

Prosocial and Antisocial Behavior in Sport: The Role of Coaching Style, Autonomous vs. Controlled Motivation, and Moral Disengagement

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The purpose of this study was to examine whether the relationships between contextual factors (i.e., autonomy-supportive vs. controlling coaching style) and person factors (i.e., autonomous vs. controlled motivation) outlined in self-determination theory (SDT) were related to prosocial and antisocial behaviors in sport. We also investigated moral disengagement as a mediator of these relationships. Athletes' ($n = 292$, $M = 19.53$ years) responses largely supported our SDT-derived hypotheses. Results indicated that an autonomy-supportive coaching style was associated with prosocial behavior toward teammates; this relationship was mediated by autonomous motivation. Controlled motivation was associated with antisocial behavior toward teammates and antisocial behavior toward opponents, and these two relationships were mediated by moral disengagement. The results provide support for research investigating the effect of autonomy-supportive coaching interventions on athletes' prosocial and antisocial behavior.

Keywords: autonomy-supportive coaching style, controlling coaching style, self-determination theory

*If people are good only because they fear punishment,
and hope for reward,
then we are a sorry lot indeed.*

—Albert Einstein
(Cited in Gagné, 2003)

It is critically important to the proper functioning of society that individuals act in accordance with moral values that reflect “good deeds,” as Einstein indicates in the above quote. Furthermore, individuals must have the ability to independently regulate their thoughts, emotions, and behavior in line with those values (e.g.,

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volitionally engage in prosocial behavior; Gagné, 2003). As an important socialization agency, sport has a meaningful role to play in this regard. In sport, the terms *prosocial* and *antisocial behavior* have been used to refer to the proactive and inhibitive aspects of morality (e.g., Kavussanu, 2006; Sage, Kavussanu, & Duda, 2006). Prosocial behaviors have been defined as acts intended to help or benefit another person (Eisenberg & Fabes, 1998; Weinstein & Ryan, 2010), whereas antisocial behaviors are acts intended to harm or disadvantage another individual (Sage et al., 2006). For example, verbally encouraging a teammate and physically intimidating an opponent are prosocial and antisocial behaviors in sport, respectively.

Recent research employing an achievement goal theory perspective has demonstrated the importance of considering both person (goal orientations) and contextual (motivational climate) variables with respect to prosocial and antisocial behaviors in sport (e.g., Boardley & Kavussanu, 2009; Kavussanu, Seal, & Phillips, 2006; Kavussanu, Stamp, Slade, & Ring, 2009). In this study, we examined whether the relationships between contextual factors (i.e., autonomy-supportive vs. controlling coaching style) and person factors (i.e., autonomous vs. controlled motivation) outlined in self-determination theory (SDT; Deci & Ryan, 2000, 2002; Ryan & Deci, 2000) were related to prosocial and antisocial behaviors toward teammates and opponents in sport. Recent research has indicated the potential for SDT as a useful motivational framework to explain the psychological underpinnings of prosocial and antisocial variables in sport (Ntoumanis & Standage, 2009; Vansteenkiste, Mouratidis, & Lens, 2010). We also investigated a potential mediator of the relationships with prosocial and antisocial behavior (i.e., moral disengagement). Moral disengagement is the selective use of psychosocial maneuvers that allow an individual to transgress moral standards without experiencing negative affect (e.g., guilt), thereby decreasing constraint on future negative behavior (Bandura, 1999, 2002). The concept of moral disengagement has recently been examined with respect to prosocial and antisocial behaviors in sport (Boardley & Kavussanu, 2007, 2009, 2010; Corrion, Long, Smith, & d'Arripe-Longueville, 2009).

Ryan and Deci (2000) have argued that humans are naturally inclined to be prosocial animals, given proper nurturing (e.g., an autonomy-supportive environment). When one lacks this nurturing, one is likely to substitute it by pursuing goals (e.g., to gain ego enhancement, fame, and extrinsic rewards) that do not promote prosocial behavior (Gagné, 2003). Ryan and Deci (2000, 2008) have proposed that motivation can be characterized as existing along a continuum representing two broad types of motivation: autonomous motivation (i.e., intrinsic motivation and self-determined forms of extrinsic motivation) and controlled motivation (i.e., non-self-determined or controlled extrinsic motivation). The hallmark of autonomous motivation is when an individual engages in an activity or behavior because of interest or enjoyment in the activity itself; actions are experienced as emanating from or are congruent with one's self (Ryan & Connell, 1989). Controlled motivation represents behavioral engagement that is regulated by a desire to obtain separable outcomes that are not self-determined; these actions are experienced as emanating from self-imposed pressures (e.g., shame, pride) or from external pressures and controls (Deci & Ryan, 2002; Ryan & Connell, 1989). Autonomous motivation has been shown to be positively associated with prosocial behavior (e.g., Gagné, 2003; Weinstein & Ryan, 2010) and controlled motivation has been shown to be positively linked to antisocial attitudes (e.g., Ntoumanis & Standage, 2009).

In addition, as demonstrated by Gagné (2003) and by Hardy, Padilla-Walker, and Carlo (2008), SDT also provides a model for understanding the internalization of values generally and applies equally well to moral (i.e., prosocial) values (also see Ryan & Connell, 1989; Ryan & Deci, 2000). The SDT continuum is a model of increasing internalization of values, as well as increasing self-regulation, as one moves from controlled to autonomous motivation. Internalization of values is conceptualized as the process by which individuals progressively accept values and integrate them into their sense of self, such that their behavior becomes internally regulated rather than primarily externally controlled (Deci & Ryan, 2000). From a SDT perspective, lower levels of internalization (i.e., controlled motivation), emphasize compliance with values, whereas at higher levels of internalization (i.e., autonomous motivation), value-congruent behavior is perceived as being self-initiated and self-regulated (Ryan & Connell, 1989; Ryan & Deci, 2000).

Self-Determination Theory, and Prosocial and Antisocial Behavior

In line with Vallerand and Losier's (1994) contention, we argue that *why* athletes play sport (motivational orientation) can influence *how* they play sport (i.e., their prosocial and antisocial behavior; also see Donahue, Miquelon, Valois, Goulet, Buist, & Vallerand, 2006; Vallerand, 2007). In accordance with SDT principles, athletes who are autonomously motivated should behave primarily in line with their true self (Deci & Ryan, 2000) and seek to satisfy their psychological needs of competence (functioning effectively), autonomy (having a sense of personal initiative and volition), and relatedness (connecting with others).

For autonomously motivated athletes, enjoyment is in "the process of trying to improve and do well through appropriate means" (Donahue et al., 2006, p. 512), in choicefully acting in line with their goals and values (e.g., prosocial behavior; Gagné, 2003), and through connecting with others in their sport, not by winning at all costs (e.g., antisocial behavior). Thus, for autonomously motivated athletes to act in an antisocial manner would run counter to their psychological needs, as it would lead them to achieve competence artificially, to act against their sense of autonomy by engaging in behaviors that run counter to their goals and values, and to disconnect from other athletes by cheating and taking unfair advantage of opponents (Donahue et al., 2006; Gagné, 2003). Autonomously motivated athletes should therefore be more likely to behave in line with their sense of self and internalized values, which would include respect for others and themselves and, in turn, be more likely to engage in prosocial behavior and less likely to engage in antisocial behavior.

Conversely, athletes who are motivated in a controlled fashion would primarily seek to gain ego enhancement, fame, and extrinsic rewards as a substitute for needs satisfaction (Deci & Ryan, 2000). Athletes with dominant controlled motivation would not focus as much on the process of the game, but rather on the outcome, which would serve to fulfill their goals of gaining ego enhancement, fame, and rewards and to nourish their contingent self-esteem (Deci & Ryan, 2000, 2002; Donahue et al., 2006). Athletes with dominant controlled motives underpinning participation would thus focus primarily on the end result with a strong emphasis on

winning; and when winning is everything, athletes will be tempted to do anything to win. They would therefore be more likely to consider engaging in antisocial behaviors in an effort to win, and to morally disengage.

Considerable research in other life domains indicates that prosocial behavior, be it helping others through prosocial acts at work, volunteering, or through giving blood, is negatively affected when people feel obligated or controlled by external contingencies (Fabes, Fultz, Eisenberg, May-Plumlee, & Christopher, 1989; Grant, 2008; Millette & Gagné, 2008). The issue of acting prosocially either volitionally or through external forces can be examined with a theoretical framework such as SDT that addresses how environmental forces and individual differences can affect motivation to engage in these behaviors.

Although moral functioning in sport has been extensively studied from an achievement goal theory perspective (e.g., Boardley & Kavussanu, 2009; Kavussanu & Spray, 2006; Miller, Roberts, & Ommundsen, 2004), far less attention has been devoted to this issue from an SDT perspective. In the few SDT-based studies that have examined moral functioning in sport, it has been shown that autonomously motivated athletes were more likely to report prosocial attitudes (Ntoumanis & Standage, 2009), sportspersonship orientations (Vallerand & Losier, 1994), and avoidance of illegal performance-enhancing substances (Barkoukis, Lazuras, Tsorbatzoudis & Rodafinos, 2011; Donahue et al., 2006). In addition, Vansteenkiste et al. (2010) found a positive association between controlled motivation and immoral behavior.

Contextual Determinants of Prosocial and Antisocial Behavior in Sport

A number of authors have contended that one of the most influential individuals in the athlete's sport experience is her or his coach and the contextual environment the coach creates for the team or training squad (e.g., Bartholomew, Ntoumanis, & Thøgersen-Ntoumani, 2010; Gagné, Ryan, & Bargmann, 2003). The key aspect of the team or training squad environment likely to be associated with differences in sport behavior is the interpersonal style of the coach (Bartholomew et al., 2010), which pertains to the values emphasized by the coach and coaching behaviors designed to influence their athletes' motivation and behavior. A coach can structure an environment to be either autonomy supportive or controlling. An autonomy-supportive environment is one in which the athlete is provided choice and a rationale for tasks, their feelings are acknowledged, opportunities to show initiative and independent work are provided, athletes are given noncontrolling competence feedback, and the use of guilt-inducing criticism and overt control is avoided (Mageau & Vallerand, 2003). In contrast, in a controlling environment a coach can behave in a coercive, pressuring, and authoritarian way and employ such strategies as manipulation, obedience, guilt induction, controlling competence feedback, and conditional regard in order to impose a specific and preconceived way of thinking and behaving upon their athletes (Bartholomew et al., 2010).

In line with Gagné's (2003) contention that autonomous motivation is a central determinant of prosocial behavior, the assumption in the present research is that motivation for prosocial behavior can be enriched by autonomy-supportive coaching factors and dampened by controlling factors because these factors affect the

satisfaction of basic psychological needs and subsequent autonomous motivation. Control, whether by external forces or by oneself, entails regulatory processes that are more rigid; involve greater pressure, tension, and a more negative emotional tone; and result in learning that is more rote oriented and less integrated (Deci & Ryan, 1987). Thus, as Gagné (2003) asserted, autonomy support should orient people toward paying more attention to others, and therefore more likely to engage in prosocial behavior and less likely to engage in antisocial behavior.

According to Bandura (2002, 2004), the social context plays an important role in determining moral thought and action. Athletes who perceive controlling coaching behaviors may morally disengage by justifying antisocial behaviors as a legitimate means to a desired end emphasized by the coach (e.g., to help the team win), by blaming the people they harm in response to provocation (e.g., he or she deserved it), or by displacing responsibility for their actions on their coach (e.g., it's not my fault). Moral disengagement may mediate the relationships between controlling environments, controlled motivation, and athletes' antisocial behaviors. Athletes who perceive their coach as being high on controlling behaviors may have higher levels of moral disengagement because they will have increased exposure to coaching behaviors that could promote its use (i.e., coercive behaviors such as obedience, guilt induction, and conditional regard that focus on compliance). As Bandura (1991) stated, "coercive threat may extract situational compliance, but cognitive guides provide a basis for regulating future conduct under changing circumstances" (p. 51).

Bandura's Model of Moral Thought, Action, and Moral Disengagement

In his social cognitive theory of moral thought and action, Bandura (2006) suggested that in the development of moral agency, individuals adopt standards of right and wrong that serve as guides for conduct. In this self-regulatory process, individuals monitor their conduct and the conditions under which it occurs, judge it in relation to their moral standards and perceived circumstances, and regulate their actions by the consequences they apply to themselves. Bandura (2004) argued that transgressive conduct is regulated by two major sources of sanctions, social sanctions and internalized self-sanctions, that operate anticipatorily. In fear control, individuals refrain from transgressing because they fear that such conduct will bring them social censure and other adverse consequences (i.e., a controlling environment). Whereas in "self-control, they behave prosocially because it produces self-satisfaction and self-respect and they refrain from transgressing because such conduct will give rise to self-reproof" (Bandura, 1991, p. 63; i.e., autonomous motivation). It is possible that a coach with good intentions could employ controlling behaviors to coerce an athlete to comply with her or his expectations for prosocial behavior, while another coach's use of autonomy-supportive behavior could inadvertently empower an athlete to freely choose to act in an antisocial manner. However, SDT propositions would predict that such outcomes would be short term and would not lead to authentic autonomously motivated behaviors in the long term (Grant, 2008), due to the lack of concordance with the athlete's psychological needs for competence, autonomy, and relatedness (Gagné, 2003).

In an effort to explain the mechanisms underlying immoral acts, Bandura (1999) argued that the use of eight psychological maneuvers, collectively known as *mechanisms of moral disengagement*, allows individuals to transgress moral standards without experiencing negative affect (e.g., guilt), thereby decreasing constraint on future negative behavior. As Bandura (2002) observed, high moral disengagers experience low guilt over immoral behavior and they are less prosocial. The eight mechanisms of moral disengagement are moral justification, euphemistic labeling, advantageous comparison, displacement of responsibility, dehumanization, attribution of blame, distortion of consequences, and diffusion of responsibility. These eight mechanisms are explained by Bandura (2002), and Boardley and Kavussanu (2007) have offered sport examples for each mechanism. Moral disengagement has been strongly associated with antisocial behaviors in sport (Boardley & Kavussanu, 2007, 2009, 2010; Corrion et al., 2009; Lucidi, Zelli, Mallia, Grano, Russo, & Violani, 2008), and inversely linked to prosocial behavior in team sports (Boardley & Kavussanu, 2007, 2009). Long, Pantaléon, Bruant, and d'Arripe-Longueville (2006) revealed that young ($M = 16.5$ years) elite athletes employed moral disengagement to minimize personal accountability for antisocial behaviors.

The Present Research

The purpose of this study was to examine whether the relationships between contextual factors and person factors outlined in self-determination theory (Deci & Ryan, 2002) were related to prosocial and antisocial behaviors toward teammates and opponents in sport. We also investigated moral disengagement as a potential mediator of these relationships. In this study we extended previous research on prosocial and antisocial behavior in sport by (i) examining SDT variables with prosocial and antisocial *behaviors* rather than attitudes as the dependent variables, (ii) integrating SDT variables with a measure of moral disengagement, and (iii) assessing SDT controlling style as well as autonomy-supportive coaching style. We tested the following hypotheses (also see Figure 1).

1. An autonomy-supportive coaching style will be positively associated with prosocial behavior, and negatively associated with antisocial behavior toward both teammates and opponents; these relationships will be mediated by autonomous motivation and moral disengagement.
2. A controlling coaching style will be positively associated with antisocial behavior, and negatively associated with prosocial behavior toward both teammates and opponents; these relationships will be mediated by controlled motivation and moral disengagement.

Method

Participants and Procedures

Competitive sport athletes ($n = 292$) from a New Zealand university were recruited for this study (175 females, 114 males, three did not report gender; mean age =

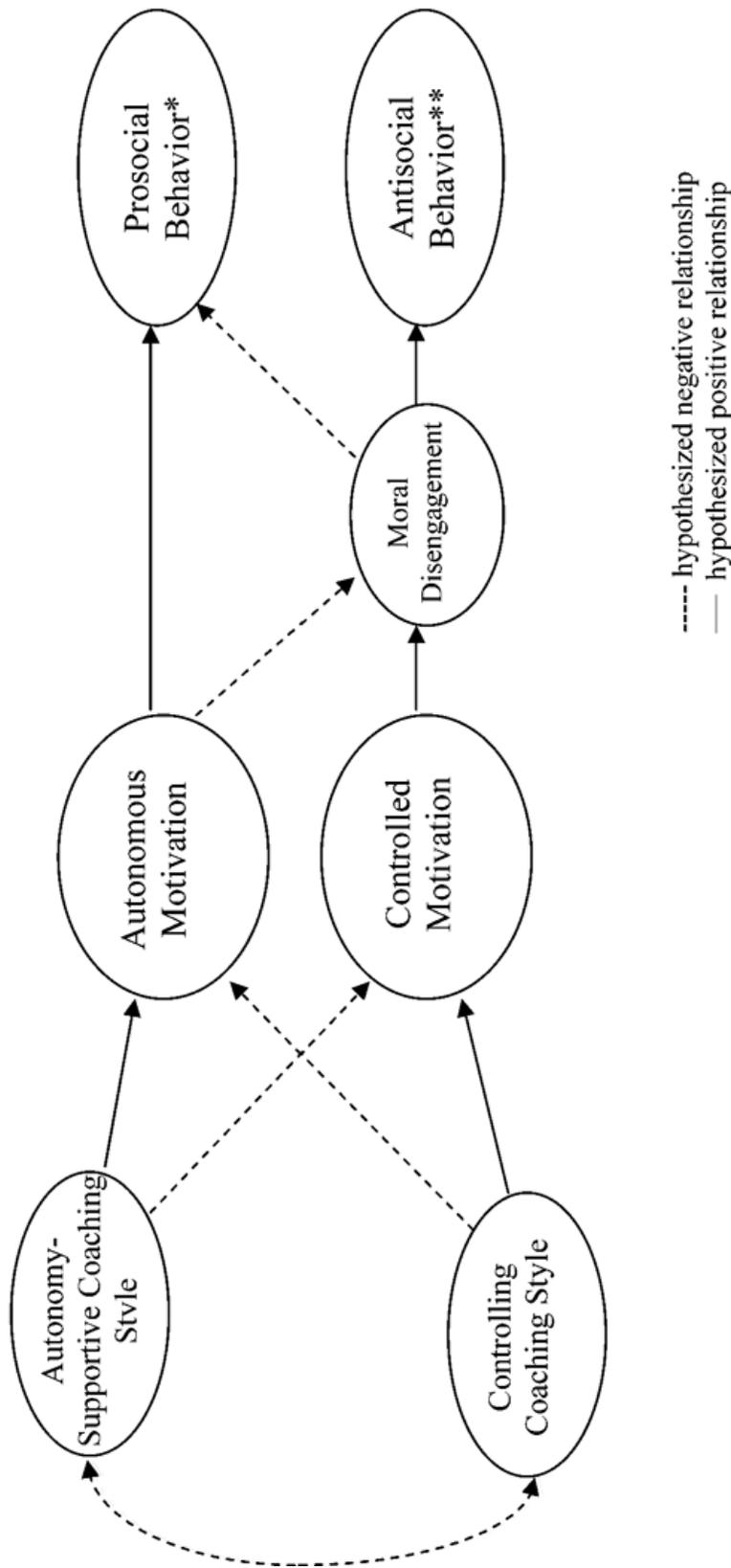


Figure 1 — Hypothesized structural model of coaching style, motivation, moral disengagement, and prosocial/antisocial behavior. *Prosocial Behavior = prosocial behavior toward both teammates and opponents. **Antisocial Behavior = antisocial behavior toward both teammates and opponents.

19.53 years, $SD = 1.6$ years), from 39 different team (e.g., netball $n = 45$; soccer $n = 32$, field hockey $n = 27$, basketball $n = 14$) and individual (e.g., track and field, $n = 19$; cycling $n = 8$, swimming $n = 7$, tennis $n = 6$) sports. These athletes were predominantly of New Zealand European (Caucasian) descent ($n = 248$, 85.22% of the sample), and included experienced ($M = 9.84$ years participating in their sport; $SD = 3.83$ years) club-level athletes ($n = 77$), provincial age-grade representatives ($n = 133$), national age-group representatives ($n = 38$), provincial senior representatives ($n = 28$), and national senior representatives ($n = 16$). We collected data in the middle of winter. As indicated by the participants, this time period was in-season for winter sport athletes (63.69%) and off-season for summer sport athletes (36.30%). Ethical approval for this study was received from the university's ethics committee and informed consent was received from all participants.

Measures

Autonomy-Supportive and Controlling Coaching Styles. We assessed athletes' perceptions of autonomy-supportive and controlling behaviors, or styles, exhibited by the coach in their major sport. Participants responded to the following stem: "This questionnaire contains items that are related to your experiences with your coach. Coaches have different styles in dealing with athletes/players, and we would like to know more about how you have felt about your encounters with your coach." We adapted 14 items from the Health Care Climate Questionnaire (Williams, Cox, Kouides, & Deci, 1999) to assess autonomy-supportive coaching style (e.g., "I feel that my coach provides me choices and options"), and 4 items from the College-Student Scale (Grolnick, Ryan, & Deci, 1991) to assess controlling coaching style (e.g., "My coach insists that I do things his/her way") in competitive sport. Satisfactory psychometric properties for these two scales have been reported by Williams et al. (1999) and Grolnick et al. (1991), respectively. Past work in sport has documented support for the reliability of adapted versions of the autonomy-supportive scale (Ntoumanis & Standage, 2009; Reinboth, Duda, & Ntoumanis, 2004); however, the controlling style scale has not been previously used in the sport context. Participants responded to each item using a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*).

Behavioral Regulation in Sport Questionnaire-6 (BRSQ-6). We measured the six types of motivational regulation as specified in SDT with the 24-item BRSQ-6 (Lonsdale, Hodge, & Rose, 2008). Participants responded to the following stem: "Below are some reasons why people participate in sport. Using the scale provided, please indicate how true each of the following statements is for you." The BRSQ-6 includes subscales designed to measure intrinsic motivation (IM; e.g., "because I find it pleasurable"), integrated regulation (IG; e.g., "because it's an opportunity to just be who I am"), identified regulation (ID; e.g., "because I value the benefits of my sport"), introjected regulation (IJ; e.g., "because I would feel ashamed if I quit"), external regulation (EX; e.g., "because I feel pressure from other people to play"), and amotivation (AM; e.g., "but I wonder what's the point"). Participants responded to the items using a 7-point Likert scale (1 = *not true at all*, 7 = *very true*). Evidence supporting the psychometric properties of the BRSQ-6 scores has been reported by Lonsdale et al. (2008). Scores for autonomous motivation (ID, IG, IM) were calculated using the following formula: $2 \times IM + IG + ID$. Controlled

motivation was calculated using $2 \times IJ + 2 \times EX$ (see Lonsdale, Hodge, & Rose, 2009).

Moral Disengagement in Sport Scale–Short (MDSS-S). The short form of the MDSS (Boardley & Kavussanu, 2008) was employed to measure athletes' overall sport moral disengagement. Participants were asked to "please respond to each of the following statements by indicating how much you agree with each statement. Please keep your main competitive sport in mind as your answer each question." Participants responded to eight items (e.g., "It is okay for players to lie to officials if it helps their team"; "Bending the rules is a way of evening things up"), each item representing one of the eight psychological mechanisms for moral disengagement (Bandura, 1991, 1999, 2002), by indicating how much they agreed with each statement (using a 7-point Likert scale; 1 = *strongly disagree*, 7 = *strongly agree*). Satisfactory psychometric properties for the short form of the MDSS have been reported by Boardley and Kavussanu (2008).

Prosocial and Antisocial Behavior in Sport Scale (PABSS). Athletes responded to 20 statements by indicating how often they had engaged in each behavior during the current competitive season or their most recent season. Participants responded to the following stem: "Please respond to each of the following statements by indicating how often you have engaged in each behavior during the current competitive season; if you are not currently participating in a competitive season, please consider your experiences during your most recent competitive season." Participants answered each item using a 5-point Likert scale (1 = *never*, 5 = *very often*). The PABSS (Kavussanu & Boardley, 2009) consists of four subscales: (i) prosocial behavior toward teammates (four items; e.g., "congratulated a teammate/training partner"), (ii) prosocial behavior toward opponents (three items; e.g., "helped an injured opponent"), (iii) antisocial behavior toward teammates (five items; e.g., "verbally abused a teammate/training partner"), and (iv) antisocial behavior toward opponents (eight items; e.g., "physically intimidated an opponent"). Opponent behaviors were both verbal and physical, whereas teammate behaviors were only verbal. Kavussanu and Boardley (2009) have provided evidence for the validity and reliability of the four subscales' scores with team sport athletes. We adapted/reworded the "teammate" items to include behaviors in individual sports as well (e.g., "Gave positive feedback to a teammate/training partner").

Data Analysis

Preliminary Analyses. We examined the data to identify any pattern of missing scores. We then assessed normality of the data distribution by examining the univariate skewness and kurtosis as well as the multivariate Mardia coefficients. We also investigated the internal consistency of subscale scores (α coefficients) and conducted CFAs to confirm the factorial validity of the two coaching behavior questionnaires, which have limited validity evidence in the sport context. We also tested the factorial validity of the PABSS scores in this sample; the PABSS has not been previously employed with individual sport athletes. Finally, we used CFA procedures to test the fit of the measurement model to the data (Jöreskog & Sörbom, 1999). In this model, and all subsequent structural equation models, we employed item parceling to reduce the number of parameters estimated. This

procedure resulted in seven observed score indicators for autonomy-supportive style, four autonomous motivation indicators, four prosocial behavior toward teammates indicators, three prosocial behaviors toward opponents indicators, five antisocial behavior toward teammates indicators, and four antisocial behavior toward opponents indicators. The original four item scores for controlling style were not parceled. We employed Hu and Bentler's (1999) cutoff criteria (CFI and TLI $\geq .95$, RMSEA $\leq .06$, SRMR $\leq .08$) when evaluating the fit of each model to the data.

Main Analyses. We began by testing the fit of the hypothesized structural equation model (see Figure 1). We then tested mediation hypotheses by specifying a combined effects model. In this combined effects model, eight paths were added to the mediation model, including paths from autonomy-supportive style to each of the four pro-/antisocial behavior variables, and paths from controlled motivation to each of the four pro-/antisocial behavior variables. These new paths estimated the direct effects of a predictor variable on an outcome variable (i.e., in addition to the mediated/indirect effect). If the fit of the combined effects model was not superior to the mediation model, the indirect effect was significant, and the direct effect was not significant, then mediation was deemed to have been demonstrated (Holmbeck, 1997). When comparing the fit of these nested models, we examined the Δ scaled χ^2 ($p < .05$) and used the Δ CFI criteria ($>.01$) suggested by Cheung and Rensvold (2002). When interpreting bivariate correlations and path estimates, we followed Cohen's (1988) guidelines: strong = .50, moderate = .30, and small = .10.

Results

Preliminary Analyses

Only 0.34% of the data were missing and there was no apparent pattern in these cases. As a result, we replaced the missing data using an expectation maximization algorithm. Univariate skewness and kurtosis were not evident in the data (skewness < 2 , kurtosis < 7); however, indices of multivariate nonnormality were substantial (standardized skewness = 22.965, standardized kurtosis = 13.348). Therefore, we employed Satorra–Bentler correction to the χ^2 statistic and standard errors in all structural equation models. Alpha coefficients ranged from .77 to .95 (see Table 1). Apart from a somewhat elevated RMSEA, CFA of the coach behavior data generally supported the factorial validity of the 14-item autonomy-support scale: scaled χ^2 ($df = 77$) = 270.79 ($p < .01$), RMSEA = .09 (90% CI = .08–.10), TLI = .97, CFI = .98, SRMR = .05. However, a subsequent CFA of the controlling item scores indicated marginal fit: χ^2 ($df = 2$) = 31.37 ($p < .01$), RMSEA = .22 (90% CI = .16–.30), TLI = .83, CFI = .94, SRMR = .05. All loadings in this latter CFA exceeded .61, suggesting that no single item was responsible for this marginal fit. We decided to include the controlling items in subsequent test of the full model, but proceeded cautiously with respect to these scores. The PABSS scores demonstrated acceptable factorial validity: scaled χ^2 ($df = 164$) = 279.15 ($p < .01$), RMSEA = .05 (90% CI = .04–.06), TLI = .97, CFI = .98, SRMR = .06.

Table 1 Descriptive Statistics and Factor Correlations (ϕ Matrix) Among Coaching Style, Motivational, and Outcome Variables ($N = 292$)

Variable	1	2	3	4	5	6	7	8
Autonomy-Supportive Coaching Style	.95							
Autonomous Motivation	.42*	.87						
Controlled Motivation	-.24*	-.08	.93					
Moral Disengagement	-.22*	-.04	.31*	.83				
Prosocial Behavior Toward Teammates	.16*	.30*	.02	.04	.81			
Prosocial Behavior Toward Opponents	.02	.08	-.02	-.09	.36*	.77		
Antisocial Behavior Toward Teammates	-.19*	-.02	.28*	.51*	-.03	.05	.84	
Antisocial Behavior Toward Opponents	-.25*	-.02	.23*	.74*	.05	.11	.57*	.89
Mean (<i>SD</i>)	4.94 (1.19)	22.13 (2.86)	5.88 (2.77)	2.74 (1.12)	4.31 (.58)	3.18 (.94)	1.92 (.69)	2.06 (.84)
Range	1.07–7.00	9.19–27.25	2.00–13.75	1.00–6.63	1.50–5.00	1.00–5.00	1.00–4.40	1.00–4.88

*Indicates that the correlation was significantly different from zero ($p < .05$). Alpha coefficients are listed in italics on the diagonal.

The measurement model of the full hypothesized model fit the data well: scaled χ^2 ($df = 666$) = 932.29 ($p < .01$), RMSEA = .04 (90% CI = .03–0.04), TLI = .98, CFI = .98, SRMR = .05. However, the correlation between the autonomy-supportive and controlling scales was problematic; the 95% confidence interval surrounding the point estimate encompassed unity ($\phi = .81 \pm .31$). This result suggested that the two scales measured similar constructs. As indicated previously, the factorial validity of the controlling coaching style scores was questionable. Thus, in our further analyses we chose to retain the autonomy-supportive scale and discard the controlling style scale. The revised measurement model fit the data well: scaled χ^2 ($df = 532$) = 751.69 ($p < .01$), RMSEA = .04 (90% CI = .03–.04), TLI = .98, CFI = .98, SRMR = .05. Factor correlations ranged from $-.25$ to $.74$ and can be viewed in Table 1.

We also tested a plausible alternative model in which moral disengagement was assumed to be an outcome of antisocial behavior, rather than a mediating variable. Bandura (2002) has argued that individuals “do not usually engage in harmful conduct until they have justified, to themselves, the morality of their actions” (p. 103); however, there is some evidence that moral disengagement may also be regarded as a dependent variable in some situations (e.g., South & Wood, 2006). The alternative model generally displayed an acceptable fit with the data on most criteria: scaled χ^2 ($df = 552$) = 873.61, $p < .01$, TLI = .97, CFI = .97, SRMR = .10, RMSEA = .04 (90% CI = .04–.05); but did not fit the data as well as our revised model.

Overall, these athletes reported perceiving their coach as autonomy supportive, plus they reported high levels of autonomous motivation and low levels of controlled motivation. These athletes also reported moderate-high levels of prosocial behavior toward teammates and opponents, low-moderate levels of moral disengagement, and low-moderate levels of antisocial behavior toward teammates and opponents (see Table 1). These descriptive findings are encouraging since prosocial behaviors are viewed as being linked to more positive sport experiences, whereas antisocial behaviors are viewed as being associated with negative experiences for sport participants (Boardley & Kavussanu, 2009).

Main Analyses

Analyses of the mediation model indicated good fit (see Table 2). As seen in Figure 2, autonomy support was a moderate positive predictor of autonomous motivation and a weak to moderate negative predictor of controlled motivation. Autonomous motivation was a moderate positive predictor of prosocial behavior toward teammates, but did not predict prosocial behavior toward opponents. Controlled motivation was a moderate positive predictor of moral disengagement, whereas moral disengagement was, in turn, a strong positive predictor of antisocial behavior toward both teammates and opponents. The following paths were not significantly different from zero: controlled motivation \rightarrow prosocial behavior toward opponents, controlled motivation \rightarrow prosocial behavior toward teammates, autonomous motivation \rightarrow prosocial behavior toward opponents, and autonomous motivation \rightarrow moral disengagement.

As shown in Table 2, the combined effects model did not show better fit than the mediation model according to the chi-square difference test ($p = .05$; Crawford, 2006), or the Δ CFI $< .01$. These results suggested that all effects were fully mediated. However, the direct path from autonomy support to antisocial behavior

Table 2 Fit Statistics and Estimates from Structural Equation Modeling Analyses

Model	Scaled χ^2	df	TLI	CFI	SRMR	RMSEA (90% CI)
1. Hypothesized Mediation Model	824.97	550	.98	.98	.08	.04 (.04-.05)
2. Combined Effects Model	810.01	542	.98	.98	.07	.04 (.03-.05)

Note. The difference in scaled χ^2 from Model 1 to Model 2 was not significantly different from zero ($p = .05$).

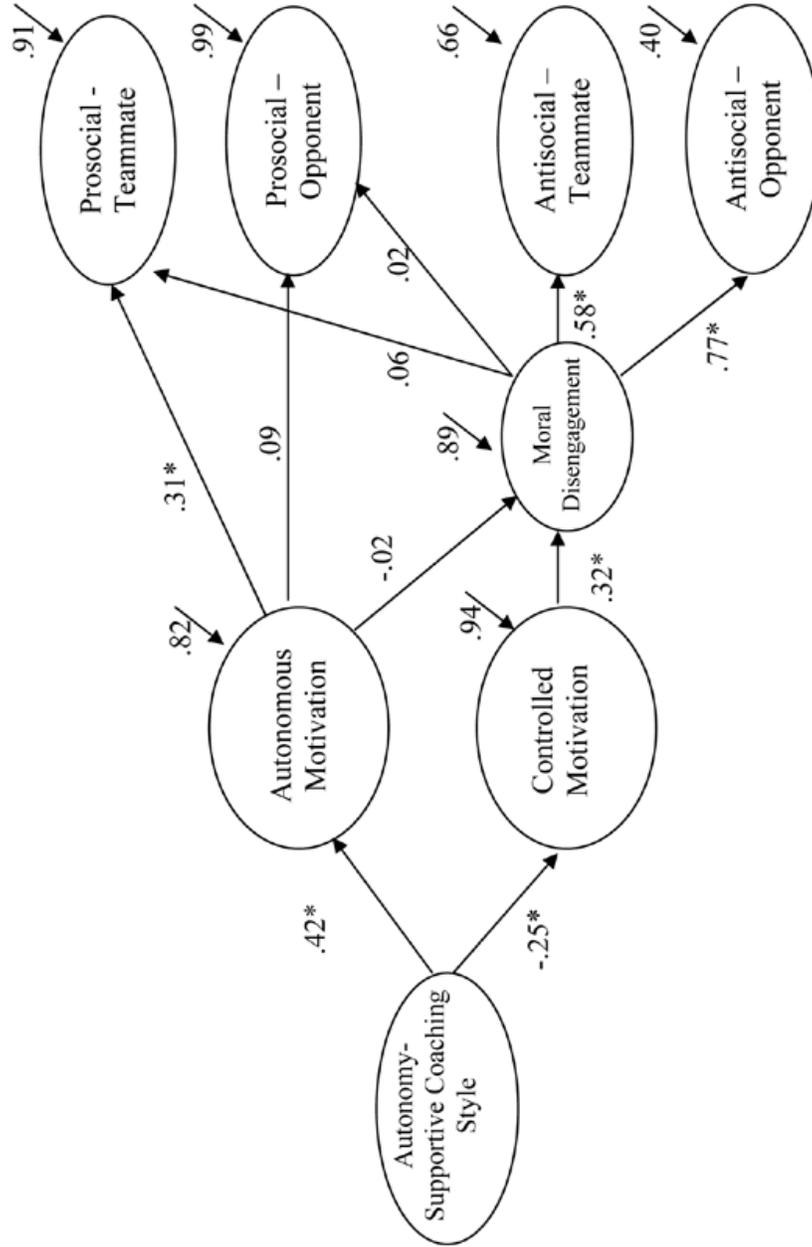


Figure 2 — Structural model of coaching style, motivation, moral disengagement, and prosocial/antisocial behavior. *Indicates the path estimate was significantly different from zero ($p < .05$).

toward opponents ($\gamma = -.11$) was significantly different from zero ($p < .05$), suggesting only partial mediation of this relationship. None of the other seven direct paths were significantly different from zero ($p > .05$). As shown in Table 3, five of the eight hypothesized indirect paths were significantly different from zero ($p < .05$) and in the expected direction. Paths from autonomy support to prosocial behavior toward opponents, and relationships between moral disengagement and both prosocial variables were not significant. Taken together, these results generally support the hypothesized mediation model; however, the model did not account for significant variance in prosocial behavior toward opponents, and neither controlled motivation nor moral disengagement was a predictor of prosocial behavior toward teammates or opponents.

Table 3 Direct, Indirect and Total Effects in the Combined Effects Model

Models (Including Direct Effect Tested in Each Model)	Direct Path Estimate	Indirect Effect Estimate	Total Effect Estimate
Autonomy Support → Prosocial Teammate	.04	.12*	.16*
Autonomy Support → Prosocial Opponent	-.02	.05	.02
Autonomy Support → Antisocial Teammate	-.07	-.07*	-.13*
Autonomy Support → Antisocial Opponent	-.11*	-.05*	-.16*
Controlled Motivation → Prosocial Teammate	-.01	-.01	-.02
Controlled Motivation → Prosocial Opponent	.04	.02	.06
Controlled Motivation → Antisocial Teammate	.10*	.17*	.27*
Controlled Motivation → Antisocial Opponent	-.04	.24*	.20*

*Indicates that path is significantly different from zero ($p < .05$).

Discussion

The purpose of this study was to examine whether the relationships between contextual factors and prosocial and antisocial behaviors in sport were mediated by person factors. We also investigated moral disengagement as a potential mediator of the relationships between motivation and antisocial behaviors. In general, our self-determination theory hypotheses were supported. Autonomy-supportive style had a moderate positive association with autonomous motivation, and a weak-moderate negative relationship with controlled motivation. These results supported previous research in which autonomy-supportive style has been shown to be positively linked to autonomous motivation in a number of life domains (e.g., Gillet, Vallerand, Amoura, & Baldes, 2010; Ntoumanis & Standage, 2009; Pelletier, Fortier, Vallerand, & Brière, 2001).

Contextual Coaching Style and Prosocial or Antisocial Behavior

Our results indicated that autonomy-supportive coaching style had weak negative relationships with antisocial behavior toward teammates and opponents.

With respect to prosocial behavior, autonomy-supportive coaching was related to prosocial behavior toward teammates (weak relationship), but not with prosocial behavior toward opponents. However, the manner in which pro-/antisocial behaviors toward teammates and opponents were measured may have influenced these results—opponent behaviors, as measured by the PABSS, were both verbal and physical, while teammate behaviors were only verbal. As such, it is difficult to determine if coaching style was differently related to behaviors toward teammates and opponents, or the type of behavior (i.e., verbal vs. physical).

The coaching style relationship with prosocial behavior was mediated by autonomous motivation which was consistent with SDT propositions (Deci & Ryan, 2000), and previous research in sport (e.g., Ntoumanis & Standage, 2009), and other life domains (e.g., Gagné, 2003). The relationship between autonomy-supportive coaching and antisocial behavior toward teammates was fully mediated by controlled motivation, while there was evidence that the autonomy support → antisocial behavior toward opponents path was only partially mediated by controlled motivation. Reasons for this difference in partial versus full mediation are not clear. One could argue that the coach is more likely to directly influence factors more closely related to the team (i.e., behavior toward teammates), rather than factors related to the opponent. This line of reasoning is contrary to the results of our study, and again, this may be due to difference in the type of behavior assessed—verbal for teammates as opposed to verbal and physical for opponents.

These coaching style findings were similar to achievement goal theory research that revealed mastery climate was positively related to prosocial behavior and negatively related to antisocial behavior (e.g., Kavussanu, 2006; Kavussanu & Spray, 2006; Miller et al., 2004). There are some conceptual similarities between mastery climate and autonomy-supportive style—both these concepts share an emphasis on self-focused standards of motivation and success within the team or training squad. Boardley and Kavussanu (2009) also found that mastery climate had a positive relationship with prosocial behavior toward teammates, but not opponents, as well as a negative relationship with antisocial behavior toward teammates. Boardley and Kavussanu (2009) concluded that mastery climate may have greater implications for pro-/antisocial behaviors directed toward teammates than opponents. They argued that this may be due to the mastery climate focus on the social environment within the team; consequently, as a team variable, mastery climate is more likely to affect within-team behavior. Our autonomy-supportive style findings appear to mirror the mastery climate relationships with teammate behavior; since autonomy-supportive style is a team-focused variable it may be more likely to have implications for within-team (teammates') rather than between-team (opponents') behavior.

Our motivation results indicated that, similar to autonomy-support, autonomous motivation also had a positive relationship with prosocial behavior toward teammates, but no significant relationship with prosocial behavior toward opponents. As discussed in the following section, these findings may indicate a differential relationship between type of coaching style, type of motivation, and teammate-versus opponent-focused behaviors.

Motivation and Prosocial or Antisocial Behavior

Autonomous motivation had a moderate positive relationship with prosocial behavior toward teammates, but had no relationship with prosocial behavior toward opponents.

Controlled motivation was positively associated with antisocial behavior toward teammates and antisocial behavior toward opponents. These relationships were mediated by moral disengagement. The strength of the relationship between controlled motivation and antisocial behavior toward teammates was small, and the strength of the relationship with antisocial behavior toward opponents was moderate. These results reflect similar findings from the Ntoumanis and Standage (2009) study of young adult British athletes: autonomous motivation was positively related to prosocial moral attitudes, whereas controlled motivation was shown to be positively linked to antisocial attitudes. Our results also reflected similar findings in non-sport research with college students, for whom autonomous motivation was shown to be positively associated with prosocial behavior (Gagné, 2003). Overall, these motivation findings echo Ntoumanis and Standage's (2009) conclusion that self-determined motivation can be a good predictor of prosocial and antisocial variables in sport.

The key differences between our findings and those of Ntoumanis and Standage (2009) were our focus on prosocial and antisocial behavior (not attitudes) and our differentiation between teammate- and opponent-focused behaviors. Our results revealed that autonomous motivation had a positive relationship with prosocial behavior toward teammates, but not toward opponents. Whereas controlled motivation had a weak positive relationship with antisocial behavior toward teammates, and a strong relationship with antisocial behavior toward opponents. These findings, along with the previously discussed coaching style findings, indicate a differential relationship between type of motivation and teammate- versus opponent-focused behaviors. On the one hand, perhaps the athletes in our sample were more motivated to act in a prosocial manner toward people with whom they had a personal relationship (i.e., teammates) as opposed to those with whom they had an impersonal relationship (i.e., opponents). On the other hand, perhaps these athletes were less motivated to act in an antisocial manner toward people with whom they had a personal relationship (i.e., teammates), but more motivated to act in an antisocial manner toward those with whom they had an impersonal relationship (i.e., opponents). These differential findings between type of motivation and teammate- versus opponent-focused antisocial behaviors may reflect the concept of personal-antisocial moral behavior versus impersonal-antisocial moral behavior described by Haviv and Leman (2002). It may be that when people report lower personal-antisocial behavior (i.e., toward teammates) they seek to avoid a negative reputation.

Motivation, Moral Disengagement, and Antisocial Behavior

Controlled motivation had a moderate positive relationship with moral disengagement, whereas moral disengagement had, in turn, a strong positive relationship with antisocial behavior toward both teammates and opponents. Moral disengagement mediated the effects of controlled motivation on both antisocial behavior toward teammates and opponents. Previous sport research employing an achievement goal theory perspective has examined the relationship between motivation and moral disengagement (e.g., Boardley & Kavussanu, 2007, 2009); however, no research to date had examined this relationship from a SDT motivation perspective.

According to SDT, the pinnacle of internalization is when values become part of one's sense of self (i.e., autonomous) and self-regulated, volitional behavior freely

emerges from the self (Hardy, 2006; Hardy et al., 2008). In a similar autonomous vein, Bandura (2002) stated that even though self-sanctions keep an individual's conduct in line with her or his internal standards, moral standards do not function as fixed internal regulators of conduct. There are several psychological mechanisms by which moral self-sanctions can be selectively disengaged from immoral conduct. Consequently, "selective activation and disengagement of self-sanctions permits different types of conduct by persons with the same moral standards" (Bandura, 2002, p. 282). Athletes who perceive their coach as being high on controlling behaviors may have higher levels of moral disengagement because they will have increased exposure to coaching behaviors that promote compliance with authority (e.g., coercion, obedience, conditional regard), rather than an internalization and subsequent self-regulation of moral values. Bandura (1999, 2002) refers to such a process as "gradualistic moral disengagement," which results in a decrease in self-regulation of moral action (cf. autonomy).

Limitations and Future Research

These are cross-sectional, self-report data; therefore, no causal relationships can be inferred. In addition, the sample was exclusively from a young adult ($M = 19.53$ years; range 18–29 years, $SD = 1.6$ years) sporting population, which limits the generalizability to other age groups. Finally, some athletes were "out of season" and had to rely on the recall of their previous season's experiences. Despite these limitations, our findings offer important insights into the motivational underpinnings of prosocial and antisocial behaviors in sport. Given these findings and the importance of better understanding the predictors of moral actions in sport, further work on the links between coaching style, athlete motivation, moral disengagement, and moral values internalization in sport is warranted. Such research efforts should seek to use a valid measure of controlling coaching style (i.e., Bartholomew et al., 2010), multiple informants (e.g., coach, teammate, peer, and parental ratings of behavior), and direct behavioral observation of prosocial and antisocial actions to compare with self-report responses. Further qualitative research is also needed to examine, in depth, the important role that moral disengagement appears to play in facilitating antisocial behavior, and to also investigate the differences between teammate- versus opponent-focused behaviors. Researchers should also examine the effect of experimental interventions designed to promote prosocial and weaken antisocial behaviors in sport (i.e., interventions aimed at developing autonomy-supportive coaching behaviors; e.g., Gagné et al., 2003).

Conclusions and Implications

As Hardy et al. (2008) observed, it is of critical importance to the proper functioning of society that individual's develop moral values and the ability to independently regulate their thoughts, emotions, and behaviors in line with these values (i.e., engage in prosocial behavior). As stated earlier, sport has a meaningful role to play in this regard as an important socialization agency. Our results, which highlighted links between coaching style, athlete motivation, and pro-/antisocial behavior, were in line with previous work suggesting that the quality of the teacher–student relationship might be of critical importance for the fostering of moral character in

school settings (Halstead & Taylor, 2000). Specifically, just as adolescents attend more to supportive and involved teachers, and are more likely to accept their explicit and implicit moral values messages, athletes might respond similarly to concerned and involved coaches (i.e., an autonomy-supportive coaching environment).

In closing, the present findings have important applied implications. Although controlling interactions with athletes may lead to immediate compliance, this way of relating with athletes may hinder the processes by which they accept and internalize moral values and are autonomously guided by them in their lives. Coaches should be educated about ways to improve the quality of autonomy support for their athletes and to provide a coaching style conducive to developing the athlete's sense of autonomy and self-regulation.

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