatively predicted antisocial judgement and behaviour (Study 1). The relationships established in Studies 1, 2, and 4 were strengthened by the experimental design of Study 3. Thus, dispositional, environmental, and situational measures of achievement motivation all indicate positive associations between the ego dimensions and antisocial aspects of morality.

The findings from the four studies concur with past work whilst expanding in some key areas of sports moral research. Nicholls' (1989) only theoretical offering on achievement motivation and morality was his reference to an ego orientation being linked to a lack of concern for justice, fairness, and welfare of competitors. This is certainly consistent with the present research and previous work (e.g., Duda et al., 1991; Kavussanu, 2006; Kavussanu & Roberts, 2001; Stuntz & Weiss, 2003). The additional finding of a link between antisocial

behaviour and social status infers that Nicholls' comment on morality may need extending to include a social aspect. Research has further strengthened moral links to achievement motivation by identifying an ego-involving climate as a predictor of antisocial behaviours (e.g., Study 4; Kavussanu, 2006; Kavussanu & Ntoumanis, 2003; Ommundsen et al., 2003) and this relationship appears to exist across a season.

Prior to the current experimental work, there was a void in the literature regarding situational motivational involvement. As goal orientations and motivational climate are proposed to interact to determine goal involvement (Ames, 1992; Nicholls, 1989), the manipulation of goal involvement whilst observing the resulting moral behaviour confirmed the effect of ego aspects of motivation on actual antisocial behaviour. Identifying the situational motivation at the time of observed antisocial behaviour represents an important progression in accurately determining the precise causes of morality.

A further key finding was the reciprocal relationship between motivation and antisocial behaviour. Previously, motivational variables had only been explored as antecedents of moral behaviour but by integrating Bandura's model of triciprocal interaction (1999) into a longitudinal design, antisocial behaviour was shown to predict both individual and environmental characteristics of motivation (Study 4). A reciprocal relationship between an ego-involving climate and antisocial behaviour, however, was not replicated with ego orientation. For the junior footballers sampled in Study 4, an ego-involving climate appears to be more closely linked to antisocial behaviour than ego orientation over the course of a season. Thus, the effect of early season antisocial behaviour and an ego-involving climate on late season antisocial behaviour may have dominated over any long term effects of the dispositional ego orientation. Further longitudinal work with these variables is needed to confirm the interrelationships found in Study 4.

A final finding of note concerns the prediction of antisocial behaviour from the self-reported importance of moral identity. Based on past work (Aquino & Reed, 2002; Reed & Aquino, 2003), moral identity was expected to be linked with the proactive or prosocial aspect of morality. In adult footballers, however, moral identity appears to be associated with the inhibitive aspect of morality. Negative links with antisocial judgement and behaviour suggest that footballers who place a high importance on morality and consider it central to their identity are more likely to refrain from behaviours that cause harm to others and judge such acts as inappropriate. As previous work on moral identity has only provided opportunities to engage in proactive morality (Aquino & Reed, 2002; Reed & Aquino, 2003), comparisons with the results of Study 1 on antisocial behaviour are limited. These preliminary links to both antisocial thought and action provide initial evidence of how placing a high importance on moral identity could help prevent harmful behaviours to others.

Theoretical Implications

Based on the current literature and the four studies of this thesis, it is possible to make several inferences relating to theory. Firstly, the duality of morality proposed by Bandura (1999) is unequivocally supported. Distinct aspects of morality are evident by the weak relationship between prosocial and antisocial variables and the fact that they are each predicted by separate profiles of motivational variables. Researchers should consider both proactive and inhibitive aspects before reflecting on levels of morality. In addition, theoretical offerings such as Shields and Bredemeier's 12-component model (1995) should be explicit in detailing whether their framework refers to both dimensions of morality and if so, what differences one might expect between the proactive and inhibitive aspects.

The present findings also have a bearing on AGT. Identifying social goal predictors of behaviour in the achievement context of competitive football (Study 2) supports theoretical

expectations of achievement goal theorists (e.g., Nicholls, 1989). As was first suggested by Maehr and Nicholls (1980), social goals can also be included within AGT as predictors of behaviour. Across two separate studies, social goals have been shown to predict moral variables over and above the contribution of task and ego orientations (Study 2; Stuntz & Weiss, 2003). The strong links of task and ego orientation with the concept of ability may undermine the relative effects of social goals when predicting performance variables in achievement contexts. Morality, however, is largely independent of ability and social goals therefore appear to be more effective in predicting these non-performance variables.

Adding to the number of goal orientations that are present in predicting moral variables increases the number of potential interactions between each other and with the motivational climate. Although an interaction in Study 1 supports suggestion of their presence in moral matters (Hardy, 1998), these findings (Studies 1 and 2), and those of other studies (e.g., Kavussanu, 2006), offer limited evidence of goal interactions. It appears that effects of goal orientations are largely independent of each other. Interactions, however, are notoriously hard to detect in cross-sectional studies (Chaplin, 1991; Cohen et al., 2003). It is possible that other interactions exist but are small in magnitude. Consequently, examining goal interactions using larger samples is warranted. Other interactions that require thorough investigation are those proposed between personal and social environmental factors (Duda, 2001). Although achievement goal theorists fail to explain when and how goal orientations and motivational climate interact (Duda, 2001), approaches that consider interactions between personal and environmental factors have been encouraged (Duda, 2001; Swain & Harwood, 1995; Treasure, 2001), and should continue to be so.

The product of an interaction between goal orientations and motivational climate is goal involvement and Study 3 provides important confirmation of its links to moral variables.

Even though Nicholls' (1989) AGT centres on task and ego involvement, all the previous work in sports moral research has focused on dispositional goal orientations and perceptions of the motivational climate. As well as confirming the influence of task and ego involvement on prosocial and antisocial behaviour, initial findings suggest that situational motivation may well be a better predictor of moral behaviour than goal orientations. This is in line with theory that identifies goal involvement as the direct regulator of behaviour in a given achievement context (Elliot, 2005; Nicholls, 1989). Maximum predictions are achieved when the motivational and moral variables are measured at the same level (Vallerand, 1997). Thus, observed behaviour is best predicted by simultaneously measured situational motivation.

Finally, despite not directly testing for the interactive effects of personal and environmental factors, their simultaneous inclusion in Study 4 offers partial support for the interactional approach of social cognitive theory. AGT is a social cognitive theory because of its appreciation of both personal and environmental influences on behaviour. The present findings largely support previous studies (e.g., Kavussanu, 2006) that reveal goal orientations and motivational climate as predictors of moral behaviour. In Study 4, however, the link from goal orientations to moral behaviour did not appear to hold over time. Interestingly, the early season behaviours were better predictors of late season motivational variables when compared to the other way around. The direction of the influence between behavioural, personal and environmental variables has not been addressed by the research but notable social cognitive theories indicate paths from behaviour back to its antecedents (e.g., Bandura, 1999; Eisenberg, 1986). The reciprocal nature of the relationships between behavioural, personal and environmental constructs requires further work to substantiate the bidirectional relationship revealed in Study 4. Whilst theory and research has firmly established the

presence of personal and social environmental factors in the area of morality, the next challenge is to clarify the nature of their interrelationships with moral behaviour.

Practical Applications of the Research

In accordance with the dual aspects of morality (Bandura, 1999), raising moral standards involves promoting proactive or prosocial action as well as strengthening the inhibitive aspect, reflected by a lack of antisocial behaviour. Due to the uniqueness of each dimension of morality, both need addressing by sport practitioners in order to promote behaviours that benefit others and minimise behaviours that disadvantage or harm others. Consequences of increasing levels of morality include prevention of injury, suspension and financial penalties, or from another perspective, facilitate a focus on learning, cooperation, and improving performance. Thus, all the findings of the present research on prosocial and antisocial variables have important practical implications in the quest for increasing moral standards and reaffirming the old adage that sport builds character.

The first area for improvement is in prosocial behaviour. Although prosocial behaviour was found to be somewhat inconsistent there is still enough evidence to suggest that interventions designed to manipulate achievement motivation will enhance this aspect of morality. By emphasising a task-involving climate, coaches, parents, peers or sports governing bodies are more likely to adopt a task orientation and resultant task involvement. Findings from Studies 1, 2, and 3 coupled with past research (e.g., Kavussanu, 2006) indicate that the task constructs of AGT should increase the likelihood of prosocial functioning. Coaches could therefore design practice sessions that focus on skill development and improvement from an individual perspective. Setting challenging exercises that are novel and interesting can help maintain an emphasis on learning. This focus on learning should lead to

prosocial behaviours such as cooperation, peer encouragement and helping among team-mates.

Another suggested intervention to improve on prosocial behaviour is the satisfaction of social goals. Study 2 showed a positive link between social affiliation orientation and prosocial behaviour. Youth footballers should therefore be supported in developing and maintaining relationships within and out-with their respective clubs and teams. Opportunities can be provided to build social bonds before, during, and after practices and matches as well as at organised social events. As social status orientations were found to negatively relate to prosocial behaviour, hierarchies of social strata should be minimised amongst peers and cliques should be avoided. Team building activities that include moral principles of equity are an ideal starting point. Developing relationships based on trust, honesty, respect, empathy, responsibility, cooperation and equality should help foster prosocial development in both youth sport and life contexts.

Sporting governing bodies can educate coaches beyond creating task-involving climates to take responsibility for supporting prosocial behaviours and disseminating moral standards to athletes, parents, supporters, and so forth. The Fédération Internationale de Football Association's fair play programme (1994) and the charter of the International Olympic Committee (2004) are initiatives that actively support the humanitarian aspects of sport. Using appropriate models of how sport can be a medium for the development of athletic and human potential, coaching foundations should continue to raise awareness of moral issues. Study 4 indicates that over time prosocial behaviour has a positive association with perceptions of a task-involving climate. An emphasis on prosocial behaviour could be extended to helping others out with the learning of skills, through instruction and encouragement. Despite the prevalence of prosocial behaviours identified in all four studies,

there are still improvements to be made in the education and coaching of individual and social moral responsibilities (Shields et al., 2005). As well as benefiting others, prosocial behaviours and task involving climates may even buffer against the occurrence of antisocial behaviours.

Prevention of antisocial behaviour is the second key area for promoting levels of morality. With strong links to ego constructs of AGT, antisocial behaviour could be reduced by avoiding the ego-involving climates that maximise the expression of ego-orientations and lead to ego involvement. Coaches and significant others should take care not to compare athletes on ability, show favouritism, or punish athletes for their mistakes. Treating every player as equal and being consistent in how players are treated could prevent an unhealthy within-team rivalry. Social status orientation has also been positively related to antisocial behaviour. Creating a strong sense of unity within team members may help avert the in-group fractions that can lead to antisocial behaviour. Targeting achievement motivation is only part of the intervention strategies that are needed to reduce antisocial behaviour.

Competition between teams is integral to sport but any antisocial behaviour can be tempered by educating sports participants on the central importance of morality in the sporting arena. Besides stressing a focus on one's own performance, thereby diverting attention away from hindering others' performance, emphasis must also be placed on respecting opponents and officials. The importance of moral identity was negatively related to antisocial behaviour. Therefore, players' sense of identity should be strengthened towards the nine characteristics of moral identity: Generosity, helpfulness, fairness, honesty, compassion, caring, friendship, hard work and kindness. Rather than leaving athletes' moral behaviour to chance, proactive measures are required to impart the appropriate values and modes of action. To this end, several interventions have been successfully applied to physical activity contexts that have been specifically designed to improve morality in school children (e.g., Danish,

1997; Ennis, 1999; Gibbons et al., 1995; Gibbons & Ebbeck, 1997; Hellison, 1995; Solomon, 1997). Such programmes require greater public awareness, a broader audience, and more structured implementation, particularly outside the North American school system. Educating athletes on the virtues of sport can have positive implications on moral identity and subsequent reductions in antisocial behaviour.

The consequences of increasing prosocial behaviour and decreasing antisocial behaviour include both performance and experiential benefits. A cooperative, sharing, and helping environment can assist the learning that will improve skills (in sport and life), competence, performance and motivation. Prosocial sporting contexts are also more likely than antisocial environments to satisfy athletes' social needs. These benefits should result in the positive experiences that prevent drop out, with continued sport participation leading to psychological well-being (Donaldson & Ronan, 2006). In contrast, antisocial behaviour can lead to injuries, disciplinary procedures including suspension, and negative sporting experiences. Injury and suspension can both be detrimental to performance with lengthy bans potentially compromising on both team and individual performances. Repeated exposure to antisocial behaviour may lead to negative sporting experiences and dropout from sport all together. Withdrawing from sport, with all its psychological and physical benefits, may also be enforced through injury. Teaching the positive and negative aspects of sport to young athletes will not only facilitate the ease of learning but also extend any benefits over a longer period of their sporting lives. Further, as older players act as important role models to younger players the former need to be made aware of their responsibilities and repercussions of their actions. The implications of moral behaviour are wide ranging and require greater consideration from sport participants.

Limitations of the Studies and Directions for Future Research

The prime limitation of the present line of studies is the measurement of morality. Problems with the assessment of moral variables are well documented (see Bredemeier & Shields, 1998, for review). Other than the inherent shortcomings of self-report methods, the lack of a reliable measure of social desirability, and the self-serving bias that is common to moral research, other matters have arisen in Studies 1, 2, and 4 that limit conclusions, particularly on the prosocial measure.

Although the measures evolved over the course of the research, the psychometric properties of the prosocial dimension are borderline adequate. In order to overcome the limitations of previous studies that have presented a maximum of only four moral dilemmas (e.g., Bredemeier, 1994; Kavussanu & Ntoumanis, 2003; Kavussanu & Roberts, 2001; Stuntz & Weiss, 2003), a wider range of behaviours were included in the present research. Whilst the more generalised measures represent a broader assessment of antisocial and prosocial dimensions of morality, the diversity of items may have had implications on the factor structures and reliabilities of the scales. Levels of alpha increased to an adequate value in Study 4. However, there are still concerns over the results of confirmatory factor analysis in Study 2 with problems associated with the correlation of errors. Consequently, conclusions pertaining to the prosocial dimension should be interpreted with caution and the generalizability of the findings is limited.

In addition to further testing and development of the moral measures, future research should employ alternative means of assessment to identify the concurrent validity of these tests. Objective measures of morality such as those used in Study 3 and recent research (Jones et al., 2005; Kavussanu et al., 2006), provide a useful starting point for future measurement of moral variables. Direct observations of behaviour are free from self-reported bias and provide

a more accurate assessment of moral behaviour. Newly identified subtypes of prosocial behaviour (Boxer, Tisak, & Goldstein, 2004), namely proactive (i.e., intended to achieve an instrumental goal) and reactive (i.e., emitted as an emotional response to provocation), require exploration in a sporting context to test out alternative typologies that may improve factor loadings. Further refinement of the measures could also differentiate between behaviours that are directed towards team-mates and those that are aimed at opponents. Although objective measures are preferable in terms of their accuracy, self-report methods have advantages of being able to collect larger and more varied samples in quicker time. More work, therefore, is required to strengthen the psychometric properties of existing and future questionnaires.

Despite the exploration of a model of motivation and moral behaviour in Study 4, additional research is required to test proposed holistic models of morality. Studies 1, 2, and 3 have been successful in identifying isolated individual and environmental factors that are associated with morality. However, more inclusive models (e.g., Shields & Bredemeier, 1995; Eisenberg, 1986) offer a variety of antecedents and consequences of moral behaviour. Moral atmosphere is one such construct that has been widely investigated (e.g., Guivernau & Duda, 2002; Kavussanu et al., 2002; Stephens & Bredemeier, 1996; Stephens, 2000, 2001) but other factors that require further consideration include self-regulatory skills, temporary affective states, social perspective taking, or characteristics of the situation. Whilst the simultaneous assessment of all possible correlates of morality was beyond the scope of the present line of studies, future research should work towards the systematic testing of integrative models of morality.

The present line of research highlights a number of further issues that could direct work in the area of sports morality. The first issue is the need to agree on a standardised measure of morality. Comparing findings from different measures can be misleading. The

four studies of this thesis identify problems when making predictions about prosocial behaviour from findings on dimensions of sportspersonship. Exploring a prosocial subtype of sportspersonship behaviours may prove useful in unifying measures on the positive aspects of morality. For example, those behaviours that exclusively benefit others can be examined separately from acts that are responses to rules or conventions. Although individual measures reflect the views and ideas of the researcher, adapting standardised instruments may improve the validity of comparing similar studies.

A second issue relates to the advantages of using a variety of methods to collect data. Self-report, experimental, longitudinal, intervention, and qualitative studies all have their place in the empirical investigation of morality. Previously, there has been a reliance on cross-sectional designs. Studies 3 and 4 bring to light the advantages of using experimental and longitudinal designs in the study of morality in sport. Thus, subsequent work should continue to employ a diversity of techniques such as recently tried qualitative methods (Long, Pantaléon, Bruant, & d'Arripe-Longueville, 2006) and proposed interventions (Petitpas, Cornelius, Van Raalte, & Jones, 2005).

Finally, there is a need to broaden samples and variables included in moral research. The present research used only British participants, who in 3 out of the 4 studies were football players. Study 1 included adult populations, which is rare in a research area that needs to investigate levels of morality across a greater diversity of cultures, sports, and ages. Another suggestion is to investigate other constructs that have been theoretically linked to morality. Findings for moral identity in Study 1, social goals in Study 2, and goal involvement in Study 3 reveal new predictors of morality. Researchers are encouraged to explore proposed antecedents and consequences of morality (e.g., Eisenberg, 1986; Shields & Bredemeier,

1995). Such factors need to be integrated into holistic theories that embrace both social and cognitive aspects.

Whilst still in its infancy, the area of sports moral research will continue to develop. The surge in research over the last 10 years suggests exponential growth in this area. Thus, attempts should now be made to coordinate the efforts of research groups and promote collaborative work. By challenging psychologists to work towards a common goal of establishing an applied model of moral behaviour, practitioners will be better equipped to optimise the character development potential of sport. The time has come to intensify endeavours that can help reassert the traditional purposes of sport.

Conclusion

Despite the progress that has been made in identifying predictors of moral judgements and behaviours in sport, there is a long way to go before the complex interrelationships between these sets of variables is fully understood. A popular line of study has been linking constructs of AGT with morality. The present thesis extends findings in this area by linking dual aspects of morality to multiple goal orientations and experimentally manipulated situational motivation. In addition, a longitudinal model of goal orientations, motivational climate and moral behaviour was explored. Experimental and longitudinal work should be developed further and used alongside cross sectional studies to establish a workable model of morality in sport. Broadening investigations to include cognitive as well as behavioural measures, self-concepts such as moral identity, and both situational and general aspects of morality, can advance knowledge of the factors involved in moral behaviour. Findings such as those in the present studies can then be used in applied work, with the aim of facilitating character development in sport.

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APPENDICES

Appendix 1: Study Questionnaires

1a) Perception of Success Questionnaire (POSQ; Roberts, Treasure, & Balague, 1998)
1b) The internalisation dimension of the self-importance of moral identity scale (Aquino & Reed, 2002)
1c) Prosocial and antisocial judgements in football questionnaire (Sage, Kavussanu, & Duda, 2006)
1d) Prosocial and antisocial behaviours in football questionnaire (Sage, Kavussanu, & Duda, 2006)
1e) Shortened version of the Marlowe-Crowne social desirability scale (Crowne & Marlowe, 1960)

1f) Social Motivational Orientation Scale for Sport (SMOSS; Allen, 2003)
1g) Prosocial and antisocial behaviours in football questionnaire – 2 (Sage & Kavussanu, present thesis – Chapter 3)

1h) Task and ego subscales of manipulation check for goal involvement (Standage, Duda, & Pensgaard, 2005)

1i) Prosocial and antisocial behaviours in football questionnaire – 3 (Sage & Kavussanu, present thesis – Chapter 5)
1j) Perceived Motivational Climate in Sport Questionnaire – 2 (PMCSQ-2; Newton, Duda, & Yin, 2000)

Appendix 1a: Perception of Success Questionnaire (POSQ; Roberts, Treasure, & Balague, 1998)

Please think about your football experience. When playing football, when do you feel most successful? Answer the following questions as honestly as possible by circling the relevant number.

When playing football I feel most successful when...	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. *I beat other people*	1	2	3	4	5
2. *I am clearly superior*	1	2	3	4	5
3. *I am the best*	1	2	3	4	5
4. *I work hard*	1	2	3	4	5
5. *I show clear personal improvement*	1	2	3	4	5
6. *I outperform my opponents*	1	2	3	4	5
7. *I accomplish something others can't do*	1	2	3	4	5
8. *I reach a goal*	1	2	3	4	5
9. *I overcome difficulties*	1	2	3	4	5
10. *I master something I couldn't do before*	1	2	3	4	5
11. *I show other people I am the best*	1	2	3	4	5
12. *I perform to the best of my ability*	1	2	3	4	5

Appendix 1b: The internalisation dimension of the self-importance of moral identity scale (Aquino & Reed, 2002)

Consider the 9 characteristics listed below...

1. Caring
2. Compassionate
3. Fair
4. Friendly
5. Generous
6. Hardworking
7. Helpful
8. Honest
9. Kind

Circle the relevant number according to how these characteristics relate to you.....	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. It would make me feel good to be a person who has these characteristics.	1	2	3	4	5
2. Being someone who has these characteristics is an important part of who I am.	1	2	3	4	5
3. Having these characteristics is not really important to me.	1	2	3	4	5
4. I would be ashamed to be a person who has these characteristics.	1	2	3	4	5
5. I strongly desire to have these characteristics.	1	2	3	4	5

Appendix 1c: Prosocial and antisocial judgements in football questionnaire (Sage, Kavussanu, & Duda, 2006)

In this section we would like to ask you about your thoughts / judgements regarding certain behaviours that are likely to occur in football. Please think about these behaviours and indicate how appropriate *you think they are in football. It is* very important *that you are completely honest in your responses. Please note that there are no right or wrong answers.*

How appropriate are these behaviours	Never appropriate	Rarely appropriate	Sometimes appropriate	Often appropriate	Very Often appropriate	Always appropriate
1. Shaking hands with the referee after the game	1	2	3	4	5	6
2. Kicking the ball out of play if an opponent is injured	1	2	3	4	5	6
3. Apologising to team-mate(s) for poor play	1	2	3	4	5	6
4. Sharing a joke with an opponent during play	1	2	3	4	5	6
5. Using bad language i.e., swearing	1	2	3	4	5	6
6. Shaking hands with the opposition after the game	1	2	3	4	5	6
7. Defending a team-mate in an argument	1	2	3	4	5	6
8. Deliberate hand-ball	1	2	3	4	5	6
9. Apologising to opponent e.g., helping off floor	1	2	3	4	5	6
10. Returning ball to opponent for a throw in, free-kick etc.	1	2	3	4	5	6
11. 'Winding-up' opposition players	1	2	3	4	5	6
12. Congratulating the opposition on good play	1	2	3	4	5	6
13. Elbowing an opposition player	1	2	3	4	5	6
14. Retaliating to a bad tackle e.g., kicking out	1	2	3	4	5	6
15. Encouraging team-mates	1	2	3	4	5	6
16. Diving to fool the referee	1	2	3	4	5	6
17. Trying to get an opponent injured	1	2	3	4	5	6
18. Socialising with opposition after the game	1	2	3	4	5	6
19. Wasting time, e.g., pretending to be injured**.**	1	2	3	4	5	6
20. Challenging the officials' decisions	1	2	3	4	5	6
21. Body-checking an opposition player	1	2	3	4	5	6

Appendix 1d: Prosocial and antisocial behaviours in football questionnaire (Sage, Kavussanu, & Duda, 2006)

Below is a list of behaviours that may occur during competitive football. Please think about the football matches that you have played this season and indicate how often you engaged in these behaviours by circling the relevant number. It is very important that you are completely honest in your responses. Please note that there are no right or wrong answers.

How often do you engage in these behaviours.....	Never	Rarely	Sometimes	Often	Very Often	Always
1. Encouraging team-mates	1	2	3	4	5	6
2. Congratulating the opposition on good play	1	2	3	4	5	6
3. Defending a team-mate in an argument	1	2	3	4	5	6
4. Trying to get an opponent injured	1	2	3	4	5	6
5. Wasting time, e.g., pretending to be injured	1	2	3	4	5	6
6. Shaking hands with the opposition after the game	1	2	3	4	5	6
7. Diving to fool the referee	1	2	3	4	5	6
8. Apologising to team-mate(s) for poor play	1	2	3	4	5	6
9. Using bad language i.e., swearing	1	2	3	4	5	6
10. Shaking hands with the referee after the game	1	2	3	4	5	6
11. Returning ball to opponent for a throw in, free-kick etc.	1	2	3	4	5	6
12. Kicking the ball out of play if an opponent is injured	1	2	3	4	5	6
13. Challenging the officials' decisions	1	2	3	4	5	6
14. Deliberate hand-ball	1	2	3	4	5	6
15. Retaliating to a bad tackle e.g., kicking out	1	2	3	4	5	6
16. Apologising to opponent e.g., helping off floor	1	2	3	4	5	6
17. Sharing a joke with an opponent during play	1	2	3	4	5	6
18. Elbowing an opposition player	1	2	3	4	5	6
19. Body-checking an opposition player	1	2	3	4	5	6
20. Socialising with opposition after the game	1	2	3	4	5	6
21. 'Winding-up' opposition players	1	2	3	4	5	6

Appendix 1e: Shortened version of the Marlowe-Crowne social desirability scale (Crowne & Marlowe, 1960)

Listed below are a number of statements concerning personal attitudes and traits. Please read each item and decide whether the statement is true or false as it relates to you personally. It is very important that you are completely honest in your responses. Please note that there are no right or wrong answers.

	True	**False**
1. I like to gossip at times	T	F
2. There have been occasions when I took advantage of someone	T	F
3. I am always willing to admit when I make a mistake	T	F
4. I always try to practice what I preach	T	F
5. I sometimes try to get even rather than forgive and forget	T	F
6. At times I have really insisted on having things my own way	T	F
7. There have been occasions when I felt like smashing things	T	F
8. I never resent being asked to return a favour	T	F
9. I have never been annoyed when people expressed ideas very different from my own	T	F
10. I have never deliberately said something to hurt someone's feelings	T	F

Appendix 1f: Social Motivational Orientation Scale for Sport (SMOSS; Allen, 2003)

Please think about when things have gone well *for you in football and circle the response that best reflects your feelings.*

I feel things have gone well in football for me when...	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Others tell me I have performed well	1	2	3	4	5
2. I make some good friends on the team	1	2	3	4	5
3. I belong to the popular group in the team	1	2	3	4	5
4. My team-mates and I have a laugh together	1	2	3	4	5
5. I am the centre of attention	1	2	3	4	5
6. I make new friends who I socialise with outside football	1	2	3	4	5
7. I have fun with others on my team	1	2	3	4	5
8. I am part of the 'in' crowd	1	2	3	4	5
9. Other players think I'm really good at football	1	2	3	4	5
10. I receive recognition from others for my accomplishments	1	2	3	4	5
11. Spending time with the other players is enjoyable	1	2	3	4	5
12. I become friends with some of the others in my team	1	2	3	4	5
13. Others are impressed by my football ability	1	2	3	4	5
14. I am one of the more popular players	1	2	3	4	5
15. Just hanging out with the other players is fun	1	2	3	4	5

Appendix 1g: Prosocial and antisocial behaviours in football questionnaire – 2 (Sage & Kavussanu, present thesis – Chapter 3)

Please think about the football matches that you have played THIS SEASON and indicate how often you engaged in these behaviours by circling the relevant number. Please be as honest as possible in your responses, there are no right or wrong answers.

Please indicate how often you engaged in the following behaviours THIS SEASON:	Never	Rarely	Some times	Often	Very Often
1. Supporting a team-mate after their poor play	1	2	3	4	5
2. Congratulating an opponent on good play	1	2	3	4	5
3. Trying to injure an opponent	1	2	3	4	5
4. Asking the referee NOT to book or send off an opponent	1	2	3	4	5
5. Diving to fool the referee	1	2	3	4	5
6. Returning ball to opponent for a throw in, free-kick	1	2	3	4	5
7. Kicking the ball out of play if an opponent is injured	1	2	3	4	5
8. Deliberately hitting or kicking an opponent	1	2	3	4	5
9. Retaliating to a bad tackle	1	2	3	4	5
10. Deliberately obstructing (i.e. body checking) an opponent	1	2	3	4	5
11. Intentionally elbowing an opponent	1	2	3	4	5
12. Apologising to an opponent after fouling them	1	2	3	4	5
13. Deliberately committing a bad tackle	1	2	3	4	5
14. 'Winding-up' an opponent	1	2	3	4	5
15. Deliberate hand-ball	1	2	3	4	5
16. Congratulating a team-mate on good play	1	2	3	4	5
17. Faking an injury	1	2	3	4	5
18. Helping an opponent off the floor	1	2	3	4	5
19. Shirt pulling	1	2	3	4	5
20. Pushing an opponent from behind	1	2	3	4	5
21. Trying to get an opponent booked	1	2	3	4	5

Appendix1h: Task and ego subscales of manipulation check for goal involvement (Standage, Duda, & Pensgaard, 2005)

In today's experiement.....	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The focus was on improving at the task	5	4	3	2	1
Winning was emphasised	5	4	3	2	1
Trying hard to improve was important	5	4	3	2	1
Doing better than other students was important	5	4	3	2	1
Getting better at the skills was reinforced by the experiment	5	4	3	2	1
The experiment emphasised putting in a lot of effort	5	4	3	2	1
The focus was on being the best	5	4	3	2	1
The experiment had us focus on doing our best	5	4	3	2	1
Each individual was very aware of how much ability he or she has	5	4	3	2	1
Successful students were those who got the highest score	5	4	3	2	1
The participants felt like they were competing against each other	5	4	3	2	1
The experiment had us focus on our own performance rather than how others were doing	5	4	3	2	1
The focus was on learning the skills	5	4	3	2	1
I/we were aware of who the really good (and really poor) study participants were	5	4	3	2	1

Appendix1i: Prosocial and antisocial behaviours in football questionnaire – 3 (Sage & Kavussanu, present thesis – Chapter 5)

Please think about the football matches that you play in and indicate how often you engage in these behaviours. Please be as honest as possible in your responses, there are no right or wrong answers.

Please indicate how often you engage in the following behaviours:	Never	Rarely	Some times	Often	Very Often
1. Support a team-mate after their poor play	1	2	3	4	5
2. Congratulate an opponent on good play	1	2	3	4	5
3. Try to injure an opponent	1	2	3	4	5
4. Dive to fool the referee	1	2	3	4	5
5. Return ball to opponent for a throw in, free-kick	1	2	3	4	5
6. Kick the ball out of play if an opponent is injured	1	2	3	4	5
7. Deliberately hit or kick an opponent	1	2	3	4	5
8. Retaliate to a bad tackle	1	2	3	4	5
9. Deliberately obstruct (i.e. body check) an opponent	1	2	3	4	5
10. Intentionally elbow an opponent	1	2	3	4	5
11. Apologise to an opponent after fouling them	1	2	3	4	5
12. Deliberately commit a bad tackle	1	2	3	4	5
13. 'Wind-up' an opponent	1	2	3	4	5
14. Deliberately handle the ball	1	2	3	4	5
15. Congratulate a team-mate on good play	1	2	3	4	5
16. Fake an injury	1	2	3	4	5
17. Help an opponent off the floor	1	2	3	4	5
18. Pull an opponent's shirt	1	2	3	4	5
19. Push an opponent from behind	1	2	3	4	5
20. Help out an injured opponent	1	2	3	4	5
21. Try to get an opponent booked	1	2	3	4	5
22. Signal to players to stop game for an injured opponent	1	2	3	4	5

Appendix 1j: Perceived Motivational Climate in Sport Questionnaire – 2 (PMCSQ-2; Newton, Duda, & Yin, 2000)

Please think about how it feels to play on your team. Then read the following statements and circle the number that best represents your opinion. Please answer the questions as honestly as possible, and remember, there are no right or wrong answers.

On this football team...	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. The coach wants us to try new skills	1	2	3	4	5
2. The coach gets mad when a player makes a mistake	1	2	3	4	5
3. The coach gives most of his attention to the stars	1	2	3	4	5
4. Each player contributes in some important way	1	2	3	4	5
5. The coach believes that all of us are crucial to the success of the team	1	2	3	4	5
6. The coach praises players only when they outplay team-mates	1	2	3	4	5
7. The coach thinks only the starting players contribute to the success of the team	1	2	3	4	5
8. Players feel good when they try their best	1	2	3	4	5
9. Players are taken out of the team when they make mistakes	1	2	3	4	5
10. Players at all skill levels have an important role on the team	1	2	3	4	5
11. Players help each other learn	1	2	3	4	5
12. Players are encouraged to outplay other players	1	2	3	4	5
13. The coach has his or her favourites	1	2	3	4	5
14. The coach makes sure players improve on skills they are not good at	1	2	3	4	5
15. The coach shouts at players for messing up	1	2	3	4	5
16. Players feel successful when they improve	1	2	3	4	5

On this football team...	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
17. Only the best players get praise	1	2	3	4	5
18. Players are punished when they make a mistake	1	2	3	4	5
19. Each player has an important role	1	2	3	4	5
20. Trying hard is rewarded	1	2	3	4	5
21. The coach encourages players to help each other	1	2	3	4	5
22. The coach makes it clear who he or she thinks are the best players	1	2	3	4	5
23. Players feel good when they do better than their team-mates in a game	1	2	3	4	5
24. If you want to play in the game you must be one of the best players	1	2	3	4	5
25. The coach emphasises always trying your best	1	2	3	4	5
26. Only the 'top' players get noticed by the coach	1	2	3	4	5
27. Players are afraid to make mistakes	1	2	3	4	5
28. Players are encouraged to work on their weaknesses	1	2	3	4	5
29. The coach favours some players more than others	1	2	3	4	5
30. The focus is to improve each game / practise	1	2	3	4	5
31. The players really work together as a team	1	2	3	4	5
32. Each player feels they are an important team member	1	2	3	4	5
33. The players help each other to get better and excel	1	2	3	4	5

Appendix 2a: Original item pool for Study 1

Dear colleagues, I am refining a scale on prosocial and antisocial behaviours in association football. Please tick the category which you believe the following behaviours best represent.

PROSOCIAL Behaviours: voluntary behaviours intended to benefit another

ANTISOCIAL Behaviours: behaviours intended to disadvantage another

	Prosocial	Antisocial	Neither
1. Encouraging team-mates			
2. Congratulating the opposition on good play			
3. Trying to get an opponent injured			
4. Wasting time, e.g., pretending to be injured			
5. Shaking hands with the opposition after the game			
6. Diving to fool the referee			
7. Apologising to team-mate(s) for poor play			
8. Using bad language i.e., swearing			
9. Shaking hands with the referee after the game			
10. Returning ball to opponent for a throw in, free-kick etc			
11. Kicking the ball out of play if an opponent is injured			
12. Challenging the officials' decisions			
13. Deliberate hand-ball			
14. Retaliating to opposition's bad behaviour			
15. Apologising to opponent e.g., helping off floor			
16. Sharing a joke with an opponent during play			
17. Elbowing an opposition player			
18. Body-checking an opposition player			
19. Socialising with opposition after the game			
20. 'Winding-up' opposition players			
21. Defending a team-mate in an argument			
22. Congratulating team-mates on good play			
23. Physically intimidating an opponent			
24. Committing a late foul			
25. Thanking opponents after the game			

Appendix 2b: Original item pool for Study 2

Dear colleagues, I am refining a scale on prosocial and antisocial behaviours in association football. Please tick the category which you believe the following behaviours best represent.

PROSOCIAL Behaviours: voluntary behaviours intended to benefit another

ANTISOCIAL Behaviours: behaviours intended to disadvantage another

	Prosocial	Antisocial	Neither
1. Preventing an opponent from taking a quick restart?			
2. Congratulating an opponent on good play			
3. Trying to injure an opponent			
4. Wasting time, e.g., pretending to be injured			
5. Shaking hands with opponents after the game			
6. Diving to fool the referee			
7. Apologising to team-mate(s) for poor play			
8. Bad language directed towards others			
9. Shaking hands with officials after the game			
10. Returning ball to opponent for a throw in, free-kick etc			
11. Kicking the ball out of play if an opponent is injured			
12. Challenging the official's decisions			
13. Supporting team-mates after their poor play			
14. Retaliating to opponent's bad behaviour			
15. Apologising to opponent after committing a foul			
16. Sharing a joke with an opponent			
17. Elbowing an opponent to gain an advantage			
18. Deliberately obstructing an opponent			
19. Deliberately committing a late foul			
20. 'Winding-up' an opponent			
21. Deliberate hand-ball to gain an advantage			
22. Congratulating team-mates on good play			
23. Physically intimidating an opponent			
24. Helping an opponent off the floor			
25. Deliberately pulling an opponent's shirt			
26. Asking the referee not to book or send off an opponent			

Appendix 3a: Introductory letter to coaches (Studies1, 2, & 4)

THE UNIVERSITY OF BIRMINGHAM

Dear Coach

We are writing to you from the School of Sport and Exercise Sciences at the University of Birmingham where a group of students are currently conducting a study that investigates footballers' thoughts and behaviours.

We would like to ask for your help in this research project. Specifically, we are asking permission to handout some questionnaires to your squad of players. The questionnaire takes approximately 10-15 minutes to complete and will give us important information about motivation, sportspersonship, and enjoyment in football. A sample questionnaire is attached. Under legal rule, all participants will be guaranteed anonymity.

We sincerely hope that you are keen to cooperate in a research opportunity that will be beneficial to all parties by expanding on our knowledge of the psychology of football. In return for any data you can provide, we will send you a complete description of the findings. We will attempt to contact your club within the next few days to determine your interest in this proposal and arrange a possible date for data collection. Should you have any questions, please do not hesitate to contact Luke Sage at LDS222@bham.ac.uk on (0121) 4145315 or Dr. Kavussanu on (0121) 4144112. We sincerely hope to be in contact in the near future. Thank you for your time.

Yours Sincerely,

Luke Sage, M.Phil. Dr. Maria Kavussanu

Appendix 3b: Information sheet and consent form (Study 1)

THE UNIVERSITY OF BIRMINGHAM

Information Sheet

Dear Footballer,

We would like to invite you to participate in a research project conducted by the School of Sport and Exercise Sciences at the University of Birmingham. The purpose of this study is to investigate the relationship between motivation and footballers' attitudes and practice of sporting and unsporting behaviours. Responsible investigators are Dr. Maria Kavussanu, [phone number: 0121 4144112], and Mr. Luke Sage [phone number: 0121 4145315].

As a participant in this study, your only obligation is to complete the attached questionnaire. We would like to gain information about various thoughts and feelings you may experience during participation in your football team, as well as your opinion about behaviours frequently occurring in football games. By participating in this research project you will help us better understand sportsmanship attitudes and behaviours in football. If you are interested in the findings of this research, please contact us at the phone numbers listed above. We will be happy to send you an outline of the findings after the data analysis has been completed.

Please answer the questions that follow as honestly as possible. We would like to reassure you that the information you will provide will NOT be shared with the coach or university personnel; your responses will be kept strictly confidential. Please, do not write your name on the questionnaire.

The expected duration for completion of the questionnaire is approximately 10-15 minutes. Participation involves no risk or discomfort and is voluntary. If you have any questions regarding this study, please feel free to contact the investigators at the telephone numbers listed above.

Please now fill out attached consent form and questionnaire and return both to the experimenter on completion. Thank you very much in advance for your cooperation, we greatly appreciate your help.

Best Regards,

Luke Sage, M.Phil. Tel: (0121) 4145315 Maria Kavussanu, PhD. (0121) 4144112

I have read the attached information sheet and fully understand the requirements of the present study. I am willing to undergo the questionnaire and understand that I am free to withdraw at any time without having to give an explanation.

Signature: _____

Date: _____

Appendix 3c: Parental consent form (Studies 2, & 4)

THE UNIVERSITY OF BIRMINGHAM

Dear Parent / Guardian,

We are writing to you from the School of Sport and Exercise Sciences at the University of Birmingham where we are currently conducting a study that investigates footballers' motivation and behaviour. Specifically, we are handing out questionnaires to football players, between the ages of 12 – 18 yrs. The questionnaire takes approximately 15-20 minutes to complete and will give us important information about the psychology of football. Your child's participation in this study is voluntary and under legal rule, all participants will be guaranteed anonymity.

Your child's school / club have screened the questionnaire and have kindly agreed to help us by allowing its distribution to junior footballers. However, as your child is under sixteen years of age, parental / guardian consent is required in order to use their data. We would greatly appreciate your co-operation by completing and returning the details below.

Should you have any questions, please do not hesitate to contact Luke Sage at LDS222@bham.ac.uk on (0121) 4145315 or Dr. Kavussanu on (0121) 4144112. We sincerely hope that you and your son / daughter are willing to participate in this project. Thank you for your time.

Yours Sincerely,

Luke Sage, M.Phil. Dr. Maria Kavussanu

I agree to allow my child (name).....to participate in a study of the psychology of football, being conducted at the University of Birmingham.

I understand the above information on the nature of this study and give my consent for my child to participate. Signed.....Date.....

Appendix 3d: Information sheet and consent form (Studies 2, & 4)

THE UNIVERSITY OF BIRMINGHAM

Information Sheet

Dear Footballer,

The following questionnaire is part of a study being conducted by the School of Sport and Exercise Sciences at The University of Birmingham. The purpose of the study is to investigate motivation, behaviour, and team climate in junior football.

I would like to invite you to participate in this study by completing the seven sections of the questionnaire that ask about your experiences in football. Answer the questions on your own and because we are interested in your unique responses there are no 'right' or 'wrong' answers. By taking your time to think about each question you should be able to complete all the sections within twenty minutes. I hope you enjoy recounting your football experiences and taking time to reflect on your thoughts and actions.

Please note that participation in this study is voluntary and you are free to withdraw at any time. If you have any questions we will be happy to answer them on the contact numbers below. Your answers are completely confidential and will be only be used for research purposes. Thank you for your time, it is much appreciated.

Best Regards,

Luke Sage, M.Phil. Tel: (0121) 4145315 Maria Kavussanu, PhD. (0121) 4144112

I have read the attached information sheet and fully understand the requirements of the present study. I am willing to undergo the questionnaire and understand that I am free to withdraw at any time without having to give an explanation.

Signature: _____

Date: _____

Appendix 4a: Information sheet for participants (Study 3)

THE UNIVERSITY OF BIRMINGHAM

Information Sheet

Dear Participant,

The following experiment is part of a study being conducted by the School of Sport and Exercise Sciences at The University of Birmingham. The purpose of the study is to investigate the motivation behind sporting behaviours.

I would like to invite you to participate in this study, which involves a short presentation, playing two ten minute games of table football, some quick exercises and the completion of a questionnaire. Please carefully read the instructions that will outline the rules and objectives of the game. When answering the questionnaire, take your time to think about each question. You should be able to complete the items within ten minutes. All together the experiment will last approximately forty minutes. I hope you enjoy playing table football and recounting your sporting experiences.

Please note that participation in this study is voluntary and you are free to withdraw at any time. If you have any questions please ask the experimenter. Your results are completely confidential and will be only be used for research purposes. Thank you for your time, it is much appreciated.

Best Regards,

Luke Sage, M.Phil. Tel: (0121) 4145315 Maria Kavussanu, PhD. (0121) 4144112

I have read the attached information sheet and fully understand the requirements of the present study. I am willing to undergo the experiment and understand that I am free to withdraw at any time without having to give an explanation.

Signature: _____Date of birth:_____

Date: _____

Appendix 4b: Video consent form (Study 3)

THE UNIVERSITY OF BIRMINGHAM

Video Consent Form

Dear Participant,

The experiment you have just undergone has been videoed to facilitate coding of your individual behaviours. Videoing behaviour is a common procedure in observational data collection techniques and is an effective tool when processing the results. In order to use this data, however, it is required that each participant gives their consent to the viewing of the videoed material, i.e. two ten minute games of table football. It is stressed that Luke Sage and Dr. Maria Kavussanu will be the only people to view the recordings and your results are completely confidential in the final report. You are free to exercise the write to erase any recorded material but we would greatly appreciate your cooperation in our research. Thank you very much for your time.

Regards,

Luke Sage, M.Phil. Tel: (0121) 4145315 Maria Kavussanu, PhD. (0121) 4144112

I have read the attached information sheet and fully understand that I have been videoed for the purpose of this study. I hereby give consent to the use of any information on the recordings, provided that confidentiality is ensured and viewing is restricted to the experimenters named above.

Name:_____

Signature: _____Date of birth:_____

Date: _____

Appendix 4c: Observer instructions and definitions (Study 3)

THE UNIVERSITY OF BIRMINGHAM

Dear Observer,

You will now view footage of games of table football. Each game lasts 20 minutes, 10 minutes each half. Player 1 is the on the left, Player 2 on the right. During each game behaviours will occur that can be coded as prosocial (intended to benefit opponent) or antisocial (intended to disadvantage opponent). A list of behaviours that fit the definitions of these behaviours is provided below. Your task is to tally the number of prosocial and antisocial behaviours that are engaged in by each player. For each occurrence of one of the listed behaviours, tally one score next to the relevant player.

Prosocial (physical)

Returning ball to opponent on leaving table / dead ball / goal – after retrieving the ball from any one of these scenarios, the retriever then hands the ball to the opponent for the advantage of serving the ball back into play.

Allowing an illegal goal – an illegal goal includes any goal scored after a breaking of the three rules (no spinning, touching the ball by hand, or jarring of table).

Shaking hands with the opponent – before or after play. This action signifies thanks and respect to opponent.

Counting opponent's goals – after a goal, the opponent of the scorer adds a counter to their opponents score.

Prosocial (verbal)

Friendly discussion, joking, laughing – tallies for this category should only be made for extreme cases where the player is making an obvious effort to ease tension or calm their opponent.

Congratulating – remarking on or reinforcing good play of opponent. e.g., good shot
Encouraging – supporting opponent e.g., go on, keep it up, good play
Providing instruction – any coaching of opponent that can help them improve

Calling own fouls – alerting opponent to one's own foul play
Declining opponents foul – allowing play to continue after recognition of foul play
Apologising – saying sorry e.g., after scoring a lucky goal
Thanking – any expression of gratitude
Asking opponent if ready – enquiring on state of readiness of opponent e.g., before serving

Reminding opponent of missed goal counts – On forgetting to tally a goal on their counter, the opponents reminds the player to add on a score.

Antisocial (physical)

Breaking of rules – rules provided were: 1) no spinning of the bars (more than 360^0 rotation of bar before of after striking the ball, 2) no jarring, jolting or moving of table 3) No handling of the ball while it is in play unless both players agree that it has gone dead.

Displays of anger – an aggressive physical reaction such forceful ramming of rods or kicking of the table in response to gameplay.

Serving on opponents put it – restarting the game after scoring a goal.
Serving when opponent not ready – restarting the game when the opponent is not paying attention to the serve.

Deliberate cheating – any example of a behaviour that aids the player in increasing their goal count e.g., tallying extra goals

Antisocial (verbal)

Winding up / Taunting opponent – any verbal teasing, derisory comment or mocking of opponent. Also comments intended to raise the arousal levels or divert attention of opponent to put them off their game.

Abusive language – swearing and offensive verbiage

Arguing – instigation of conflict.

Should you be unsure of any behaviour please ask the senior experimenter for help. If any queries arise during the observation please pause the video and seek help. Thanks for your time and help

Luke Sage

Appendix 4d: Social Behavioural Scale for prosocial choices (Study 3)

Participant Numbers: P1_____& P2_____ Test Session:_____ Date:_____/_____/_____ Time:_____:_____ am/pm

Prosocial Physical		1st Half	2nd Half	Prosocial Verbal		1st Half	2nd Half
Shaking hands / applauding opponent	P1			Friendly discussion Joking / laughing with opponent	P1		
	P2				P2		
Allow opponent scoring opportunity / Allow an illegal goal	P1			Congratulating / encouraging / providing instruction to opponent	P1		
	P2				P2		
Returning ball to opponent after goal/ on leaving table / dead ball	P1			Drawing attention to own fouls / declining fouls	P1		
	P2				P2		
Moving on opponent's score counter	P1			Alerting opponent to missed goal counts	P1		
	P2				P2		
	P1			Apologies / expression of thanks	P1		
	P2				P2		
Antisocial Physical		1st Half	2nd Half	Antisocial Verbal		1st Half	2nd Half
Breaking of rule(s)	P1			Winding up / Taunting / Sledging opponent	P1		
	P2				P2		
Displays of anger Abuse of table	P1			Abusive language	P1		
	P2				P2		
Serving out of turn or too early	P1			Arguing	P1		
	P2				P2		
Deliberate cheating e.g., over-counting of goals	P1				P1		
	P2				P2		
	P1				P1		
	P2				P2		

Appendix 4e: Social Behavioural Scale for prosocial choices (Study 3)

Bonus Goals

Please choose one of the following options by confidentially handing the experimenter one of four cards, A, B, C, or D.

	You	Opponent
A	3	4
B	3	3
C	3	2
D	3	1

Welcome to Table Football

(aka; Kicker,foosball, babyfoot and billiardino)

Background to Table Football

The Table Soccer Phenomenon

The history of table football can be compared to the growth of an oak tree. Slow sure and ultimately monumental in stature. From a primitive wooden box, some wooden dowels and a lot of imagination, the European game has developed into a professional game that some would argue is a sport. Taking its place alongside darts and pool, the almost cultish adoration of table soccer found in many countries around the world brings young and old players together for a game of few rules but plenty of fast fuelled action.

Originating in Germany…

The original game we know as table football originated in Germany during the late 1920's and early 1930's before it made its first timid appearance in the United States. Bud Wachter, who originally imported the table footballs to the US, recalls that "practically every village in Germany has their field soccer team. Some enterprising club somewhere in Germany decided a game imitating soccer was needed back in the clubhouse. They made one and very soon the idea expanded and practically every club had their 'kicker'."

The kicker name stuck and it is still one of the most common names for the game in Germany.'' The German word for field soccer is ''football'' spelled Fußall.The ''ß'' is pronounced like two S's, hence the commonly used term foosball. The 'industry' seems to be settling on ''table soccer'' as the most popular phrase.

The first German soccer tables were primitive, consisting of a rectangular box with a plywood playing field. Rods, or bars, were usually wooden dowels with plain rectangular blocks of wood for figures. The goals were cut out of the end with cloth pockets to catch the balls. They were usually made by members of the football club or a local carpenter.

In 1948-49 several German firms started making ''kicker'' games. Eventually there were eighteen different businesses making the game all with their own ideas about how the game should be made. As a result there were a variety of shapes, sizes and playing features until the game evolved to what we know it as today. At the same time the French and Italians started producing their versions. Except for telescoping rods on the French models and on some of the Italian models, everyone has settled on a game which is fundamentally universal.

The first tables were imported to the United States in 1955. During the 60's those salesmen attempting to establish 'coin football' found themselves entrenched in a missionary effort. The game was founded upon a major European sport but 'soccer' was a relatively unknown sport to Americans and not taken seriously until the end of the 60's. In 1969 the game of table football caught on in some areas of the US and it has been spreading ever since until now it is has reached professional status and is one of the most popular and profitable games the coin trade has. The "European import'' is there to stay.

Garlando's Empire

''Spinetta-Marengo.'' A rich Italian dessert? A torrid Latin dance? Not quite. It's a small town between Milan and Genoa; more importantly, the home of Renato Garlando and the Garlando, Chevrolet of soccer tables. Garlando has been in the table soccer business for twenty-five years. An apocryphal story circulates that his father made coffins and that Garlando transformed them into his first soccer cabinets.

Influential in the European game industry. Garlando did not enter the American market until 1969. In the first year, the Garlando table was rejected. Operators put them on locations, but returned them disgruntled. Nobody understood the game so nobody played it. Even a sixty-day free trial in Chicago proved futile. Only in Wisconsin did Garlando gain a quick foothold.

Then Joe Robbins, vice president of Empire Distributing, spent time and patience on educating people in the crucial elements of table football. According to Empire salesman Alan Zeidman, once it caught on tables sold “like hamburgers.” From Florida to Montana, California to Wisconsin people were playing Garlando table footballs. The heyday lasted five years and by late 1973 there was a veritable plethora of soccer table manufacturers. Garlando's most exuberant competition came from the Tornado, a heavy duty Texas style table, and this forced Renato to revise his own model. In 1975 Garlando's ‘Deluxe’ and ‘Giant’ replaced the standard table and he still remains a top manufacturer of football tables today.

Renato Garlando's manufacturing philosophy provides an answer to their popularity. He strives for durability and playability. He is an innovator, developing the first solid plastic man and then the die mould. Formica and metal are used instead of the regular composition board. He patented the spring loaded oilier bushings for easier rod handling.

By listening to whatever operators and players want, Renato Garlando responds to change and he is again at work on a new model. Perhaps another breakthrough. Garlando and table football continues to evolve.

The following slides provide some examples of Garlando tables. Spot the one you are about to play on.

Garlando Tables

The G-100: A starter table.

The G-500: A standard free play table.

Garlando Tables

The G-1000: For novelty and innovation.

The G-300: Sister to the G-1000, colourful and bright in order to get noticed.

Garlando Tables

Familiare: The table football classic

The G-5000: A superior table that blends style with a professional playability

Rules

I. **No Spinning of the bars** – more than 360º rotation of the player before or after contact with the ball.

II. **No jarring, sliding, or lifting of the table.**

III. **No handling of the ball within the playing area** – if the ball goes dead, both players have to agree that it has stopped before picking up the ball.

Violation of Rules

- First violation of the rules - opponent allowed to stop play and gain possession of the ball.
- Second violation - opponent can either take a penalty shot or deduct one goal from the opposition.
- Note - once a second violation has been taken a successive foul is deemed a first violation.

You now have 5 minutes to practice

First Half

(10 mins.)

Half Time

Second Half

(10 mins.)

Full Time

Now see the ref for some short exercises, a questionnaire and a score tally.

Welcome to the Table Football Competition

An Invitation.....

- You are invited to partake in a study that aims to understand behaviour in competitive games.
- The goal is to outscore your opponent and other competitors in the game of table football.

Introduction

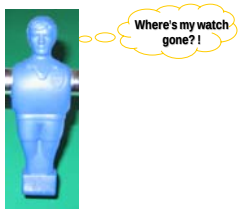
- Table football is a fast and exciting game where you (and a team mate) come face to face with your opponent(s) to pit your skills and nerve in a test of who can score the most goals. Tackle, save, and shoot your way to victory to savour that winning thrill!
- Your challenge is to score more goals than your opponent and previous competitors. Score as many goals as you can to reach a goal count that will keep you in the all time top ten and win you a prize.

Introduction

- At the end of the match your total number of goals will be tallied against your opponent's and other competitor's scores. You will have only succeeded in your challenge by beating your opponent and finishing in the top 10. The more goals you score, the more chance you have of winning a prize.
- All scores will be displayed on web CT and the departmental notice board.
- Three tips on beating your competitors are now presented along with some film clips of some great table football goals for you to outdo.

How to Beat Your Opponent(s) Tip #1 ...

Watch the time...



II. You are not only against the opponent but against the clock so be as quick as you can in scoring the goals needed to reach the leader board.

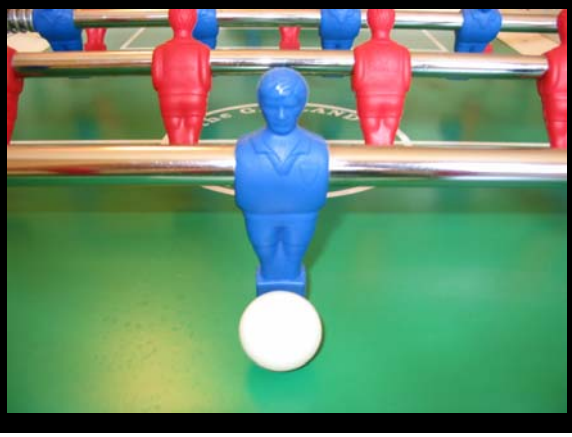
Here is a clip of some super quick table footy goals

How to Beat Your Opponent(s) Tip #2 …

Head towards goal

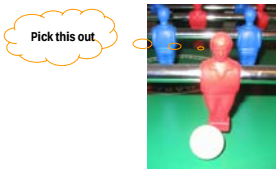
I. Force the ball towards the opponent's goal any way you can.

Beat this.....



How to Beat Your Opponent(s) Tip #3 …

Shooting



I. Watch the goals again to see if you can pick out the super strikes from defence, the angled shots, the 350^0 'snake shot' and the 'tip tap'. Shoot these goals and you have a great chance of beating your opponent.

Try to beat these 'super shots'.....

Rules

I. **No Spinning of the bars** – more than 360º rotation of the player before or after contact with the ball.

II. **No jarring, sliding, or lifting of the table.**

III. **No handling of the ball within the playing area** – if the ball goes dead, **both** players have to agree that it has stopped before picking up the ball.

Violation of Rules

- First violation of the rules - opponent allowed to stop play and gain possession of the ball.
- Second violation - opponent can either take a penalty shot or deduct one goal from the opposition.
- Note - once a second violation has been taken a successive foul is deemed a first violation.

Remember.....

- Out score your opponent and other competitors.
- If you finish in the top ten of total goals scored you will have succeeded in making it onto the leader board.

Remember.....

- All scores published on web CT and departmental notice board.
- Do all you can to win

Before you start check out this great goal.....

Warm Up

(5 mins.)

First Half

(10 mins.)

Half - Time

You are now going to play the second half. Depending on the score of the first half, you must either turn around a deficit in goals or forge further ahead to increase your chances of beating your opponent and finishing in the top ten. Remember, you are not only competing against your opponent to determine who is the best but also against other competitors. All the scores will be available on the web CT and the departmental notice board.

Remember.....

- Out score your opponent.
- If you beat your opponent and finish in the top ten of total goals scored you will have succeeded in making it onto the leader board. Only one of you can win.
- All scores displayed on web CT and departmental notice board.
- Do all you can to win.

Second Half

(10 mins.)

Full Time

Now see the ref for some short exercises, a questionnaire and a score tally.

An Invitation.....

- You are invited to partake in a study that aims to understand how people learn skills.
- The intention is to measure individual improvement on the task of table football.

Introduction

- A common misconception of the game of table football is that it is a 'chancy spin of the rods' in the hope that the ball heads goal-bound. The skills of passing, controlling and kicking are largely underrated, yet highly effective in improving on game play.
- Your challenge is to do your best in developing these three skills so that by the end of this session you leave an improved player. Measured improvement will be rewarded accordingly

Introduction

- Please note, the demonstrations that follow are by an advanced player. It is important that you focus on developing and improving on these skills from your own individual level. Concentrate on grasping the basics of each skill before moving on at your personal pace. Be patient in learning and good luck!
- Tips on the skills of 1) Passing, 2) Controlling & 3) kicking are now presented with accompanying video clips. In the game that follows, do your best to develop your overall table football play.

#1 Passing...

Tips for Passing

I. Pass between players on the same bar as well as between bars.

II. Use the walls to help you.

A demonstration of passing……

#2 Controlling

Tips for Controlling

I. Stop the ball by cushioning its momentum on the player's base.

I. Then try trapping the ball between the player and the table. Manoeuvre the ball by tapping and rolling in the direction you choose.

Let's take a look……..

a demonstration of controlling……

#3 Kicking …

Tips for Kicking

I. Pass and control with forefinger and thumb, roll the bar in the palm of your hand for power kicks.

Thumb and forefinger for control

Roll for power

Before shot

After shot

Tips for Kicking

II. Angle kicks by striking the ball with the corners of the 'feet' or aim to make contact with the ball either side of its centre.

a demonstration of kicking……

Rules

I. **No Spinning of the bars** – more than 360º rotation of the player before or after contact with the ball.

II. **No jarring, sliding, or lifting of the table.**

III. **No handling of the ball within the playing area** – if the ball goes dead, both players have to agree that it has stopped before picking up the ball.

Violation of Rules

- First violation of the rules - opponent allowed to stop play and gain possession of the ball.
- Second violation - opponent can either take a penalty shot or deduct one goal from the opposition.
- Note - once a second violation has been taken a successive foul is deemed a first violation.

Remember……

- Pass from player to player along or between rods & use the walls.
- Control and manoeuvre the ball and player to create space.
- Try to direct you kicks by striking the ball at varying angles with the player.
- Play at your own level and do your best to improve on these 3 skills.

Before practising, please watch a demonstration of all the skills again ……

Warm Up

(5 mins.)

First Half

(10 mins.)

Half - Time

You are now entering the second half. Knowing how you did in the first half, continue to focus on improving your three skills and give it your best shot to try to beat your previous score. For a successful second game put in the maximum effort and focus on a personal best for table football mastery.

Remember....

- Pass from player to player along or between rods & use the walls.
- Control and manoeuvre the ball and player to create space.
- Try kicking with different grips and directing the ball with the player.
- Play at your own level and do your best to improve on these 3 skills.

Second Half

(10 mins.)

Full Time

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