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The role of passion in mainstream and radical behaviors: A look at environmental activism

Anne-Sophie Gousse-Lessard*, Robert J. Vallerand, Noémie Carbonneau, Marc-André K. Lafrenière

Research Laboratory on Social Behavior, Department of Psychology Université du Québec à Montréal, Canada

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ABSTRACT

The dualistic model of passion proposes that individuals can have two distinct types of passion toward an activity, a harmonious passion (HP) or an obsessive passion (OP), that lead to more or less adaptive outcomes, respectively. The purpose of the present research was to investigate the differential role of passion toward the environmental cause in mainstream and radical activist behaviors. Three studies were conducted with participants actively engaged in the environmental cause. In Study 1 (n = 106), path analysis results revealed that both HP and OP were associated with the endorsement of mainstream behaviors whereas only OP was related to the endorsement of radical behaviors. Study 2 (n = 123) replicated this pattern of results by looking at the extent to which participants were willing to engage in mainstream and radical behaviors in a hypothetical scenario depicting a real-life situation. Finally, path analysis results in Study 3 (n = 169) underscored the mediating role of emotions in the relationship between passion and activist behaviors. Overall, the present findings highlight the importance of distinguishing HP from OP for an important cause such as that of the environment.

"Without passion, change is not possible."

David Suzuki, 2002, p. 3

1. Introduction

Nowadays, one of the most talked-about causes is the environmental cause. Students in environment programs, as well as workers and volunteers in environmental organizations, are actively involved in this cause to help the population change for the better. However, while some activists use peaceful and moderate means to achieve their ends, others are more radical. Why? What makes an environmental activist cross the line of social norms to engage in radical behaviors? We posit that passion is a key concept in the explanation of the phenomenon of environmental radicalism. In line with the dualistic model of passion proposed by Vallerand et al. (2003), the purpose of the present research was to look at the concept of passion in the environmental field in order to determine its relevance in predicting mainstream and radical behaviors as pertains to the environmental cause.

1.1. Research on activism

Many approaches have been developed to better understand the determinants of pro-environmental behavior and activism. One of the most commonly used is perhaps Ajzen's theory of planned behavior (1991). The theory stipulates that attitudes, subjective norms and perceived behavioral control precede the intention to act in an environmentally friendly manner which then leads to the actual behavior. Stern's values-belief-norm (VBN) model (2000) is another important approach. It asserts that one's different values and beliefs lead the person to have a sense of obligation to take pro-environmental actions (personal norms) which then lead to several kind of behaviors like activism. Theoretically closer with the dualistic model of passion, self-determination theory (Deci & Ryan, 2002) is also an interesting approach to proenvironmental behaviors. However, although past research has shown that autodetermined motivation was associated with a high occurrence of difficult proenvironmental behaviors (e.g., Green-Demers, Pelletier, & Ménard, 1997), it seems to be a poor predictor of environmental activism (see Dono, Webb, & Richardson, 2010). These approaches have one thing in common: activism is generally conceptualized as public mainstream and normative behaviors like participating in a

* Corresponding author. Research Laboratory on Social Behavior, Department of Psychology, Université du Québec à Montréal, P.O. Box 8888, Station Centre-Ville, Montreal (Qc), H3C 3P8, Canada.
E-mail address: anso.gousse@gmail.com (A.-S. Gousse-Lessard).

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demonstration, signing a petition, engaging in environmental organizations, etc. The purpose of the present research was to go a little further by examining why some activists tend to adopt radical non-normative behaviors. We posit that passion, a complex motivational concept imbricated in the identity, could be a part of the answer.

2. The dualistic model of passion

The dualistic model of passion toward an activity (Vallerand, 2010; Vallerand et al., 2003) defines passion as a strong inclination toward a self-defining activity that people love, find important, and in which they invest time and energy. Passion is thus a strong motivational force. Moreover, the object of one's passion is internalized in one's identity (Amiot, Vallerand, & Blanchard, 2006; Vallerand et al., 2003). Thereby, a person having a passion for the environmental cause would define himself or herself as an environmentalist or an eco-citizen and not only as someone who recycles from time to time. This is noteworthy because past research has shown that self-identity is a significant predictor of behavior (see Whitmarsh & O'Neill, 2010).

Imbricated in the definition of passion is the notion of activity valuation. This subjective importance given to the activity by the person is expected to play an important role in the internalization of the activity in identity. Research has shown that when the object of interest (the activity) is highly valued, one is inclined to internalize the valued object, to make it part of him or herself (Aron, Aron, & Smollan, 1992; Deci, Eghrari, Patrick, & Leone, 1994). So, once an interesting activity becomes highly valued, and thus, internalized in identity, the person will tend to develop a passion toward this activity. The dualistic model of passion goes further and proposes that the type of passion that will ensue is determined by the type of internalization process that takes place. Indeed, the model posits the existence of two distinct types of processes by which the passionate activity can be internalized in one's identity. These processes lead to two different types of passion: harmonious (HP) and obsessive (OP) passion. According to Vallerand et al. (2003), harmonious passion originates from an autonomous internalization of the passionate activity in one's identity. An autonomous internalization occurs when there is no contingency attached to the engagement in the activity. This type of internalization produces a motivational force to engage in the activity willingly and engenders a sense of volition and personal endorsement about pursuing the activity. People with a harmonious passion can thus freely choose to engage in the activity that they love. In such a case, 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. Individuals with a harmonious passion are in control of their engagement. In other words, they are able to decide when to and when not to engage in the activity. Engagement in the passionate activity is thus seen as flexible (Vallerand, 2010). For instance, knowing that there is an important exam the next morning, an undergraduate student with a harmonious passion for video gaming would freely chose to study instead of playing *World of Warcraft* with his friends. The undergraduate adjusts him or herself to the situation and puts aside his or her passion for the task at hand.

Conversely, the dualistic model of passion (Vallerand et al., 2003) posits that obsessive passion is derived from a controlled internalization of the passionate activity in one's identity. This controlled internalization process originates from certain contingencies attached to the activity such as intra or interpersonal pressure (e.g., feelings of social acceptance or self-esteem; see Mageau, Carpentier, & Vallerand, 2011). People with an obsessive passion can thus find themselves in the position of experiencing an uncontrollable urge to partake in the activity they view as important and enjoyable. They cannot help but to engage in the passionate activity. Because it occupies an overpowering space in one's identity, the passionate activity can lead the person to experience conflicts with other aspects of his or her life (Vallerand et al., 2003, Study 1). For instance, an undergraduate student with an obsessive passion for video gaming might not be able to resist an invitation to play *World of Warcraft* with his/her friends even if he/she should study for the fast approaching exam instead. The student cannot control his or her urge to engage in the video game. Furthermore, in opposition to harmonious passion, obsessive passion is associated with a rigid persistence in the activity. In other words, irrespective of the emotions or outcomes experienced during or after the activity, the individual who experiences obsessive passion will continue to invest time and energy in the activity even at the expense of his or her own emotional or physical well-being.

The dualistic model of passion further proposes that one important determinant of the internalization process is the extent to which the social environment promotes one's autonomy (Deci & Ryan, 1987) toward activity selection and activity valuation. Indeed, autonomy support (or promoting choice and self-initiation of another person's behavior) from a significant other (e.g., parents, teachers) is associated with an autonomous internalization of non-interesting activities such as school (see Grolnick & Ryan, 1989; Vallerand, Fortier, & Guay, 1997). It also facilitates the autonomous internalization of interesting (and valued) activities in one's identity, thereby leading to a harmonious passion. Conversely, a controlling environment facilitates a controlled internalization of the activity in one's identity, thereby leading to an obsessive passion for the activity. Results from Mageau et al. (2009, Study 3) underscored the important role of autonomy support in the internalization process. Indeed, they found that high levels of autonomous support from close adults (parents and music teachers) were conducive to the development of harmonious passion toward music for first-year high school students who had never played a musical instrument before. Results also demonstrated that high levels of parental perceived valuation for music (probably experienced as external pressure) and lack of autonomy support (or controlling behavior from close adults) were found to predict the development of obsessive passion. In sum, it is important to differentiate between the two types of internalization process in order to predict the occurrence of the two types of passion.

Research has provided empirical support for several aspects of the passion conceptualization. For instance, results from exploratory and confirmatory factor analyses with the Passion Scale supported the existence of two constructs corresponding to harmonious and obsessive passion (Rousseau, Vallerand, Ratelle, Mageau, & Provencher, 2002; Vallerand et al., 2003, Study 1; Vallerand et al., 2006, Study 1). The Passion Scale was also shown to have high levels of internal consistency as well as predictive, discriminant, construct, and external validity (see Vallerand, 2010). Furthermore, results from partial correlations (controlling for the correlation between the two types of passion) revealed that both harmonious and obsessive passion were positively associated with measures of activity valuation and loving, time and energy expenditure for the activity, measures of the activity being perceived as a passion, and inclusion of the activity in the person's identity thereby providing support for the definition of passion (Vallerand et al., 2003, Study 1). Finally, several studies conducted in various contexts support the hypotheses from the dualistic model of passion (Vallerand et al., 2003), notably in the realm of gambling (Castelda, Mattson, MacKillop, Anderson, & Donovick, 2007; Mageau, Vallerand, Rousseau, Ratelle, & Provencher, 2005; Ratelle, Vallerand, Mageau, Rousseau, & Provencher, 2004; Rousseau et al., 2002), dance (Rip, Fortin, & Vallerand, 2006), work (Carbonneau, Vallerand, Fernet, & Guay, 2008; Vallerand & Houlfort, 2003), sport (Amiot et al., 2006; Vallerand et al., 2006, Study 1), Internet use (Séguin-Lévesque, Laliberté, Pelletier, Blanchard, & Vallerand, 2003), as well as with recreational

activities such as reading or music (Stenseng, 2008; Vallerand et al., 2003, Study 1).

It should be noted that beyond the differences regarding the internalization process in identity, the two types of passion can also be distinguished by the affective consequences they engender. Thus, harmonious passion generally leads to positive affect, both during and after activity engagement (Mageau et al., 2005; Philippe, Vallerand, Houlfort, Lavigne, & Donahue, 2010; Vallerand et al., 2003, Study 1) whereas obsessive passion is strongly associated with negative emotions and sometimes related to specific positive emotions. For instance, when prevented from engaging in their passionate activity, people with an obsessive passion tend to experience negative affect such as guilt and frustration (Mageau et al., 2009; Ratelle et al., 2004; Vallerand et al., 2003, Study 1) whereas people with an harmonious passion do not experience these kinds of affect. However, individuals with an obsessive passion can experience specific positive affects such as happiness, pride and excitement during the activity (e.g., Lafrenière, Vallerand, Donahue, & Lavigne, 2009; Vallerand et al., 2008, Study 2).

Finally, the two types of passion can be distinguished by their behavioral consequences. Indeed, harmonious passion is expected to lead to more adaptive behaviors than obsessive passion. For instance, past research has shown that obsessive passion is positively associated with extreme behaviors whereas harmonious passion is typically not significantly related to such behaviors. A study conducted by Philippe, Vallerand, Richer, Vallières, and Bergeron (2009, Study 3) has demonstrated that an obsessive passion for driving is significantly and positively related to aggressive driving behaviors such as road rage while harmonious passion is unrelated to such behaviors. Similar results have also been found in the realm of sports where athletes with an obsessive passion reported higher levels of aggression than athletes with a harmonious passion (Donahue, Rip, & Vallerand, 2009). Finally, the only research on the relation between passion for a cause and radical behaviors (Rip, Vallerand, & Lafrenière, 2012) has obtained similar results as well.

3. The present research

As can be seen from the above, several studies have provided support for the dualistic model of passion. However, very little research has investigated the role of passion in the promotion of a cause. The main purpose of the present research was to look at the concept of passion toward the environmental cause in order to determine its relevance in predicting mainstream and radical activist behaviors. Because passion is internalized in one's identity, it is postulated that passion would be a good predictor of environmental activism. Indeed, past research has shown that self-identity is a significant predictor of behavior, even above attitudes, subjective norms and perceived behavioral control (see Whitmarsh & O'Neill, 2010).

The concept of radicalism can be looked at in many ways. It can be described in moral terms. A radical behavior thus becomes a behavior judged as immoral or unacceptable. Some researchers use a more cognitive definition of radicalism. For example, Kruglanski and colleagues (e.g., Klein, 2011; Kruglanski & Klein, 2009) define a radical behavior as an instrumental means to achieve one goal that is detrimental to another valued goal. For instance, if an undergraduate student neglects to sleep because he studies all night for an important exam, studying all night can be perceived as radical because it serves one goal (succeed in the exam) at the expense of another important goal (one's health). In the present research, the definition of radicalism is normative in nature. This means that it relates to the perception of radicalism. A radical behavior is thus a behavior perceived or judged as radical by the population in general. In other words, a behavior is radical because it is non-normative, and not because it is "bad" or unacceptable per se. Conversely, a behavior characterized as mainstream would be a behavior that is perceived as "normal" by the population, a behavior that respects social norms.

In line with past findings (Donahue et al., 2009; Philippe et al., 2010; Rip et al., 2012), it was first posited that harmonious passion would lead individuals to want to help the environmental cause (e.g., by educating close relatives or the population in general), but not at any cost. Consequently, harmonious passion should be associated with mainstream or moderate activist behaviors, but not radical ones. Conversely, it was posited that obsessive passion would lead individuals to be willing to do whatever it takes to help the environmental cause, including mainstream and more extreme or radical behaviors. Based on the dualistic model of passion, three studies were conducted. Study 1 investigated the differential role of the two types of passion toward the environmental cause in the endorsement of mainstream and radical behaviors. Study 2 went further by moving from a judgment of acceptability of behaviors to behavioral intentions. Finally, Study 3 aimed at uncovering the nature of the psychological processes that mediate the passion-activist behavior relationship. In line with the work of Fredrickson (2001) that demonstrates that positive emotions are conducive to the use of more adaptive behaviors through the broadening of thought-action repertoires and self, the mediating role of positive and negative emotions was ascertained. A last and exploratory purpose of the present research was to assess the actual prevalence of passion among environmental activists across all studies.

4. Study 1

The purpose of Study 1 was to investigate the role of passion toward the environmental cause in the endorsement of mainstream and radical behaviors. In line with the dualistic model of passion and past research, it was hypothesized that harmonious passion would be related to mainstream behaviors but would be unrelated to radical behaviors. Conversely, obsessive passion was expected to be associated with both mainstream and radical behaviors.

4.1. Method

4.1.1. Participants

Participants (n = 110; 67 women, 43 men) were workers, members or volunteers actively engaged in the environmental cause through their involvement in environmental organizations in the Province of Québec. The average age of the participants was 32.26 years (SD = 8.63 years). Most of the participants (90.9%) were French Canadians. Moreover, participants had been committed to the environmental cause for an average of 7.68 years (SD = 7.1).

4.1.2. Procedure

Emails were sent to several environmental organizations to recruit participants. Each invitation included the purpose of the study, the website address of the online questionnaire and the name and address of our research lab. The participants were also asked to share the invitation Email with their colleagues and other members, volunteers, and employees of the organization. Participation was voluntary. Participants were told that the study was about people's attitudes toward the environmental cause. They had to complete a French-Canadian version of an online questionnaire. Besides the demographic variables, the questionnaire contained scales assessing passion toward the environmental cause and the extent to which the participants judged as acceptable behaviors that can be employed to achieve the environmental cause.

4.1.3. Measures

4.1.3.1. Demographic variables. Participants completed a demographic information section that included questions on gender, age, mother tongue, and the number of years they had been actively engaged in the environmental cause.

4.1.3.2. Passion toward the environmental cause. The Passion Scale (Vallerand et al., 2003) was used to assess passion toward the environmental cause. This scale is composed of two six-item subscales assessing harmonious and obsessive passion toward an activity (here the involvement in the environmental cause), as well as a third subscale composed of 5 passion criterion items (i.e., love for the activity, time spent on the activity, activity valuation, the activity perceived as a passion, the activity perceived as a part of one's identity) measuring whether the participants' involvement in the environmental cause can be considered a passion. The participants rated the items on a seven-point Likert-type scale ranging from 1 (*Do not agree at all*) to 7 (*Very strongly agree*). The harmonious passion subscale used in the present study included items such as "My involvement in the environmental cause is in harmony with the other activities in my life." while the obsessive passion subscale included items such as "I have difficulties controlling my urge to engage in the environmental cause." The criterion subscale included items such as "Being involved in the environmental cause represents a passion for me." In the present study, internal consistency indices of .81 and .85 were obtained for the harmonious and obsessive passion subscales, respectively. As for the criterion subscale, it yielded a Cronbach's alpha of .74. The Passion Scale (Vallerand et al., 2003) has been used in several studies and has shown high levels of validity and reliability (Carbonneau et al., 2008; Donahue et al., 2009; Philippe et al., 2009, 2010; Philippe, Vallerand, Andrianarisoa, & Brunel, 2009; Vallerand et al., 2008). However, given that the Passion Scale was used for the first time in the environmental domain, a confirmatory factor analysis (CFA) was conducted in the current study with EQS 6.1 (Bentler, 1993). In light of the relatively low number of participants, parcels were used to create six indicators by combining 2 items from the same subscale (see Kline, 2005). Results confirmed the two-factor structure of the Passion Scale, χ^2 (df = 8, n = 106) = 7.91, p = .44, CFI = .1.00, NFI = .97, NNFI = 1.00, GFI = .98, RMSEA = .00, SRMR = .05. These results are consistent with those of Marsh (Marsh et al., 2012). Indeed, based on an archive (n = 3571) of existing data, their results demonstrated that the two-factor Passion Scale has high levels of internal consistency, and factorial and construct validity.

4.1.3.3. Judgment of behavior acceptability. This scale, in line with a scale used by Rip et al. (2012), was composed of two subscales assessing the participants' judgment of behaviors acceptability. Specifically, participants were asked to indicate to what extent they found each behavior as being acceptable to help the environmental cause. The first subscale (16 items) concerning mainstream behaviors included items such as "Establishing a carpooling system at work." The second subscale (15 items) was related to radical behaviors and included items such as "Physically attack a polluting factory's representative." The alpha values in the present study were .90 and .81 for mainstream and radical behaviors, respectively. Responses were scored on a seven-point Likert scale ranging from 1 (*Do not agree at all*) to 7 (*Very strongly agree*). A pilot study with 53 participants was conducted to validate the different items of this scale. The participants were asked to indicate the extent to which they found different behaviors (the items used in Study 1) as being radical. Responses were scored on a seven-point Likert scale ranging from 1 (*Not at all radical*) to 7 (*Very strongly radical*). Results revealed that the mainstream behavior items were indeed perceived as significantly less radical overall (M = 2.52) than the radical behavior items (M = 5.90), t (52) = −19.33, p < .001.

Table 1
Means, standard deviations, and correlations: Study 1.

	M	SD	1	2	3	4	5	6	7
Harmonious passion (1)	5.70	.80	–						
Obsessive passion (2)	2.73	1.29	.23*	–					
Passion criteria (3)	5.65	.77	.63***	.41***	–				
Mainstream behaviors (4)	5.71	.88	.41***	.31***	.26**	–			
Radical behaviors (5)	2.30	.76	.10	.29**	.09	.29**	–		
Sex (6)	–	–	−.17	.01	.09	−.11	−.06	–	
Age (7)	32.45	8.72	−.07	.13	−.07	−.08	−.22*	.10	–

Note: Means and standard deviations come from Likert type subscales ranging from 1 (Do not agree at all) to 7 (Very strongly agree).
n = 106, *$p \leq .05$, **$p \leq .01$, ***$p \leq .001$.

4.2. Results and discussion

4.2.1. Preliminary analysis

Table 1 presents the means, standard deviations, and correlations of all study variables. Missing values were replaced with the mean of the other scale items for the same individual. Descriptive analyses related to the criterion subscale were performed in order to determine whether the 110 participants had a passion or not toward the environmental cause. In line with past research (e.g., Rip et al., 2006; Vallerand & Houlfort, 2003), participants whose mean score on the sum of the five criterion items was situated at midpoint (4) or above on the seven-point Likert scale were considered to be passionate. Thus, in the present study, 96.4% of participants were found to be at least moderately passionate toward the environmental cause. The four individuals who were "non-passionate" were removed from subsequent analyses.

4.2.2. Path analysis

In order to assess the relationship between passion and the endorsement of activist behaviors, a path analysis was conducted with EQS 6.1 (Bentler, 1993). The two types of passion served as exogenous variables in the model as well as the age and sex of participants that served as control variables. Covariance paths were estimated between each exogenous variable. Mainstream and radical behaviors served as endogenous variables. Paths were specified according to the hypotheses presented above. Concerning age and sex variables, paths were specified if needed as suggested by Lagrange Multiplier tests. Thus, a path was specified between age and radical behaviors only. In addition, an error covariance path was estimated between the two behavioral variables, as they are related constructs. Results of the path analysis revealed a satisfactory fit of the model to the data, χ^2 (df = 4, n = 106) = 1.76, p = .78, CFI = 1.00, NFI = .97, NNFI = 1.00, GFI = .99, RMSEA = .00 [.00; .10], SRMR = .03.[1] Fig. 1 presents the path analysis. As can be seen, all estimated structural paths were significant. The potential path between harmonious passion and radical behaviors was not significant (β = −.03, p = .78), and thus was not added to the model. Moreover, results from Wald and Lagrange Multiplier tests suggested that no addition or deletion of any parameters could significantly improve model fit.

[1] The fitting function estimated by the procedure was assessed through several indices, namely a chi-square statistic, the Comparative Fit Index (CFI), the Bentler-Bonnet Normed (NFI) and NonNormed Fit Index (NNFI) and the Goodness of Fit Index (GFI). These indices vary from 0 to 1 where 1 indicates a perfect fit for the model. Models with indices in the .90 range are considered acceptable (Bentler, 1993). The Root Mean Squared Error of Approximation (RMSEA) and the Standardized Root Mean Square Residual (SRMR) were also used. A value of .10 or less for the upper bound of the RMSEA is considered acceptable (Browne & Cudeck, 1993). Finally, a good model should have an SRMR smaller than .08 (Hu & Bentler, 1999).

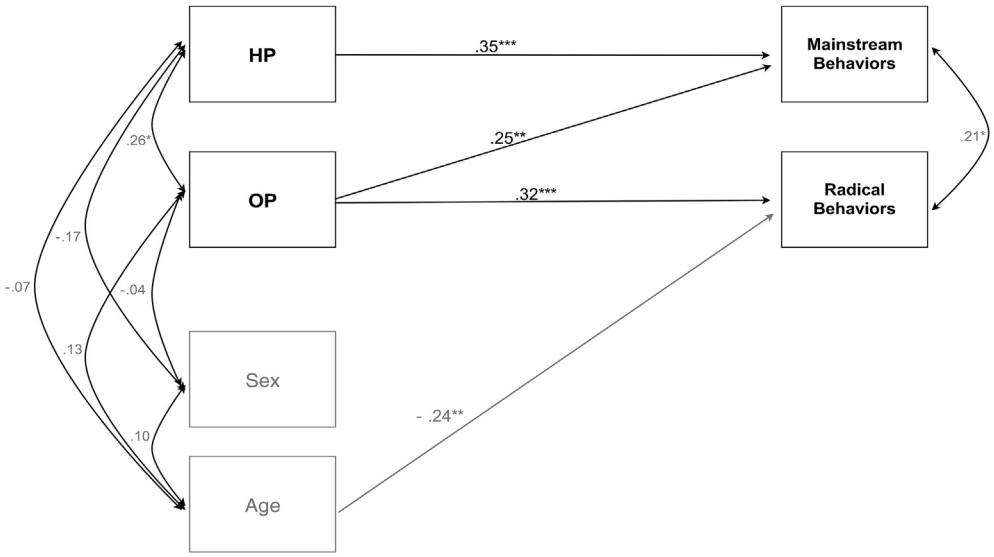

Fig. 1. Path analytic model of Study 1 of the relationship between passion and the endorsement of activist behaviors, controlling for sex and age. Standardized path coefficients are presented. $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

4.2.3. Discussion

The results of Study 1 provided initial support for the hypotheses. Results revealed that harmonious passion was positively associated with the endorsement of mainstream behaviors, but not with radical behaviors. As expected, individuals with a harmonious passion seem to prefer a moderate approach rather than a radical one with respect to their engagement in the environmental cause. Conversely, results demonstrated that obsessive passion was related to the endorsement of both mainstream and radical behaviors. It would then seem that, for individuals with a predominant obsessive passion, all types of behaviors are acceptable to help the environmental cause. Finally, an interesting finding was that the great majority of the participants (96.4%) had at least a moderate level of passion toward the environmental cause. It would then seem that passion is an important factor that can explain a deep engagement toward a cause such as that of the environment.

5. Study 2

Results from Study 1 showed that the two types of passion had a differential role in the endorsement of mainstream and radical behaviors. Indeed, only obsessive passion was positively associated with the endorsement of radical behaviors, while both harmonious and obsessive passions were significantly related to the endorsement of mainstream behaviors. However, Study 1 only assessed the extent to which participants endorsed certain behaviors. As such, we do not know whether the two types of passion lead individuals to engage in mainstream and radical behaviors. Consequently, the purpose of Study 2 was twofold. First, it aimed to test whether the same pattern of results would be obtained by moving from judgments of acceptability to behavioral intentions. Second, it aimed to assess behavioral intentions in a specific context. To do so, participants read a hypothetical scenario depicting a real-life situation dealing with the construction of a polluting factory in the participants' region. Then, they had to indicate the extent to which they would be willing to engage in different behaviors to help the environmental cause in that specific situation. In line with the results of Study 1, it was hypothesized that obsessive passion would be associated with the intention to perform both mainstream and radical behaviors whereas harmonious passion was expected to be associated with the intention to perform mainstream behaviors only.

5.1. Method

5.1.1. Participants

The 131 participants (99 women, 32 men; average age = 32.14 years) were either individuals actively engaged in the environmental cause through their involvement in environmental organizations, or university employees and students in the large field of environmental sciences (e.g., students, professors, teaching assistants, research professionals, etc.). Most of the participants (96.7%) were French Canadians. Moreover, the mean number of years of commitment to the environmental cause was 7.02 years (SD = 5.38 years).

5.1.2. Procedure

Similarly to Study 1, participants were recruited via emails in which the website address of the online questionnaire could be found. The questionnaire contained demographic questions, the Passion Scale, as well as questions dealing with the extent to which participants would be willing to adopt different behaviors to help the environmental cause in a specific situation. All scales except the demographic variables were scored on a seven-point Likert scale, ranging from 1 (*Do not agree at all*) to 7 (*Very strongly agree*).

5.1.3. Measures

5.1.3.1. Demographic section. In addition to the demographic questions of Study 1, participants who were in the academic field had to indicate the nature of their program and their function (student, professor, etc.).

5.1.3.2. Passion toward the environmental cause. The Passion Scale used in Study 1 was administered. In the present study, internal consistency indices of .78 and .83 were obtained for the harmonious and obsessive passion subscales, respectively. Moreover, the alpha value for the passion criterion subscale was .82.

5.1.3.3. Behavioral intentions. This scale was composed of two subscales assessing the extent to which participants were willing to engage in mainstream and radical behaviors in a specific real-life situation. The situation pertained to the construction of a new polluting factory in the participants' region.

> *Situation*. A new factory-building project has been set up in your region. The managers have decided to ignore the possible

Table 2
Means, standard deviations, and correlations: Study 2.

	M	SD	1	2	3	4	5	6	7
Harmonious passion (1)	5.86	.68	–						
Obsessive passion (2)	2.98	1.21	.31***	–					
Passion criteria (3)	5.61	.88	.70***	.49***	–				
Mainstream behaviors (4)	5.47	.85	.35***	.26**	.32***	–			
Radical behaviors (5)	2.18	.95	.01	.34***	.17	.38***	–		
Sex (6)	–	–	−.17	.05	−.18*	−.07	.27**	–	
Age (7)	32.14	9.89	.08	.09	−.003	.03	−.11	−.08	–

Note: Means and standard deviations come from Likert type subscales ranging from 1 (Do not agree at all) to 7 (Very strongly agree).
$n = 123$, $^{*}p \leq .05$, $^{**}p \leq .01$, $^{***}p \leq .001$.

repercussions of the factory on the local environment. Consequently, no impact study has been conducted. It stands to reason that this factory will use a big quantity of drinking water and energy, and has no waste management plan. To what extent would you be willing to engage in the following behaviors to help the environmental cause in this situation?

The items of the two subscales were a subset of those used in Study 1. They were slightly adapted to fit the scenario of the real-life situation. The first subscale (7 items) assessed mainstream behaviors. It included items such as "Organize socio-cultural activities in my region to increase the population's awareness of the issues related to the construction of the polluting factory." The second subscale (7 items) assessed radical behaviors and included items such as "Appeal to acts of sabotage against the polluting factory while in construction." The alpha values were .73 and .82 for mainstream and radical behaviors, respectively. Scales were scored on a seven-point Likert scale, ranging from 1 (*Do not agree at all*) to 7 (*Very strongly agree*).

5.2. Results and discussion

5.2.1. Preliminary analysis

Means, standard deviations and correlations of all study variables are reported in Table 2. Missing values were replaced with the mean of the other scale items for the same individual. The same procedures mentioned in Study 1 were used to determine whether the 131 participants had a passion or not toward the environmental cause. Once more, the majority (93.9%) of the participants were found to be passionate toward the environmental cause, thus underlying the key role of passion in a deep engagement in a cause such as that of the environment. Eight participants who didn't reach a score of 4 out of 7 on the criterion subscale were excluded from further analyses.

5.2.2. Path analysis

In order to assess the relationship between passion and the intention to adopt activist behaviors, a path analysis was conducted with EQS 6.1 (Bentler, 1993). The two types of passion served as exogenous variables in the model. Moreover, the age and sex variables were also added as exogenous variables to serve as control variables in the model. Covariance paths were estimated between each exogenous variable. As in Study 1, mainstream and radical behaviors served as endogenous variables and an error covariance path was estimated between these two, as they were related constructs. Paths were specified according to the hypotheses presented above. Concerning age and sex variables, paths were specified if needed as suggested by Lagrange Multiplier tests. Accordingly, a path was specified between sex and radical behaviors only. Results of the path analysis revealed a satisfactory fit of the model to the data, χ^2 (df = 4, $n = 123$) = 2.54, $p = .64$, CFI = 1.00, NFI = .97, NNFI = 1.08, GFI = .99, RMSEA = .00 [.00; .11], SRMR = .03. The final path analysis is illustrated in Fig. 2. As can be seen, all estimated structural paths were significant. The potential path between harmonious passion and radical behaviors was not significant ($\beta = -.06$, $p = .52$), and thus was not added to the model. Moreover, results from Wald and Lagrange Multiplier tests suggested that no addition or deletion of any parameters could significantly improve model fit.

5.2.3. Discussion

As predicted, the pattern of results of Study 1 was replicated in Study 2 this time while using behavioral intentions rather than behavior acceptability. Specifically, results demonstrated that harmonious passion was related to the intention to perform mainstream behaviors but not radical behaviors. Conversely, obsessive passion was associated with the intention to perform both mainstream and radical behaviors. It would appear that individuals with an obsessive passion are willing to do whatever it

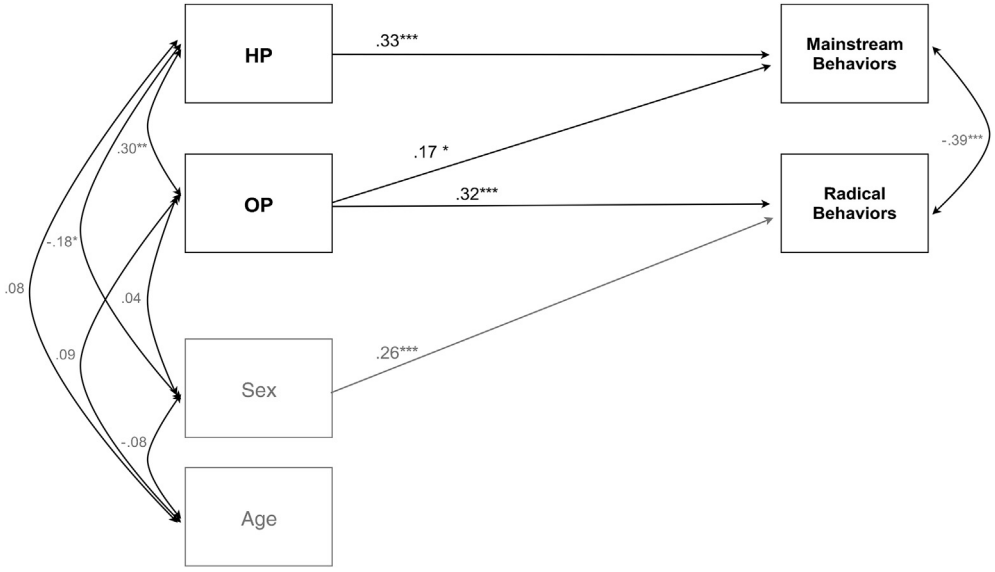

Fig. 2. Path analytic model of Study 2 of the relationship between passion and the intention to perform activist behaviors, controlling for sex and age. Standardized path coefficients are presented. $^{*}p < .06$, $^{**}p < .01$, $^{***}p < .001$.

takes to help the environmental cause, even if it means engaging in radical behaviors. Such is not the case with harmonious passion that only leads to the intention to perform mainstream behaviors. Of additional interest is that the great majority of the participants (93.9%) were found to be passionate toward the environmental cause. It thus appears that passion is relevant to one's commitment toward an important cause such as the environment.

6. Study 3

Results from Studies 1 and 2 demonstrated that the two types of passion were differently associated with the endorsement and the intention to perform mainstream and radical behaviors. Indeed, harmonious passion was found to be associated with the endorsement and the intention to perform mainstream behaviors only. Conversely, obsessive passion was positively associated with the endorsement and the intention to perform both mainstream and radical behaviors. Whereas these results underline the differential role of passion in activist behaviors regarding the environmental domain, one question still remains unanswered: what are the psychological processes that mediate the relationship between passion and the two types of activist behaviors? The purpose of Study 3 was to answer this important question. It was hypothesized that emotions would mediate the relationship between the types of passion and the types of behavior.

As mentioned previously, harmonious passion derives from an autonomous internalization of the activity in the self. People with this type of passion volitionally engage in the passionate activity with an openness and a mindfulness that allow them to fully partake in the activity and thus to experience positive emotions during task engagement (Hodgins & Knee, 2002). Results from past research have indeed demonstrated that harmonious passion was positively related to positive emotions and unrelated or negatively related to negative emotions during task engagement (Mageau et al., 2005; Philippe et al., 2010; Vallerand et al., 2003, Study 1). Obsessive passion has been generally found to be negatively related or unrelated to positive affect. However some research has shown that obsessive passion can be related to specific positive emotions such as happiness, pride, and positive excitement (e.g., Lafrenière et al., 2009; Vallerand et al., 2008, Study 2). Indeed, because individuals with an obsessive passion love their activity, it makes sense that they derive some pleasure during the activity. Performing the activity can also be seen as a release from the internal pressure caused by particular contingencies attached to the activity (Lafrenière et al., 2009). Thus, they can experience joy, happiness and positive excitement. Also, because pride is closely linked to one's identity, a person with a passion, obsessive or harmonious, should feel proud (Vallerand et al., 2008, Study 2). In parallel to this, the broaden-and-build theory proposed by Fredrickson (2001) stipulates that positive emotions experienced in a given context facilitate the broadening of thought-action repertoires and self (Fredrickson & Branigan, 2005; Waugh & Fredrickson, 2006) that in turn may lead to the use of more adaptive behaviors (see Cohn & Fredrickson, 2006). In other words, experiencing positive emotions encourage novel, open-minded, curious and exploratory thoughts and actions. It also facilitates openness to new relationships with others by broadening the self. Past research has indeed shown that positive emotions generate greater feelings of self-other overlap or social closeness, which is conducive to a better understanding of others (Waugh & Fredrickson, 2006). Other results have demonstrated that when experiencing positive emotions, one tends to think in terms of "we" instead of "me" vs "you" (Dovidio, Gaertner, Isen, & Lowrance, 1995). Finally, a research has shown that positive emotions positively mediate the relationship between passion and the quality of interpersonal relationship (Philippe et al., 2010). Given that positive emotions seem to be conductive to a social broadening, it was posited in the present research that the experience of positive emotions triggered by harmonious and obsessive passion should promote adaptive behaviors like mainstream activist behaviors.

Conversely, obsessive passion originates from a controlled internalization of the activity in one's identity and thus, is generally associated with a rigid and conflicted form of activity engagement. Past research has shown that obsessive passion is strongly associated with negative emotions during task engagement (Mageau et al., 2005; Vallerand et al., 2003, Study 1; Vallerand et al., 2006, Studies 2 and 3), although a positive association with specific positive emotions is possible as indicated above. Conversely, results from past research demonstrated that harmonious passion is either negatively associated with negative emotions or unrelated to such emotions. Fredrickson's broaden-and-build theory (2001) stipulates that negative emotions lead to a narrowing of the thought-action repertoires and self (e.g., Fredrickson & Branigan, 2005) by calling to mind an urge to act in a particular way, which may lead to less adaptive behaviors. In other words, experiencing negative affect narrows the range of possible responses to a given situation. The individual becomes close-minded and is prompt to perform self-oriented behaviors that threaten interpersonal relationships. Indeed, past research has shown that negative emotions are related to a closing off from others and poor social interaction (Waugh & Fredrickson, 2006). Other research has shown that obsessive passion, through negative emotions it engenders, is associated with negative interpersonal relationships (Philippe et al., 2010). It was thus posited in the present research that the experience of negative emotions triggered by obsessive passion should promote less adaptive behaviors such as radical activist behaviors.

6.1. Method

6.1.1. Participants

Participants were 190 (128 women, 62 men; average age = 38.26 years) employees, volunteers or member in Canadian environmental organizations. 62.5% were French Canadians whereas 32.1% had English as first language. On average, they considered themselves as being highly involved in the environmental cause ($M = 5.80$, SD = .95). Moreover, participants had been committed to the environmental cause for an average of 11.06 years (SD = 9.69 years).

6.1.2. Procedure

Similarly to previous studies, participants were recruited via emails. The questionnaire contained the same scales as in Studies 1 and 2 as well as a scale assessing emotions. All scales except the demographic variables were scored on a seven-point Likert scale, ranging from 1 (*Do not agree at all*) to 7 (*Very strongly agree*).

6.1.3. Measures

6.1.3.1. Demographic section. In addition to the demographic questions of Studies 1 and 2, participants had to indicate the extent to which they considered themselves as being actively involved in the environmental cause. This scale was scored on a seven-point Likert scale ranging from 1 (*Not at all involved*) to 7 (*Very strongly involved*).

6.1.3.2. Passion toward the environmental cause. The Passion Scale was used. In the present study, internal consistency indices of .81 and .87 were obtained for the harmonious and obsessive passion subscales, respectively. Moreover, the alpha value for the passion criterion subscale was .78.

Table 3
Means, standard deviations, and correlations: Study 3.

	M	SD	1	2	3	4	5	6	7	8	9
Harmonious passion (1)	5.67	.80	–								
Obsessive passion (2)	2.84	1.34	.10	–							
Passion criteria (3)	5.69	.87	.45***	.49***	–						
Positive emotions (4)	4.34	1.27	.41***	.35***	.53***	–					
Negative emotions (5)	1.81	.80	−.17*	.35**	.11	−.10	–				
Mainstream behaviors (6)	4.72	1.28	.30***	.23**	.38***	.39***	.02	–			
Radical behaviors (7)	2.00	1.00	.05	.31***	.28***	.08	.37**	.19*	–		
Sex (8)	–	–	−.21**	−.03	−.02*	−.08	−.01	−.10	.07	–	
Age (9)	38.26	14.07	−.21**	−.01	−.13	−.16*	−.04	.02	−.14	.28***	–

Note: Means and standard deviations come from Likert type subscales ranging from 1 (Do not agree at all) to 7 (Very strongly agree) except for the sex and age variables. $n = 169$, $^{*}p \leq .05$, $^{**}p \leq .01$, $^{***}p \leq .001$.

6.1.3.3. Emotions. This short scale was composed of two four-item subscales measuring respectively positive and negative emotions experienced when participants were actively involved in the environmental cause. More precisely, participants were asked to indicate the extent to which the items corresponded to their emotions experienced when they are sensitizing/educating people about environmental issues. The emotions listed in the positive emotions scale were *proud*, *happy*, *very excited (positively)* and *I'm having a blast*, and those listed in the negative emotions scale were *nervous, hostile, irritable* and *hateful*. These emotions were selected because of their likelihood to be experienced by someone who is trying to sensitize and persuade people about a cause. A factor analysis yielded two factors accounting for 58.25% of the variance that correspond to the positive and negative emotions subscales. The alpha values were .78 and .69 for positive and negative emotions, respectively.

6.1.3.4. Behavioral intentions. This scale was composed of two subscales that assessed the extent to which participants intended to perform mainstream and radical behaviors. Both subscales were composed of 5 items each that were a subset of those used in Study 1. The mainstream behaviors subscale included items such as "Organizing educational activities in my region on the theme of the environment and sustainable development." The radical behaviors subscale included items such as "Climbing up a bridge/building to bring the media to talk about the environmental cause." Alphas for the mainstream and radical behaviors subscales were .81 and .71, respectively.

6.2. Results and discussion

6.2.1. Preliminary analysis

Table 3 reports the means, standard deviations, and correlations of all study variables. Missing values were replaced with the mean of the other scale items for the same individual. The same procedure mentioned in the first two studies was used to determine whether the 190 participants had a passion or not toward the environmental cause. The majority (88.9%) of the participants were found to be passionate toward the environmental cause. Twenty-one participants who did not reach a score of 4 out of 7 on the criterion subscale were excluded from further analyses.

In addition, a first path analysis aimed to assess the relationship between passion and the types of behavior, and to test whether results from Studies 1 and 2 would be replicated. Harmonious passion was expected to be associated with mainstream behaviors only whereas obsessive passion was expected to be associated with both mainstream and radical behaviors. In order to test the proposed model, a path analysis was performed with EQS 6.1 (Bentler, 1993). The two types of passion served as exogenous variables in the model as well as age and sex variables that served as control variables. Mainstream and radical behaviors served as endogenous variables. Paths were specified according to the hypotheses presented above. Furthermore, two paths were specified from age and sex to radical behaviors. Covariance paths were estimated between each exogenous variable. Finally, an error covariance path was estimated between the two behavioral variables, as they were related constructs.

Results of the path analysis showed a satisfactory fit of the model to the data, χ^2 (df = 3, $n = 169$) = 1.68, $p = .64$, CFI = 1.00, NFI = .98, NNFI = 1.00, GFI = 1.00, RMSEA = .00 [.00; .10], SRMR = .02. Results revealed that both harmonious ($\beta = .26$, $p < .001$) and obsessive passion ($\beta = .21$, $p < .01$) were significant predictors of mainstream behaviors. Moreover, the age of the participants was negatively associated with radical behaviors ($\beta = -.18$, $p < .05$), the older the participants, the less they intended to engage in radical behaviors. Sex was marginally related to those behaviors ($\beta = .14$, $p < .06$). Furthermore, results also revealed that obsessive passion was a significant predictor of radical behaviors ($\beta = .21$, $p < .001$). The potential path between harmonious passion and radical behaviors was not significant ($\beta = -.004$, $p = .95$), and thus was not added to the model. Moreover, results from Wald and Lagrange Multiplier tests suggested that no addition or deletion of any parameters could significantly improve model fit. Overall, the results from the present path analysis replicate the findings of the first two studies.

6.2.2. Path analysis

In Study 3, our main hypothesis was that emotions experienced when actively engaged by sensitizing people about environmental issues mediate the relationship between the type of passions and the type of behaviors. Based on past research (Lafrenière et al., 2009; Vallerand et al., 2008, Study 2), harmonious passion was expected to be positively associated with positive emotions and negatively associated with negative emotions, whereas obsession passion was expected to be positively related to both types of emotions. Positive emotions were then expected to be related to mainstream behaviors, whereas negative emotions would be related to radical behaviors. In order to test the proposed model, a second path analysis was performed with EQS 6.1 (Bentler, 1993). The two types of passion served as exogenous variables in the model. Age and sex variables were also added to the model as exogenous variables to serve as control variables. Covariance paths were estimated between each exogenous variable. Positive and negative emotions served as endogenous variables, as well as mainstream and radical behaviors. Paths were specified according to the hypotheses presented above. Concerning age and sex variables, paths were specified if needed as suggested by Lagrange Multiplier tests. Thus, a path was specified from age to radical behaviors and from sex to radical behaviors. An error covariance path

was estimated between positive and negative emotions, and between mainstream and radical behaviors.

Results of the path analysis showed a satisfactory fit of the model to the data, χ^2 (df = 11, n = 169) = 11.99, p = .36, CFI = .99, NFI = .94, NNFI = .99, GFI = .98, RMSEA = .02 [.00; .09], SRMR = .38. As shown in Fig. 3, all estimated structural paths were significant. In addition, results from Wald and Lagrange Multiplier tests suggested that no addition or deletion of any parameters could significantly improve model fit. The potential direct paths between harmonious passion and mainstream behaviors (β = .13, p = .11), and between obsessive passion and mainstream behaviors (β = .12, p = .13) were not significant, thus suggesting mediation. However, as can be seen in Fig. 3, the direct path between obsessive passion and radical behaviors was significant (β = .19, p = .01), thus suggesting partial mediation. Consequently, indirect effects were investigated to further test the mediating role of (1) positive emotions between the two types of passion and moderate behaviors, and (2) negative emotions between obsessive passion and radical behaviors. To do so, bootstrapped confidence interval estimates of the indirect effects (see Preacher & Hayes, 2008) were calculated to confirm the significance of mediations. In the present study, the 95% bias corrected confidence interval of the indirect effects was obtained with 5000 bootstrap resamples (see Mackinnon, Lockwood, & Williams, 2004). Results confirmed the mediating role of positive emotions between harmonious passion and mainstream behaviors (β = .15, CI = .09–.23), and between obsessive passion and mainstream behaviors (β = .11, CI = .05–.19). Results also confirmed the partial mediating role of negative emotions between obsessive passion and radical behaviors (β = .12, CI = .05–.21). Finally, it should be noted that although both types of passion were positively associated with positive emotions, results showed that harmonious passion was significantly more strongly associated with positive emotions than obsessive passion, χ^2 (1) = 7.349, p = .007. Harmonious passion thus seems to be a better predictor of positive emotions than obsessive passion.

Alternative models were also tested. The first model posited that the types of behaviors mediated the relationship between passion and emotions (passion → behaviors → emotions), controlling for age and sex variables. Results revealed that the fit indices of this alternative model were very poor compared to those of the hypothesized model: χ^2 (df = 12, n = 169) = 60.73, p < .000, CFI = .71, NFI = .69, NNFI = .33, GFI = .92, RMSEA = .16 [.12; .21] SRMR = .08. A second alternative model with the type of emotions predicting the passion, which, in turn, predicted the behaviors, was also tested (emotions → passion → behaviors), again controlling for age and sex variables. Results revealed that the fit indices of this alternative model were very poor compared to those of the hypothesized model: χ^2 (df = 11, n = 169) = 45.18, p < .000, CFI = .80, NFI = .77, NNFI = .49, GFI = .94, RMSEA = .14 [.10; .18], SRMR = .08. These results are in line with past research that has consistently shown that passion is a predictor of the consequences of passionate activity engagement and not an outcome per se (Carbonneau et al., 2008; see also Vallerand, 2010) thus suggesting that the "passion → outcomes" sequence postulated in the present research is appropriate. These findings with the alternative models yielded clear evidence that the hypothesized model should be preferred.

6.2.3. Discussion

Overall, results of Study 3 supported the hypotheses. First, they showed that harmonious passion was again positively associated with mainstream behaviors only, whereas obsessive passion was again associated with both mainstream and radical behaviors, even when controlling for the sex and age of the participants. Second, results supported the mediation hypothesis with respect to mainstream behaviors, as they revealed that the association between the two types of passion and such behaviors was totally mediated by the experience of positive emotions experienced when engaged in activist behaviors. Results with radical behaviors revealed that the association between obsessive passion and radical behaviors was only partially mediated by the experience of negative emotions during their active engagement in the environmental cause.

7. General discussion

The present research sought to shed light on the phenomenon of environmental activism with regards to the concept of passion. The main objective was to ascertain the differential role of passion toward the environmental cause in mainstream and radical activist behaviors. Another purpose of the research was to examine the psychological processes involved in the relationship between

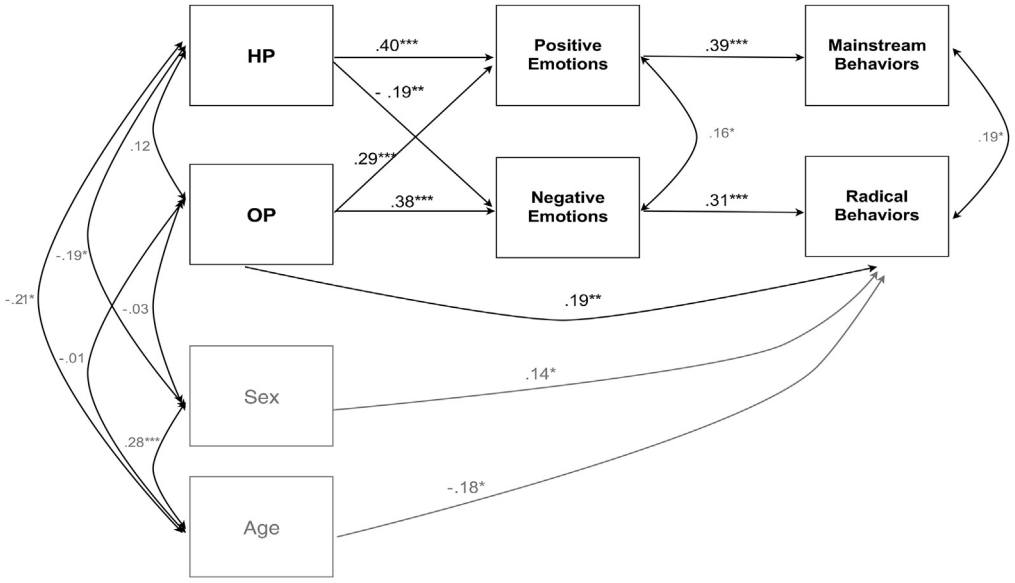

Fig. 3. Path analytic model of Study 3 of the relationship among passion, emotions and the intention to perform activist behaviors, controlling for sex and age. Standardized path coefficients are presented. $^*p < .05$, $^{**}p < .01$, $^{***}p < .001$.

passion and activist behaviors. Finally, a side purpose was to ascertain the prevalence of passion among the environmental activists. In line with past research on passion and extreme behaviors (Donahue et al., 2009; Philippe et al., 2010; Rip et al., 2012), it was first hypothesized that obsessive passion would be associated with the endorsement of and the intention to perform both mainstream and radical behaviors, whereas harmonious passion was expected to be related to the endorsement of and the intention to perform mainstream behaviors only. Based on both the dualistic model of passion (Vallerand et al., 2003) and Fredrickson's broaden-and-build theory (2001), it was also postulated that emotions would mediate the relationship between passion and behaviors. More specifically, it was hypothesized that both harmonious and obsessive passion for the environmental cause would lead to the experience of positive emotions that, in turn, would be conducive to the intention to perform mainstream behaviors. Moreover, it was postulated that obsessive passion would also positively be associated with negative emotions that, in turn, would be conducive to radical behaviors. Finally, in line with past research (e.g., Carbonneau et al., 2008), it was postulated that individuals highly involved in the environmental cause would be passionate. The present findings provide support for all of these hypotheses and lead to a number of implications.

7.1. Passion and activist behaviors

A first implication of the present findings is that, overall, individuals with an obsessive passion are more inclined to engage in radical behaviors. The same pattern of results was found in the three studies thereby providing empirical evidence that obsessive passion is more likely to be conducive to extreme or radical behaviors than harmonious passion. Presumably, when obsessive passion is operative, failure to reach the goal is not an option. The end justifies the means, and engaging in all kinds of behaviors, including extreme ones, becomes acceptable. As expected, harmonious passion was unrelated to radical behaviors. It thus seems that individuals with a harmonious passion want to help the cause but not at any cost. Because harmonious passion is in harmony with other aspects of the self, activist behaviors are coherent with one's values and mainstream behaviors are preferred. These results are congruent with those from previous studies that showed that obsessive passion is associated with more extreme behaviors than harmonious passion (Donahue et al., 2009; Philippe et al., 2010; Rip et al., 2012). Interestingly, even though obsessive passion was also related to mainstream behaviors, results from an additional analysis combining samples from the three studies showed that harmonious passion was significantly and systematically more strongly associated with mainstream activist behaviors than obsessive passion, $\chi^2\ (1) = 10.408$, $p = .001$. It thus appears that harmonious passion is a better predictor of mainstream behaviors than obsessive passion. The present findings are robust as they have been obtained with different populations in Canada (e.g., university students, university employees, members in environmental organizations) and while controlling for the age and sex of the participants, thus providing strong support for the dualistic model of passion.

7.2. The mediating role of emotions

A second implication of the present findings is that they highlight the importance of emotions as a psychological process that mediates the relationship between passion and activist behaviors. More specifically, it seems that both harmonious and obsessive passion lead to the experience of positive emotions such as happiness and pride that, in turn, lead people to engage in mainstream behaviors. On the one hand, these results replicate those of other studies that demonstrated that obsessive passion can be related to specific positive emotions (e.g., Lafrenière et al., 2009; Vallerand et al., 2008, Study 2; see Vallerand, 2010). However, results also showed that harmonious passion was a better predictor of positive emotions than obsessive passion as it was more strongly associated with that kind of emotions. On the other hand, results of Study 3 also contributed to the work of Fredrickson as positive emotions triggered by harmonious and obsessive passion seem to sustain the broadening of thought-action repertoires and self (Fredrickson, 2001). Indeed, as demonstrated in past research (e.g., Waugh & Fredrickson, 2006), positive emotions are related to greater feelings of self-other overlap, a better understanding of others, and a change in perceptions of the others from "them" to a more inclusive "we" (Dovidio et al., 1995). It may be, then, that this very feeling of social closeness triggered by positive emotions facilitates the use of more adaptive behaviors toward others, like mainstream activist behaviors when educating people about the environmental issues.

Conversely, obsessive passion seems to also lead people to experience negative emotions while working for the environmental cause that, in turn, lead them to engage in more radical behaviors. Indeed, results of the present research also demonstrated the significant partial mediation effect of negative emotions between obsessive passion and radical behaviors. On the one hand, these results replicate those of past research that demonstrated that obsessive passion is strongly related to negative emotions (Vallerand et al., 2003, Study 2; Vallerand et al., 2008), thus supporting the dualistic model of passion. On the other hand, results contribute to the work of Fredrickson as negative emotions triggered by obsessive passion seem to lead to the narrowing of the thought-action repertoires and self (Fredrickson, 2001; Waugh & Fredrickson, 2006). Indeed, as demonstrated in past research (e.g., Waugh & Fredrickson, 2006), negative emotions are related to a closing off from others and poor social interaction, and promote the use of less adaptive behaviors, such as radical activist behaviors. That the mediation was a partial one shows that something else might also be at play, aside from emotions. Clearly, more research is needed to fully understand the psychological processes that take place between passion and activist behaviors.

7.3. On the prevalence of passion in the realm of the environmental cause

A third implication of the present research is that it empirically showed that passion for the environmental cause appears to be highly prevalent among environmental activists (i.e., in environmental organizations and in the realm of environmental sciences). The hypothesis that the majority of the participants would be passionate was confirmed. Indeed, in average, 93% of participants displayed at least a moderate level of passion toward the environmental cause. David Suzuki's statement that "Without passion, change is not possible." (2002, p. 3) echoes a widely accepted claim that passion is the fuel underlying commitment and change. The present findings thus fill an empirical gap by supporting this common thought about the importance of passion when it comes to a profound and active engagement in causes such as that of the environment.

7.4. Passion and the environmental cause

A last and more practical implication is that the present results help us understand the importance of distinguishing between the two types of passion in the realm of the environmental cause. Indeed, it would appear that being passionate may not be enough

to contribute to the environmental cause. What seems important is to experience a harmonious passion, as it seems to lead to the most desirable forms of behavior in helping the cause. Indeed, harmonious passion was found to be more strongly associated with mainstream activist behaviors than obsessive passion, and was unrelated to radical activist behaviors. Obsessive passion may help the cause to some extent by leading to the adoption of moderate behaviors, but at the same time it may also harm the very cause people fight for by promoting the use of extreme behaviors. Indeed, we think that some extreme behaviors may, at times, have negative consequences. For instance, triggered by obsessive passion, radical behaviors performed by a group may lead other citizens to dissociate themselves from the group and even from the cause, while the very objective of such behaviors is often to convince the population to join the cause. This could take place especially when the radical group takes violent or illegal actions or when their actions conflict with the population's everyday life (e.g., if a group of radical activists blocks the traffic on a bridge to talk about the environmental cause in the media). Clearly, more research on individuals' reactions to radical behaviors is needed to better understand how obsessive passion could possibly affect the environmental cause.

7.5. Limitations

Some limitations should be mentioned. First, no causal inferences can be drawn from the present research due to the correlational nature of the data. Although results of the various alternative models in Study 3 provide additional support for the adequacy of the direction of the "Passion → Emotions → Activist behaviors" model, future research using experimental designs is needed to replicate and confirm the present results. Second, although the results showed that the two types of passion are differently associated with mainstream and radical forms of activist behaviors, it should be underscored that the three studies relied exclusively on self-report data and did not go beyond behavioral intentions. Given that some items related to illegal or violent behaviors, directly observing those behaviors could have been a problem. Moreover, participants' behavioral intentions permit to ensure high levels of validity because participants don't have to lie or hide what they do in reality. In addition, it should be noted that past research has shown that behavioral intentions are highly correlated with actual behavior (Ajzen, 1991; Ajzen & Fishbein, 2005; Webb & Sheeran, 2006). Therefore, they are good indicators of actual behavior. Nevertheless, future research is needed to replicate the present findings by using observational and objective measures in order to test whether passion would predict the adoption of actual mainstream and radical behaviors. It should also be noted that the results about the prevalence of passion toward the environmental cause are limited to our sample, that is, people in environmental organizations and in the field of environmental sciences. Thus, these results cannot be generalized to the broader population of actively engaged people in the environmental cause. Would these results be replicated with average individuals or with well-known and long-term activists? Cleary, further research is needed on this issue. Finally, future research should investigate the influence of other variables on passion and the adoption of activist behaviors. For instance, personality traits, values or norms could influence the type of passion and its emotional and behavioral outcomes.

8. Conclusion

In sum, the present findings provide important answers to questions related to environmental activism. Indeed, they suggest that passion matters for environmental activists as regards behaviors toward the environmental cause. Whereas some activists prefer a moderate approach to achieve the cause, others use more radical means to reach their goal. The present results suggest that the two types of passion have a differential role in mainstream and radical behaviors toward the environmental cause, with harmonious passion being more strongly associated with moderate, and thus more adaptive behaviors than obsessive passion. Conversely, only obsessive passion was positively related to radical behaviors. Furthermore, this research underlines the important role of emotions as a mediator of the passion-activist behavior relationship. Future research is needed to delineate the nature of other mediators of this differential impact of passion on extreme forms of behavior.

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