Arousal and Satisfaction during Mountain Rambling: Comparing Non-Athletes', Mountain Athletes' and Non-Mountain Athletes' Views*

Eric Fruchart, Patricia Rulence-Pâques

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Fruchart Eric & Rulence-Pâques Patricia

Acknowledgments:

Thanks to Neil Rowlandson for his help in translation.

Abstract

The first aim of the study was to explore the way in which non-athletes, athletes doing mountain sports, and athletes doing sports other than mountain sports used five informational cues (relatedness, autonomy, competence, risk-taking, and weather conditions) for judging the degree of arousal and satisfaction during mountain rambling. The participants indicated their judgment of arousal and satisfaction in 32 scenarios constructed from the combination of these information cues. Three ANOVAs were conducted. All participants' judgments did not differ. The main finding was that the impact of relatedness and risk-taking change according to the judgment condition.

Keywords: arousal; satisfaction; mountain rambling

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Mountain rambling as many sport activities may generate arousal and pleasure (Pomfret, 2012). Arousal is high when people feel 'worked up'. It is low when they feel bored or relaxed (Kerr, 1997). Pleasure and satisfaction can be either a direct or an inverse function of arousal (Apter, 2001).

The present study examined the way in which people with different levels of involvement in mountain sports judge the level of arousal and satisfaction that are associated with diverse circumstances in which a particular session of mountain rambling has taken place. Five types of circumstances have been considered in the present study: autonomy of choice, competence, relatedness (Deci & Ryan, 2002), level of risk (Mackenzie& Kerr, 2012), and weather conditions (Starosta, 2003). Autonomy of choice refers to the extent to which the individual has personally decided to practice mountain rambling or has followed the group's decision without taking part in it. Competence refers to the individual's previous experience with this activity. Relatedness refers to the extent that the individual enjoyed the personal contacts with the other group's members during rambling. Risk-taking refers to the level of dangerousness of the track. Finally, as in altitude, weather conditions can dramatically change in few minutes, which explain why this factor has also been considered.

Our main hypothesis was that, overall, (a) judged level of arousal would be a direct function of risk-taking, and an inverse function of competence, and (b) judged level of satisfaction would be a direct function of autonomy of choice, competence, relatedness, and weather, and an inverse function of risk. Our research question was: Do people with different levels of expertise in sport rambling differ in the impact they attribute to these factors for judging arousal and satisfaction?

Method

Participants

Participants were eleven non-athletes (M_{age}= 24.00; *SD* = 1.56), fifty-nine athletes doing mountain sports (M_{age}= 24.36; *SD* = 1.38) and fifty-nine athletes doing sports other than mountain sports (M_{age}= 25.41; *SD* = 1.24).They were volunteers and unpaid. They were recruited in the street or in the University. The aim of the study has been explained to the participants who accepted to participate, and then they were given the questionnaire.

Material

The material consisted of one set of 32 scenarios. These scenarios resulted from orthogonal crossing of the levels of the five factors: Autonomy of choice (the individual decided to do rambling versus just followed the group's decision) x Competence (the individual is competent in this activity versus is not competent) x Relatedness (the individual enjoys been with the other members of the group versus not enjoy) x Risk-taking (difficulties encountered on the track has led people to take risks versus no risk taken) x Weather conditions (bad versus good), 2 x 2 x 2 x 2 x 2.

One typical scenario was: "During holidays in the Pyrenees, Maël has done rambling in the mountains with a group of people. He had not personally decided to do rambling. He was simply following his group's decision: He did not feel very competent for this kind of activity. The weather conditions were bad, and unexpected difficulties encountered on the track led Maël to take risks. Nevertheless, he enjoyed the personal relationships with the other individuals in the group during rambling. According to you, which was the degree of Maël's arousal during rambling?"

Beneath each scenario was an eleven-point response scale that either ranged from "*Low arousal*" on the left-hand to "*High arousal*" on the right-hand or from "*Low*

satisfaction" on the left-hand to "*High satisfaction*" on the right-hand, depending on the condition.

Procedure

Testing took place in a quiet room (in the club house for amateur athletes and in a classroom for non-athletes). As indicated before, there were two conditions. In the first condition, participants were, as in the scenario shown before, asked to assess the level of arousal. In the second condition they were asked to assess the level of pleasure.

There were two phases: a familiarization phase and an experimental phase (Anderson, 2008). In the familiarization phase, the experimenter explained to each participant what was expected, i.e., that he had to read a certain number of stories in which an individual is rambling in the mountains and to indicate the degree of this individual's level of arousal or satisfaction. During this phase, participants were presented with eight scenarios taken from the set of 32. The choice of these 8 scenarios was guided so as to expose participants to the full range of stimuli. The purpose of this phase was to make participants as familiar as possible with the test material and the task. Each story was read aloud and participants provided ratings. During the experimental phase, participants were presented with the whole set of 32 scenarios. They provided the ratings at their own pace but they were not allowed to compare their responses or to go back and make changes as in the familiarization phase. The whole session lasted about 45 minutes.

Coach's approval was obtained for each athletes participating in the study. Dean's approval was obtained for non-athletes.

Results

All participants' ratings from the experimental phase were converted to a numerical value expressing the distance between the point on the response scale, and the left anchor which served as the point of origin. These numerical values were then subjected to graphical

and statistical analysis. An ANOVA with a Group × Condition × Autonomy × Weather × Risk-Taking × Competence × Relatedness, 3 × 2 × 2 × 2 × 2 × 2 × 2 design was performed on the raw data. Owing to the may comparisons realized, the significance threshold was set at .001.

The main results of this ANOVA are shown in Table 1. The mean scores of the three groups were similar (M = 4.88 and SD = 0.19 for non-athletes; M = 5.30 and SD = 0.08 for mountain athletes, and M = 5.14 and SD = 0.08 for non-mountain athletes), and the mean scores for the two conditions were also very similar (M = 5.21 and SD = 0.10 in the arousal condition, and M = 4.99 and SD = 0.07 in the satisfaction condition). In other words, the three groups used both response scales in the same way. This greatly simplified the interpretation of the effects of the within-subject factor.

Overall, mean judgments of arousal or of satisfaction were higher when the individual had personally chosen to practice rambling (M = 5.70 and SD = 0.08), he felt competent for this activity (M = 5.67 and SD = 0.09), he enjoyed the relationships with the other group's members (M = 6.35 and SD = 0.11), some particular risk had to be taken (M = 5.36 and SD = 0.10), and the weather was good (M = 5.63 and SD = 0.08), than when the individual had followed the group's decision without taking part in it (M = 4.51and SD = 0.10), he did not feel competent for this activity (M = 4.54 and SD = 0.11), he did not enjoy the relationships with the other group's members (M = 3.86 and SD = 0.10), no particular risk had to be taken owing to difficulties on the track (M = 4.85 and SD = 0.09), and the weather was bad (M = 4.58 and SD = 0.10).

Two interactions involving the conditions were significant. As shown in Figure 1, risk had a stronger impact of arousal judgments (5.74 – 4.69 = 1.05) than on satisfaction judgments (5.00 – 4.98 = 0.02), and relatedness had a stronger impact on satisfaction judgments (6.68 – 3.31 = 3.37) than on arousal judgments (6.01 – 4.41 = 1.60). As a result,

two separate ANOVAs were performed with a design of Group × Autonomy × Weather × Risk-Taking × Competence × Relatedness, 3 × 2 × 2 × 2 × 2 × 2, one for each condition. Their main results are shown in Table 2. In the arousal condition, the effects of the five information cues were significant. In the satisfaction condition, only the effect of risk-taking was not significant.

Discussion

The aim of the study was to explore the way in which individuals with different levels of expertise in sport rambling differ in judging the degree of arousal and satisfaction resulting from a given session of rambling. Overall, non-athletes, mountain athletes, and non-mountains athletes did not differ in the importance they attributed to autonomy, competence, weather conditions, relatedness, and risk-taking when assessing arousal and satisfaction.

In all groups, the effects of some of the five informational cues slightly changed as a function of the judgment condition: (a) relatedness impacted more on satisfaction judgments than on arousal judgements, and (b) risk taking did not impact at all on satisfaction judgments. Otherwise, autonomy, competence, and weather condition had a positive impact on both judgments.

Contrary to our hypotheses, (a) judged level of arousal was a direct function of risk-taking, but it was also a direct function of competence, autonomy of choice, relatedness, and weather condition, and (b) judged level of satisfaction was a direct function of autonomy of choice, competence, relatedness, and weather, but did not depended on risk taking.

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Table 1.

Main results of the ANOVA performed on the raw data for the whole sample

Factor	Effect		Error				
	df	*MS*	*df*	*MS*	*F*	*p*	η^2_p
Group (G)	2	62.57	124	25.03	2.50	.086	.04
Judgment Conditions (JC)	1	57.83	124	11.75	4.92	.028	.04
Autonomy (A)	1	1641.32	124	13.20	124.34	.001	.50
Relatedness (R)	1	7122.44	124	24.64	289.07	.001	.70
Competence (C)	1	1451.15	124	21.07	68.80	.001	.36
Risk-Taking (RT)	1	290.56	124	17.49	16.62	.001	.12
Weather Conditions (WC)	1	1245.48	124	13.93	89.38	.001	.42
JC × R	1	881.17	124	13.88	63.47	.001	.34
G × JC × R	2	41.05	124	13.88	2.96	.056	.05
JC × RT	1	320.54	124	12.47	25.70	.001	.17
G × JC × RT	2	15.75	124	12.47	1.26	.287	.02

Table 2.

Main results of the ANOVAs performed for the arousal and satisfaction conditions

	Effect		Error				
	df	*MS*	*df*	*MS*	*F*	*p*	η^2_p
AROUSAL CONDITION							
Group (G)	2	25.26	125	25.32	1.00	.372	.02
Autonomy (A)	1	717.53	125	14.17	50.63	.001	.29
Relatedness (R)	1	1486.26	125	24.51	60.65	.001	.33
Competence (C)	1	256.19	125	24.06	10.65	.001	.08
Risk-Taking (RT)	1	625.87	125	18.15	34.48	.001	.22
Weather Conditions (WC)	1	162.23	125	19.80	8.19	.001	.07
SATISFACTION CONDITION							
Group (G)	2	43.68	125	11.27	3.87	.023	.06
Autonomy (A)	1	917.02	125	7.57	121.18	.001	.49
Relatedness (R)	1	6532.70	125	13.83	472.51	.001	.79
Competence (C)	1	1406.36	125	8.80	159.88	.001	.56
Risk-Taking (RT)	1	0.17	125	11.94	0.02	.904	.00
Weather Conditions (WC)	1	1371.55	125	6.35	89.38	.001	.63

Figure 1. Impact of relatedness and risk-taking on arousal and satisfaction.