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# Contextual Influences on Moral Functioning of Male Youth Footballers

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This study examined the network of relationships among moral atmosphere, perceived performance motivational climate, and moral functioning of male youth football players. Participants were 325 footballers recruited from 24 teams of a youth football league. They responded to scenarios describing cheating and aggressive behaviors likely to occur during a football game by indicating their moral judgment, intention, and behavior, which represented moral functioning. The moral atmosphere of the team and participants' perceptions of the team's performance motivational climate were also measured. Structural equation modeling indicated that perceptions of an atmosphere condoning cheating and aggressive behaviors were associated with views that a performance motivational climate is salient in the team, while both moral atmosphere and perceived performance climate corresponded to low levels of moral functioning in football. The findings are discussed in terms of their implications for eliminating unsportsmanlike conduct from sport.

The past two decades have witnessed an increasing number of studies dealing with moral issues in sport. Initial work focused primarily on personal variables that potentially influence moral functioning in sport, such as moral reasoning, sport experience, gender, and age (e.g., Bredemeier, 1985; Bredemeier & Shields, 1984; Bredemeier, Weiss, Shields, & Cooper, 1987). More recently, attention has been shifted to investigating the effects of the social context within which sport takes place on athletes' moral functioning (e.g., Kavussanu, Roberts, & Ntoumanis, 2002; Stuart & Ebbeck, 1995; Vallerand, Deshaies, & Cuerrier, 1997). Two aspects of the social context that have been the focus of empirical investigation in recent years and are examined in the present study in relation to moral functioning in sport are the moral atmosphere of the team and perceived performance motivational climate.

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A model that has served as the theoretical framework for several studies investigating moral functioning in sport (e.g., Kavussanu & Ntoumanis, 2003; Kavussanu et al., 2002; Stuart & Ebbeck, 1995) and has also guided the current study is Rest's (1983, 1984) four-component model of moral action. Rest (1983, 1984) argued that a fundamental aspect of morality is moral behavior and that to understand behavior, we need to understand the processes that underlie moral action. Rest (1983, 1984) proposed that four processes underlie each moral action: (a) interpreting the situation by recognizing that it involves a moral issue; (b) forming a moral *judgment* about what ought to be done, which includes both judgment and reasoning; (c) deciding what one *intends* to do by selecting among competing values; and (d) implementing one's intentions, that is actual *behavior*. For Rest, moral development involves gaining proficiency in all four processes, and deficiency in any of these processes can result in moral failure. Further, the four processes interact with each other through feedback and feed-forward loops and a number of factors influence them. Because of the interactive nature of the four processes, factors acting on one process indirectly influence the others. The present study examined three of the four components of Rest's model, namely judgment, intention, and behavior.

Shields and Bredemeier (1995) applied Rest's model to sport and proposed that the moral atmosphere of the team influences moral judgment, which is the second component of Rest's model. The concept of moral atmosphere was first described by Kohlberg and his associates (Higgins, Power, & Kohlberg, 1984; Power, Higgins, & Kohlberg, 1989), who investigated the influence of group norms on moral reasoning and behavior of the group members in school and prison environments. Kohlberg and colleagues (Higgins et al., 1984; Power et al., 1989) showed that through interaction, group members over time develop a shared understanding of what constitutes appropriate behavior in that context. This shared understanding of appropriate action is the defining characteristic of moral atmosphere, that is, it refers to the collective group norms regarding moral action (Power et al., 1989). Moral judgments are made within a specific social context, and the moral atmosphere of that context is assumed to have a profound influence on these judgments and subsequent decisions and behavior.

A number of studies have investigated moral atmosphere in relation to some aspects of morality in sport settings. One line of work has focused on reported likelihood to aggress against an opponent (e.g., Guivernau & Duda, 2002; Stephens, 2000, 2001, 2004; Stephens & Bredemeier, 1996); in this work, moral atmosphere has been assessed by asking athletes to report the number of group members who, in their view, would be willing to engage in an aggressive behavior described in a hypothetical scenario. In the first study to investigate the relationship between moral atmosphere and reported likelihood to aggress against an opponent, Stephens and Bredemeier (1996) found that young female football players, who perceived a large number of their teammates as willing to aggress against an opponent, reported greater likelihood to behave aggressively if they were in a similar situation. These findings were corroborated in several subsequent studies: Athletes' perceptions of their team's pro-aggressive norms being the best predictor of reported likelihood to aggress for boys and girls in coed football leagues (Stephens, 2000); female basketball players participating in summer skill camps (Stephens, 2001); university intramural athletes participating in softball, basketball, and floor hockey

(Stephens, 2004); and adolescent male and female footballers (Guivernau & Duda, 2002).

A second line of work has investigated moral atmosphere in relation to multiple components of morality based on Rest's model, namely judgment, intention, and behavior (Kavussanu et al., 2002; Kavussanu & Rameswaran, 2000) and has considered two aspects of the moral atmosphere, one referring to the coach and a second referring to teammates (see Shields, Bredemeier, Gardner, & Bostrom, 1995). These two aspects of the moral atmosphere, although related to each other, are distinct as indicated by the moderate correlations reported in past research (Shields et al., 1995). In a study with college basketball players, Kavussanu and colleagues (2002) presented participants with scenarios describing cheating and aggressive behaviors likely to occur during a basketball game, such as faking an injury and risking injuring an opposing player to prevent a basket. Players were asked to respond to these scenarios by indicating whether they thought the described behaviors were appropriate (judgment), whether they would engage in the behaviors if winning was at stake (intention), and how often they had engaged in the behaviors in the past five games (behavior). The moral atmosphere of the team was measured by asking players to indicate whether the coach would encourage the described behaviors and how many of their teammates would engage in the behaviors if it was necessary for the team to win. When basketball players perceived their coach as encouraging the described behaviors and a large number of teammates as willing to engage in the behaviors, if winning was at stake, they reported lower levels of moral functioning as reflected on their scores of judgment, intention, and behavior. Similar findings were obtained in a study of adolescent male field hockey players (Kavussanu & Rameswaran, 2000). Overall, the evidence to date is consistent in indicating that the moral atmosphere of the team has a strong influence on morality regardless of whether reported likelihood to aggress against an opponent or multiple indices of moral functioning have been the focus of investigation.

Another factor that has been proposed (Bredemeier, 1999; Kavussanu et al., 2002) to influence morality in sport is the motivational climate of the team. Motivational climate refers to the prevailing situational goal structure and is primarily created by significant others, such as teachers, parents, and coaches (Ames, 1992). These individuals structure the achievement context in a manner that conveys to participants the criteria for success through various means, including the evaluation procedures, the distribution of rewards, and the type of feedback provided. A performance motivational climate is salient in a team when success is defined in normative terms, the top athletes typically receive recognition, and the emphasis is on how one's ability compares to that of others. In contrast, a mastery climate is evident when success is defined as individual progress, every player has an important role, and the focus is on skill improvement and development of every individual's potential.

Although mastery climate is likely to have a positive influence on variables such as sportspersonship orientations (see Miller, Roberts, & Ommundsen, 2004; Ommundsen, Roberts, Lemyre, & Treasure, 2003), the relationship identified with indices of moral functioning in previous research has been weak (Ommundsen et al., 2003). In addition, some studies have reported no relationship between mastery climate and cheating in the education domain (e.g., Anderman, Griesinger, & Westerfield, 1998). Thus, in the present study, the interest was on the relationship

between *performance* climate and athletes' moral functioning. Because of its emphasis on normative success and recognition of the most competent individuals at the expense of those who are less skilled, a performance motivational climate unavoidably invites social comparison and elicits a focus on the demonstration of ability (Ames, 1992; Treasure, 2001). When the emphasis is on how one's ability compares to that of others, it is reasonable to expect that team members will use any means to demonstrate high ability, including engaging in unsportsmanlike conduct (see also Anderman et al., 1998). Thus, a performance motivational climate was hypothesized to correspond to low levels of athletes' moral functioning.

Several studies have investigated the relationship between perceived performance motivational climate and various aspects of morality in sport. For example, Ommundsen and his associates (Ommundsen et al., 2003), in their study with Norwegian male youth football players, found that performance climate corresponded to greater intention to engage as well as reported engagement in amoral behaviors such as cheating, rule bending, and aggression. In addition, performance climate was inversely linked to some dimensions of sportspersonship, such as respect for rules and officials and social conventions. The latter finding was also reported in a second study, which used male and female Norwegian youth football players (Miller et al., 2004). Finally, Boixados and colleagues (Boixados, Cruz, Torregrosa, & Valiente, 2004) found that in adolescent male football players' perceptions of a performance climate in the team corresponded to the view that rough play and cheating are acceptable in the context of football. However, Kavussanu and colleagues (Kavussanu et al., 2002) reported no significant relationship between perceptions of performance motivational climate and moral functioning in college basketball players, and no relationship has been identified between this type of climate and sportspersonship (i.e., respect for the game) in adolescent female volleyball players (Gano-Overway, Guivernau, Magyar, Waldron, & Ewing, 2005). Thus, in some studies, performance motivational climate has been linked to low levels of morality, whereas in others no such relationship has been identified.

One issue that has been investigated in only two studies to date (Kavussanu et al., 2002; Ommundsen et al., 2003) is the relationship between performance motivational climate and the moral atmosphere of the team. In the first study to investigate this issue (Kavussanu et al., 2002), it was proposed on both theoretical and empirical grounds (Ames, 1992; Shields et al., 1995) that athletes' views that a performance motivational climate is prevalent in their team should correspond to perceptions that a moral atmosphere condoning inappropriate action also exists in the team. Specifically, Ames (1992) suggested that the degree of student participation in the instructional process is one of the defining characteristics of motivational climate; in a performance climate, participants have limited opportunities for decision making and the coach (or teacher) is the primary authority of the context. This state of affairs resembles the autocratic leadership style (Cheladurai & Saleh, 1980), which has been associated with the moral atmosphere of the team: Specifically, Shields and colleagues (Shields et al., 1995) have shown that baseball and softball coaches, who were perceived by their players as being autocratic leaders, were also perceived as sanctioning cheating and aggression in the team. Even though no empirical relationship has been demonstrated between performance climate and autocratic leadership style, based on the work described above, it is likely that an autocratic coach may create a performance motivational

climate in the team. Thus, an association between performance climate and moral atmosphere of the team is possible.

As stated earlier, to date, the relationship between moral atmosphere and performance motivational climate in sport has been investigated in only two studies. In their study with college basketball players, Kavussanu and colleagues (Kavussanu et al., 2002) identified a moderate positive relationship between athletes' perceptions of a performance motivational climate and the moral atmosphere of their team. In particular, perceptions that a performance climate was prevalent in the team were positively related to basketball players' views that the coach would encourage cheating and aggressive behaviors and that a large number of teammates would be willing to engage in such behaviors if it was necessary for the team to win. Similar findings were revealed in a second study utilizing Norwegian youth male footballers (Ommundsen et al., 2003). Thus, preliminary evidence suggests a moderate positive relationship between perceived performance motivational climate and the moral atmosphere of the team. Such a relationship was also anticipated in the present study.

In sum, recent research has used Rest's (1983, 1984) model to examine judgment, intention, and behavior as multiple indices of moral functioning in sport. The moral atmosphere of the team has been identified as a strong influence on athletes' moral functioning (Kavussanu et al., 2002; Kavussanu & Rameswaran, 2000) and on their reported likelihood to aggress against an opponent (Guivernau & Duda, 2002; Stephens, 2000, 2001, 2004; Stephens & Bredemeier, 1996). Further, perceptions of a performance motivational climate have been positively linked to attitudes toward rough play and cheating (Boixados et al., 2004), as well as amoral intention and behavior (Ommundsen et al., 2003), and inversely associated with sportspersonship (e.g., Miller et al., 2004; Ommundsen et al., 2003). Finally, a positive relationship has been identified between perceived performance motivational climate and moral atmosphere of the team (Kavussanu et al., 2002; Ommundsen et al., 2003).

Overall, the extant literature indicates that interrelationships exist among moral atmosphere, performance motivational climate, and moral variables in the sport context. However, to date, only one study (Kavussanu et al., 2002) has investigated all these relationships simultaneously by employing structural equation modeling. By considering the relationship between performance climate and moral atmosphere, we can identify unique effects of these constructs on athletes' moral functioning. Equally important, interrelationships among judgment, intention, and behavior identified in past research (e.g., Kavussanu & Ntoumanis, 2003; Kavussanu et al., 2002) necessitate their simultaneous investigation if our goal is to parsimoniously describe the effects of moral atmosphere and performance climate on athletes' moral functioning. The findings of the Kavussanu et al (2002) study, however, can only be generalized to American college (i.e., adult) basketball players, most of whom were females. It is not known whether these relationships hold for individuals who have different characteristics. Therefore, the present study examined moral atmosphere, perceived performance motivational climate, and moral functioning in adolescent, male, British, footballers, that is, a sample that differed from previous research (e.g., Kavussanu et al., 2002) in age, gender, cultural context, and sport. It was hypothesized that moral atmosphere and perceived performance motivational climate would be positively related and predict moral functioning.

## Method

### Participants

Participants were adolescent male ( $N = 325$ ) footballers recruited from 24 teams in a boys' league in the West Midlands, UK. Players' age ranged from 12-17 years ( $M = 14.58$ ,  $SD = 1.68$ ) and their experience playing organized football ranged from 1 to 12 seasons ( $M = 5.61$ ,  $SD = 2.23$ ).

### Procedure

Upon approval of the study by the University Ethics Committee, and permission from the chairman of a local football league, we contacted the coaches by telephone, explained the details of the study, and asked for their assistance. Coaches of 24 teams provided assistance by allowing their athletes to participate in the study. All data were collected after a football game in the changing rooms 3-4 months after the season had started. Two trained sport and exercise science research assistants administered the questionnaires to participants, who were asked to complete them as honestly as possible and were encouraged to ask questions, if this was necessary. During data collection, it was emphasized that participation in the study was voluntary and that all information would be kept strictly confidential. Coaches signed a letter indicating that they were acting in loco parentis, that is, they were acting in the position of the parent and gave their consent for players to participate in the study, a procedure endorsed by the British Psychological Society. The questionnaire included (a) a cover letter explaining the purpose of the study and specifying confidentiality, (b) three moral dilemmas followed by three questions assessing the three indices of moral functioning (i.e., judgment, intention, and behavior) and two further questions assessing two aspects of the moral atmosphere (i.e., coach and teammates), (c) the Perceived Motivational Climate in Sport Questionnaire-2, and (d) demographic questions.

### Measures

**Moral Functioning.** Moral functioning was measured using a version of an instrument developed by Gibbons, Ebbeck, and Weiss (1995) and adapted for use in previous studies (e.g., Kavussanu & Roberts, 2001; Ommundsen et al., 2003; Stuart & Ebbeck, 1995). Three football-specific moral dilemmas (i.e., scenarios) were used to assess players' moral functioning in the context of football. Two of the dilemmas were developed based on previous research (e.g., Kavussanu & Roberts, 2001; Stuart & Ebbeck, 1995) and after extensive discussions with football coaches and sport psychologists. Specifically, dilemmas that have been used in past research dealing with basketball players, such as faking an injury (Kavussanu & Roberts, 2001) or cursing an opposing player to provoke a reaction (Stuart & Ebbeck, 1995), were modified and adapted to the context of football. In discussion with football coaches and sport psychologists, we also considered the most commonly occurring behaviors with moral connotations in the context of football. We chose to use the behaviors described in the dilemmas because these were identified as most common in football. The third dilemma has been used in previous work (Stephens,

2000, 2001, 2004; Stephens & Bredemeier, 1996) to measure aggressive behavior in football. As Bredemeier (1983) has argued, aggression may be conceptualized and investigated as a moral issue. The behaviors described in the three dilemmas were (a) winding up<sup>1</sup> an opposing player to provoke a reaction, (b) diving to gain an advantage, and (c) tackling from behind with the risk to hurt one's opponent. An example of a dilemma used in this study is presented below:

Imagine that you are playing in a critical game. The player who has been marking you throughout the game has continually stopped your attacks. As you attack again, your player tries to tackle you. The referee is not that close. You have the opportunity to dive, leading the referee to believe that you were fouled and gain an advantage for your team.

After each dilemma was presented, participants responded to three questions designed to assess Components 2, 3, and 4 of Rest's (1983, 1984) model. More specifically, participants were asked (a) whether they thought it was right to engage in the described behaviors, (b) whether they would engage in the behaviors in case they were in that situation, and (c) how often they engaged in similar behaviors during the season. Consistent with previous work (e.g., Kavussanu & Ntoumanis, 2003; Kavussanu et al., 2002; Ommundsen et al., 2003), these items measured moral judgment, intention, and behavior. The three variables were assessed using 5-point Likert scales anchored by *never* (1) and *always* (5) in the case of judgment and *never* (1) and *very often* (5) in the cases of intention and behavior. In the present study, alpha coefficients were .70, .69, and .64 for judgment, intention, and behavior, respectively. Although these values are not very high, it is important to note that alpha coefficient is highly dependent on the number of items in a scale (Cortina, 1993; Schmitt, 1996) and should be interpreted taking this into consideration.

**Moral Atmosphere.** Following each dilemma, participants were also asked two questions assessing moral atmosphere or collective team norms (see Shields et al., 1995). Specifically, players were asked whether the coach would encourage the described behaviors, if it was necessary for the team to win, and indicated their responses on a 5-point Likert scale anchored by *strongly discourage* (1) and *strongly encourage* (5). Players also recorded how many of their teammates would engage in the specific behaviors, if it was necessary for the team to win, on a 5-point scale anchored by *none of the players* (1) and *everyone on the team* (5). These questions have been used in past research that has examined moral atmosphere of the team (e.g., Kavussanu et al., 2002; Ommundsen et al., 2003; Shields et al., 1995).

Some evidence for the construct validity of this measure has been provided by Kavussanu and colleagues (Kavussanu et al., 2002), who reported the coefficient of variation for each team for the two aspects of moral atmosphere. This statistic is computed by dividing the standard deviation of the group by the mean of the group and multiplying by 100, thereby expressing the standard deviation of a group as a percentage of the mean and allowing for comparison of variability of a certain value within a group across groups. Kavussanu et al. (2002) reported that coefficients of variation in 34 teams ranged from 13 to 65% for the coach and from 11 to 41% for the teammates' aspects of the moral atmosphere, suggesting that players in the same team tended to perceive the team's moral atmosphere in a similar way. In addition, satisfactory reliability of this measure has been reported



(Kavussanu et al., 2002) with alpha coefficients of .82 and .70 for the coach and teammates' aspects of the moral atmosphere, respectively.

In the present study, we also computed the coefficient of variation for each team to determine the degree of consistency in players' perceptions of their team's moral atmosphere. For the questions pertaining to the coach, the average coefficient of variation was 31.03%,  $SD = 10.15$ , while the range was 11.34 to 52.17%. For the questions pertaining to the teammates, the average coefficient of variation was 24.88%,  $SD = 7.33$ , while the range was 12.62 to 41.78%. These results indicate considerable intra-team consistency in participants' perceptions of the moral atmosphere of their team. Finally, reliability of the two subscales was satisfactory with alpha coefficients of .80 and .73 for the aspects of the moral atmosphere pertaining to the coach and teammates, respectively.

**Perceived Motivational Climate.** Perceptions of performance motivational climate were measured using the performance climate scale of the Perceived Motivational Climate in Sport Questionnaire-2 (PMCSQ-2; Newton, Duda, & Yin, 2000). According to Newton and colleagues (Newton et al., 2000), the PMCSQ-2 was developed as a result of suggestions (Seifriz, Duda, & Chi, 1992; Walling, Duda, & Chi, 1993) that the original version could be strengthened by conceptualizing the climate in a hierarchical manner, with subdimensions underlying the higher order mastery and performance climate scales. These issues had not been addressed in the first version of the questionnaire (Seifriz et al., 1992) and were in line with Ames' (1984, 1992) conceptualization of the climate (Newton et al., 2000).

In the present study, we used only the performance climate scale of the PMCSQ-2. We did so because (a) we did not have a rationale to hypothesize a relationship between mastery motivational climate and moral atmosphere and therefore were unsure on where in the hypothesized model to place this construct; (b) past research (Ommundsen et al., 2003) has reported weak findings between mastery climate and indices of moral functioning; and (c) our intention was to replicate a previous study (Kavussanu et al., 2002) with a different sample, and that study had not included mastery climate.

The 16-item performance climate scale is subdivided into three subscales measuring unequal recognition (8 items), punishment for mistakes (5 items), and intra-team member rivalry (3 items). Athletes were asked to think about how it felt to play for their team this season, then read a number of statements and circle the number that best represents how they feel. The stem for each item was "On this football team . . ." and examples of items are "the coach has his own favorites" for unequal recognition, "the coach gets mad when a player makes a mistake" for punishment for mistakes, and "players are encouraged to out-play the other players" for intra-team rivalry. Participants responded on a 5-point Likert scale anchored by (1) *strongly disagree* and (5) *strongly agree*. The psychometric properties of this questionnaire have been described by Newton and colleagues (Newton et al., 2000). The unequal recognition and punishment for mistakes subscales have demonstrated satisfactory reliability with alphas of .86 and .82, respectively, while the intra-team rivalry subscale had low Cronbach's (1951) alpha in both studies (i.e., .66 and .54) conducted by Newton and colleagues.

In the present study, alpha coefficients with all original items retained were .85 for unequal recognition, .75 for punishment for mistakes, and .54 for intra-team

rivalry. However, Confirmatory Factor Analysis of the performance motivational climate (see Results section) indicated that the intra-team rivalry subscale and some items from the other two subscales had to be dropped to improve model fit and that performance climate should be conceptualized in a hierarchical manner. Alpha coefficients were .74 and .69 for the unequal recognition and punishment for mistakes subscales, respectively, when only the retained items were considered and .77 for the overall scale of performance climate. In addition, the coefficient of variation was computed for the two subscales used in this study including only the retained items. For the unequal recognition subscale, the average coefficient of variation was 25.40%,  $SD = 7.81$  and the range was 12.51 to 38.33%. For the punishment of mistakes subscale, the average coefficient of variation was 25.89%,  $SD = 5.90$ , and the values ranged from 17.85 to 40.40%. These values indicate that there was considerable intra-team consistency in participants' perceptions of performance climate.

## Results

### Descriptive Statistics

Table 1 presents descriptive statistics of all variables used in this study. Descriptive statistics have been presented separately for the three indices of moral functioning and the two aspects of moral atmosphere as they pertain to each scenario. With regard to judgments, intentions, and behaviors, mean scores were generally below the midpoint of the scale. Thus, most participants judged the described behaviors as being rarely to sometimes right and indicated the intention to rarely or sometimes engage in the behaviors. Similarly, the majority of participants reported that they rarely or sometimes engaged in the described behaviors. Players did not perceive their coach as encouraging the behaviors described in the three scenarios, but suggested that nearly half of their teammates would engage in such behaviors as winding up an opposing player, diving to gain an advantage, and risking injury to an opponent. Finally, participants were, on the whole, neutral in terms of their perception of a situationally induced performance climate.

### Structural Equation Modeling

It was hypothesized that perceived performance motivational climate and moral atmosphere would covary and independently predict footballers' moral functioning. Specifically, we expected that higher perceived performance climate and stronger perceptions of the coach encouraging and the teammates undertaking inappropriate actions would lead to lower levels of moral functioning among players as reflected on their reports of moral judgment, intention, and behavior. These hypotheses were investigated using structural equation modeling. However, before testing the hypothesized model, we examined the factorial structure of the instruments used to measure moral functioning, moral atmosphere, and performance climate (see Anderson & Gerbing, 1988).

**Multitrait-Multimethod (MTMM) Analysis of Moral Functioning and Moral Atmosphere.** In the present study, the three indices of moral functioning, that is

**Table 1 Means and Standard Deviations of All Variables**

	<i>M</i>	<i>SD</i>
Moral functioning		
Judgment		
Wind up opponent	2.71	1.11
Dive to seek advantage	2.35	1.06
Risk injuring opponent	2.57	1.09
Intention		
Wind up opponent	2.96	1.25
Dive to seek advantage	2.72	1.23
Risk injuring opponent	2.94	1.15
Behavior		
Wind up opponent	2.73	1.17
Dive to seek advantage	2.03	1.11
Risk injuring opponent	2.50	1.09
Moral atmosphere		
Coach		
Wind up opponent	2.55	1.16
Dive to seek advantage	2.46	1.10
Risk injuring opponent	2.59	1.02
Teammates		
Wind up opponent	3.03	1.06
Dive to seek advantage	2.69	1.02
Risk injuring opponent	2.90	1.01
Performance Climate	2.94	0.71

*Note.* Higher scores on moral variables denote lower levels of moral functioning and a moral atmosphere condoning inappropriate action. Possible range of scores was 1-5.

judgment, intention, and behavior and the two aspects of moral atmosphere, that is coach and teammates, were measured with respect to three different scenarios describing inappropriate behaviors likely to occur during a football game. Because these variables were measured across three different scenarios, the MTMM analysis was deemed as the most appropriate method to examine the factorial structure of the moral functioning and moral atmosphere instruments (see Marsh, 1996; Marsh & Grayson, 1995). The five moral variables (i.e., judgment, intention, behavior, coach, and teammates) were considered as *traits*, while the three scenarios (i.e., wind up, dive, and risk injury) were regarded as different *methods* used to assess these traits.

The Confirmatory Factor Analysis (CFA) approach to MTMM data (Marsh & Grayson, 1995) was used to examine the factorial structure of the moral functioning and moral atmosphere instruments. In this approach, models that posit a priori trait and method factors are defined, and the ability of these models to fit the data is tested. Trait factors are defined by different measures of the same trait and suggest trait effects, whereas method factors are defined by measured variables (i.e., questionnaire items) assessed with the same method and suggest method effects.

Each measured variable is postulated to load on one trait and one method factor but is constrained not to load on any other factors. The CFA approach to MTMM data assesses convergent validity, discriminant validity, and method effects. Large loadings on trait factors provide support for convergent validity, large loadings on method factors indicate the existence of method effects, and large correlations among trait factors especially those approaching 1 indicate low discriminant validity (Marsh & Grayson, 1995).

Marsh and Grayson (1995) suggest that four models must be tested and compared. The first model, the trait only model (5CT in Table 2) posits correlated trait factors but no method effects; its comparison with the other models indicates the extent of method effects. If this model fits the data well, method effects are negligible. The remaining three models postulate correlated trait factors in combination with different representations of method effects. Thus, the second model (5CT3CM) posits *correlated* method factors, whereas the third model (5CT3UM) posits *uncorrelated* method factors. The comparison of the second to the third model determines whether method factors are correlated. In the fourth model, termed correlated trait correlated uniqueness (5CTCU), the presence of method effects is concluded from the correlations among uniqueness terms of the measured variables assessed by the same method. Method effects are inferred when the correlations among the uniqueness terms are moderate to large, and this model has a considerably better fit than the trait only (5CT) model (Marsh, 1989). The comparison between the 5CTCU and the 5CT3UM and 5CT3CM models tests whether method effects are unidimensional, that is, whether the effects associated with a certain method can be explained by a single method factor. The assumption of unidimensionality is made by the CTUM and CTCM models but not by the CTCU model (Marsh & Grayson, 1995). Previous research into moral functioning and moral atmosphere using MTMM analysis and similar design to the present study has found the CTUM and CTCU models to be credible (Kavussanu & Ntoumanis, 2003; Kavussanu et al., 2002); similar findings were anticipated in the present study.

The MTMM analyses were carried out with EQS 6.1 (Bentler, 2002) using the Maximum Likelihood Estimation method. The most appropriate model was selected based on (a) whether the model converged to a proper solution and (b) an examination of the goodness of fit indices (Marsh & Grayson, 1995). A model converges to an improper solution when parameter estimates take on impossible values, or are constrained (by the program) to the boundaries of possible values, such as correlations greater than 1 or constrained at 1 (Chen, Bollen, Paxton, Curran, & Kirby, 2001). Goodness of fit indices used to evaluate the competing models were the Comparative Fit Index (CFI), the Bentler-Bonett Non-Normed Fit Index (NNFI), the Standardized Root Mean Square Residual (SRMR), the Root Mean Square Error of Approximation (RMSEA) and its 90% Confidence Interval (CI), the Akaike's Information Criterion (AIC), the Consistent Akaike's Information Criterion (CAIC), and the Chi-Square ( $\chi^2$ ) likelihood ratio. A good model fit is evident when the CFI and the NNFI values are above .95, the SRMR is below .08, and the RMSEA is below .06 (Hu & Bentler, 1999). In addition, the model which produces the minimum AIC and CAIC may be considered a useful model (Bentler, 2002).

Results of the MTMM analyses are presented in Table 2. The solution for the 5CT model was improper and the model fit was very poor. In contrast, the remain-

ing three models had proper solutions and showed almost identical fit indices that reached the criteria for CFI, NNFI, SRMR, and RMSEA proposed by Hu and Bentler (1999). Because  $T > 3$ , the 5CT3UM model was nested under the 5CT3CM and 5CTCU models (see Marsh, 1996). Chi-square difference tests between the two pairs of nested models were non-significant, 5CT3UM versus 5CT3CM,  $\chi^2$  diff (3) = 3.61,  $p > .05$ ; 5CT3UM versus 5CTCU,  $\chi^2$  diff (15) = 16.66,  $p > .05$ . The 5CT3CM and 5CTCU models were not nested. Therefore, all models were compared by examining the AIC and CAIC (Table 2). Although the 5CT3CM model performed better than the 5CTCU model, the lowest AIC and CAIC were recorded for the 5CT3UM model. The 5CT3UM model was preferred because (a) it produced the minimum AIC and CAIC values and (b) it represented the most parsimonious model (i.e., goodness of fit indices for the 5CT3UM model were as good as the 5CT3CM and 5CTCU models using fewer freely estimated paths to account for relationships among the data).

The trait factor loadings were almost identical to those in Figure 1<sup>2</sup>. All trait factor loadings were significant (median = .70), indicating moderate convergent validity. The correlations among the moral variables (traits) were moderate to large (median  $r = .73$ ), indicating relatively low discriminant validity. These correlations are presented in Table 3. Finally, method factor loadings, presented in Table 4, were all significant and ranged from .14 to .64 (median = .46), indicating the presence of relatively weak method effects, that is, some variation in participants' responses specific to each moral dilemma.

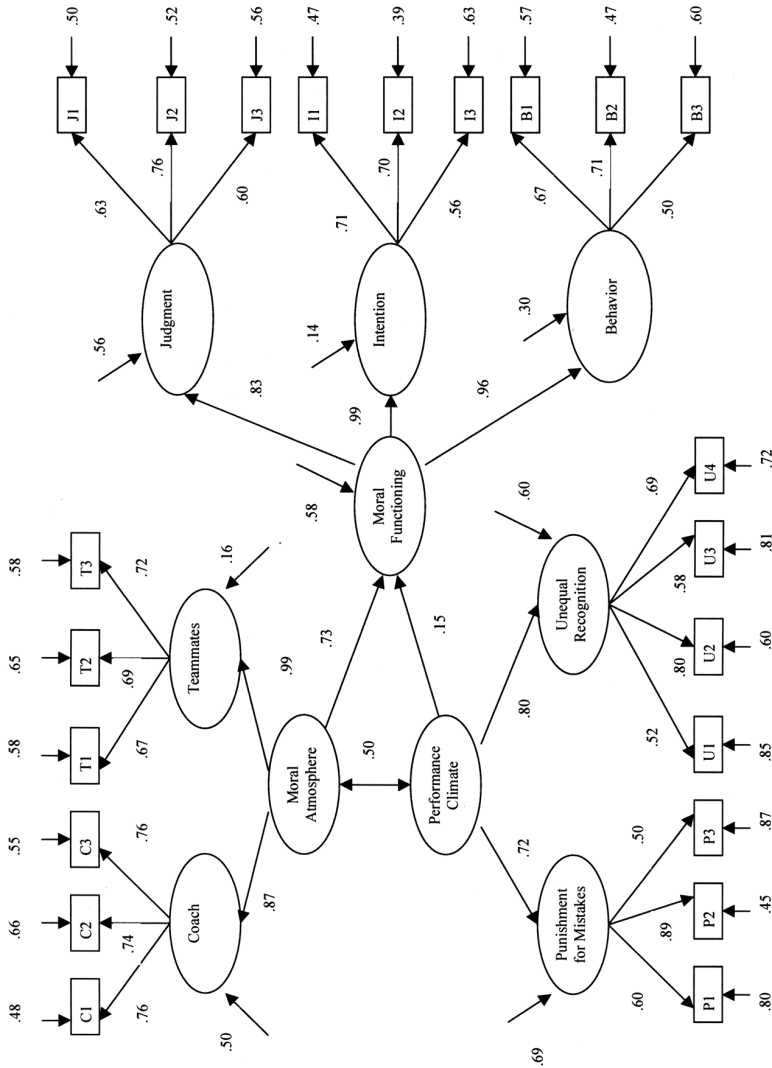
**Testing the Hierarchical Model of Moral Functioning and Moral Atmosphere.** Based on previous research (Kavussanu & Ntoumanis, 2003; Kavussanu et al., 2002), it was hypothesized that judgment, intention, and behavior would be lower-order indicators of moral functioning and that coach and teammates would be lower-order indicators of moral atmosphere. This hierarchical model with two higher-order factors was tested and compared with the first-order 5CT3UM model. The hierarchical model is nested under the first-order model, because it attempts to explain the correlations among the five first-order factors in terms of two higher-order factors (Marsh, 1987). Both the first-order 5CT3UM and the hierarchical 5CT3UM showed good fit indices (see Table 2),  $\chi^2$  diff (6) = 21.73,  $p < .01$ . We selected the higher-order model for subsequent testing of the hypothesized model, because (a) a higher-order model represents a more parsimonious explanation of relationships among the data (Marsh, 1987), and (b) we were interested in testing substantive hypotheses involving the higher-order constructs of moral functioning and moral atmosphere. The first- and second-order trait loadings of the hierarchical model were almost identical to those presented in Figure 1<sup>2</sup>. The correlation between moral atmosphere and moral functioning was  $r = .80$ . The second-order factor loadings were very high (median = .95) and accounted for a large percentage of the variance of the first-order factors (median % explained variance = 91), providing further support for the higher-order model.

**Testing the Hierarchical Model of Performance Motivational Climate.** Confirmatory factor analysis of the performance climate items from the PMCSQ-2 resulted in a less than adequate fit (see Table 2). Examination of the modification indices provided by EQS suggested the elimination of problematic items. These items were removed and the model fit was re-evaluated. The resultant model had an

Table 2 Goodness of Fit Indices for Various Models

Model	Solution	AIC	CAIC	$\chi^2$	df	NNFI	CFI	SRMR	RMSEA (90% CI)
5CT	Improper	758.38	375.43	918.38**	80	.61	.70	.10	.18 (.17 – .19)
5CT3CM	Proper	-33.74	-330.53	90.26*	62	.98	.99	.03	.04 (.02 – .05)
5CT3UM	Proper	-36.13	-347.27	93.87*	65	.98	.99	.03	.04 (.02 – .05)
5CTCU	Proper	-22.79	-262.14	77.21**	50	.98	.99	.03	.04 (.02 – .06)
Hierarchical 5CT3UM	Proper	-26.40	-366.27	115.60**	71	.98	.98	.03	.04 (.03 – .06)
Hierarchical Performance Climate	Proper	55.47	-250.90	183.47**	64	.90	.92	.06	.08 (.06 – .09)
Revised Hierarchical Performance Climate	Proper	-9.33	-71.56	16.67	13	.99	.99	.03	.03 (.00 – .07)
Hypothesized SEM in Figure 1	Proper	-118.99	-1014.14	255.01**	187	.98	.98	.04	.03 (.02 – .04)

Note: CT = Correlated Traits; CM = Correlated Methods; CU = Correlated Uniqueness; AIC = Akaike's Information Criterion; CAIC = Consistent Akaike's Information Criterion; NNFI = Non-Normed Fit Index; CFI = Comparative Fit Index; SRMR = Standardized Root Mean Square Residual; RMSEA = Root Mean Square Error of Approximation; 90% CI = 90% confidence interval of RMSEA. \*\*  $p < .01$  \*  $p < .05$ .



**Figure 1** — Hypothesized model depicting the relationships among moral atmosphere, performance climate, and moral functioning.

**Table 3 Trait Factor Correlations in the 5CT3UM Model**

	Judgment	Intention	Behavior	Coach	Teammates
Judgment		.81	.76	.69	.64
Intention			.96	.63	.81
Behavior				.64	.76
Coach					.53
Teammates					

Note. All correlations are significant at the  $p < .01$  level.

**Table 4 Standardized Method Factor Loadings of the 5CT3UM Model**

Traits	Methods		
	Wind up opponent	Dive to seek advantage	Risk injuring opponent with tackle
Judgment	.40	.58	.61
Intention	.58	.55	.46
Behavior	.53	.64	.48
Coach	.14	.36	.45
Teammates	.33	.40	.46

excellent fit (see Table 2), whereby performance motivational climate comprised two lower-order factors: Punishment for Mistakes and Unequal Recognition. Thus, this procedure of item elimination retained two of the hypothesized three performance climate factors with the best available indicators, a legitimate procedure in measurement evaluation (see Hofmann, 1995). The intra-team member rivalry subscale was eliminated from subsequent analyses. The first- and second-order loadings of the performance climate measure were almost the same as those presented in Figure 1<sup>2</sup>. The Punishment for Mistakes subscale contained three items: “the coach gets mad when a player makes a mistake,” “players are afraid to make mistakes,” and “the coach shouts at players for messing up.” The Unequal Recognition subscale contained four items: “the coach gives most of his attention to star players,” “the coach makes it clear who he thinks are the best players,” “if you want to play in the game you must be one of the best players,” and “the coach favors some players more than others.”



**Testing the Hypothesized Structural Model.** As stated earlier, in the hypothesized model, moral atmosphere and performance climate were posited to be related to each other and independently predict moral functioning. The model had an excellent fit and all parameter estimates were significant (see Table 2 and Figure 1). The variance accounted for in the first-order factors ranged from 52% to 98% (median = 75%). The correlation between performance climate and moral atmosphere was moderate ( $r = .50$ ), indicating that players who perceived a performance climate in their team also perceived a moral atmosphere condoning inappropriate action. Moral atmosphere was a strong predictor of moral functioning ( $b = .73$ ), while the path from performance climate to moral functioning was small but significant ( $b = .15$ ). Thus, players who perceived that a moral atmosphere condoning inappropriate action and to a lesser extent a performance motivational climate were salient in their team tended to report lower levels of moral functioning. Finally, the variance explained in moral functioning by moral atmosphere and performance climate was 66%.

## Discussion

The importance of the social context in influencing moral judgment, decision making, and subsequent behavior has been noted by several theorists (e.g., Higgins et al., 1984; Power et al., 1989; Shields & Bredemeier, 1995) and is supported by recently accumulated evidence in the sport domain (e.g., Kavussanu et al., 2002; Stephens & Bredemeier, 1996; Stuart & Ebbeck, 1995). The present study investigated the effects of two aspects of the social context, namely, moral atmosphere of the team and perceived performance motivational climate on moral functioning of adolescent British male footballers as well as the relationship between moral atmosphere and performance motivational climate. Based on past work (Kavussanu et al., 2002; Ommundsen et al., 2003), it was hypothesized that moral atmosphere and performance motivational climate would be positively related to each other and independently predict athletes' moral functioning.

Prior to testing the hypothesized relationships, the factorial structure of the instruments used in the study was examined. With regard to moral functioning and moral atmosphere, results indicated relatively weak method effects and moderate convergent validity, that is, there was some variation in participants' responses specific to each dilemma, but also stability of the traits (i.e., judgment, intention, behavior, coach, and teammates) across the dilemmas. This was not surprising given that different scenarios described different behaviors. In addition, there was a relative lack of discriminant validity among the five traits as evidenced by the high intercorrelations, more so among the moral functioning indicators.

The high inter-correlations among judgment, intention, and behavior are similar to previous work (Kavussanu & Ntoumanis, 2003; Kavussanu et al., 2002) and suggest that players who judge certain behaviors as appropriate are more likely to indicate the intention to engage in these behaviors and to subsequently perform the behaviors. This finding is consistent with Rest's (1983, 1984) model and in particular, the proposition that the components of the model influence each other through feedback and feed-forward loops. Although in this study we did not examine whether and how the three indices of moral functioning influence one another, clearly the

relationships identified are consistent with Rest's (1983, 1984) proposal.

Examination of the factor structure of the performance motivational climate revealed two factors, namely unequal recognition and punishment for mistakes. In line with earlier research into perceived motivational climate using the PMCSQ-2 (Newton et al., 2000), the intra-team member rivalry subscale proved unreliable. In providing justification for the low reliability of this subscale, Newton et al. (2000) suggested that coaches and female players in volleyball may be less likely to engage in rivalrous activities. However, the present study involved male football players and resulted in similar problems with the subscale. Our findings suggest that the constituent subscale items need to be revised.

As hypothesized, the moral atmosphere of the team had a strong effect on athletes' moral functioning. Thus, perceiving that the coach would encourage engagement in behaviors such as verbally or physically provoking an opponent, diving to seek an advantage, and risking hurting an opponent with a tackle and that a large number of team members would engage in such behaviors if winning was at stake, had a strong effect on the manner players viewed these behaviors, their intention to engage, as well as their reported engagement in the behaviors over the course of the football season. It is worth noting that the relationship between moral atmosphere and moral functioning was the strongest relationship identified in the present study. This finding supports previous work (Kavussanu et al., 2002) that has examined moral functioning in college basketball players and is consistent with other studies (Guivernau & Duda, 2002; Stephens, 2000, 2001, 2004; Stephens & Bredemeier, 1996) in which moral atmosphere has emerged as the best predictor of reported likelihood to aggress against an opponent. Finally, this finding supports Shields and Bredemeier's (1995) assertions, who applied Rest's model to sport that the moral atmosphere of the team has an effect on athletes' moral functioning.

Clearly, the moral atmosphere of the team plays an important role on athletes' moral functioning within the sport context. This finding has important implications for eliminating unsportsmanlike conduct from the athletic context. It seems that the best chance to achieve this is to educate the coaches about their role in maintaining fair play and encourage them to actively promote fair play in the team. For example, coaches could organize discussions about moral issues athletes face in their daily sport experience and encourage active participation of athletes in decision making as a way to promote moral functioning in sport. Research by Kohlberg and his associates (Kohlberg & Higgins, 1987; Power et al., 1989) on participatory democracy has shown that students from schools where they had more participation in decision making displayed higher levels of moral judgment. If athletes feel that they play an important role in the decisions that need to be made in the team, including engagement in sportsmanlike behaviors, they are likely to feel higher sense of responsibility to engage in positive social conduct and avoid unsportsmanlike action.

Performance climate had a significant effect on footballers' moral functioning with perceptions of a performance climate corresponding to low levels of moral functioning. In a performance motivational climate, success is defined in normative terms and value is placed on normatively high ability (Ames & Archer, 1988). The best players typically receive recognition and play in the game, and the coach makes it clear that he or she is not happy when players make mistakes (Newton et al., 2000). Clearly, the coach who creates such a climate is very much concerned

with and values winning. Sometimes, winning a game could be achieved not only by playing exceptionally well, but also by engaging in unsportsmanlike conduct such as provoking other players, cheating, and risking injuring opponents. When performance motivational climate prevails in the team, it is likely that players might engage in such behaviors if this secures the goal of winning. Thus, coaches who want to promote moral functioning in sport need to minimize the emphasis on performance motivational climate. For example, recognizing the contributions of all players to the team and avoiding punishing players when they make mistakes would minimize the emphasis on this type of climate and has the potential to promote moral functioning. Although our findings attest to the detrimental effects of performance motivational climate on athletes' moral functioning, it is also important to note that despite being significant, these effects were weak.

The link between performance climate and moral functioning is consistent with other work that has also shown a significant relationship between performance motivational climate and moral variables in sport such as attitudes toward rough play and cheating (Boixados et al., 2004), low levels of sportspersonship (Miller et al., 2004; Ommundsen et al., 2003), and multiple indices of moral functioning (Ommundsen et al., 2003). However, it is in contrast with work that has not identified a significant association between performance climate and moral functioning (Kavussanu et al., 2002) or sportspersonship (Gano-Overway et al., 2005). One factor that may explain the discrepancy in the findings of these studies is participants' sex. More specifically, studies reporting no relationship between performance climate and moral variables have used either exclusively (Gano-Overway et al., 2005) or mostly (Kavussanu et al., 2002) female athletes, whereas studies which have found a significant relationship between the two constructs have used either exclusively (Boixados et al., 2004; Ommundsen et al., 2003) or mostly male athletes (Miller et al., 2004). Our study also falls in the latter category. In the only study that has examined interaction effects between gender and perceptions of motivational climate on sportspersonship (Miller et al., 2004), no significant effects were revealed; however, it should be noted that this study used the median split strategy, which is not very powerful in revealing interaction effects (Cohen, 1983; Cohen, Cohen, West, & Aiken, 2003).

Taken together, the findings of the above studies suggest that perceptions of a performance motivational climate may exert a stronger effect on moral functioning in males than in females. Past research has consistently reported that males tend to be higher in ego orientation than are females (e.g., Kavussanu & Roberts, 1996, 2001; Walling & Duda, 1995). Athletes who are high in ego orientation express a strong preference for social comparison as a source of information for their competence (Williams, 1994). It is possible that male athletes, who tend to be predominantly ego oriented, due to this preference for normative competence information, are more susceptible to the influence of a performance motivational climate. As a result, perceiving that the coach favors the best players and recognizes normative achievement may predispose male athletes, more so than females, to engage in unsportsmanlike conduct in order to prove their ability in contributing to the success of the team. However, because in the present study we did not compare males and females, nor did we measure goal orientation, we can only speculate on the above. It would be interesting for future research to disentangle these relationships.

As hypothesized, moral atmosphere and perceived performance climate were moderately related to each other. Thus, coaches, who were perceived to create a performance climate in the team, were also viewed as encouraging unsportsmanlike conduct, while teammates were viewed as more likely to engage in such conduct. It is possible that the type of motivational climate created by the coach reflects his or her values and priorities (see also Kavussanu et al., 2002). That such a climate is moderately associated with views that the coach encourages unsportsmanlike conduct in order to win suggests that the coach who creates this climate highly values winning over the players' welfare.

The finding described above supports previous research (Kavussanu et al., 2002; Ommundsen et al., 2003), which has employed the same methodology and has also reported a moderate relationship between performance climate and moral atmosphere. Equally important, to date this relationship has held regardless of cultural context, gender, or sport. Specifically, Kavussanu and colleagues (Kavussanu et al., 2002) used American male and female college basketball players, Ommundsen and his associates (Ommundsen et al., 2003) have employed Norwegian adolescent footballers, while in the current study, we used British adolescent male footballers; yet the link between performance climate and moral atmosphere has persisted, which is evidence of the strength of the relationship between the two constructs.

In sum, this study identified a positive relationship between moral atmosphere and performance motivational climate and documented the independent predictive effects of these constructs on moral functioning of adolescent British male footballers. These results are consistent with past research (e.g., Boixados et al., 2004; Ommundsen et al., 2003), but only partly support the generalizability of the Kavussanu et al (2002) findings to a sample that differed in gender, sport, age and cultural context. One discrepant finding between the two studies was the relationship between performance climate and moral functioning, which was significant in the current study but failed to reach significance in previous work (Kavussanu et al., 2002). Although other factors such as sample size may have affected the statistical significance of the results, it is likely that performance climate has a stronger effect on moral functioning in male athletes in comparison to female athletes. The answer to this question, however, awaits further research.

## Practical Recommendations

The current findings suggest that the moral atmosphere of the team and the motivational climate created by the coach play an important role on athletes' moral functioning. Based on these findings, several recommendations can be made to the practitioner to assist in minimizing unsportsmanlike conduct within the sport context. First and foremost, coaches need to actively discourage such conduct. For example, coaches could reprimand players when they cheat, break the rules, or try to injure opponents while reward players when they help an opponent off the floor, encourage a teammate after a mistake, or display other positive social behaviors. Second, coaches could discuss with their players the importance of fair play for everyone involved in sport as well as their *own* role in maintaining this. Through such discussions, team members may reevaluate their views of sport morality and assume more responsibility in maintaining fair play within the sport context. Third, coaches need to deemphasize a motivational climate that encourages social

comparison. More specifically, coaches should treat all players equally, avoid favoring some players more than others, and treat mistakes as a natural part of learning. By reducing the emphasis on normative success, and actively discouraging cheating and aggressive behaviors, such behaviors should be kept to the minimum.

## Future Research

Researchers concerned with moral issues in sport have a great deal of questions to answer in future research. A central issue that has emerged in this study is the relationship between performance climate and moral functioning. Future studies need to investigate these constructs in both males and females to ascertain whether participants' gender moderates this relationship. In addition, recent research has identified peer motivational climate as a factor that influences motivational climate in sport (Vazou, Ntoumanis, & Duda, 2005). It would be interesting for future research to determine whether the motivational climate created by peers and the coach interact in influencing moral functioning in sport. Finally, as the link between moral atmosphere and performance climate has now appeared in several studies, it would be interesting for future research to identify variables that underpin this relationship.

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## End Notes

<sup>1</sup>Winding up an opposition player means physically or verbally taunting an opposition player with the intention to either cause distraction or provoke a punishable reaction.

<sup>2</sup>Details can be obtained from the second author.

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