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On Passion and Moral Behavior in Achievement Settings:

The Mediating Role of Pride

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**Abstract**

The Dualistic Model of Passion (Vallerand et al., 2003) distinguishes two types of passion: harmonious passion (HP) and obsessive passion (OP) that predict adaptive and less adaptive outcomes, respectively. In the present research, we were interested in understanding the role of passion in the adoption of moral behavior in achievement settings. It was predicted that the two facets of pride (authentic and hubristic; Tracy & Robins, 2007) would mediate the passion-moral behavior relationship. Specifically, because people who are passionate about a given activity are highly involved in it, it was postulated that they should typically do well and thus experience high levels of pride when engaged in the activity. However, it was also hypothesized that while both types of passion should be conducive to authentic pride, only OP should lead to hubristic pride. Finally, in line with past research on pride (Carver, Sinclair, & Johnson, 2010; Tracy et al., 2009), only hubristic pride was expected to negatively predict moral behavior, while authentic pride was expected to positively predict moral behavior. Results of two studies conducted with paintball players ( $N=163$ , Study 1) and athletes ( $N=296$ , Study 2) supported the proposed model. Future research directions are discussed in light of the Dualistic Model of Passion.

## On Passion and Moral Behavior in Achievement Settings:

### The Mediating Role of Pride

Highly-involved individuals would appear to have a lot at stake in achievement settings. Indeed, because the activity they care about serves to define them, a loss or negative performance in the purview of the activity may have a negative connotation for their sense of self. Thus, if these individuals have the opportunity to erase the negative performance through cheating or immoral behavior, they might be inclined to do so. Alternatively, it is also possible that highly-involved individuals over time develop a strong sense of identity and confidence as pertains to the activity, and thus may not be adversely affected by the negative performance. Consequently, they might be in an ideal position to accept the negative performance as such without resorting to cheating to protect themselves. In the present research, we attempted to determine which of these two positions is correct by looking at one type of highly-involved individuals, namely passionate people. Furthermore, we also sought to identify the nature of the psychological processes responsible for such effects.

### **The Dualistic Model of Passion**

Vallerand and colleagues (Vallerand, 2008, 2010; Vallerand et al., 2003; Vallerand & Houliort, 2003; Vallerand & Miquelon, 2007) have proposed a conceptual model of passion toward activities. This model, the Dualistic Model of Passion, posits that passion refers to a strong inclination toward a self-defining activity that individuals like (or even love), that they value, and in which they invest time and energy (Vallerand et al., 2003). This model further posits that because of the high level of importance of the activity and the need for self-growth (e.g., Deci & Ryan, 2000), the beloved activity will be internalized in the identity. Such internalization can take either of two forms, leading to two types of passion, namely harmonious and obsessive. Harmonious passion (HP) results from an autonomous internalization (Deci & Ryan, 2000) of the activity into the person's identity. An autonomous internalization occurs when individuals have freely accepted the activity as important for them without

any contingencies attached to it (Vallerand, Fortier, & Guay, 1997). HP leads one to engage in the activity willingly and engenders a sense of volition and personal endorsement about pursuing the activity. Individuals do not feel compelled to engage in the enjoyable activity, rather, they freely choose to do so. With this type of passion, the activity occupies a significant, but not overpowering, space in the person's identity and is in harmony with other aspects of the person's life. In other words, with HP, the authentic integrating self is at play (Hodgins & Knee, 2002). HP is thus hypothesized to lead the person to engage in the task in a flexible manner, and thus to experience task engagement rather fully. The person should then be in a position to concentrate on the task and experience positive affect, task satisfaction, and flow (i.e., the feeling that one is immersed in the activity; see Csikszentmihalyi, 1978) while engaging in the activity (Carpentier, Mageau, & Vallerand, in press). Furthermore, because HP facilitates control of the activity, it should contribute to the experience of positive affect and task satisfaction and minimize the experience of negative affect *after* task engagement that might be due to over-engaging in the activity. In addition, such control over the activity should lead the person to display flexible persistence toward the activity.

Conversely, obsessive passion (OP) results from a controlled internalization (see Deci & Ryan, 2000; Sheldon, 2002; Vallerand, 1997) of the activity into one's identity. Such internalization originates from intra and/or interpersonal pressure either because certain contingencies are attached to the activity, such as feelings of social acceptance or self-esteem, or because the sense of excitement derived from activity engagement becomes uncontrollable. With OP, individuals come to develop ego-invested self-structures (Hodgins & Knee, 2002) and eventually display a rigid persistence toward the activity. Thus, although individuals love the passionate activity, they find themselves in the position of experiencing an internal uncontrollable urge to engage in the passionate activity, leading to a more rigid and conflicted form of task engagement. Such pressured engagement should prevent the person from fully focusing on the task at hand. It may also interfere with the experience of positive affect and task satisfaction, and even facilitate negative affect (such as guilt) during task engagement as one may engage in the activity at

ill-advised times. In addition, because with OP an internal urge leads the person to engage in the activity even when he or she should not, he or she may experience negative emotions once engagement in the passionate activity is terminated (e.g., guilt for having engaged in the activity when one should not have done so).

Research has provided empirical support for several aspects of the passion conceptualization (see Vallerand, 2008, 2010, for reviews). First, results from exploratory and confirmatory factor analyses with the Passion Scale (Vallerand et al., 2003, Study 1; Vallerand et al., 2006, Study 1) supported the existence of two constructs, corresponding to both HP and OP. Second, in line with the DMP, results from partial correlations (controlling for the correlation between the two types of passion) revealed that both types of passion are positively associated with measures of activity valuation and measures of the activity being perceived as a passion, thereby providing support for the definition of passion. Finally, empirical evidence has also shown that the two types of passion differently predict various outcomes. More specifically, OP has been positively related to negative emotions (Mageau et al., 2005; Vallerand et al., 2003, Study 1), poor concentration (Vallerand et al., 2003, Study 1), increased rumination with the activity (Ratelle et al., 2004; Vallerand et al., 2003, Study 1), and a rigid task engagement (Rip, Fortin, & Vallerand, 2006; Vallerand et al., 2003, Studies 3 and 4) that can lead to physical symptoms (Lafrenière et al., 2009) and injuries (Rip et al., 2006; Stephan et al., 2009) and even pathological gambling (Ratelle et al., 2004; Rousseau et al., 2002). Finally, when prevented from engaging in the passionate activity, OP has been associated with rumination and negative affect (Carpentier et al., in press; Ratelle et al., 2004; Vallerand et al., 2003, Study 1).

Conversely, HP has been associated with high levels of positive emotions both during and after engagement in the passionate activity (Vallerand et al., 2003, Study 1; Vallerand et al., 2006, Studies 2 and 3), concentration, absorption, and flow during activity engagement (Forest et al., 2010; Mageau et al., 2005; Vallerand et al., 2003, Study 1), as well as subjective well-being (Rousseau & Vallerand, 2003, 2008; Philippe, Vallerand, & Lavigne, 2009; Vallerand, Ntoumanis, et al., 2008, Study 2; Vallerand et

al., 2007, Studies 1 and 2). Additionally, HP has been negatively associated with negative emotions (Lafrenière et al., 2009; Mageau, et al., 2005; Philippe et al., 2010; Vallerand et al., 2003, Study 1) and with conflict with other activities (Séguin-Levesque et al., 2003; Vallerand et al., 2003, Study 1).

### **The Present Research:**

#### **Passion and Moral Behavior in Achievement Settings**

Reviews of studies on morality have argued that behavior, rather than intentions or judgment, should be the main object of investigation in the moral domain (Blasi, 1980; Rest, 1984). As Kavussanu (2008) proposed, behavior that has consequences for others' rights and well-being pertains to morality (see Turiel, 1983) and can be classified as moral behavior. She further discusses that, even if researchers often assess morality through scenarios (e.g., "I help the opponent get up after a fall"), these scenarios involve real-world behaviors, and thus represent an approximation of the real social conduct of the individual (Kavussanu, 2008). The present study labels concepts pertaining to fairplay and sportspersonship in an activity as « Moral behavior » and concepts pertaining to cheating behavior, non-gamesmanship, and antisocial behavior against other individuals in the activity as « Immoral behavior ». Although pure right versus wrong decisions seems vague in the context of achievement settings, some authors rather emphasize moral and immoral behavior as behavior that affects others' rights and well-being (Kavussanu, 2008; Turiel, 1983). Past research shows that there is little correlation between the proactive (tendency to act humanely) and inhibitive (tendency to refrain from acting inhumanely) aspects of morality ( $r < .23$ ; Bandura, 1999; Sage & Kavussanu, 2008), suggesting that both positive and negative aspects of moral behavior should be examined to better understand the determinants of moral or immoral behavior. Many studies also found that males display lower levels of morality than females (Coulomb-Cabagno & Rasclé, 2006; Miller et al., 2005; Sage and Kavussanu (2007)). Such issues are of great relevance and will be taken into account in the present research.

As pertains to the motivational determinants of moral behavior, self-determined motivation (engaging in the activity out of pleasure and/or choice) has been found to have a positive influence on

sportspersonship (i.e., positive attitudes and behaviors towards the sport, the teammates and the opponents; Vallerand & Losier, 1994; Ntoumanis & Standage, 2009) and a negative influence on antisocial attitudes in sports (Ntoumanis & Standage, 2009). Of interest, research by Donahue et al. (2006) has shown that intrinsic motivation was positively, while extrinsic motivation negatively, related to sportspersonship that, in turn, was negatively related to cheating through the use of performance-enhancing substances. Chantal, Robin, Vernat, and Bernache-Assollant (2005) have found support for a similar model as pertains to aggressive behavior.

While the above research is important and has shown that less self-determined motivational processes are likely to lead to lower levels of moral behavior, such research has not addressed the role of passion in moral behavior. Such investigation is of prime importance because of the likeliness to come across passionate people in the highest domains of achievement (academia, Olympics, etc.) where moral and mostly immoral behavior can have huge impacts when not detected (such as having cheaters receive tenure or medals). To the best of our knowledge, no published research has looked at passion and moral behavior. However, recent research has been conducted as pertains to behavior related to the morality domain. For instance, Donahue, Rip, and Vallerand (2009) have shown that obsessively-passionate individuals are likely to be aggressive, especially when winning or losing is on the line. Similarly, Philippe, Vallerand, Richer, Vallières, and Bergeron (2009) have found that OP is likely to lead to road rage and aggressive behavior if one's goals as a driver have been thwarted by another driver. However, no research so far has looked at the role of passion in moral (or immoral) behavior as such. Thus, one of the goals of the present research was to address this issue. In line with research presented above pertaining to self-determined motivation, HP should promote moral behavior through confident and non-contingent engagement in the activity. The absence of self-worth contingencies in harmoniously passionate individuals' engagement (Mageau, Carpentier, & Vallerand, 2011) should make them more likely to respect opponents and rules in the face of adversity in the task. However, in line with research showing that OP can trigger aggression when the outcome is uncertain (Donahue et al., 2009), and that

obsessively passionate individuals have more self-worth contingencies pertaining to the activity (Mageau et al., 2011), OP should lead to subsequent immoral behavior because these behaviors may help restore self-esteem through dominance over opponents in the face of adversity.

Another goal of the present research was to identify the psychological process that mediates the passion-moral behavior relationship. Research by Tracy and Robins (2004, 2007) pertaining to the emotion of pride are of much relevance in the present context. These authors distinguish two forms of pride: authentic pride and hubristic pride. Authentic pride is hypothesized to be based on self-accomplishments and to reflect genuine feelings of self-worth. This type of pride has been associated with self-esteem, long-term goal-achievement, better social interactions, and prosocial behavior (Carver et al., 2010; Tracy et al., 2009; Tracy & Robins, 2007). Hubristic pride is hypothesized to be less based on self-accomplishments and to reflect distorted and self-aggrandized self-views. This type of pride has been associated with narcissistic self-aggrandizement, short-term goal-attainment, and to aggressive and antisocial behavior (Carver et al., 2010; Tracy et al., 2009). However, to the best of our knowledge, no research has looked at the role of pride as pertains to passion and moral behavior. However, why should pride mediate the link between passion and moral behavior? During activity engagement, harmoniously passionate individuals are likely to feel confident (because their sense of achievement is not contingent on success outcomes in the activity; Mageau et al., 2011) and accomplished (as they have come to reach high levels of proficiency in their activity): These feelings of confidence and accomplishment, as found in authentic pride, should then promote moral behavior such as fair play through the better social interactions that they entail (Tracy et al., 2009). Moreover, authentic pride should not be predictive of immoral behavior because of the adaptive goal regulation that it entails. Indeed, individuals experiencing authentic pride should seek success mainly through mastery goals and, when success is not possible, should move on to new goals (Carver et al., 2010) instead of resorting to immoral behavior. Conversely, OP should entail an important need to succeed that derives from high self-worth contingencies (Mageau et al., 2011), leading the individual to focus egotistically on goal-seeking at the expense of the other



individuals involved in the activity, thus promoting arrogance and hubristic pride. These feelings should then promote immoral behavior (Carver et al., 2010; Cheng et al., 2010; Tracy et al., 2009), such as disregarding sportspersonship and resorting to cheating, given that such behavior will increase chances of goal-attainment (it is easier to win for someone who cheats than for someone who respects the rules). Nevertheless, OP also leads to performance (Vallerand et al., 2007) and obsessively passionate individuals should therefore also experience some levels of authentic pride (confidence, sense of accomplishment, etc.) when engaging in the activity.

In light of the above, the purpose of the present research was to test an integrated model in which both HP and OP positively predict authentic pride that, in turn, positively predicts moral behavior. OP was also posited to positively predict hubristic pride that, in turn, positively predicts immoral behavior. This basic model was tested in two studies in two different achievement settings and in two different cultures. Study 1 was conducted with paintball players from North America, while Study 2 took place with athletes of different sports from the United Kingdom. Furthermore, while Study 1 focused on immoral behavior (cheating), Study 2 assessed both moral and immoral behavior.

## **STUDY 1**

The purpose of Study 1 was to test the model proposed above in a specific realm of achievement, namely paintball, with players from North America and focused on the narrower issue of cheating behavior. This sport was chosen because of the multiple possibilities of cheating behavior it enables, given that some features of the sport are based on trust (e.g., admitting you have been hit even though this prevents you from further play). It was predicted that both HP and OP would positively predict authentic pride, while only OP would predict hubristic pride that, in turn, would positively predict cheating behavior.

## **Method**

### **Participants and Procedure**

Participants were 163 paintball players (160 males, 3 females). Some participants were recruited in a paintball center ( $N = 34$ ) in Montreal and completed a paper questionnaire in French while other participants were recruited on the internet ( $N = 129$ ) via advertisement on a popular social networking website and completed the questionnaire online in English. Whether recruited live or online, participants were immediately supplied with a questionnaire and were asked, following informed consent, to complete the scales described below. In addition, each questionnaire contained demographic questions (e.g., age, gender). Following the instructions, participants completed the questionnaire independently. Players' mean age was 19.84 years ( $SD = 7.77$  years). At the time of the study, they were practicing their activity an average of 3.76 times a month ( $SD = 2.73$  times), for an average of 6.19 hours each time ( $SD = 5.83$  hours).

## Measures

**Passion.** Passion for paintball was assessed using the Passion Scale (Vallerand et al., 2003), an instrument composed of two six-item subscales assessing HP and OP. In the present study, the scale items were slightly adapted so that the word “activity” was replaced by the word “paintball” (a sample item for HP: “Paintball is in harmony with the other activities in my life.”;  $\alpha = .86$ ; a sample item for OP: “Paintball is the only thing that really turns me on.”;  $\alpha = .87$ ). This scale was completed on a 7-point Likert scale ranging from 1 (“not agree at all”) to 7 (“very strongly agree”). The Passion Scale has been used in several studies and has shown high levels of validity and reliability (see Carbonneau et al., 2008; Donahue et al., 2009; Lafrenière et al., 2011; Philippe, Vallerand, Andrianarisoa et al., 2009; Philippe, Vallerand, Richer et al., 2009; Vallerand et al., 2008).

**Pride.** Feelings of authentic and hubristic pride while engaging in paintball were assessed using two 3-item subscales taken from the Pride Scale (Tracy & Robins, 2007, Study 2; a sample item for authentic pride: “In general, during a game, I feel accomplished.”;  $\alpha = .82$ ; a sample item for hubristic pride: “In general, during a game, I feel arrogant.”;  $\alpha = .67$ ). This scale was also completed on a 7-point Likert scale ranging from 1 (“not agree at all”) to 7 (“very strongly agree”). Because the original scale

was adapted to paintball and shortened, a Confirmatory Factor Analysis (CFA) was conducted on the data. Results supported the two-factor structure of this scale,  $\chi^2 (df = 8, N = 163) = 19.92, p = .01$ ,  $\chi^2/df = 2.49$ , CFI = .95, IFI = .95, RMSEA = .10[.04-.15]. In order to demonstrate the validity of the short scale, we conducted a validation study. A hyperlink leading to an online questionnaire was posted on two social psychological research forums. A different sample of participants (N=53) completed both the short and original scales in counterbalanced order separated by a filler task consisting of describing an average day in their life in details. Correspondence between the short and long subscales were high ( $r = .77$  for authentic pride and  $r = .73$  for hubristic pride) while correlations between the two subscales of a same scale were similar ( $r = .39$  for the short scale and  $r = .27$  for the original scale). Although the short scale showed a slightly higher intercorrelation, this difference was not significant ( $p = .50$ ).

***Cheating Behavior.*** Cheating behavior was assessed using a scale developed for the purpose of this study. Many items representing different forms of cheating behavior in paintball were generated by the first author and two associates who had extensive experience in the field of paintball. Ten of these items were selected for their face validity with cheating behavior and were cross-verified by an expert in the domain. In preliminary analyses, we performed an EFA with oblimin rotation, expecting possible factors to be correlated. Two factors emerged from the analyses, explaining 57.9% of the variance. Factor 1 had 5 items: “Continued to play after being hit by a paintball (.65)”, “Started running or walking before the game has begun (.56)”, “Protested against a referee’s decision during the game (.68)”, “Wiped off a paintball that hit me (.78)”, and “Not respected a referee’s specific game rule (.70)”. This factor was labeled “usual cheating behavior” ( $\alpha = .81$ ) because such acts represent somewhat common cheating behavior. Factor 2 had also 5 items: “Hidden the flag in a forbidden place (.93)”, “Moved the flag while I was dead or while I didn’t have the right to do so (.98)”, “Voluntarily trespassed the game limits when playing an outside game (.58)”, “Used a forbidden gadget on my gun (.75)”, and “Faked death so that I can go behind the enemy lines (.33)”. This factor was labeled “extreme cheating behavior” ( $\alpha = .83$ )

because such acts represent extremely antisocial forms of cheating behavior. Factor correlation was .51. This scale was completed on a 7-point Likert scale ranging from 1 (“*never*”) to 7 (“*very often*”).

## Results and Discussion

### Preliminary Analyses

Missing values (representing 0.30% of the total data file) were replaced using a regression imputation procedure. Inspection of the skewness indices for all variables proved to be normal (values ranged from -1.075 to 1.581) except for extreme cheating behavior which was positively skewed (3.394). An inverse transformation was performed on this subscale in order to restore normality. Means and standard deviations (non-transformed), and Pearson correlations for all measures are presented in Table 1. Partial correlations are presented between passion and other measures since HP and OP are highly correlated ( $r = .45$ ) and given that this procedure is believed to produce correlations that better reflect the links between each form of passion and the other variables.

### Main Analyses

The full measurement model was tested in the present study using AMOS 19. It was composed of 6 latent variables: 2 exogenous variables (i.e., HP and OP) and 4 endogenous variables (i.e., authentic pride, hubristic pride, usual cheating behavior and extreme cheating behavior). In order to test the hypothesized model, a total of 8 paths were specified: one between HP and authentic pride, two between OP and both types of pride, and two between hubristic pride and both forms of cheating behavior; finally, three covariance paths were specified: one between HP and OP, one between the residuals of authentic and hubristic pride, and one between the residuals of usual and extreme cheating behavior. As can be seen in Table 2, the results showed that the model (Model 1.1) had reasonable fit to the data ( $\chi^2$  ( $df = 338, N = 163$ ) = 518.73,  $p < .001$ ,  $\chi^2/df = 1.53$ , CFI = .91, IFI = .92, NNFI = .90, SRMR = .08, RMSEA = .07 [.06-.08]). However, modification indices suggested the addition of a path between HP and hubristic pride. A second model (Model 1.2) was tested with this added parameter and yielded a better fit to the data,  $\chi^2$  ( $df = 337, N = 163$ ) = 510.32,  $p < .001$ ,  $\chi^2/df = 1.51$ , and the other fit indices were

good, CFI = .92, IFI = .92, NNFI = .91, SRMR = .08, RMSEA = .06 [.05-.07]. Modification indices suggested that no other addition or deletion of any theoretically sound parameters could significantly improve model fit. Results revealed that all paths were significant except path from HP to authentic pride, which was marginally significant ( $p = .06$ ). As shown in Figure 1, the results showed that HP positively predicted authentic pride ( $\beta = .20$ ) and negatively predicted hubristic pride ( $\beta = -.35$ ). OP positively predicted both authentic pride ( $\beta = .37$ ) and hubristic pride ( $\beta = .67$ ). In turn, hubristic pride positively predicted both usual cheating behavior ( $\beta = .52$ ) and extreme cheating behavior ( $\beta = .38$ ). When age or years of experience were included as covariates, the model did not change significantly ( $\Delta\chi^2(26) = 30.11, p = .26$  and  $\Delta\chi^2(26) = 24.52, p = .55$ , respectively), modification indices did not suggest addition of paths between covariates and other variables and all betas suffered no significant change ( $\Delta\beta \leq .01$  for all  $\beta$ s). Therefore, age and years of experience were not included in the present model.

In order to test whether the hypothesized model provided the best fit indices, four meaningful alternative models were tested. These models were chosen because they were theoretically or statistically more plausible than other possible models. Modification indices were also screened and any meaningful additions or removals of parameters were executed in order to improve the probability of alternative models to fit data. The first alternative model (i.e., Model 1.3) was one in which passion predicted cheating behavior that, in turn, predicted both types of pride. The second alternative model (i.e., Model 1.4) was one in which both types of pride predicted passion that, in turn, predicted immoral behavior. The third alternative model (i.e., Model 1.5) was one in which both types of pride predicted immoral behavior that, in turn, predicted passion. The fourth alternative model (i.e., Model 1.6) was one in which immoral behavior predicted passion that, in turn, predicted both types of pride. As can be seen in Table 2, all alternative models (Models 1.3 to 1.6) resulted in poorer fit indices than the proposed model. Thus, all four alternative models were rejected.

### **Indirect Effects**

Indirect effects were investigated to further test the mediating role of hubristic pride between OP and usual ( $pr = .20$ ) and extreme ( $pr = .16$ ) cheating behavior, as well as between HP and extreme cheating behavior ( $pr = -.13$ ). Consequently, bootstrapped confidence interval estimates of the indirect effect (Preacher & Hayes, 2008) were calculated to confirm the significance of mediations. Bootstrapping is a statistical method that randomly constructs a number of resamples of the original sample in order to estimate parameters. In the present study, the 95% confidence intervals of the indirect effects were obtained with 5000 bootstrap resamples. Using bootstrap methods to estimate indirect effects is especially recommended in small-to-moderate samples (Shrout & Bolger, 2002). It should be noted that the indirect effect is significant at  $p < .05$  if the 95% confidence intervals do not include the value of zero. In the present study, the confidence interval was bias-corrected given that this correction is believed to improve power and Type 1 error rates (MacKinnon, Lockwood, & Williams, 2004). Results confirmed the mediating role of hubristic pride between OP and usual ( $\beta = .34$ ; CI = .24 - .44) and extreme ( $\beta = .26$ ; CI = .18 - .34) cheating behavior as well as between HP and extreme cheating behavior ( $\beta = -.13$ ; CI = -.08 - -.21). It should be noted that, even though the partial correlation between HP and usual cheating behavior did not reach significance, hubristic pride significantly mediated the indirect relationship between the two variables ( $\beta = -.18$ ; CI = -.11 - -.26).

In sum, the present findings provided support for the proposed model. Specifically, OP was positively related to hubristic pride that, in turn, was positively related to cheating behavior. Moreover, HP was positively related to authentic pride as well as negatively related to hubristic pride. Finally, results from bootstrapping statistics provided support for the mediating role of hubristic pride in the relationships between OP (positively) and HP (negatively) and cheating behavior. As expected, authentic pride was unrelated to cheating behavior.

## STUDY 2

There were four purposes to Study 2. First, we sought to test a more complete integrated model by including both moral and immoral forms of behavior. It was hypothesized that both HP and OP would

positively predict authentic pride which, in turn, would positively predict moral behavior. On the other hand, only OP was posited to positively predict hubristic pride that, in turn, would positively predict immoral behavior. A second purpose was to further explore the presence of a negative link between HP and hubristic pride (as obtained in Study 1). Although this link makes sense conceptually, because it was not initially anticipated, we sought to replicate it before discussing it further. A third purpose was to test this model with a new population, namely athletes from various sports and different levels of expertise. Finally, we also wished to test the model in a different Western culture, namely the United Kingdom.

## Method

### Participants

Participants were 296 athletes (139 females, 156 males, 1 missing value) engaged in one of several sports (hockey, cheerleading, soccer, and American football). The mean age of the athletes was 19.77 years ( $SD = 1.33$  years). On average, athletes had been practicing their sports for 8.65 years ( $SD = 3.55$  years). The athletes' competitive level was as follows: school level ( $N = 6$ ; 2.0%), club or university level ( $N = 81$ ; 27.4%), district or county level ( $N = 98$ ; 33.1%), regional or national level ( $N = 86$ ; 29.1%), international level ( $N = 24$ ; 8.1%).

### Procedure

The team coaches were approached and explained the purpose of the study. Once the coaches gave consent, then their athletes were informed on a subsequent visit about the study and were asked to give their consent. All teams were university teams. Once they agreed to participate, each participant was supplied with a paper questionnaire before or after training. Each questionnaire contained demographic questions (e.g., age, gender, years of experience), and the scales described below. Following the instructions, participants completed the questionnaire independently under the supervision of a research assistant.

### Measures

**Passion.** Passion was assessed using the Passion Scale (Vallerand et al., 2003), as in Study 1. The version employed is the present study referred specifically to sport (Vallerand et al., 2006). A sample item for HP toward a sport is: “My sport is in harmony with the other activities in my life.” ( $\alpha = .70$ ) A sample item for OP toward a sport: “My sport is the only thing that really turns me on.” ( $\alpha = .79$ ).

**Pride.** Feelings of authentic and hubristic pride were assessed using the same scale used in Study 1 ( $\alpha$  for authentic pride = .77;  $\alpha$  for hubristic pride = .85)

**Moral Behavior.** Moral behavior was assessed using two subscales from the Multidimensional Sportspersonship Orientations Scale (MSOS; Vallerand et al., 1997), each assessed with 5 items: The first subscale assessed the respect for the rules and the officials (a sample item: “I really obey all rules of my sport.”;  $\alpha = .76$ ). The other subscale assessed the respect and concern for the opponent (a sample item: “If I see that the opponent is unjustly penalized, I try to rectify the situation.”;  $\alpha = .74$ ). This scale was completed on a 5-point Likert scale ranging from 1 (“Doesn’t correspond to me at all”) to 5 (“Corresponds to me exactly”). These two subscales have been used in past research and have shown high levels of validity and reliability (see Vallerand et al., 1997; Lemyre, Roberts, & Ommundsen, 2002; Miller, Roberts, & Ommundsen, 2003).

**Immoral Behavior.** Immoral behavior in sport was assessed with three different subscales. First, the Antisocial Behavior Against the Opponent subscale developed by Kavussanu and Boardley (2009) was used. This subscale consists of four items (a sample item: “In the past year, I have deliberately fouled an opponent.”;  $\alpha = .83$ ). Two 3-item subscales from the Youth Sport Values Questionnaire 2 (YSVQ-2; Lee et al. 2008) were also used to assess cheating (a sample item: “I would cheat if I thought it would help me win.”;  $\alpha = .85$ ) and gamesmanship (a sample item: “If I don’t want another person to do well I put them off a bit.”;  $\alpha = .84$ ). These scales were completed on a 5-point Likert scale ranging from 1 (“Never”) to 5 (“Very often”).

## Results and Discussion

### Preliminary Analyses



Means, standard deviations, and Pearson correlations for all measures are presented in Table 3. Missing values (representing 0.25% of the total data file) were replaced using a regression imputation procedure. Inspection of the skewness indices for all variables proved to be normal (values ranged from -.686 to 1.487). Furthermore, because participants were part of teams, we calculated intraclass correlations of all variables to determine if observations were independent. Results revealed that mean intraclass correlation was small ( $M = .04$ ,  $SD = .03$ ) suggesting that shared team variance was negligible. Consequently, in lines with Julian (2001), observations were considered independent. The means, standard deviations, and correlations of all variables are presented in Table 3.

### **Main Analyses**

The model tested in the present study was composed of 6 latent variables: 2 exogenous variables (i.e., HP, OP) and 4 endogenous variables (i.e., authentic pride, hubristic pride, moral behavior and immoral behavior). We tested the measurement model for passion and pride but there were too many items in the full-measurement model to maintain an acceptable ratio of sample size to estimated parameters and thus measurement model for moral and immoral behavior could not be included in the main model. However, we tested a second order CFA including both moral and immoral behavior variables which yielded acceptable model fits ( $\chi^2(149) = 380.93$ ,  $p < .001$ ,  $\chi^2/df = 2.56$ , CFI = .91, IFI = .91, NNFI = .89, SRMR = .07, RMSEA = .07 [.06-.08]). In the main model, immoral behavior had two indicators. The first one was the Antisocial Behavior Against the Opponent subscale and the second one was the combination (a sum of their scores) of the two subscales of the YSVQ-2 assessing cheating and gamesmanship behavior. These subscales were combined because of high intercorrelation between them ( $r = .63$ ) and because they originated from the same scale. The moral behavior variable had also two indicators which were the two subscales of the MSOS.

In order to test the hypothesized model, a total of 9 paths were specified: one between HP and authentic pride, two between OP and both types of pride, two between hubristic pride and moral and immoral behavior, and one between authentic pride and moral behavior. Three covariance paths were

specified between HP and OP, between the residuals of authentic and hubristic pride, as well as between the residuals of moral and immoral behavior. The results showed that the model (Model 2.1) had an acceptable fit to the data,  $\chi^2 (df = 182, N = 296) = 412.50, p < .001, \chi^2/df = 2.27$ , and the other fit indices were acceptable, CFI = .90, IFI = .90, NNFI = .87, SRMR = .08, RMSEA = .07 [.06-.07]. Modification indices suggested that no addition or deletion of any theoretically sound parameters could significantly improve model fit. Thus, the negative path from HP to hubristic pride found in Study 1 was not replicated in Study 2.

As shown in Figure 2, the results revealed that HP positively predicted authentic pride ( $\beta = .16$ ) while OP positively predicted both authentic pride ( $\beta = .41$ ) and hubristic pride ( $\beta = .55$ ). In turn, hubristic pride positively predicted immoral behavior ( $\beta = .63$ ) and negatively predicted moral behavior ( $\beta = -.35$ ). Authentic pride only positively predicted moral behavior ( $\beta = .30$ ). When age was included as a covariate, the model did not change significantly ( $\Delta\chi^2 (20) = 23.45, p = .27$ ), modification indices did not suggest any addition of paths between age and other variables and betas suffered no significant change ( $\Delta\beta \leq .03$  for all  $\beta$ s). However, when years of experience were included in the present model, model fit dropped significantly ( $\Delta\chi^2 (20) = 39.48, p = .006$ ) and modification indices suggested adding links to authentic pride ( $\beta = -.15$ ), moral behavior ( $\beta = -.11$ ), and immoral behavior ( $\beta = .16$ ). However, even after these additions in the model, all other betas suffered no significant change ( $\Delta\beta \leq .02$  for all  $\beta$ s). Therefore, age or years of experience were not included in the present model because they did not affect the relationships between the main model variables.

Furthermore, the effect of gender on the present model was tested through multi-group analyses where all 9 paths were constrained to be equal across both the male and the female groups. Results showed that the constrained model did not differ significantly in model fit from the unconstrained model ( $\Delta\chi^2 (9) = 7.28, p = .61$ ), suggesting that relationships in the model are not significantly different across gender. However, inclusion of the gender variable (male = 1, female = 2) in the general model as a covariate made modification indices suggest adding links from gender to hubristic pride ( $\beta = -.23$ ),

immoral behavior ( $\beta = -.31$ ), and moral behavior ( $\beta = .26$ ) suggesting mean differences in these model variables between gender.

In order to test whether the hypothesized model provided the best fit indices, four meaningful alternative models were tested, in the same way as in Study 1. The first alternative model (i.e., Model 2.2) was one in which passion predicted immoral and moral behavior which, in turn, predicted pride. Based on modification indices, paths between HP and immoral behavior, as well as between OP and moral behavior were removed. The second alternative model (i.e., Model 2.3) was one in which pride predicted passion which, in turn, predicted immoral and moral behavior. Based on modification indices, the path between OP and moral behavior was removed. The third alternative model (i.e., Model 2.4) was one in which pride predicted immoral and moral behavior which, in turn, predicted passion. The fourth alternative model (i.e., Model 2.5) was one in which immoral and moral behavior predicted passion that, in turn, predicted pride. Based on modification indices, the path between HP and hubristic pride was removed. As can be seen in Table 4, all alternative models (Model 2.2 to 2.5) resulted in poorer fit indices than the proposed model. Thus, all alternative models were rejected.

### **Indirect effects**

Indirect effects were investigated to further test the mediating role of hubristic pride between OP and immoral behavior and the mediating role of authentic pride between HP and moral behavior. Consequently, as in Study 1, bootstrapped confidence interval estimates of the indirect effect were calculated to confirm the significance of mediations. Results confirmed the mediating role of hubristic pride between OP and immoral behavior ( $\beta = .35$ ; CI = .29 - .41). Results also confirmed the mediating role of authentic pride between HP and moral behavior ( $\beta = .05$ ; CI = .01 - .11). It should be noted that pride did not significantly mediate the positive or negative indirect relationship between OP and moral behavior.

The present findings provided support for the extended model. As expected, both HP and OP positively predicted authentic pride that, in turn, positively predicted moral behavior. On the other hand,

OP was positively related to hubristic pride that, in turn, positively predicted immoral behavior and negatively predicted moral behavior. These findings basically replicate and extend those of Study 1 while including moral behavior in the model and testing the model in the realm of sports with United Kingdom athletes. Furthermore, results suggested that females were less likely to feel hubristic, less likely to engage in immoral behavior and more likely to adopt moral behavior. In spite of correlational differences across gender, the model did not differ on its whole between males and females, nor was it affected by age or years of experience of participants.

### **General Discussion**

The main purpose of the present research was to investigate the role of passion in moral behavior in two studies and to identify some of the mediating processes in the relationship. Specifically, the purpose of the present research was to test an integrated model in which both HP and OP positively predict authentic pride that, in turn, positively predicts moral behavior. OP was also posited to positively predict hubristic pride that, in turn, positively predicts immoral behavior and negatively predicts moral behavior. This basic model was supported in two studies that took place in two different achievement settings and in two different cultures. These findings lead to some important implications.

### **Passion and Moral Behavior**

A first implication is that passion matters with respect to moral behavior. While past research has shown that passion, and especially OP, is positively related to aggression (Donahue et al., 2009; Philippe, Vallerand, Richer et al., 2009) and to less positive interpersonal behavior (e.g., Lafrenière et al., 2011, Philippe et al., 2010), the present findings are the first to show that passion needs to be taken into account as pertains to moral behavior. These findings were obtained in two studies that dealt with two different types of activities (paintball and sports) in two different, yet similar, cultures (North America and the United Kingdom). Of major interest is that it seems that OP is mostly important if one wants to predict immoral behavior while HP seems to be more important for moral behavior. While this statement is generally true, a more in depth analysis reveals that the picture is more complex for OP.

Indeed, the results showed that while OP is positively related to immoral behavior, it is still positively involved with moral behavior through its relationship with authentic pride. Thus, a more precise characterization of its link to morality would be that of a conflicted relationship. Because it can be positively related to both moral and immoral behavior, future research should seek to identify the conditions under which OP is related to either moral or to immoral behavior. As in past research on aggression (e.g., Donahue et al., 2009), it is possible that it is especially under ego threat that OP leads to immoral behavior.

Overall, the present findings provide support for the Dualistic Model of Passion as it further adds to the differential role of HP and OP as pertains to behavior. As in past research (see Vallerand, 2010), HP was found to positively contribute to an adaptive form of behavior, namely moral behavior. However, OP revealed a much less adaptive form of relationship with moral and immoral behavior, being positively related immoral behavior and unrelated to moral behavior. Thus, while the present findings replicate past findings on the less adaptive moral aspects of OP, they also provide some important nuances as to its consequences. It is not as if OP were “all bad”. Rather, as indicated above, the picture with OP is somewhat more complex than that with HP. Clearly, future research on passion and moral behavior is needed.

### **Pride as a Mediating Process**

Results of both studies revealed that the link between passion and moral behavior is mediated by pride. It would appear that OP leads people to feelings of arrogance and superiority over their opponents. This emotion then seems to make people focus compulsively on domination (Cheng et al., 2010), presumably through obsession with winning, and preventing them from experiencing empathy and making them adopt immoral behavior such as antisocial behavior and cheating. With respect to the mediating role of authentic pride between passion and moral behavior, results suggest that harmoniously-passionate as well as obsessively-passionate individuals come to feel authentic pride. Although authentic pride does not seem to play a role in immoral behavior (see Studies 1 and 2), it does predict moral

behavior (Study 2). Thus, HP leads to moral behavior through its link to authentic pride. With OP, the indirect path to moral behavior is mediated positively by authentic pride and negatively by hubristic pride. These two mediating process cancel each other out psychologically (and statistically), thus leaving OP with a less straightforward role in moral behavior. It would be interesting, however, to examine how moral behavior operates when it is the result of two conflicting types of pride (such as in the case of OP) as opposed to when it is the result of authentic pride only (such as in the case of HP). Furthermore, future research is needed to identify the conditions under which one of the OP-pride paths is triggered at the expense of the other and the ensuing consequences for moral/immoral behavior.

The present findings provide support for Tracy and Robins' (2007) position on the role of authentic and hubristic pride in adaptive and less adaptive behavior, respectively. Past research has shown that authentic pride leads to adaptive behavior such as better social interactions and prosocial behavior, while hubristic pride can lead to maladaptive behavior such as aggression and antisocial behavior (e.g., Tracy et al., 2009). The present research extends these findings in showing that they also apply to moral and immoral behavior that take the form of sportspersonship and cheating and antisocial behavior, respectfully. Future research is needed in order to explore the processes involved in these relationships. As research by Cheng and her colleagues (2010) points out, it may be that authentic pride leads to moral behavior through prestige-seeking while hubristic pride leads to immoral behavior through dominance seeking.

From a more general perspective the picture that the present findings paint is that there are two roads to morality in achievement settings. The harmonious road is straightforward. It starts with HP that is associated with the experience of authentic pride that, in turn, predicts moral behavior. One aspect of that road that remains a question mark, however, is when will HP negatively predict hubristic pride (as in Study 1) and when will it remain unrelated to it (as in Study 2). The second, more obsessive, road is more complex and involves both positive elements (through authentic pride) and maladaptive ones

(through hubristic pride): Clearly, future research on passion and morality is needed in order to further chart the vicissitudes of these two roads to morality and assess their generality.

### **Limitations**

Some limitations of the present research need to be underscored. First, the correlational design used in both studies does not allow us to make causal inferences. Therefore, it is impossible to determine the directionality of causality with respect to the proposed model. Consequently, researchers should try to replicate the present findings using experimental designs to clearly establish the directionality of the effect. Second, both studies were cross-sectional. It would be important to conduct future research using longitudinal or prospective designs to determine the role of passion in predicting changes in moral and immoral behavior over time. Third, in the present research, all variables were reported by the participants. Future research should replicate the present findings while using objective measures or observer reports of moral and immoral behavior. Fourth, the measure of pride used was an abridged scale. Even though we carried out a validation study to further assess its validity and reliability in regard to Tracy & Robins' original scale, the short subscales still showed a higher intercorrelation than the original subscales. Thus, future research should replicate the present findings with the original scale. Finally, we need to extend the generality of the present findings by assessing the present model as pertains to other types of activities in non-achievement settings (e.g., environmental engagement) and in other cultures. Such research would go a long way in providing crucial information as to the validity of the proposed model and its potential application to a wide range of situations and people.

### **Conclusion**

In sum, the findings from the present study suggest that passion matters with respect to moral behavior and that its link to moral and immoral behavior is mediated by authentic and hubristic pride, respectively. To return to the question posed in the Introduction section, it appears that highly-involved individuals may adopt either moral or immoral behavior as a function of the predominant type of passion that characterizes their relationship with the passionate activity. Future research on the role of passion in

moral behavior should be pursued as it might yield important insights into the psychological processes at play in the moral (and immoral) behavior of highly-involved individuals.



### References

- Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, 3, 193-209.
- Blasi, A. (1980). Bridging moral cognition and moral action: A critical review of the literature. *Psychological Bulletin*, 88, 1-45.
- Carbonneau, N., Vallerand, R.J., Fernet, C., & Guay, F. (2008). The role of passion for teaching in intra and interpersonal outcomes. *Journal of Educational Psychology*, 100, 977-987.
- Carpentier, J., Mageau, G. A., & Vallerand, R. J. (In press). Ruminations and Flow: Why Do People with a More Harmonious Passion Experience Higher Well-Being? *Journal of Happiness Studies*.
- Carver, C. S., Sinclair, S., & Johnson, S. L. (2010). Authentic and hubristic pride : Differential relations to aspects of goal regulation, affect, and self-control. *Journal of Research in Personality*, 44, 698-703.
- Chantal, Y., Robin, P., Vernat, J.-P., Bernache-Asollant, I. (2005). Motivation, sportpersonship, and athletic aggression: a mediational analysis. *Psychology of Sport and Exercise*, 6, 233-49.
- Cheng, J. T., Tracy, J. L., & Henrich, J. (2010). Pride, personality, and the evolutionary foundations of human social status. *Evolution and Human Behavior*, 31, 334-347.
- Coulomb-Cabagno, G., & Rasclé, O. (2006). Team sports players' observed aggression as a function of gender, competitive level, and sport type. *Journal of Applied Social Psychology*, 36, 1980-2000.
- Csikszentmihalyi, M. (1978). Intrinsic rewards and emergent motivation. In M.R. Lepper & D. Greene (Eds.), *The hidden costs of reward* (pp. 205-216). Hillsdale, NJ: Erlbaum.
- Deci, E. L., & Ryan, R. M. (2000). The what and why of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.

- Donahue, E. G., Miquelon, P., Valois, P., Goulet, C., Buist, A., & Vallerand, R. J. (2006). A motivation model of performance-enhancing substance use in elite athletes. *Journal of Sport and Exercise Psychology, 28*, 511-520.
- Donahue, E. G., Rip, B., & Vallerand, R. J. (2009) When winning is everything: On passion, identity, and aggression in sport. *Psychology of Sport and Exercise, 10*, 526-534.
- Forest, J., Mageau, G. A., Sarrazin, C., & Morin, E. M. (2010). "Work is my passion": The different affective, behavioural, and cognitive consequences of harmonious and obsessive passion toward work. *Canadian Journal of Administrative Sciences, n/a*. DOI: 10.1002/cjas.
- Hodgins, H. S., & Knee, R. (2002). The integrating self and conscious experience. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of Self-determination research* (pp.87-100). Rochester, NY: University of Rochester Press.
- Julian, M. W. (2001). The consequences of ignoring multilevel data structures in nonhierarchical covariance modeling. *Structural Equation Modeling: A Multidisciplinary Journal, 8*, 325-352.
- Kavussanu, M. (2008). Moral behaviour in sport: a critical review of the literature. *International Review of Sport and Exercise Psychology, 1*, 124-138.
- Kavussanu, M., & Boardley, I. D. (2009) The prosocial and antisocial behavior in sport scale. *Journal of Sport and Exercise Psychology, 31*, 97-117.
- Lafrenière, M-A. K., Jowett, S., Vallerand, R. J., Carbonneau, N. (2011). Passion for coaching and the quality of the coach-athlete relationship: The mediating role of coaching behaviors. *Psychology of Sport and Exercise.*
- Lafrenière, M.-A. K., Vallerand, R. J., Donahue, R., & Lavigne, G. L. (2009). On the costs and benefits of gaming: The role of passion. *Cyberpsychology and Behavior, 12*, 285-290.
- Lee, M. J., Whitehead, J., Ntoumanis N., & Hatzigeorgiadis, H. (2008). Relationships among values, achievement orientations, and attitudes in youth sport. *Journal of Sport and Exercise Psychology, 30*, 588-610.

- Lemyre, P-N., Roberts, G. C., & Ommundsen, Y. (2002). Achievement goal orientations, perceived ability, and sportpersonship in youth soccer. *Journal of applied sport psychology, 14*, 120-136.
- Lewin, K. (1951). *Field theory in social science*. New York: Harper.
- MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004) Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research, 39*, 99-128.
- Mageau, G. A., Carpentier, J., & Vallerand, R. J. (2011). The role of self-esteem contingencies in the distinction between obsessive and harmonious passion. *European Journal of Social Psychology, 41*, 720-729.
- Mageau, G. A., Vallerand, R. J., Rousseau, F. L., Ratelle, C. F., & Provencher, P. J. (2005). Passion and gambling: Investigating the divergent affective and cognitive consequences of gambling. *Journal of Applied Social Psychology, 35*, 100–118.
- Miller, B.W., Roberts, G.C., & Ommundsen, Y. (2005). Effect of perceived motivational climate on moral functioning, team moral atmosphere perceptions, and the legitimacy of intentionally injurious acts among competitive youth football players. *Psychology of Sport and Exercise, 6*, 461-477.
- Miller, B., Roberts, G. C., & Ommundsen, Y. (2003) Effect of motivational climate on sportpersonship among competitive male and female soccer players. *Scandinavian Journal of Medicine and Science in Sports, 13* , 1-14.
- Ntoumanis, N., & Standage, M. (2009). Morality in sport : A self-determination theory perspective. *Journal of Applied Sport Psychology, 21*, 365-380.
- Philippe, F.L., Vallerand, R.J., Andrianarisoa, J., & Brunel, P. (2009). Passion in referees: Examining their affective and cognitive experiences in sport situations. *Journal of Sport & Exercise Psychology, 31*, 1-21.

- Philippe, F. L., Vallerand, R. J., Houliort, N., Lavigne, G., Donahue, E. G. (2010). Passion for an activity and quality of interpersonal relationships: The mediating role of emotions. *Journal of Personality and Social Psychology*.
- Philippe, F. L., Vallerand, R. J., Lavigne, G. (2009) Passion does make a difference in people's lives: A look at well-being in passionate and non-passionate individuals. *Applied Psychology: Health and Well-Being, 1*, 3-22.
- Philippe, F.L., Vallerand, R.J., Richer, I., Vallières, E., & Bergeron, J. (2009). Passion for driving and aggressive driving behavior: A look at their relationship. *Journal of Applied Social Psychology, 39*, 3020-3043.
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879-891.
- Ratelle, C. F., Vallerand, R. J., Mageau, G. A., Rousseau, F. L., & Provencher, P. (2004). When passion leads to problematic outcomes: A look at gambling. *Journal of Gambling Studies, 20*, 105-119.
- Rest, J.R. (1984). The major components of morality. In W. Kurtines & J. Gewirtz (Eds.) *Morality, moral behavior, and moral development* (pp. 556-629). New York: Wiley.
- Rip, B., Fortin, S., & Vallerand, R. J. (2006). The relationship between passion and injury in dance students. *Journal of Dance Medicine & Science, 10*, 14-20
- Rousseau, F. L., & Vallerand, R. J. (2003). Le rôle de la passion dans le bien-être subjectif des aînés. [The role of passion in subjective well-being of seniors]. *Revue Québécoise de psychologie, 24*, 197-211.
- Rousseau, F. L., & Vallerand, R. J. (2008). An examination of the relationship between passion and subjective well-being in older adults. *The International Journal of Aging and Human Development, 66*, 195-211.

- Rousseau, F. L., Vallerand, R. J., Ratelle, C. F., Mageau, G. A., & Provencher, P. J. (2002). Passion and gambling: On the validation of the Gambling Passion Scale (GPS). *Journal of Gambling Studies*, *18*, 45–66.
- Sage, L., & Kavussanu, M. (2007). The effects of goal involvement on moral behavior in an experimentally manipulated competitive setting. *Journal of Sport & Exercise Psychology*, *29*, 190–207.
- Sage, L., & Kavussanu, M. (2008). An exploration of temporal stability and reciprocal relationships between goal orientations, motivational climate and prosocial and antisocial behaviour in youth soccer. *Journal of Sports Sciences*, *26*, 717–732.
- Séguin-Lévesque, C., Laliberté, M. L. N., Pelletier, L. G., Blanchard C., & Vallerand, R. J. (2003). Harmonious and obsessive passion for the internet : Their associations with the couple's relationship. *Journal of Applied Social Psychology*, *33*, 197–221.
- Sheldon, K. M. (2002). The self-concordance model of healthy goal striving: When personal goals correctly represent the person. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 65–86). Rochester, NY: University of Rochester Press.
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, *7*, 422–445.
- Stephan, Y., Deroche, T., Brewer, B. W., Caudroit, J., & Le Scanff, C. (2009). Predictors of perceived susceptibility to sport-related injury among competitive runners: The role of previous experience, neuroticism, and passion for running. *Applied Psychology: An International Review*, *58*, 672–689.
- Tracy, J. L., Cheng, J. T., Robins, R. W., & Trzesniewski, K. H. (2009). Authentic and hubristic pride: The affective core of self-esteem and narcissism. *Self and Identity*, *8*, 196–213.
- Tracy, J. L., & Robins, R. W. (2004). Putting the self into self-conscious emotions: A theoretical model. *Psychological Inquiry*, *15*, 103–125.

- Tracy, J. L., & Robins, R. W. (2007). The psychological structure of pride: A tale of two facets. *Journal of Personality and Social Psychology*, *92*, 506-525.
- Turiel, E. (1983). *The development of social knowledge: Morality and convention*. Cambridge University Press.
- Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology* (pp. 271-360). New York: Academic Press.
- Vallerand, R. J. (2008). On the psychology of passion: In the search of what makes people's lives most worth living. *Canadian Psychology*, *49*, 1-13.
- Vallerand, R. J. (2010). On passion for life activities: The dualistic model of passion. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 42, pp. 97-193). New York: Academic Press.
- Vallerand, R. J., Blanchard, C., Mageau, G. A., Koestner, R., Ratelle, C. F., Léonard, M., Gagné, M., & Marsolais, J. (2003). Les passions de l'âme : On obsessive and harmonious passion. *Journal of Personality and Social Psychology*, *85*, 756-767.
- Vallerand, R.J., Brière, N.M., Blanchard, C., & Provencher, P. (1997). Development and validation of the Multidimensional Sportpersonship Orientation Scale (MSOS). *Journal of Sport and Exercise Psychology*, *19*, 197-206.
- Vallerand, R. J., Fortier, M. S., & Guay, F. (1997). Self-determination and persistence in a real-life setting: Toward a motivational model of high school dropout. *Journal of Personality and Social Psychology*, *72*, 1161-1176.
- Vallerand, R. J., & Houliort, N. (2003). Passion at work: Toward a new conceptualization. In D. Skarlicki, S. Gilliland, & D. Steiner (Eds.), *Social issues in management* (pp. 175-204). Greenwich, CT: Information Age.

- Vallerand, R. J., & Losier, G. F. (1994). Self-determined motivation and sportsmanship orientations : An assessment of their temporal relationship. *Journal of Sport and Exercise Psychology, 16*, 229-245.
- Vallerand, R. J., Mageau, G. A., Elliot, A., Dumais, A., Demers, M-A., & Rousseau, F. L. (2008). Passion and performance attainment in sport. *Psychology of Sport & Exercise, 9*, 373-392.
- Vallerand, R. J., & Miquelon, P. (2007). Passion in sport: Theory, research, and applications. In D. Lavallée & S. Jowett (Eds.), *Social psychology in sport* (pp. 249–263). Champaign, IL: Human Kinetics.
- Vallerand, R. J., Rousseau, F. L., Grouzet, F. M. E., Dumais, A., Grenier, S., & Blanchard, C. M. (2006). Passion in sport: A look at determinants and affective experiences. *Journal of Sport and Exercise Psychology, 28*, 454–478.
- Vallerand, R. J., Salvy, S-J., Mageau, G. A., Denis, P, Grouzet, F. M. E., & Blanchard, C. B. (2007). On the role of passion in performance. *Journal of Personality, 75*, 505-53.

Table 1

*Means, Standard Deviations, and Correlations Involving all Variables of Study 1 (N = 163)*

	<i>M</i>	<i>SD</i>	2	3	4	5	6
Harmonious passion	5.38	1.15	<b>.45***</b>	<b>.19*</b>	<b>-.24**</b>	<b>-.09</b>	<b>-.13<sup>†</sup></b>
Obsessive passion (2)	3.62	1.59		<b>.34***</b>	<b>.45***</b>	<b>.20**</b>	<b>.16*</b>
Authentic pride (3)	5.84	1.18			<b>.39***</b>	<b>.23**</b>	.04
Hubristic pride (4)	2.69	1.38				<b>.39***</b>	<b>.33***</b>
Usual cheating Behavior (5)	-0.12	1.47					<b>.53***</b>
Extreme cheating behavior (6)							

*Note.* Correlations in bold are partial correlations. Correlations with HP are partial correlations controlling for OP while correlations with OP are partial correlations controlling for HP (except intercorrelation between HP and OP).

<sup>†</sup> $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$



Table 2

*Goodness-of-Fit Indices of the Six Models of Study 1 (N = 163)*

Model	$\chi^2$	<i>df</i>	$\chi^2/df$	CFI	IFI	SRMR	RMSEA [95%] CI	AIC
1.1	518.73	338	1.54	.91	.92	.08	.06 [.05-.07]	710.73
1.2	510.32	337	1.51	.92	.92	.08	.06 [.05-.07]	704.32
1.3	550.69	335	1.64	.90	.90	.10	.06 [.05-.07]	748.69
1.4	527.73	335	1.58	.91	.91	.09	.06 [.05-.07]	725.73
1.5	551.10	336	1.64	.90	.90	.10	.06 [.05-.07]	747.10
1.6	527.73	335	1.58	.91	.91	.09	.06 [.05-.07]	725.73

Table 3

*Means, Standard Deviations, and Correlations Involving all Variables of Study 2 (N = 296)*

	<i>M</i>	<i>SD</i>	2	3	4	5	6
Harmonious passion	4.82	0.79	.27***	.27***	.15**	.10 <sup>†</sup>	.14*
Obsessive passion (2)	3.12	1.11		.32***	.42***	.31***	.01
Authentic pride (3)	5.15	0.95			.29***	.15**	.07
Hubristic pride (4)	2.59	1.38				.53***	-.22***
Immoral behavior (5)	2.33	0.91					-.39***
Moral behavior (6)	3.14	0.61					

<sup>†</sup> $p < .10$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

Table 4

*Goodness-of-Fit Indices of the Five Models of Study 2 (N = 296)*

Model	$\chi^2$	<i>df</i>	$\chi^2/df$	CFI	IFI	SRMR	RMSEA [95%] CI	AIC
2.1	412.50	182	2.27	.90	.90	.08	.07 [.06-.07]	598.50
2.2	420.16	184	2.28	.90	.90	.08	.07 [.06-.07]	602.18
2.3	461.41	183	2.52	.88	.88	.09	.07 [.06-.08]	645.41
2.4	471.10	183	2.57	.88	.88	.11	.07 [.07-.08]	655.10
2.5	487.89	183	2.66	.87	.87	.09	.08 [.07-.08]	671.89

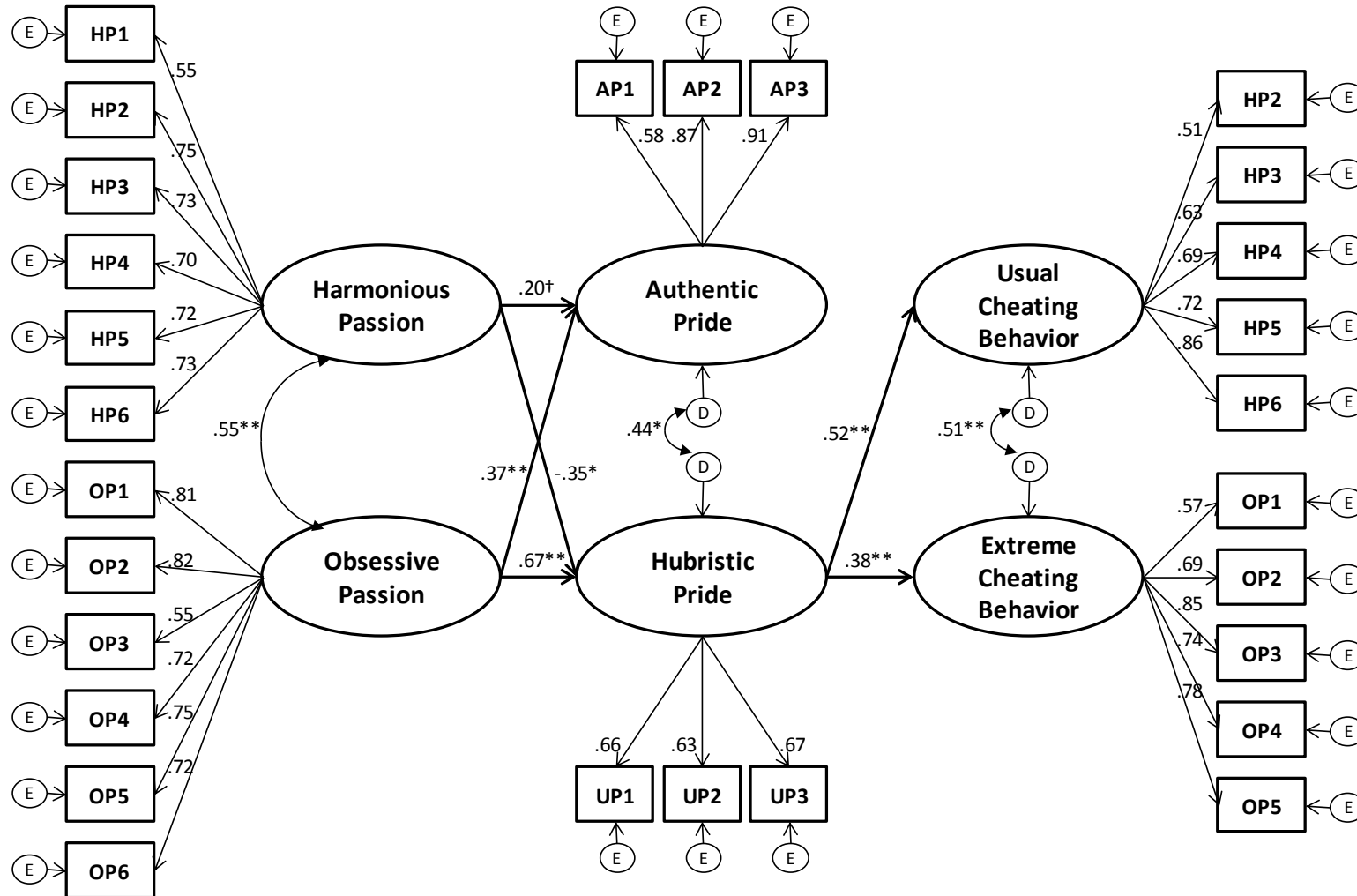


Figure 1. Results of the structural equation modeling analyses of Study 1 (N=163)

<sup>†</sup> $p < .10$ ,  $*p < .01$ ,  $**p < .001$

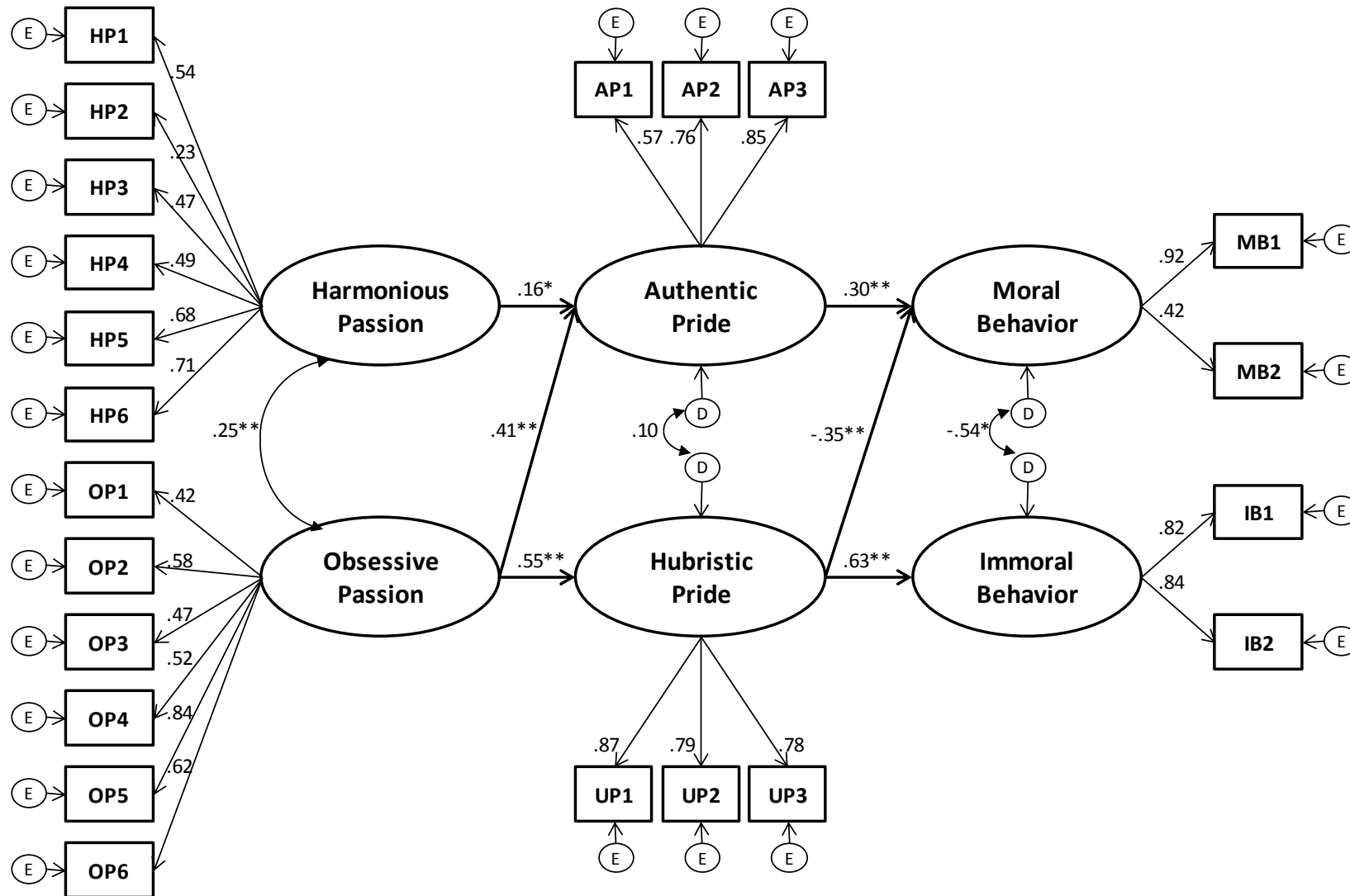


Figure 2. Results of the structural equation modeling analyses of Study 2 (N=296)

\* $p < .05$ , \*\* $p < .001$