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# The personality of freestyle snowboarders: Implications for product development

## Abstract

*Several approaches with reference to customer involvement in the product development process can be found in the research literature. The majority of studies, focusing primarily on customer involvement in the product or service development process, are based on research in the area of new product development. However, these studies did not describe which customers or groups of customers are suitable to be involved in the product development process of services. Meanwhile some researchers have drawn their focus on this topic. The empirical personality psychological traits approach as well as the differential psychology put the individual in the focus of the analyses. To this end, a research of snowboarders' personality profile and their involvement in product design was carried out on a sample of 50 respondents active in the alpine region of Austria, Switzerland and Italy. The results have revealed that snowboarders differ from general population. The standard deviations of all five scales are lower for the freestyle snowboarders than for those of the reference population. Freestyle snowboarders are scoring higher on dimensions of extraversion, openness to experience, compatibility and conscientiousness. This research is an attempt to bring together psychology and social leisure sciences and to derive new findings regarding this under-investigated extreme sport segment, which in many cases displays typical lead user consumers in the field of sport tourism.*

## **Keywords:**

*personality; product development; lead user; winter sport; freestyle snowboarder; tourism destinations; Austria*

## Introduction

Snowboarding was slowly emerging in the sixties (Gille, & Marks, 2000), but became increasingly popular in the mid-eighties when the US snowboard magazine 'Absolutely Radical' as well as the movie 'Fire & Ice' (USA, 1983) and the James Bond movie 'A View To Kill' (UK/USA, 1985) promoted this new sport to a mass audience. Within short time three styles of snowboarding were born: race, freeride and freestyle

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(Gille, & Marks, 2000). Since then, snowboard competitions and snowboarder-related events started to play an increasing role in tourism destinations' value chains. Also riders, which are often lead users, play an important role in establishing trends, promoting brands and, therefore, influence the consumers' buying behaviour. This is especially the case with competitive freestyle snowboarders in disciplines such as half pipe, big air and slope-style who, supported by their sponsors, often spend at least 50 days per year on the snow. Suppliers see this group of snowboarders as being economically relevant given that 88.73% of all Austrian skiing destinations offer suitable resources for this sport (ADAC, 2007). This raises the question whether the active competitors are seen as a trendsetter and can act therefore, perhaps, as lead users. Lead users are users with strong personal needs. They have the ability to face needs time before they will be detected in the marketplace. For the reason that those people have strong relation and knowledge to specific topics, they can be useful in development of new products or services (Herstatt, & von Hippel, 1992).

In spite of its importance in terms of numbers and trendsetting influence, the extreme snowboard sports as a part of active sport tourism have not appeared in recent tourism and leisure research articles. A number of studies deal with the categorisation and classification of extreme sports, risky or adventure sports or have investigated trends in sports development and the ecological impacts and consequences for destination stake-holders (Hlavac, & Baumgartner, 2000; Buckley, 2006a; Buckley, 2006b; Bourdeau, Corneloupe, & Mao, 2004; Bette, 2004). Other contributions shed light on the motives of extreme sports athletes and on participant perception of a sport's risks (Örley, 2005; Opaschowski, 2000; Celsi, Randall, & Leigh, 1993; Gonzales, & Bello, 2002; Palmer, 2002). Research literature that investigates economic impacts of extreme sports on destinations is scarce (Hlavac, & Baumgartner, 2000).

Another relevant question of consumer behaviour research addresses extreme sport athletes' personality traits (Apter, 1992). The interesting question is how these personalities differ from those who do not go in for extreme sport. The combination of fun and thrill is one of the main motivators (Apter, 1991) and, according to Allmer (1995), the testing of individual limits and experience seeking are the main intentions of extreme sportsmen. In addition, social components play a major role in describing these personalities: being together with like-minded people, developing joint colleagueship and mutual support are strong motives for extreme snowboarders (Brandauer, 1994; Wessely, & Schneeberger, 1999). The empirical personality psychological traits approach, as well as the differential psychology, put the individual in the focus of the analyses with the aim to gain more insight into inter and intra-individual behaviour patterns (Allport, 1961; Allport, & Allport, 1921; Allport, & Odbert, 1936; Amelang, & Ahrends, 1984; Amelang, & Bartussek, 1994).

Given this gap in the research published to date, the aim of this study is to investigate the main personality traits of freestyle snowboarders and to identify what implications in terms of product or service development can be derived from these findings. The paper is structured as follows: the first part of the paper will give an overview on the literature in the field of extreme sports' personalities and introduces the concept of personality constructs. The five factor model of Costa, and McCrea (1985) serves as background for the empirical research presented in the second part of the paper of the freestyle snowboarders who were surveyed to gain more insight into their personality and motivation. In addition, the study examines their role in tourism destination product development as this group often can be interpreted as lead user personalities. The final part of the paper presents implications for tourism destinations and derives recommendations for further research.

## Theoretical background

The necessity and the advantages of integrating customers into the innovation process are widely recognized. Several approaches with reference to the customer involvement in the product development process can be found in the literature, for example in the lead user discussion (von Hippel, 1986), co-development (Anderson, & Crocca, 1993; Neale, & Corkindale, 1998), co-opting customer competence (Prahalad, & Ramaswamy, 2000), user involvement (Alam, 2002), consumer involvement (Pitta, & Franzak, 1996), and customer interaction (Gruner, & Homburg, 2000). However, according to Matthing, Sandén, and Edvardsson (2004), explicit definitions of these concepts are often missing. Instead, selected variables are used to describe these concepts, such as degree or intensity of customer participation (Alam, 2002; Gruner, & Homburg, 2000) or stages of the innovation process (Alam, 2002; von Hippel, 1986).

Moreover, the majority of studies, focusing primarily on customer involvement in the product or service development process are based on research from the area of new product development (Anderson, & Crocca, 1993; Ciccantelli, & Magidson, 1993; von Hippel, 1986, 2001). Until 2004, according to Matthing, *et al.* (2004), only four studies focused on customer involvement within the development of new services (Alam, 2002; Martin & Horne, 1995; Martin, Horne, & Schultz, 1999; Thomke, 2003). However, none of these studies described which customers or groups of customers are suitable to be involved in the product development process of services. The only exception is a study by Schreier, Oberhauser, and Prügl (2007) who pointed out that lead users demonstrate stronger domain-specific innovativeness than “ordinary” users. In addition, they perceive new technologies as less “complex” and demonstrate stronger opinion leadership and weaker opinion seeking tendencies. Lead users might not only play an important role in the development but, also, in the adoption and diffusion of new consumer products. However, it remains unclear what personality traits would be valuable in making contributions to the development process. For this reason, the empirical part of this work analysed the personality of freestyle snowboarders to derive possible implications for ski tourism product development. The influence of these sport athletes in terms of attracting their followers to the sport/activity can be illustrated by the number of visitors of the Air & Style event (see Table 1) as well as in the growing number of snowboarding facilities in the Alps. The Air & Style is one of the biggest events for freestyle snowboarders and includes several competitions. Since 1993 it is held every December.

Table 1

### NUMBER OF VISITORS OF THE AIR AND STYLE

Year	1993	1995	1997	1999	2001	2003	2004	2005	2006	2007
Number of visitors	5,000	20,000	25,000	25,000	12,000	18,000	24,000	21,000	27,500	28,000

Source: Estimation based on Air & Style press releases - see Air & Style, 2008

It is still unclear which role these freestylers play in stimulating new product and service development processes in tourism destinations. In addition, the personality composition of this group has not yet been explored nor was there an attempt made to categorize personalities among the segment of snowboard freestylers. Weinstein (1987, p. 4) defined segmentation as “the process of partitioning markets into segments of potential customers with similar characteristics who are likely to exhibit similar purchase behaviour.” In the literature, various theories and approaches for segmentation of customer groups are found based on different segmentation criteria such as: demographic and socio-economic characteristics; consumer lifecycle; behavioural attributes as segmentation criteria; psychographical features; benefit segmentation and psychological attributes. A decision which must be made when investigating different customer segments is the choice of the appropriate segmentation criteria and segmen-

tation variables (Baker, 1984). Demographic as well as socio-economic variables are limited in their ability to predict future purchase behaviour and are of limited use for the identification of market segments (Stanton, 1978; McCarthy, 1978; Haley, 1968; Frank, Massy, & Boyd, 1967). Hartmann (1999) argued that psychographic variables, such as a combination of demographic, socio-economic and psychological variables, should overcome these weaknesses. It is obvious that by including psychological variables, the image of the consumer can be drawn much more comprehensively, but also the different lifestyle concepts cannot provide a complete explanation or a perfect prediction of consumer behaviour (Kramer, 1991). Haley (1968) and Wind (1973) suggested market segmentation strategies based on benefits desired by identifiable groups of individuals whereby the resulting segmentation focuses on the underlying reasons why consumers are attracted to certain products (Hooley, Saunders, & Piercy, 2004). In addition, the fact that the benefits individuals strive for with the consumption of products or services are the main reasons for the existence of the “real” market segments. That is why benefit segmentation can be seen as an approach that enables segments to be built according to causal rather than descriptive criteria (Botschen, Thelen, & Pieters, 1999).

Along with the psychological attributes, personality characteristics, in particular motives, attitudes, involvement, preferences and values, may contribute significantly to segmentation (Dubois, Jolibert, & Mühlbacher, 2007). However, opinions about the existence of clear relationships between personality traits and consumer behaviour greatly differ. Some researchers have found rather weak correlations between consumer behaviour and personality (Myers, 1967; Massy, Frank, & Lodahl, 1968; Robertson & Myers, 1969), while others have found significant ones, such as the studies by Eysenck, Tarrant, Woolf, and England (1960), Tucker and Painter (1961), Matzler, Bidmon, and Grabner-Kräuter (2006), Ghani (2004), and Heinström (2004).

According to Feldt, Metsäpelto, Kinnunen, and Pulkkinen (2007), personality traits are used to represent a person’s basic tendency which, in transaction with the environment, produces characteristic adaptations, such as skills, beliefs and attitudes. Personality or personality constructs are the research subject of empirical personality psychology and differential psychology, which view the individual as such, and focus on inter- and intra-individual differences in the behaviour of people (Amelang, & Ahrens, 1984). Within the personality psychology, there are several paradigms which perceive the construct “personality” in different ways (Asendorpf, 2004). In literature, there is empirical evidence of three (e.g., Eysenck, 1991), five (e.g., McCrae, & Costa, 1987), at least six (Jackson, Paunonen, Fraboni, & Goffin, 1996), seven (Almagor, Tellegen, & Waller, 1995), and even as many as sixteen (e.g., Cattell, & Krug, 1986) fundamental dimensions to personality. Even as there is still a dispute (e.g., Paunonen, & Jackson, 2000), most researchers agree on what is referred to as the ‘Big Five’ model of personality, typically characterized by dimensions of neuroticism (i.e. anxious, hostile, depressed), extraversion (i.e. warm, active), openness to experience (i.e. artistic, imaginative, curious), agreeableness (i.e. trusting, altruistic, tender-minded), and conscientiousness (i.e. orderly, self-disciplined) (Holden, Wasylkiw, Starzyk, Book, & Edwards, 2006; Feldt, *et al.*, 2007).

“Starting in the 1960s, but with increasing speed in the 1980s, 1990s and 2000s, many research works approached the idea that the most common characteristic approaches to personality can be captured by using five dimensions” (Friedmann, & Schustack, 2004, p. 346). In particular Costa, and McCrae (1992) are representatives of the five-factor model of personality, building a personality profile using the five key

characteristics: neuroticism, extraversion, openness to experience, agreeableness, conscientiousness (Borkenau, 1992; Borkenau, & Ostendorf, 1987, 1993b).

Costa, and McCrae (1980) developed a personality model with three major areas of individual differences: neuroticism, extraversion and openness to new experiences (= NEO). Later, they distinguished further facets within these three dimensions. In addition, based on factor analytical results, they extended the model with the inclusion of the dimensions 'compatibility' and 'conscientiousness'. Today, three versions of the Neo exist: the NEO – personality inventory (NEO-PI; Costa, & McCrae, 1985), the NEO five factor inventory (NEO-FFI; Costa, & McCrae, 1989) and the revised NEO personality inventory (NEO PIR) (Costa, & McCrae, 1992). The NEO FFI can be interpreted as the short form of the NEO PIR. Due to time and cost constraints, short forms apparently seem to be attractive. Short forms can be useful when respondents feel too much involved in the research process (e.g., in longitudinal surveys). Additionally, it eliminates item redundancies, which can lead to boredom and frustration by answering similar items (Herzberg, & Brähler, 2006).

The specific aim of the study was to investigate freestyle snowboarders' characteristics within the context of these so-called 'Big Five' which can be assessed with the NEO-FFI test. It is a personality test which has been developed for both the segment of youngsters and adults and reveals peculiarities in the area of the following five categories: neuroticism, extraversion, openness for experiences, compatibility (agreeableness) and conscientiousness (Srivastava, 2008). The following description of the 'Big Five' is based on Pervin, Cervone, and John (2005), Friedman, and Schustack (2004), and Borkenau, and Ostendorf (1993a):

*Extraversion* - Extraverted people are described with the following adjectives: energetic, enthusiastic, dominant, optimistic, companionable, communicative, process-oriented and fun-loving. The opposite introverted individual is usually described as follows: shy, cautious, obedient, unemotional, controlled, task-oriented, and calm.

*Compatibility (agreeableness)* - Individuals who see themselves as social compatible are described as friendly, trustful, warm-hearted, cooperative, and conciliable. The opposite is described as cold, unfriendly, vindictive, cynical, non-cooperative, fractious, and manipulative.

*Conscientiousness* - Conscientious people are cautious, reliable, well organized, punctual, diligent, orderly, and ambitious. Non-conscientious people show the opposite characteristic: They are incautious, messy, not punctual, not reliable, lazy, weak-minded and careless.

*Neuroticism* - Neurotic people are nervous, unsteady, anxious, very emotional, and hypochondriac. On the contrary, non-neurotic people are relaxed, emotionally stable, calm, self-confident, and self-contented.

*Openness for experience* - Experience-open people can be described as witty and imaginative, creative, curious, interested and unconventional. On the contrary, we find superficial, conventional, non-creative, down-to-earth-oriented, and quite simple individuals.

The empirical study reported in this paper attempts to identify characteristics of freestyle snowboarders based on the categorization according to the above presented literature (Borkenau, & Ostendorf, 1993a; Srivastava, 2005; Feldt, *et al.*, 2007; Holden, *et al.*, 2006; McCrae, & Costa, 2007; Costa, & McCrae, 1985, 1992).

## Research design

For the purpose of this study, the survey instrument used consisted of two separate questionnaires. The first questionnaire was used to collect the personality profiles of the respondents. As using a standardized licensed questionnaire based on Costa, and McCrae (1992) in the German translation of Borkenau, and Ostendorf (1993a), the authors were not allowed to adapt or enhance this instrument. Therefore, a second questionnaire was developed to assess the role of the freestyle snowboarders in the development of new services and products for or within the tourism destination. The respondents had to fill out two successive questionnaires.

The reduced version of the NEO-FFI consists of 60 standardized items, which can be allocated to the various personality factors through a predetermined process of evaluation. These 60 items consist of statements, which can be used to describe the respondent. Of these 60 items, 12 items are assigned to each personality factor. To evaluate the statements a quintuplicate graduated verbal scale was available for the respondents (SA - strong rejection; A - rejection; N - neutral; Z - agree; SZ - strongly agree) (Borkenau, & Ostendorf, 1993b).

Table 2

**ALLOCATION OF ITEMS**

	Neuroticism	Extraversion	Openness for experience	Agreeableness, compatibility	Conscientiousness
Items	1, 6, 11, 16, 21, 26, 31, 36, 41, 46, 51, 56	2, 7, 12, 17, 22, 27, 32, 37, 42, 47, 52, 57	3, 8, 13, 18, 23, 28, 33, 38, 43, 48, 53, 58	4, 9, 14, 19, 24, 29, 34, 39, 44, 49, 54, 59	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60
Statement example	1 = I am not easily concerned	2 = I like to be surrounded by people	3 = I like to waste my time with daydreaming	4 = I try to be friendly to anybody I meet	5 = I keep my things tidy and in order

Source: Borkenau & Ostendorf, 1993b

The evaluations of the survey responses were done using the template proposed by Borkenau, and Ostendorf (1993a) which helps researchers to apply scores from 0 - 4 to the marked answers. These scores were allocated to the above-described personality factors. The sum of the points of individual personality factors were entered on the rear side of each questionnaire. In addition, the number of the items per personality factor was determined and entered on the questionnaires. Then, in a further step, the averages of the single personality factors were determined by forming the ratio of the sum values of the scores and the number of answered items per personality factor.

On the one hand, the second questionnaire was used to collect demographic and socio-economic data such as age, gender, education and profession as well as the attitude of the respondents towards their involvement in new product and service development processes. Some questions determined whether the respondents were already included in new product and service development processes of their sponsors. Furthermore, it was ascertained whether they generally could imagine an involvement in the product development process of tourism destinations, and if so, in what areas did they see a need for improvement. Finally, the respondents had the opportunity to comment on possible suggestions for improvement in tourism destination products.

The majority of questions were closed-ended, but several used an open-ended format, such as e.g.: "Can you imagine being involved in the new product and service development processes in tourism destinations?" If they answered 'yes', the respondents were asked to specify 'which areas of service and product development they prefer' or

‘which role they could play in the new product and service development process’ in the tourism destination.

The study was conducted in the area of Innsbruck (Austria) in the period from July to September 2007. During this phase of the year the respondents were easier to reach as they are not participating in competitions or freestyle events. The contact with the respondents was established, on the one hand, via appropriate shops specialized for snowboarders’ equipments and, on the other hand, via contacts with snowboard producing companies and team managers (snow-ball-principle). Respondents were Germans, Austrians and riders from Switzerland. These snowboarders are supported by sponsors and are actively on the snow at least 50 days per year. The potential respondents were individually approached by mobile phone or email and a meeting was arranged. In total, 68 riders were contacted and 50 accepted to participate in this study. Each respondent was asked to complete the two questionnaires after the researcher has given him/her a brief introduction on how to fill them out. On average, one meeting lasted about 45 minutes.

As already mentioned, a total of 50 usable questionnaires were obtained. The average age of respondents was 25 years, with the youngest snowboarder at age 17 and the oldest of 33 years of age. Of the 50 respondents, there were 42 males (84%) and 8 (16%) females. The educational level of the participants was as follows: 44% were high school graduates, 36% are technical school graduates, while 6% of the respondents had a university or technical college degree. To screen respondents for the eligibility to participate in the study, participants were asked for the number of days during the year in which they were snowboarding, as well as their sponsorship status. In terms of the days spent on the slopes, 48 respondents met the screening criteria of minimum 50 days on the slopes. The majority of those spent on the slopes between 76 and 125 days (26% between 51 to 75 days, 30% between 76 – 100 days and 24% from 101 to 125 days), while only a minority (8%) were on the slopes more than 125 days. Two of the survey respondents (4%) said they were on the snowboard for only 26-50 days a year, which actually does not fulfil the required minimum criterion of 50 days. However, as both these individuals had a sponsorship, and the sample size was smaller than expected, they were still included in the analysis. The sponsorship status showed the following distribution: 26% had an amateur status (producer national), 22% an amateur status (producer international), 20% amateur status or professional status (sales/distributor) respectively and 12% amateur status (shop sponsor).

## Results and discussion

### PRODUCT DEVELOPMENT

Even though respondents were sponsored by the manufacturers of equipment and related goods, it is somewhat surprising that sponsors of about third of the respondents (17 respondents or 34%) did not use this opportunity to involve the snowboarders that they sponsor in the product development process, even though the vast majority of them (14 or of 17 respondents) show general willingness to be involved.

They were also asked whether they could imagine being involved in the product development process of tourism destinations. The majority (90%) said they could imagine doing so. Furthermore, 90% of the respondents who could see themselves being involved in the product development process of tourism destinations in a positive way, indicated in which areas they have ideas for improvements or new developments. There was a set of predefined categories of involvement; however there was also the possibility to indicate further domains, whereby multiple answers were allowed. The results are shown in Table 3.

As expected, the areas close to snowboarding activities are highest in responses with vast majority (91.11%) of the respondents indicating that they could imagine being involved in the improvement of fun parks, competitions (84.44%) and events (62.22%).

Table 3

**AREAS WHERE RESPONDENTS CAN IMAGINE BEING INVOLVED IN TOURISM DESTINATION PRODUCT DEVELOPMENT PROCESSES**

Areas of interest	Percentage*
Funparks	91.11
Contests	84.44
Events	62.22
Offered leisure activities	35.56
Accommodation	35.56
Pub/Nightclubs	31.11
Accessibility	26.67
Transport within the destination	17.78
Booking/Reservation options	13.33
Others	11.11

\* Multiple answers

For the categories that are not directly related to the snowboard sport about 35.56% of the respondents have ideas for improvements or new developments in the areas of “leisure activities of a destination” and “accommodation”, followed by “pubs and night-clubs” (31.11%), “arrival possibility” (26.67%), “lift and transport facilities in the destination” (17.78%), “booking opportunities” (13.33 %). A small group of respondents indicated they could be involved in “further destination development” (11.11%).

Finally, the respondents could openly formulate their ideas and suggestions for improvements in tourism destinations. Of all the respondents, 90% indicated that they would be interested in being involved in the product development process of tourism destinations. However, slightly over a half of the respondents (25 or 56%) had some ideas on the possible destination-wide improvements, while the rest had left this question unanswered (Table 4). Most suggestions for improvements, with a total of 21 responses, were given in the area “fun parks”, followed by the category “competitions” (17), and “events” (8). Other areas of the destination were assigned one to four ideas for improvement. For the categories “arrival possibilities” and “booking opportunities” no suggestions were given.

Table 4

**RESPONSES REGARDING THE VARIOUS POSSIBILITIES FOR IMPROVEMENT**

Areas of improvement	Number of responses
Funparks	21
Contests	17
Events	8
Offered leisure activities	4
Pub/Nightclubs	4
Accommodation	3
Transport within the destination	3
Others	4
Accessibility	0
Booking/Reservation options	0

The third step of the analysis focused on the content level of the individual proposals in the categories. Below the contents of the ideas are shown - arranged by categories.

*Fun parks:* In the category of “fun parks” the proposals for improvements are primarily about the construction, the type and arrangement of elements and obstacles. They had - apart from the mere increase of the park size - mainly asked for more creativity in terms of the obstacles, be it through the development of new elements, their better arrangement or the inclusion of natural conditions, such as rocks, hills or anything like that. What is to be understood under the demand for “better” fun parks can only be formulated by the respondents. It is mainly about well-shaped and well-maintained parks that are required, as underpinned in the call for trained park designers. As for the size and quality of fun parks, one respondent also refers to the U.S.A, which is in a leading position in this area. Another important point seemed to be to create different levels of difficulties whereby here the necessity for strict subdivision was pointed out. Within this context the reference to the security aspect in park design also probably fits.

*Competitions:* In the realm of “competitions”, it seems that respondents are dissatisfied with the format of the competitions. Different and new contest formats are demanded but it is not mentioned how they should look. In regards the source of the improvements, everybody agrees on the following: the snowboarders should be more involved when it comes to the development of new formats. There were also controversial views about the aspired level of the competitions. On the one side, there were calls for raising the level and, on the other side, it was asked for more formats addressing rookies and youngsters. The second central theme in the area “competitions” were the assessment methods, the so-called “judging”, which has to be improved. Also, here it should be noted that judging should be carried out by experienced boarders.

*Events:* Concerning events, formats were demanded that offer more than mere snowboarding. Thus, combinations with other sports, team competitions between different sports or a combination of sports, art & music were suggested. There were also calls for city events as well as big snowboard events, comparable to the Air & Style (see Table 1). In addition, improved access for spectators was demanded, a shift of events onto the mountains, which probably stands in contrast to city events, as well as the avoidance of alibi events.

*Leisure activities of the destination:* In this area, an expansion of offers, for example, ‘standing waves’ or ‘multifunctional theme worlds for snowboarders’ were suggested, as well as a greater orientation of offers towards younger target groups.

*Pubs and nightclubs:* Proposals in this area were related to the improvement of the music choice, game offers and seat allocation.

## **RESULTS FROM THE NEO FFI SURVEY**

An average comparison between the current study sample and a reference population seems appropriate to identify variances between freestyle snowboarder and the German reference sample in terms of their personality factors. Therefore, for the comparison, the latest results of a study by Borkenau, and Ostendorf (2008)<sup>1</sup> which was carried out in Germany, Austria and Switzerland were used. Their results are based on a study with a sample size of 11.724 respondents. The comparison was carried out to determine whether the personality profiles of the sponsored freestyle snowboarders significantly differ from those of the reference population. To test this, the mean

values of all five scales in the sample of this study are compared with the reference sample of Borkenau, and Ostendorf (2008). Thus, Group 1 represents the sample of freestyle snowboarders (N=50) and Group 2 is the reference population, which refers to Borkenau, and Ostendorfs study in 2008 (N=11724).

From the mean values and standard deviations presented in Table 5, it can be seen that Group 1, freestyle snowboarders in the area of Innsbruck, Austria, with reference to the personality profiles in all five characteristic values, differ from the reference population of Borkenau, and Ostendorf (2008) in terms of their personality profiles in all of the five characteristic values. Obviously, the standard deviations ( $s$ ) of all five scales of both samples are lower for the freestyle snowboarders than for those of the reference population. Consequently, individual mean values of the respondents do not differ as strongly as the total sample's mean values differ from the mean values of the reference population. Thus, it is fair to say that the participants of this study have inwards relatively homogeneous, but outwards heterogeneous personality profiles.

Table 5

**MEAN VALUES OF NEO-FFI SCALES AND STANDARD DEVIATION**

Scales	Group 1 (freestylers)			Group 2 (reference group)		
	M	s	$\alpha$	M	s	$\alpha$
Neuroticism	1.21	0.51	0.77	1.83	0.70	0.87
Extraversion	2.72	0.36	0.51	2.37	0.56	0.81
Openness to experience	2.53	0.51	0.71	2.68	0.54	0.75
Compatibility	2.72	0.35	0.58	2.52	0.47	0.72
Conscientiousness	2.79	0.41	0.69	2.57	0.59	0.84

A t-test was carried out which reveals that, for four of the five scales, variances are not homogenous. Only in the case of 'openness for experiences' we find homogenous variances ( $p > 0.05$ ). The results of the t-test are presented in Table 6.

Table 6

**PERSONALITY DIFFERENCES BETWEEN THE TWO GROUPS – RESULTS OF T-TEST UNDER THE ASSUMPTION OF HETEROGENEITY OF VARIANCES**

	Mean Group 1 (freestyler)	Mean Group 2 (reference)	T-calc	p*	Cohen-d	eta sq
Neuroticism	1.21	1.83	8.56	0.00	18.66	0.60
Extraversion	2.72	2.37	6.84	0.00	14.87	0.48
Openness to experience**	2.53	2.68	1.96	0.05	0.28	0.00
Compatibility	2.72	2.52	4.03	0.00	8.78	0.25
Conscientiousness	2.79	2.57	3.78	0.00	8.23	0.22

\*  $p \leq 0.05$

\*\* test under the assumption of homogeneity of variance

In general, freestyle snowboarders are scoring higher on dimensions of 'extraversion', 'openness to experience', 'compatibility' and 'conscientiousness' than the reference group. Freestylers are describing themselves as sociable, self-confident, active, energetic, optimistic, and hilarious. Also they like extroverted individuals and are attracted by social events (Borkenau, & Ostendorf, 1993b). This supports the party-orientation of snowboarders as well as their willingness to be part of a social group (Brandauer, 1994; Wessely, & Schneeberger, 1999).

When it comes to the 'openness to experience', surprisingly the freestyle snowboarders, with a mean value of 2.53, appear to be less open than the reference group whose mean value is 2.68. As mentioned already, freestyle snowboarding is seen as a creative form of sports (Gille, & Marks, 2000; Muessig, 1997). However, when analysing the scales of items displaying 'openness to experiences' we find also statements which focus on the 'openness towards arts, philosophy and literature' which might explain these unexpected answers. Their openness towards sports is very high whilst their openness towards cultural aspects can be interpreted as relatively low.

In comparison to the reference population, the respondents also display a significantly lower value on the 'neuroticism' scale (1.21 versus 1.83 for the reference group). This is in line with the expectations - freestyle snowboarders are emotionally stable and show low rates of stress or anxiety. This supports the fact that freestyle snowboarders are less risk averse than the reference population (Apter, 1990). It also holds true for the other four scales.

## Conclusions and implications

In terms of personality and market segmentation, as the results have shown, the selected target group has a particular personality profile, relatively homogeneous inwards and heterogeneous outwards. Outwards heterogeneous in the sense, that it is significantly different from a reference population. Consequently, one goal being pursued with the segmentation of markets is, at least, partially fulfilled: the formation of an inwards homogeneous and outwards heterogeneous segment. It can be stated that the respondents are homogeneous in relation to a relevant behaviour (intense freestyle snow-boarding) and their personality profile. Regarding the expectations of benefits of the participants, new insights cannot be claimed on the basis of this study. Additional studies would be needed, using a tool that measures the expected benefits associated with the acquisition of certain products or services. Therefore, the authors refer to the briefly mentioned benefit segmentation and its instruments (Haley, 1968; Wind, 1973; Dubois, *et al.*, 2007). Nevertheless, this study can be interpreted as a first step that could be pursued through further investigations by the target group.

Another aim of this work was to draw conclusions about possible implications for the product development in tourism. The results showed that the respondents' willingness is very high to be involved in the product development process of a sponsor. This also can be pointed out for the willingness to be involved in the product development process of destinations because a total of 90% of the participants indicated that they could imagine disclosing their ideas for destination improvements. Besides, a need for improvement was seen in the areas which are directly connected with the sport, namely parks, contests and events. The result of the evaluation of the open question provided a similar picture. The allocation of responses for each category puts fun parks in the first place, followed by contests and events. Statements such as "we do not want alibi parks" and "they should look at exemplary fun parks in the United States" suggest that this is an area with an enormous need for action at destinations in Europe. Moreover, there are potential heavy and/or lead users available for these parks, who would like to offer their help in working out new concepts. The present study results suggest the existing willingness of the snowboarders to help in these areas. A tangible proposal to the city of Innsbruck was done in suggesting carrying out a 'rail contest'. It is up to the destination management to use this potential. If destinations are seriously interested in the target group of freestyle snowboarders, then it is suggested to respond to their needs in a much more aggressive way.

The existing products offered, obviously seems to have major deficiencies, starting with accommodation facilities, which are not aimed at the needs of the youth, existing or lack of leisure facilities and finally the fun parks themselves. As already mentioned, there seems to be an enormous need for improvement in these areas. If a destination decides to offer a fun park, the target group surveyed should definitely be involved in the design of such a place. Moreover, it is not enough to create a fun park; the continuous care is an absolute must, as the safety of the snowboarders is directly linked to it. One can assume that the less experienced snowboarders are the more they depend on well-kept parks than the surveyed target group of this study.

This study could not reveal a connection between the involvement in the product development process and the personality traits of the respondents. No such connections could be verified, as no causal connection can be drawn between the positive willingness to be involved in the product development process and the present personality profile. For this type of investigation people lacking the willingness to participate would have to be specifically called upon for a comparative analysis of their personality profile to a group of participants who is predominantly willing to do so.

Finally, it has to be indicated that the conclusions and interpretations of the results of this study have a limited validity based on the small sample size. It is critical to state that due to this analysis – with reservations to the before mentioned restrictions – it can be shown, that a market segment could be depicted which exists for a practitioner anyway without the need of a large scale argumentation like this work. It is recommended to repeat the personality investigation of the target group in the winter to question more respondents because at that time more international sponsored freestyle-snowboarders can be addressed. It could be possible to survey the whole sponsored, German-speaking, freestyle scene throughout the Alpine region to generate more representative results for this market segment. The aforementioned enhancement of the investigation instruments to include a tool that allows collection of the benefit expectations of the interviewees is also recommended.

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