

## Motivation and Gambling Involvement

YVES CHANTAL

ROBERT J. VALLERAND

*Research Laboratory on Social Behavior  
University of Quebec at Montreal, Canada*

EVELYNE F. VALLIÈRES

*Institutional Research Office  
University of Quebec at Montreal, Canada*

---

**ABSTRACT.** It is argued that motivation is a key determinant of gambling involvement. The hypothesis—that participants who exhibit a high self-determined motivational profile (i.e., engage in gambling for fun and have a sense of choice) will report a higher degree of involvement—was supported in a study conducted in Canada, with 245 gamblers who bet on horses. Also, the male participants were more involved in gambling than the female participants were.

---

THE POPULARITY OF GAMBLING continues to increase. During its first year of operation, the Montreal Casino reported a total income of Can\$137.1 million and a net profit of \$70 million (Loto-Quebec, 1994). Moreover, even though 92% of the population of the province of Quebec had never been to a casino, approximately 26% of the population intended to visit one and to spend, on average, \$78 their first visit (Laterrière, 1994). Recent figures indicate that Quebecers have spent about \$1.55 billion on gambling in the past year, approximately \$203 per capita (Loto-Quebec, 1993, 1994). Gambling seems to be just as popular in other countries, including the United States (Abbott & Cramer, 1993), Cameroon (Brenner & Liped, 1993), England (Fisher, 1993), Norway (Gotestam, 1993), the

---

*The research reported in this paper was made possible by a research grant from Loto-Quebec.*

*We are grateful to Lina Di Blasio and Andrea Riddle for their comments on an earlier version of this article.*

*Address correspondence and requests for information on the Gambling Motivation Scale to Robert J. Vallerand, Research Laboratory on Social Behavior, Department of Psychology, University of Quebec at Montreal, P.O. Box 8888, Station Centre-Ville, Montreal, Quebec, Canada H3C 3P8. Tel. (514) 987-4836; FAX (514) 987-7953.*

Netherlands (Hermkens & Kok, 1990), and Spain (Legarda, Babio, & Abreu, 1992).

Why are so many people attracted to this potentially addictive pursuit? Why do people continue to gamble, even though they are usually aware that betting is not a sound financial move (Gilovich, 1983; Walker, 1992)?

In the present study, we viewed gambling as a motivational consequence, positing that motivation leads people to become involved in gambling and to invest considerable amounts of time and money in betting. We reasoned that, if motivation is defined as the internal and/or external forces that trigger, direct, intensify, and lead to the persistence of a behavior (Vallerand & Thill, 1993; Weiner, 1980), then a theory that adequately addresses gambling motivation should help delineate gamblers' motivational orientation and thus help clarify how gamblers interact with their environment.

Self-determination theory (Deci & Ryan, 1985, 1991), whose main premise is that people have a need to feel self-determined and competent when interacting with their environment, seemed to fit our purposes. Intrinsic motivation stems from the satisfaction of these two needs and pertains to the act of participating in an activity for its own sake, that is, for the pleasure and satisfaction afforded by that activity. Vallerand and his colleagues proposed a tripartite taxonomy of intrinsic motivation (Vallerand, Blais, Brière, & Pelletier, 1989; Vallerand et al., 1992).

*Intrinsic motivation to experience stimulation* is exemplified by gamblers who bet for fun and excitement. Gamblers who enjoy learning, exploring, or trying to understand something new (e.g., gathering data about previous horse races) exemplify *intrinsic motivation to know*. *Intrinsic motivation to accomplish things* is exemplified by gamblers who find pleasure and satisfaction in surpassing themselves in the course of their betting activities (e.g., improving one's counting method in blackjack).

The three types of extrinsic motivation pertain to viewing a given activity as a means to an end. *External regulation* does not involve self-determination (e.g., people who gamble in hopes of becoming rich). The reasons for extrinsically motivated behavior may become internalized, however (Deci & Ryan, 1985). *Introjected regulation* limits this process of internalization to past external contingencies when controlling beliefs, such as pressure and guilt, modify behaviors (e.g., some gamblers pressure themselves to use the same lottery ticket numbers because they would feel guilty if they did not). *Identified regulation*, which involves self-determination, is operant when a person has come to value certain behaviors (e.g., people who gamble for the purpose of socializing with friends value this activity and choose to participate in it).

*Amotivation* pertains to activities that are neither intrinsically nor extrinsically motivated. It is operant when people do not perceive contingencies between an outcome and their own actions.

Deci and Ryan (1985, 1991) hypothesized that the various types of motiva-

tion are ordered along a self-determination continuum that ranges from amotivation (corresponding to the absence of any choice) to intrinsic types of motivation (corresponding to higher degrees of self-determination). As the degree of self-determination inherent in a person's motivation increases, feelings of autonomy also increase. The fact that self-determination has been associated repeatedly with enhanced psychological functioning (see Deci, 1980; Deci & Ryan, 1985, 1991; Ryan, 1993) makes possible the prediction of a specific pattern of consequences. The higher the degree of self-determination, the more positive the consequences should be (e.g., better problem-solving skills, more cognitive flexibility, higher levels of interest and persistence). Thus, intrinsic motivation has been found to result in the most positive consequences, followed by identified regulation. Amotivation has been associated with the worst consequences, followed by external regulation and introjected regulation.

This pattern of motivational consequences has been replicated in several domains, including education (Fortier, Vallerand, & Guay, 1995; Ryan & Connell, 1989; Vallerand & Bissonnette, 1992; Vallerand et al., 1989; Vallerand et al., 1992, 1993), interpersonal relationships (Blais, Sabourin, Boucher, & Vallerand, 1990), aging (O'Connor & Vallerand, 1990, 1994a, 1994b; Vallerand & O'Connor, 1989, 1991; Vallerand, O'Connor, & Hamel, *in press*), work (Blais, Brière, Lachance, Riddle, & Vallerand, 1993), sports (Brière, Vallerand, Blais, & Pelletier, *in press*), and leisure (Losier, Bourque, & Vallerand, 1993; Pelletier, Vallerand, Green-Demers, Brière, & Blais, 1995).

We thought this pattern of motivational consequences might be applicable to gambling as well. This hypothesis was supported in a recent study (Chantal, Vallerand, & Vallières, 1994) which demonstrated that specific types of motivation adequately predicted some relevant psychological variables, including self-attributions for wins, perceived chances of winning, and intent to continue gambling in the future. These variables were positively correlated with high self-determined types of motivation (intrinsic motivation and identified regulation) and negatively correlated with low self-determined types of motivation (especially amotivation and external regulation). Low self-determined types of motivation were also positively correlated with compulsion. These findings support a linkage between different forms of motivation and various aspects of gambling behavior.

Our objective in the present study was to assess how motivation relates to involvement in gambling. We hypothesized that people who exhibited a high self-determined motivational profile (SDMP) would report higher levels of gambling involvement than people with a low SDMP would. According to this rationale, people who have a high SDMP gamble because the inherent characteristics of gambling offer excitement, an opportunity to acquire knowledge, and a sense of accomplishment. The positive feelings—efficacy, curiosity, interest, and enjoyment—experienced by a high-SDMP gambler in the course of his or her gambling activities lead to the investment of increasing amounts of time and

money in gambling activities (high involvement). People who exhibit a low SDMP (external regulation and amotivation) gamble mainly because of external rewards, such as money and social approval, that are generally beyond their personal control. Thus, low-SDMP gamblers experience negative pressure, tension, obligation, and uncertainty, feelings that will make them less likely to continue investing time and money in gambling activities (low involvement).

## Method

### *Participants*

The sample consisted of 186 male and 59 female French Canadian gamblers who bet on horses, with a mean age of 48.3 years. The participants' average annual income was \$32,951 (not including gambling winnings). Forty-eight percent of the participants were blue-collar workers, 24% were unemployed, 11% were business executives, 7% were professionals, 7% were clerical workers, and 3% were homemakers.

### *Procedure and Measures*

The data were collected immediately before an evening program at a race-course in the Montreal area. The participants were told that the investigation concerned their attitudes toward gambling. All the participants completed two measures: the Gambling Motivation Scale (GMS; Chantal, Vallerand, & Vallières, 1994) and a measure of gambling involvement.

The GMS, which is derived from the tenets of self-determination theory (Deci & Ryan, 1985, 1991), contains 28 items representing potential answers to the question: "Why do you gamble?". These items are scored on a 7-point Likert-type scale anchored by the endpoints *does not correspond at all* (1) and *corresponds exactly* (7), with a midpoint of *corresponds moderately* (4). The GMS comprises seven subscales that correspond to the seven types of motivation described previously. For example, items such as "for the pleasure I feel when my knowledge of the game improves" and "because it is the best way I know of for meeting friends" composed the Intrinsic Motivation to Know scale and the Identified Regulation scale, respectively. The External Regulation and Amotivation subscales were composed of items such as "to buy something I have been dreaming of" and "I gamble but at times I wonder if it's worth it," respectively. In the present study, the internal consistency values (Cronbach's alphas) of the seven subscales were as follows: .81 for Intrinsic Motivation to Know, .78 for Intrinsic Motivation to Accomplish, .73 for Intrinsic Motivation to Experience Stimulation, .64 for Identified Regulation, .80 for Introjected Regulation, .77 for External Regulation, and .78 for Amotivation.

We assessed gambling involvement, using five items that were derived from

previous findings in the literature (e.g., Murray, 1993; Walker, 1992). First, the participants were asked to report the number of years they had been gambling and to estimate their weekly gambling expenses and the number of weekly visits they made to the racecourse. The participants were then asked to evaluate their involvement with gambling on a 7-point Likert-type scale that ranged from *occasional gambler* (1) to *heavy gambler* (7). Finally, the participants indicated how long they intended to continue gambling, using a 7-point Likert-type scale that ranged from *not for long* (1) to *for a very long time* (7).

## Results

### Indexes

We computed two numerical indexes, the Self-Determination Index (SDI) and the Gambling Involvement Index (GII), before we conducted the statistical analysis. The SDI, which provided the participants' motivational profiles, was calculated using the scores of six GMS subscales and the following formula:

$$\{ [2 \times (\text{IM to Know} + \text{IM to Accomplish} + \text{IM to Experience Stimulation})/3] + \text{Identified Regulation} \} - [(\text{External Regulation} + (2 \times \text{Amotivation}))].$$

The Introjected Regulation subscale was omitted because the distribution of scores indicated that there was a floor effect ( $Mdn = 1.25$ ), which would have artificially inflated the SDI scores.

The justification for this type of computation is based on Guttman's (1954, 1978) simplex structure patterns, such as the correlation matrix that emerges from the self-determination continuum. This type of matrix is characterized by strong positive correlations between adjacent subscales on the self-determination continuum and weaker correlations between subscales located at opposite ends. This type of index has been shown to be a valid indicator of self-determination in studies on motivational issues (Brière et al., in press; Grolnick & Ryan, 1987; Vallerand et al., 1989, 1992, 1993; Vallerand & O'Connor, 1991).

Possible total scores on the SDI range from  $-18$  to  $+18$ . Scores in the present study ranged from  $-11.17$  to  $+14.83$ , with a median of 3 ( $M = 3.08$ ,  $SD = 4.40$ ). The internal consistency of the index was satisfactory (Cronbach's  $\alpha = .79$ ). The median score of 3 was used as a cutoff to classify participants in terms of their SDMP. Participants whose SDI scores were higher than 3 were categorized as having a high SDMP; and participants whose SDI scores were lower than 3, as having a low SDMP. Both the male and the female participants were classified regarding SDMP, resulting in a  $2 \times 2$  (Motivational Profile  $\times$  Gender) between-subjects design.

For gambling involvement, we computed the GII by summing  $z$  conversions of the scores for the five involvement items (number of years spent gambling, weekly gambling expenses, weekly visits to racecourse, self-perception as occa-

sional gambler/heavy gambler, and intent to continue gambling). The internal consistency of the index was acceptable (Cronbach's  $\alpha = .67$ ).

### *Analysis of Variance*

We performed a  $2 \times 2$  (Motivational Profile  $\times$  Gender) analysis of variance (ANOVA) on the GII scores. This analysis included 241 cases because 4 participants had missing values on the GII. The results of the ANOVA indicated that motivational profile had a significant main effect,  $F(1, 237) = 4.57, p < .05$ . Overall, the high-SDMP participants reported a higher degree of gambling involvement than the low-SDMP participants did ( $M_s = 0.74$  and  $-0.69$  for the high-SDMP men and women, respectively, vs.  $-0.01$  and  $-1.91$  for the low-SDMP men and women, respectively). There was a significant main effect for gender,  $F(1, 237) = 12.27, p < .001$ : The men reported being more involved in gambling than the women did, ( $M_s = 0.37$  and  $-1.30$ , respectively). The Motivational Profile  $\times$  Gender interaction was not significant,  $F < 1$ .

### *Discussion*

The finding that the high-SDMP participants were more involved in gambling than the low-SDMP participants were supports our hypothesis that motivation is a key determinant of gambling involvement. The results of the present study also indicate that the high-SDMP participants, who engaged in gambling because it provided excitement, a sense of accomplishment, and an opportunity to broaden their knowledge, were (a) more involved in gambling and (b) more likely to continue gambling than the low-SDMP participants, who gambled for external reasons, such as a potential monetary reward. These findings are consistent with previous research in various domains indicating that a high SDMP is associated with more persistence and with numerous positive consequences (Deci & Ryan, 1985, 1991).

Another important determinant of gambling involvement in the present study was gender. The men's reported involvement in gambling was significantly higher than that of the women. Gender differences in gambling have received little research attention (Mark & Lesieur, 1992), but the present results are consistent with previous findings that men are consistently more involved than women are in gambling. It is not clear why there was a gender difference in the present study, but the results of previous research may shed some light on this issue. Hong and Chiu (1988) suggested that the key determinant of gambling involvement may differ for men and women (illusions of control for men and locus of control for women). Lindgren, Youngs, McDonald, and Klenow's (1987) explanation for this gender difference was that women are more reluctant to gamble than men are. Both the results from the present study and those from previous studies suggest that gender affects gambling involvement, but future research is necessary to determine why.

The present results should be interpreted cautiously, first, because unless

they are replicated with gamblers from various societies, these results may be applicable only to French Canadians. Second, whether the present results can be generalized to include gamblers who do not bet on horses is questionable because the fact that a successful betting outcome when horses are involved requires both skill and knowledge (Walker, 1992) may make the involvement variable more salient in this type of gambling. Thus, motivation might affect involvement differently in gambling activities that entail luck rather than skill (e.g., lotteries). Third, although we used a correlational design in the present study, a prospective design or an experimental design would provide a clearer indication of whether motivational profile predicts future involvement in gambling.

Although the results of the present study indicate that involvement in gambling is related to a person's gambling motivational profile, additional research is necessary to explore the significance and the role of this type of influence and its relationship to other factors, such as gender.

## REFERENCES

- Abbott, D. A., & Cramer, S. L. (1993). Gambling attitudes and participation: A Midwestern survey. *Journal of Gambling Studies*, 9, 247-263.
- Blais, M. R., Brière, N. M., Lachance, L., Riddle, A. S., & Vallerand, R. J. (1993). L'inventaire des motivations au travail de Blais [The Blais work motivation inventory]. *Revue Québécoise de Psychologie*, 14, 185-215.
- Blais, M. R., Sabourin, S., Boucher, C., & Vallerand, R. J. (1990). Toward a motivational model of couple happiness. *Journal of Personality and Social Psychology*, 59, 1021-1031.
- Brenner, G. A., & Liped, M. (1993). The lottery player in Cameroon: An exploratory study. *Journal of Gambling Studies*, 9, 185-190.
- Brière, N. M., Vallerand, R. J., Blais, M. R., & Pelletier, L. G. (in press). Développement et validation d'une mesure de motivation intrinsèque, extrinsèque et d'amotivation en contexte sportif: L'Échelle de Motivation dans les Sports (ÉMS) [Toward a new measure of intrinsic motivation, extrinsic motivation, and amotivation in sports: The Sport Motivation Scale (SMS)]. *International Journal of Sport Psychology*.
- Chantal, Y., Vallerand, R. J., & Vallières, E. F. (1994). Construction et validation de l'Échelle de Motivation Relative aux Jeux de Hasard et d'Argent [On the development and validation of the Gambling Motivation Scale (GMS)]. *Society and Leisure*, 17, 189-212.
- Deci, E. L. (1980). *The psychology of self-determination*. D.C. Heath and Company.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), *Nebraska symposium on motivation*. Vol. 38: *Perspectives on motivation* (pp. 237-288). Lincoln: University of Nebraska Press.
- Fisher, S. (1993). Gambling and pathological gambling in adolescents. *Journal of Gambling Studies*, 9, 277-288.
- Fortier, M. S., Vallerand, R. J., & Guay, F. (1995). Academic motivation and school performance: Toward a structural model. *Contemporary Educational Psychology*, 20, 257-274.
- Gilovich, T. (1983). Biased evaluation and persistence in gambling. *Journal of Personal-*

- ity and Social Psychology, 44, 1110–1126.
- Gotestam, K. G. (1993). Gambling in Norway: An obscure activity? *Psychology of Addictive Behaviors*, 7, 66–68.
- Grolnick, W. S., & Ryan, R. M. (1987). Autonomy in children's learning: An experimental and individual difference investigation. *Journal of Personality and Social Psychology*, 52, 890–898.
- Guttman, L. (1954). A new approach to factor analysis: The radex. In P. Lazerfeld (Ed.), *Mathematical thinking in the social sciences* (pp. 258–348). Glencoe, IL: Free Press.
- Guttman, L. (1978). *Theory construction and data analysis in the behavioral sciences*. San Francisco, CA: Jossey-Bass.
- Hermkens, P., & Kok, I. (1990). Gambling in the Netherlands: Developments, participation, and compulsive gambling. *Journal of Gambling Studies*, 6, 223–240.
- Hong, Y. Y., & Chiu, C. Y. (1988). Sex, locus of control, and illusion of control in Hong Kong as correlates of gambling involvement. *The Journal of Social Psychology*, 128, 667–673.
- Laterrière, G. (1994, May). Casino: 1 Québécois sur 4 ira cette année [Casino: 1 out of 4 Quebecers will go this year]. *Protégez-Vous*, 5, 19.
- Legarda, J. J., Babio, R., & Abreu, J. M. (1992). Prevalence estimates of pathological gambling in Seville (Spain). *British Journal of Addiction*, 87, 767–770.
- Lindgren, H. E., Youngs, G. A., McDonald, T. D., & Klenow, D. J. (1987). The impact of gender on gambling attitudes and behavior. *Journal of Gambling Behavior*, 3, 155–167.
- Losier, G. F., Bourque, P. E., & Vallerand, R. J. (1993). A motivational model of leisure participation in the elderly. *The Journal of Psychology*, 127, 153–170.
- Loto-Quebec (1993). *Les loteries et leurs consommateurs [Lottery buyers: Who are they?]*. Montreal: The Directorate of Public Affairs (Loto-Quebec).
- Loto-Quebec (1994). *Rapport annuel 1993–1994 [1993–1994 Annual Report]*. Montreal: The Directorate of Public Affairs (Loto-Quebec).
- Mark, M. E., & Lesieur, H. R. (1992). A feminist critique of problem gambling research. *British Journal of Addiction*, 87(4), 549–565.
- Murray, J. B. (1993). Review of research on pathological gambling. *Psychological Reports*, 72, 791–810.
- O'Connor, B. P., & Vallerand, R. J. (1990). Religious motivation in the elderly: A French-Canadian replication and an extension. *The Journal of Social Psychology*, 130, 53–59.
- O'Connor, B. P., & Vallerand, R. J. (1994a). Motivation, self-determination, and person–environment fit as predictors of psychological adjustment among nursing home residents. *Psychology and Aging*, 9, 189–194.
- O'Connor, B. P., & Vallerand, R. J. (1994b). The relative effects of actual and experienced autonomy on motivation in nursing home residents. *Canadian Journal on Aging*, 13, 529–538.
- Pelletier, L. G., Vallerand, R. J., Green-Demers, I., Brière, N. M., & Blais, M. R. (1995). Loisirs et santé mentale: Les relations entre la motivation pour la pratique des loisirs et le bien-être psychologique [Leisure and mental health: On the relationships between motivation for leisure participation and psychological well-being]. *Canadian Journal of Behavioral Sciences*, 27, 140–156.
- Ryan, R. M. (1993). Agency and organization: Intrinsic motivation, autonomy and the self in psychological development. In R. Dienstbier (Ed.), *Nebraska symposium on motivation. Vol. 40: Developmental perspectives on motivation* (pp. 1–56). Lincoln: University of Nebraska Press.
- Ryan, R. M., & Connell, J. P. (1989). Perceived locus of causality and internalization: Examining reasons for acting in two domains. *Journal of Personality and Social Psychology*, 57, 749–761.



- Vallerand, R. J., & Bissonnette, R. (1992). Intrinsic, extrinsic, and amotivational styles as predictors of behavior: A prospective study. *Journal of Personality*, 60, 599–620.
- Vallerand, R. J., Blais, M. R., Brière, N. M., & Pelletier, L. G. (1989). Construction et validation de l'Échelle de Motivation en Éducation (EME) [On the construction and validation of the Academic Motivation Scale (AMS)]. *Canadian Journal of Behavioural Science*, 21, 323–349.
- Vallerand, R. J., & O'Connor, B. P. (1989). Motivation in the elderly: A theoretical framework and some promising findings. *Canadian Psychology*, 30, 538–550.
- Vallerand, R. J., & O'Connor, B. P. (1991). Construction et validation de l'Echelle de Motivation Pour les Personnes Agées (EMPA) [The development of the Motivation in the Elderly Scale]. *International Journal of Psychology*, 26, 219–240.
- Vallerand, R. J., O'Connor, B. P., & Hamel, M. (in press). Motivation in later life: Theory and assessment. *International Journal of Aging and Human Development*.
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senécal, C., & Vallières, E. F. (1992). The Academic Motivation Scale: A measure of intrinsic, extrinsic, and amotivation in education. *Education and Psychological Measurement*, 52, 1003–1019.
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senécal, C., & Vallières, E. F. (1993). On the assessment of intrinsic, extrinsic, and amotivation in education: Evidence on the concurrent and construct validity of the Academic Motivation Scale. *Education and Psychological Measurement*, 53, 159–172.
- Vallerand, R. J., & Thill, E. E. (1993). Introduction au concept de motivation. [An introduction to the concept of motivation]. In R. J. Vallerand & E. E. Thill (Eds.), *Introduction à la psychologie de la motivation* (pp. 3–39). Laval (Québec): Éditions Études Vivantes.
- Walker, M. B. (1992). *The psychology of gambling*. New York: Pergamon Press.
- Weiner, B. (1980). *Human motivation*. New York: Holt, Rinehart and Winston.

*Received February 24, 1995*