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Corso di dottorato di ricerca in:

Scienze Manageriali e Attuariali

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Ciclo 31°

Titolo della tesi

TO THE DEATH, BABY.
AN EXPLORATION OF PSYCHOLOGICAL DRIVERS OF CONSUMER BEHAVIOR IN EXTREME SPORTS

Dottorando
Dott. Francesco Raggiotto

Supervisore
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Anno 2019

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Introduction

1. A new consumer reality

The last decades have brought unique challenges to marketing and consumer research. Since the end of the mass production era (e.g., Kotler, 1986), consumption landscapes went through massive changes, extremely fast metamorphoses which called for a profound evolution of academic paradigms to provide answers to questions like: Who are the new consumers? What do they want? How are they likely to behave in the future?

This postmodern consumer reality -liquid, undefinable, ambiguous (Bardhi & Eckhardt, 2017)- has posed -and still poses today- great challenges for consumer researchers, being an invaluable stimulation for the emergence of new frameworks, ideas, and conceptualizations. Literature is extremely rich in this sense: scholars have proposed multifaceted, complex patterns to capture the complexity of consumption phenomena, trying to keep up with this tremendous evolution (Arnould & Thompson, 2005). The emergence of a globalized world (Bardhi, Eckhardt, & Arnould, 2012), the rise of consumer self-consciousness (Lambert, Desmond, & O'Donohoe, 2014) and of new models of economic development (Tuan & Moretti, 2015), are just some of the events that, according to the literature, have triggered major changes in the meaning of consumption itself. Alongside such changes, new consumption paradigms have emerged. For instance, traditional consumeristic models have being gradually replaced

by new forms of consumption, involving consumers as active producers of value (Ramirez, 1999; Humphreys & Grayson, 2008). Further, consumers are no more concerned about acquiring and owning *per se*, rather they employ consumption as a tool for affirming their strong self-consciousness. Moreover, they feel the need to gather in spontaneous social groups grounded on shared experiences, beliefs, ideas and perspectives, which include consumption as well (Muniz Jr & Schau, 2005). In other words, consumption becomes a tool to express one's own self (Shamah, Mason, Moretti, & Raggiotto, 2016), but also to create social spaces (Holt, 1995). Consumption becomes a blank space, which everyone can fill with its own essence.

Such new kind of consumption is increasingly directed towards satisfying complex, hidden, intangible needs, and has deep implications for practice: the advanced role of new consumers urges marketing strategies to be fully reconsidered, departing from a traditional top-down approach underlying a traditional cognition of the "consumer", and pushing towards new operational paradigms which, given such real-world complexity, are likely to greatly benefit from insights of academic literature, which might enable practice to the use of new, sophisticated tools for a deeper understanding of the market (e.g., Gambetti & Graffigna, 2010; Cova & Dalli, 2017).

2. Dissertation overview

Being aware of the consumer macro-context described in the previous section, the present dissertation bases on a fundamental premise: the new consumer -regardless of its numerous possible definitions, like: prosumer (Cova & Dalli, 2017), post-modern

consumer (Firat & Venkatesh, 1993), and many others-, enacts new, emerging forms of consumption denoted by complex, underlying motives. Some of them are remarkably peculiar, as they require an extraordinary consumer commitment, which may have deep consequences in consumers' everyday life, that consumers are willing to accept anyway. For instance, Raggiotto, Mason, & Moretti (2018) and Mason & Moretti (2017) suggested that consuming extreme body modifications (e.g., full-body tattoos) implies a strong consumer psychological commitment: by willing to permanently modify the body, consumers also accept to face drawbacks which may also have permanent implications on their everyday life (e.g., health risks and/or social stigma, Atkinson, 2003).

Such emerging forms of consumption are sometimes triggering managerially relevant phenomena: in this sense, few businesses have witnessed an exponential growth like the one of extreme sports. In the last few years, the number of active athletes in extreme sports is growing fast (Xtremesports, 2008): for instance, since 2014 more than 22 million people regularly participate every year in extreme sporting events (TBI, 2014). Many extreme sports disciplines have grown from niche sports to globally participated sporting disciplines, attracting today thousands of athletes from around the world. Extreme sports have increasingly transformed into an industry made of huge international events, thousands of active consumers and brands worth millions: for instance, the Triathlon Ironman brand alone is worth US$650 million and attracts about 3,000 athletes generating revenues of US$932 million (Roethenbaugh, 2017).

Extreme sports represent quite well an emerging kind of consumption in which an extraordinary commitment is required by active consumers-participants, spanning from physical and psychological sport training to potential consequences on everyday life (e.g., changes in dietary habits and lifestyle; risk of severe injuries).

The inner characteristics of extreme sports active consumption, as well as its managerial relevance justify extreme sports as the research setting of the present dissertation, which combines insights from some psychological theories examining behavior of extreme individuals with marketing and consumer behavior literature, to provide a comprehensive framework on consumer behavior related to these extreme situations. In other words, this dissertation aims to shed some light on the underlying motives of consumer engagement in such extreme lifestyles and behaviors, providing a representation based on multiple disciplinary perspectives (e.g., psychology, see Taylor, 1983; sociology, see Lyng, 2014, and marketing research).

The investigation of extreme consumption behaviors develops throughout three parts, covering a comprehensive scope of managerially relevant outcomes to strengthen the managerial relevance of this dissertation:

- Part 1 adopts a demand-side perspective, examining the role of psychology-based constructs in determining what drives consumers' upgrading intentions;
- Part 2 adopts a communication perspective, comparing the efficacy of advertising claims set in extreme vs. traditional sports;
- Part 3 adopts a supply-side perspective determining key drivers of revisit intentions in extreme sports events.

3. Dissertation's positioning within sports marketing

The research context chosen for this dissertation further positions it also within the domain of sports marketing research.

The origins of the term "sport marketing" might be dated back to the 1970s, as a 1978 issue of Advertising Age defined sports marketing as "the activities of consumer and industrial product and service marketers who are increasingly using sport as a promotional vehicle" (Gray & McEvoy, 2005).

Despite a unique literary definition of sports marketing is still lacking, it could be noticed that early conceptualizations were conditioned by a limited practitioners' view, which considered sports marketing as just encompassing the primary activities related to selling sports products -for instance, selling tickets and acquiring fans at sport events (Sports Marketing Surveys, 2002)-. In other words, that narrow view of sports marketing barely considered the "sports product" as something related to sports, perhaps reflecting the massive investments related to marketing such events and/or major sports products (Fullerton & Merz, 2008).

The evolution of the sports business has led to a major reconsideration of the sports marketing concept. Scholars labelled the early definition of sport marketing as largely inadequate to describe the evolving situation in the industry, which gradually went through a full acceptance of marketing "as an integral component of the industry" (Fullerton & Merz, 2008, p. 90), thus extending the domain of sports marketing.

Nowadays, sports marketers often sell sports products to a specific target of customers (e.g., sports professionals); at the same time, they market non-sports products

to other market segments, being linked to sport entities in different ways (Fullerton & Merz, 2008). Such dual nature of sports marketing was early conceptualized by Gray & McEvoy (2005), which noted that sports marketing (still intended as a set of activities), could be considered, on the one hand, as "marketing through sport; that is using sport as a promotional vehicle or sponsorship platform for companies that market consumer, and to a lesser extent, industrial products" (2005, p.229); on the other hand, as "marketing of sport", that is, "the application of marketing principles and processes to market goods and services directly to sports participants and spectators" (2005, p. 229). These two aspects translate in strategies which are often interrelated in the real-world business, to the point that a comprehensive definition of sports marketing should encompass both. Accordingly, Gray & McEvoy provided the following broad definition of sports marketing: "the anticipation, management, and satisfaction of consumers' wants and needs through the application of marketing principles and practices" (p. 229). This fundamental dualism of sports marketing (i.e., marketing of sports and marketing through sports), is today quite accepted by scholars (e.g., Shank, 2005; Fullerton, 2007). From a business viewpoint, this dualism is a consolidated practice, and reverberates on many aspects. First and foremost, on the kind of products that are marketed in the industry: marketing actions may be focused on selling sports products, that might be events, sports equipment, sporting goods, and other sport-related products like magazines (Fullerton & Merz, 2008). However, marketing actions may be aimed at selling nonsports products as well, like cars, consumer electronics, food, or watches. In this latter case, sports become marketing platforms (Fullerton & Merz, 2008).

This twofold definition of sports marketing is even more relevant for extreme sports. For instance, on the one hand, over 70% of total revenues in the extreme sports industry is made of merchandising provided to active sports participants: this means that a great deal of the value generated in the industry is related to the marketing of sports products (i.e., equipment, event subscriptions, and so forth). Further, extreme sports have gained, especially recently, a great deal of attention by marketers, which have transformed them into a promising and successful marketing platform. Examples might be the strategies pursued by brands like Red Bull, Sector, and Van's Apparel, which use extreme sports in devising their advertising campaigns to position their brands and products in a distinctive way. This latter point suggests that extreme sports are employed to market nonsports products as well.

Accordingly, this dissertation is articulated in a way to ensure its literary and managerial relevance, thus addressing both sides of sports marketing: on the one hand, focusing on sports products (i.e., investigating drivers of increased consumer spending and sports event revisit intentions) and, on the other hand, on nonsports products (i.e., examining advertising-related perceptions).

Further, this dissertation may contribute to fill a literature gap that refers to the kind of sports in which sports marketing is examined.

Fullerton & Merz (2008) distinguish among different kinds of sports in which sports marketing may operate: namely, spectators sports and participation sports.

In spectator sports, major marketing goals are generally related to passive participation, like: maximizing viewership, media exposures, or events' ticket sales. On

the other hand, participation sports are those sports for which major marketing objectives include, for instance, maximizing demand for equipment and professional apparel (Fullerton & Merz, 2008). Due to their intrinsic characteristics, extreme sports are more ascribable to participation sports.

However, the majority of existing research has mostly concentrated on spectator sports like, for instance, football (Richelieu & Pons, 2006) or basketball (Kwak & Kang, 2009), regarding both sports products (e.g., Kwon & Armstrong, 2006) as well as nonsports products (e.g., Bush, Martin, & Bush, 2004). This appears surprising, at least for two empirical reasons: on the one hand, the massive relevance of marketing sports products for active participants in participation sports industries (for instance, in the extreme sports industry, it makes up 70% of total revenues); on the other hand, the remarkable, recent interest of advertisers in participation sports. Extreme sports are a case in point (see Nike's "The Chosen" campaign, The New York Times, 2011).

Hence, from a sports marketing perspective, the present dissertation aims at extending the two-folded conception of sports marketing to a specific kind of participation sports, which additionally, according to psychology literature, is likely to be denoted by unique features which require a thorough examination combining several disciplinary perspectives.

This dissertation does so throughout three parts. The following sections provide executive summaries for each single part.

3.1.Part 1. Executive summary

Extreme sports are activities which entail an extraordinary effort from participants (both physical and mental), and in which great risks and/or extreme challenges are often involved (Allman, Mittelstaedt, Martin, & Goldenberg, 2009). Examples are skydiving, base jumping, BMX, and snowboarding (Brymer & Houge Mackenzie, 2016), but also bungee jumping (Bentley, Page, & Laird, 2001) and triathlon (Atkinson, 2008).

Extreme sports represent one of the fastest-growing sports industries, in which merchandising makes over 50% of the total industry revenues (Triathlon Business International, 2014). Arguably, despite merchandising is a fundamental source of revenues in the sports industry overall (Correia & Esteves, 2007), in the extreme sports industry, over 70% of merchandising revenues come from active consumer-athletes rather than from passive consumers (e.g., spectators, NerdWallet, 2015). Such expenditures are very often ascribable to events, both directly and indirectly (e.g., training to compete in an event; costs related to accommodation, subscriptions and equipment). The potential of the extreme sports industry is further enhanced by the fast growth of athletes-consumers in extreme sports: for instance, every year, more than 22 million people actively participate in BMX riding (TBI, 2014); snowboarding active participants grew of about 50% from 1999 to 2011, claiming 7.2 million active participants in the US alone.

Surprisingly, empirical investigations into the extreme sports market are lacking. Merchandising consumption has been mostly considered in traditional sports (e.g.,

football; Richelieu & Pons, 2006); in extreme contexts, empirical research is still scant, probably because extreme sports have only recently achieved massive popularity and market booming.

This research addresses extreme sports' novel consumer importance providing a representation of the drivers of consumer intention to upgrade (i.e., the relationship with product/service provider(s)). Despite most of existing marketing research insisted on considering repurchase intentions as a major positive signal in the consumer-provider relationship, some authors suggested that, instead, it often is the decision to enhance the relationship (through higher merchandise spending, more equipment expenditures, higher purchase frequency, etc.) that signals a positive outcome of management of the relationship and increases value for the seller (Visentin & Scarpi, 2012). Such enhancement may comprise up-selling, cross-selling and, in general, an upgrade to the relationship with the partner or brand (Visentin & Scarpi, 2012).

The model proposed in this research hence addresses consumer intention to upgrade in extreme sports, combining two separate streams of literature. A model branch addresses traditional sports marketing drivers of upgrading, well assessed in industrial and relationship marketing, such as loyalty, trust, satisfaction, and image related to extreme sports events.

Further, the model proposes that such constructs might work differently in extreme sports rather than in traditional ones, as extreme activities emphasize a sense of challenge, thrill, risk, and self-improvement and have been shown by psychological literature to induce different behavioral patterns. Thus, basing on two leading

psychological theories examining behavior of individuals facing extreme challenges (i.e., edgework theory and cognitive adaptation theory), an additional, self-enhancement-based model branch addresses further drivers of the intention to upgrade, accounting for the unique psychology of extreme sport active participants. Data were collected by means of a paper and pencil questionnaire administered to athletes participating in two leading championships for extreme sports: the BMX European Cup in Italy and Ironman in Austria. Data collection was carried out on the days in which events took place.

Model estimation was carried out using Structural Equation Modeling (SEM).Model estimation was carried out using Structural Equation Modeling (SEM).

Findings provide some key outcomes:

- There is full support for previous research findings in showing that satisfaction, trust and event image are relevant drivers of loyalty;
- The present study further combines risk-taking attitude, perceived control and image congruence with self-enhancement to demonstrate that they influence the consumer's intention to upgrade. From this viewpoint, findings show that it matters how the event image is interiorized by consumers and experienced in relationship with personal capabilities and self-image;
- Multigroup comparisons show that some consumers' characteristics impact on drivers of the intention to upgrade, namely consumers' age and distance traveled to reach the event venue. On the one hand, younger consumers are driven more than older consumers by self-enhancement; further, loyalty in older consumers is driven mostly by satisfaction, whereas for younger consumers trust is more important than

satisfaction in driving loyalty. On the other hand, risk-taking is important in shaping the intention to upgrade for those coming from afar, whereas control has a greater impact on the intention to upgrade for those coming from nearby. Loyalty is more important in shaping the intention to upgrade for those coming from afar; conversely, self-enhancement is more important in shaping the intention to upgrade for those coming from nearby.

In summary, findings suggest that, in extreme sports settings, traditional marketing drivers are conditioned by other drivers, accounting for the role of personal enhancement, which require looking at consumers on a more personal, psychological level. In other words, drivers of consumer upgrading in extreme sports both include marketing-related variables and features related to the unique psychology of extreme consumer-athletes (perceived control, risk-taking attitude, image congruence, self-enhancement). From a practitioner viewpoint, it is worth to note that these drivers are not mutually exclusive, rather, they should be jointly addressed to maximize the positive outcomes of the relationship between the consumer and the service provider. Psychological drivers included in this study can be explicitly affected by organizers' actions (e.g., emphasizing consumers' perceived control over the event by providing detailed information about the event and about participants; adopting a more customer-based perspective in delivering the image of the event). Further insights for practice can be provided by the multigroup comparisons, suggesting variables to differentiate between different consumer target and how to differentiate strategies between them.

3.2.Part 2. Executive summary

In recent years, sports had become "an important advertising platform for many corporations because of the flexibility, broader reach, and higher levels of brand or corporate exposure that sport platforms afford" (Pyun & James, 2011, p.33). The relationship between sports and advertising goes far beyond sponsoring activities (Olson, 2010), due to its meta-linguistic valence which allow to convey key meanings and appeals, as well as helping to achieve positioning (McDonald, 1996). The influencing power of advertising within sports contexts in terms of consumer perceptions of appeals, brands and products (Chandrasekaran, Srinivasan, & Sihi, 2017) has led sport advertising to become a mass phenomenon, with many brands advertising in the context of sports on any possible media, even for products and services not relating to sports at all (e.g., financial services).

Following the recent, massive popularity of extreme sports, and in a continuous search to find attractive contexts, marketers today are increasingly using such disciplines as an advertising setting; extreme sports are used also by a number of brands that often sell products unrelated to sports (e.g., watches, cameras, perfumes). This real-world evidence suggests the opportunity to managerially investigating extreme sports not just as a consumer phenomenon (see Part 1 of this dissertation), but also as a context of advertising.

When advertising in extreme sports, literature on such sports disciplines and on psychology of extreme participants suggests these contexts to be denoted by unique specificities, especially if compared to traditional sports. Hence, when investigating

extreme sport advertising, differences with traditional sport contexts for advertising should be highlighted. Such differences are likely to rely mostly to the mindset of the individuals into extreme sports, which, indeed, behave and think differently from the average consumer (Buckley, 2012), as, for instance, they perceive painful challenges and threatening difficulties as positive rather than negative, have a high tendency to seek sensations, and enjoy watching and/or doing activities that push their physical and psychological limits as they attribute a cathartic value to difficulties and risky challenges (Laurendeau, 2011).

The present study takes on the theoretical perspective of cognitive adaptation and edgework theory and adopts an explanatory mixed method approach to understand the relationship between ad and sports type (extreme vs. traditional). The main assumption is that, due to their specificities, extreme sports as contexts for advertising work differently than traditional sports; thus, ads must differ and employ different psychological mechanisms.

On the one hand, extreme activities are sought precisely because they require pushing one's physical and mental limits to the edge and are pursued to discover and push forward those limits (i.e., the "edge"; Brymer & Houge Mackenzie, 2016; Milovanovic, 2005). Pursuing increasingly risky challenges feeds individuals' idea of belonging to an elite group of "superior" men/women (Lyng, 2014). In other words, risk-taking is a positive value in extreme sports, leading individuals to undertake extreme difficulties and challenges (Brymer & Schweitzer, 2013).

On the other hand, according to cognitive adaptation theory (Taylor, 1983), difficulties and challenges are present in traditional activities but are unsought and

actively minimized to restore a safe condition (Taylor, 2011). Coherently, actions that threaten self-preservation are often against the rules in traditional sports, where sensationalism does not usually stem from putting oneself in dangerous situations, but from gameplay, extraordinary actions, choreography, etc.

Following this theoretical base, we identify two core elements to interpret the link between sport type and ad appeal focus: difficulty and challenge.

A between-subject experimental design was developed, relying on data from over 700 potential and actual consumers from data panels. Respondents were asked to assess: ad persuasiveness, product attractiveness, brand attitude and purchase intention with respect to mock-up ads set in extreme sports and in traditional sports contexts, respectively. Numerical data are further strengthened by means of a qualitative analysis (content-analysed interviews).

Results show that difficulty- and challenge-based appeals work well for ads set in the context of extreme sports but not when applied to brands advertising in traditional sports. The results hold regardless of the viewer's sports participation (active vs. passive) or favorite sport, which aligns with recent findings in traditional sports (Masanovic, Zoric, & Gardasevic, 2017; Bajramović, Zorić, & Mašanović, 2018). The quantitative findings are further validated by qualitative interviews emphasizing that the psychological meaning and valence of difficulties, risks and challenges are different in extreme sports and in traditional sports, as the authors predicted after examining literature from psychology and sport psychology.

Results suggest that managers should be aware of the psychological meaning that difficulties and challenges acquire in extreme sports. Further, advertisers should be aware that extreme sports lovers do not deny effort, training, dedication and challenge in traditional sports, yet they do not want "common people" to meddle in their disciplines. Additionally, managers might find it useful to know that traditional sport lovers do not want to focus on limits-pushing ordeals, though also traditional sports require a considerable amount of discipline, endurance and hard training. Advertising practitioners may take advantage of the theoretical lenses provided in the present research to assess their current campaigns and to devise future ones.

3.3.Part 3. Executive summary

Events are nowadays the bulk of the extreme sports industry. Weirdly, despite the clear managerial relevance of extreme sports events (in terms of, for instance, massive participation and tourism-related implications), previous research has not addressed revisit intention for sporting events outside of traditional sports (Richelieu and Pons 2006). This study aims to fill this gap by investigating the determinants of revisit intention for extreme sporting events. In doing so, we use concepts and constructs from the psychological literature addressing extreme behaviors, as well as from sport tourism literature; this allows to consider some key specificities of extreme athletes noted by literature in psychology.

Apart from emphasizing extreme individuals' intrinsic need to continuously push further their physical and mental limits, psychological literature additionally

suggested that extreme individuals actively seek sensations which originate from risks (Milovanovic, 2005). Sensation-seeking theory is based on the sensation-seeking personality trait (Schroth, 1995), which refers to the individual need to continuously look for an optimal level of stimulation by means of "the seeking of varied, novel, complex and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experiences" (Zuckerman 1994, p. 27). Recent research argued that individuals denoted by sensation seeking motives have been exhibiting a frequent engagement in extreme sports (Heirene et al, 2016). Hence, from sensation seeking theory, we derive the construct of sensation seeking tendency, and fit (congruence) between the image of the event and the image of the self, while from sport tourism literature we derive the concept of satisfaction. Notably, previous studies have suggested that such intrinsic psychological characteristics of extreme sports may have important marketing implications, but also that marketing related variables might work differently in this context (Self, Henry, Findley, & Reilly, 2007). Accordingly, we investigate how event revisit intentions for extreme active sport tourists could be shaped by not only a set of marketing-related variables usually addressed in the behavioral intentions literature and in traditional sport tourism research, but also by context-specific variables related to the unique psychology of extreme individuals.

The proposed model was tested on data collected through a questionnaire administered to athletes participating in competitions for skydiving, snowboarding,

BMX, and triathlon. A total sample of 240 respondents was collected; the model was tested with the PROCESS macro for SPSS.

Empirical results can be summarized as follows:

- Sensation-seeking indirectly influences revisit intentions through satisfaction;
- The link between event satisfaction and revisit intention was stronger when individuals exhibited a stronger event image fit (i.e., event image fit moderates the relationship between event satisfaction and revisit intentions).

The model gives empirical confirmation of a positive relationship between satisfaction and revisit intentions and shows that it is impacted by the psychological fit between the event and the participants.

The analysis considers those psychological drivers which can be addressed by the actions of event marketers. For instance, managers could address consumers' sensation-seeking tendency by providing increasing levels of difficulty and novelty; this may provide unique competitive benefits, leading to the development of highly-differentiated, innovative events. The moderating effect of image fit may suggest the need to adopt, even in extreme sports event management, a more customer-based perspective in delivering the image of the event, rather than merely pursuing the image desired by event managers. Results of this study suggest that there is a systematic interrelation with event-related features which drive the probability individuals will revisit the event in the future. From a managerial viewpoint, event organizers should hence consider a meticulous definition of how the event deploys and transmits itself and its image to participants.

4. Dissertation's editorial positioning

The three studies composing this dissertation have been submitted for consideration in leading international and national marketing journals. Specifically:

- Part 1 has been the basis for the development of a full research paper currently under consideration on the Journal of Business Research (Elsevier Inc., IF 3.6; first round of review passed as of October 31st, 2018).
- Part 2 has been the basis of a full research paper which is currently under the first round of review on Sport Management Review (Elsevier Inc., IF3.5, under first round of review as of October 31st, 2018).
- Finally, Part 3 has been the basis of a full research paper currently under consideration on Mercati & Competitività (FrancoAngeli Publishing, official journal of the Italian Marketing Society, under first round of review as of October 31st, 2018).

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Part 1.

Drivers of Upgrading among Participants in Extreme Sports Events

Francesco Raggiotto, Daniele Scarpi, Michela Cesarina Mason

Abstract

Merchandising expenditures in extreme sports are a multi-billion market, but contrary to most traditional sports those revenues come mainly from active consumers-athletes rather than from (passive) spectators. We focus on consumers participating in extreme sports to identify the determinants of their intention to upgrade the relationship with the sports brand. A model is developed that addresses psychological theories of extreme behaviors and voluntary risk-seeking on one side, but also marketing drivers of consumers' upgrading on the other side. The model is tested on 580 active participants in two major extreme sports events. The results show that consumers-athletes upgrading is driven not only by loyalty-related marketing variables, but also, and significantly, by self-enhancement-related factors that are specific to the psychology of extreme individuals. This study therefore contributes to the understanding of the determinants of extreme consumers' intention to upgrade, and provides, important implications for managers as well.

1. Introduction

"The world of extreme sports is also one of big business. Kids might think that snowboarding is the ultimate freedom, but this freedom is being marketed to them." *Walker (2013)*

The present research focuses on extreme sports and aims to identify the determinants of participants' intention to upgrade the relationship with the sports brand (through higher merchandise spending, more equipment expenditures, higher purchase frequency, etc.). To do so, this research draws from psychological theories suggesting that consumers who engage in extreme activities are driven by different elements than those who do not (e.g., Brymer & Houge Mackenzie, 2016). As a consequence, we develop a model that includes those specific psychological drivers next to variables already established by marketing literature.

Extreme sports are activities where the participant is subjected to great physical and mental challenges such as speed, height, depth, natural forces, where often risks and/or extreme endurance are involved (Allman, Mittelstaedt, Martin, & Goldenberg, 2009). They are characterized by the involvement in physical prowess and a particular attitude towards the world and the self. Examples are BMX, skydiving, base jumping, snowboarding, cliff jumping and ice climbing (Brymer & Mackenzie, 2016), but also bungee jumping, caving (Bentley, Page, & Laird, 2001) and triathlon (Atkinson, 2008).

Merchandising is a fundamental source of revenues in the sports industry overall (Correia & Esteves, 2007), but is even more so in extreme sports, where over 50% of the revenues come from expenditures on merchandising (TBI, 2014). Yet, contrary to traditional sports, over 70% of revenues come from the active consumer-athletes rather

than from the (passive) spectators (ISPO, 2016; NerdWallet, 2015; Nielsen Scarborough, 2017). And the number of athletes-consumers in extreme sports is large and fast growing: more than 22 million people per year regularly participate in extreme sports such as BMX riding, and snowboarding (TBI, 2014), wakeboarding has surged 32% in the U.S. alone (3.5 million people), snowboarding claims 7.2 million U.S. participants (up 51% from 1999). In addition, the average income of extreme sports athletes-consumers is significantly higher than the national average (ChronReport, 2011), making them a large and appealing target market, with a huge potential.

Despite the relevance of the extreme sports market, merchandising consumption has been considered by scholars mostly in the domain of traditional sports (e.g., football; Richelieu & Pons, 2006). Significantly less attention has been paid to merchandising consumption in extreme contexts, probably because extreme sports have gained momentum only in relatively recent times. Thus, the present analysis addresses the context of extreme sports because of their growing relevance and novelty.

Extreme sports constitute a highly relevant domain also from a theoretical point of view, as classic marketing-related aspects might work differently here (Puchan, 2005; Self, Henry, Findley, & Reilly, 2007). In this vein, literature in psychology has shown that behavioral drivers in extreme contexts work in a different way than they do in traditional ones (Laurendeau, 2006). Specifically, in extreme sports risks are sought rather than avoided (Milovanovic, 2005) and consumers voluntarily undergo extenuating or life-threatening ordeals to push forward their physical and psychological

limits (Brymer & Mackenzie, 2016), feeding the idea of belonging to of an elite group of “superior” men/women (Lyng & Matthews, 2007).

This research bases on cognitive adaptation and edgework theory, that address drivers, motivations and psychological dynamics of individuals that face extreme, or even threatening, situations and challenges (Lyng, 1990). The authors relate those psychological considerations to managerially relevant behaviors and propose that - in extreme marketing contexts- those behaviors could be driven by other aspects than in traditional contexts.

Furthermore, past research usually considered the likelihood-to-repurchase a product or service as a positive outcome of the consumer–brand relationship. However, that consumers do repurchase does not necessarily signal virtuous management and could severely underexploit consumers’ spending power (Bolton, Lemon, & Verhoef, 2008; Visentin & Scarpi, 2012). Instead, it often is the decision to enhance the relationship (through higher merchandise spending, more equipment expenditures, higher purchase frequency, etc.) that signals a positive outcome of management of the relationship and increases value for the seller. Such enhancement is referred to as “upgrading” in a broad sense, comprising up-selling, cross-selling and, in general, an upgrade to the relationship with the partner or brand (Visentin & Scarpi, 2012). Yet, despite its relevance, upgrading in sports marketing, and in extreme sports in particular, has been largely neglected; most studies focus instead on mere repetition of purchase as is. To fill this gap, the present research considers as the main dependent variable the

intention to upgrade rather than mere repurchase), especially in a growing market like that of extreme sports (Xtremesports, 2008).

The paper is organized as follows: the next section relates considerations from cognitive adaptation (Taylor, 1983) and edgework theory (Lyng, 1990) to upgrade intention of participants in extreme sports events. Specific hypotheses are formulated and then combined in a theoretical model. Next, we describe the method and test the model on data collected from participants in extreme sports events. Results are then presented for the model and for multi-group comparisons based on consumers' age and distance travelled to reach the event. The conclusions discuss the findings, providing managerial implications and limitations

2. Theoretical background and hypotheses

In this section, the authors address two theories in psychology that help explain the behavior of extreme individuals: cognitive adaptation (Taylor, 1983) and edgework theory (Lyng, 1990). From those theories, we derive some key constructs that we then link to managerially relevant outcomes and translate into specific hypotheses. The combined hypothesized relationships among the constructs build our theoretical model, which is presented at the end of this section

2.1. Cognitive adaptation- and edgework- based drivers of upgrade

Cognitive adaptation theory (Taylor, 1983) is a theory in psychology that posits that after experiencing adversity, individuals attempts to regain perceptions of control

over their own life. To do so, they activate self-affirmation processes to preserve their identity, to avoid that the adversity compromises their self-image (Steele, 1988). This can be the case, for instance, of an adversity that might disfigure individuals or compromise their self-sufficiency (Schulz & Decker, 1985). In summary, in those cases individuals attempts to feel again in control over their own life, eventually acquiring stronger self-esteem and reaching self-enhancement (Davis, Campbell, Hildon, Hobbs, & Michie, 2015). Although threatening events can occur unexpectedly, a psychological pattern in line with to the one predicted by cognitive adaptation theory can be found also when adversities are instead actively sought by individuals, as in extreme sports.

In this vein, edgework theory is another psychological theory that explains how individuals cope with adversities (Lyng, 1990), but it specifically addresses the case where risks are actively sought. Edgework theory rotates around the concept of voluntary risk-taking, that refers to undertaking risky activities without coercion and with the acknowledgement that risks are being confronted (Milovanovic, 2005). Voluntary risk-taking is at the base of to the willingness to explore and push one's own limits, both physically and psychologically (Brymer & Mackenzie, 2016), and characterizes extreme consumers-athletes (Gyimóthy & Mykletun, 2004).

Accordingly, we read the context of extreme sports through the lenses of cognitive adaptation and edgework theory to understand the drivers of upgrade. In particular, from cognitive adaptation and edgework theory, we derive the constructs of self-image, risk-taking tendency, perceived control, and congruence between the image of the event and the image of the self. These constructs are addressed in the following

sections and are the building blocks of the theoretical model we present at the end of this section. However, whereas previous literature investigated what leads a person to become an edgework individual, mostly from a psychological perspective, we focus on the managerial consequences of addressing a customer base of edgework individuals. Thus, our dependent variable is the intention to upgrade the relationship with the sports brand.

2.1.1. Self-enhancement

The outcome sought (consciously or unconsciously) both by extreme athletes (Gyimóthy & Mykletun, 2004) and by individuals facing threatening events (Gupta & Bonanno, 2010) is self-enhancement, the coming closer to an ideal self. Coherently, words such as independence, ideal self, self-fulfillment, and self-realization were used by individuals to describe extreme sports events (Brymer & Mackenzie, 2016; Hardie-Bick & Bonner, 2016), where athletes are motivated to perform incremental efforts (e.g., in terms of distance covered) on a path to reaching personal limits (Shoham, Rose, & Kahle, 2000; Verchère, 2017).

Sports consumption carries relevant symbolic meanings for individuals' self-image (Kang, Bagozzi, & Oh, 2011). For example, purchase of branded merchandise is highly symbolic and entails meanings related to self-enhancement (Kwak & Kang, 2009). In this vein, also sports participation is a vehicle for self-expression, which individuals see as functional to getting closer to the ideal self (Gyimóthy & Mykletun, 2004). Though this evidence stems mostly from analyses set in the context of traditional

(i.e. not extreme) activities, it appears reasonable to expect that also in extreme contexts feelings and desires for self-enhancement drive the decision to upgrade the relationship with the brand/event. Accordingly, we advance the following

H1. Self-enhancement has a positive impact on intention to upgrade.

2.1.2 Perceived control

Self-enhancement is driven both in extreme sports and in extreme life events by the need to (re)acquire the perception of being in control, of being able to overcome an apparently invincible obstacle (Yan & Bonanno, 2015). The literature highlighted the preeminent role of perceived control in edgework (Milovanovic, 2005), as individuals push themselves to the limit of their ability to maintain control over a specific activity or challenge (Lyng, 2008) and continuously negotiate the edge of their competence and control over the activities they perform (Brymer & Mackenzie, 2016). Overall, the perception of control provides the mindset for successfully facing a challenge, for feeling able to conquer dangerous activities, which in turn leads to feelings of being blessed by a "survival instinct" (Laurendeau, 206) that helps successfully negotiate the edge (Lyng, 1990). Nonetheless, control not only helps extreme sports practitioners face risks but also is key to enjoying the leisure experience (Csikszentmihalyi, 2002; Hardie-Bick & Bonner, 2016). Furthermore, perceived control can be manipulated by external, contextual cues, making it potentially relevant not only from the psychological perception of individuals but also from the managerial perspective. For instance, Laurendeau (2006) found that better-organized edgework activities lead to stronger

feelings of control. Based on these considerations from Edgework theory, we advance the following hypothesis:

H2. Perceived control has a positive impact on self-enhancement.

2.1.3. Risk-taking attitude

Although according to Edgework theory voluntary risk-taking attitude is a characteristic of extreme athletes (Laurendeau, 2006), different studies explained it differently. Dewhirst and Sparks (2003) suggested that risk-taking attitude is a way to reach self-enhancement (e.g., people deciding to start smoking to be perceived as cool). Taylor and Hamilton (1997) conceptualized risk-taking attitude as a way to escape uncomfortable personal states (e.g., depression). Other studies suggested that voluntary risk-taking has social-symbolic meanings and helps one become part of an ideal group of "sophisticated people" (Allman et al., 2009, p. 239). In summary, despite the different perspectives or aims, one might see a consistent underlying link in the literature between risk-taking attitude and self-enhancement. Accordingly, we advance the following hypothesis:

H3. Risk-taking attitude has a positive impact on self-enhancement.

2.1.4 Image congruence

Finally, research in the context of traditional sports has dedicated much attention to the image congruence (or fit) between an event and the brand sponsoring/organizing it (Du, Jordan, & Funk, 2015; Papadimitriou, Kaplanidou, & Papacharalampous, 2016),

identifying image congruence as relevant in affecting purchase intention (Koo, Quarterman, & Flynn, 2006). Extreme athletes have been found to be more innovative and energetic than ordinary consumers (Schreier, Oberhauser, & Prügl, 2007) and to have an intense inner life (Coffey, 2008). Yet, extant contributions appear limited in number and scope when it comes to congruity between the event and the image of the consumer rather than of the brand (with some noticeable exceptions, such as Kwak & Kang, 2009), even more in the context of extreme sports. Nonetheless, congruence with consumer image is a core concept in marketing (Hosany & Martin, 2012; Shamah, Mason, Moretti, & Raggiotto, 2016) and was found to be relevant in a number of consumption contexts, from retail (Das, 2013) to tourism (Usakli & Baloglu, 2011) to food (Shamah et al., 2016). But fit of external events with self-image is a core concept also according to cognitive adaptation and edgework theory, where the assessment of fit between the self and objects external to the self is conceptualized as a search for self-consistency, and as a driver both of processes that allow identity-preservation and of processes that eventually help reaching a new and better self (Davis et al., 2015; Taylor, 1983). Reinterpreting these considerations in our specific domain, we posit that image congruence between the consumer and the event will contribute positively to self-esteem and, ultimately, to feeling better. More formally we advance the following hypothesis:

> **H4.** Image congruence between the self and the event has a positive impact on self-enhancement.

Figure 1 here below provides a graphical representation of the relationships we hypothesize among the constructs derived from adaptation and edgework:

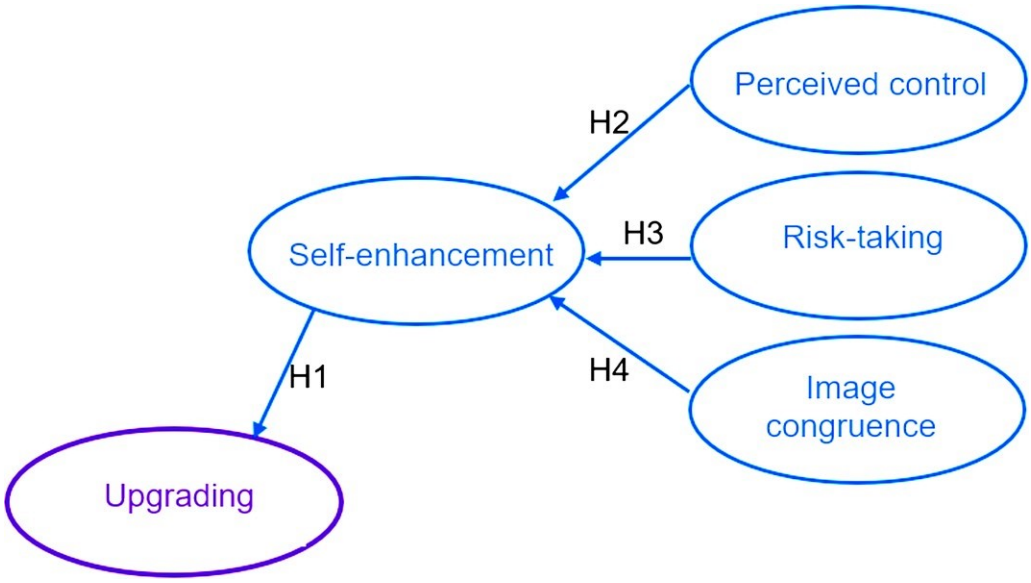


Figure 1. Adaptation and edgework-related branch of the model.

2.2. Marketing-based drivers of upgrade

Although cognitive adaptation and edgework theory provide potentially useful insight in the identification of drivers of the intention to upgrade of extreme sports consumers, the intention to upgrade has been often addressed in marketing literature in other, different domains. Customer upgrading is one of the major Customer Relationship Management activities (Valenzuela, Torres, Hidalgo, & Farías, 2014; Wang & Feng, 2012) and has been mostly analyzed from a supply-side perspective and/or in the context of business relations. Namely, in terms of firm's needed resources (i.e., antecedents) and firm performance (i.e., consequences, Wang & Feng, 2012).

Similarly, drivers of relationship upgrading have been often examined in the context of business-to-business relations, such as buyer-supplier relationships. Fewer and more recent contributions proposed a demand-oriented interpretation, suggesting major antecedents of customer relationship upgrading from consumers' side, and asking for future research in that direction (Valenzuela et al., 2014).

2.2.1 Loyalty

Although different models have been proposed to explain customer upgrade, marketing literature agrees that loyalty is a critical variable in upgrading the customer–brand relationship, maximizing the value that customers have for the brand and leading customers to upgrade their commitment and expenditures (Johnson, Herrmann, & Huber, 2006; Visentin & Scarpi, 2012). In particular, the cognitive loyalty of customers has been found to be very weak to non-relevant for driving their decisions to upgrade (Pedersen & Nysveen, 2001), as cognitive loyalty is anchored to a self-centered assessment of the trade-off between one's own costs and benefits without considering those for the partner (Beverland, Farrelly, & Woodhatch, 2007). In affective loyalty, by contrast, the costs-to-benefits comparison is no longer self-centered but takes into account what the customer gave and what the partner received (Johnson et al., 2006). Affective loyalty has been found to be harder to break (Beverland et al., 2007) and to contribute effectively to upgrading (Visentin & Scarpi, 2012).

Accordingly, we advance the following hypothesis:

H5: Affective loyalty has a positive impact on upgrading.

2.2.2 Satisfaction and trust

Practitioners and academics alike understand that consumer loyalty, trust and satisfaction are intertwined for the positive development of the relationship. An abundant literature has identified both satisfaction and trust as a predictor of loyalty, and research in sports management has identified satisfaction as key to decreasing complaints (Rust & Zahorik, 1993), reinforcing customer retention (Yoshida & James, 2010), increasing patronage behaviors (Kwon, Trail, & Anderson, 2005) and, in two words, building loyalty (Caro & García, 2007). A similar function is done by trust that refers to the reliability that is built through repeat positive evaluations of the experiences one had with the firm or brand (Johnson & Grayson, 2005; Morgan & Hunt, 1994). Trust comprises knowledge of the brand, but also care, concern and affect (Johnson & Grayson, 2005) that lead to developing confidence in the brand. Accordingly, we advance the following hypotheses:

H6: Satisfaction has a positive impact on affective loyalty.

H7: Trust has a positive impact on affective loyalty

When set in the domain of sports, and extreme sports in particular, hypotheses H6 and H7 answer recent calls in the literature (Du et al., 2015) for evidence of the role of satisfaction and trust when the physical performance contributes to the event experience and, possibly, to the relationship with the brand.

2.2.3. Event image

Marketing literature identified the brand image in the eyes of the partners as a relevant driver of their loyalty, and therefore of upgrading, be their industrial (Visentin & Scarpi, 2012) or consumer partner (Marinova & Singh, 2014). In the sports industry, brands are often associated with events, so that the image of the event and the image of the organizing brand overlap (Gwinner & Eaton, 1999; Walker et al., 2013). Consumers imbue sporting events with functional, symbolic, and emotional meanings (Filo, Funk, & O'Brien, 2008), so that event image can be defined as the consumer's holistic interpretation of the meanings (s)he attributes to an event (Gwinner & Eaton, 1999). Extreme sports in particular are often characterized by highly symbolic, iconic events (e.g. Ironman) that have been described as sophisticated (Bennett & Lachowetz, 2004) and innovative (Franke & Shah, 2003) and that are often synonymous of their respective sports discipline. Accordingly, the present research considers event image as brand image, and posits that it could drive the intention to upgrade in extreme sports, advancing the following hypothesis:

H8: event image has a positive impact on affective loyalty.

Figure 2 here below provides a graphical representation of the relationships we hypothesize among the constructs derived from marketing literature on the drivers of upgrade, while Figure 3 illustrates the whole theoretical model.

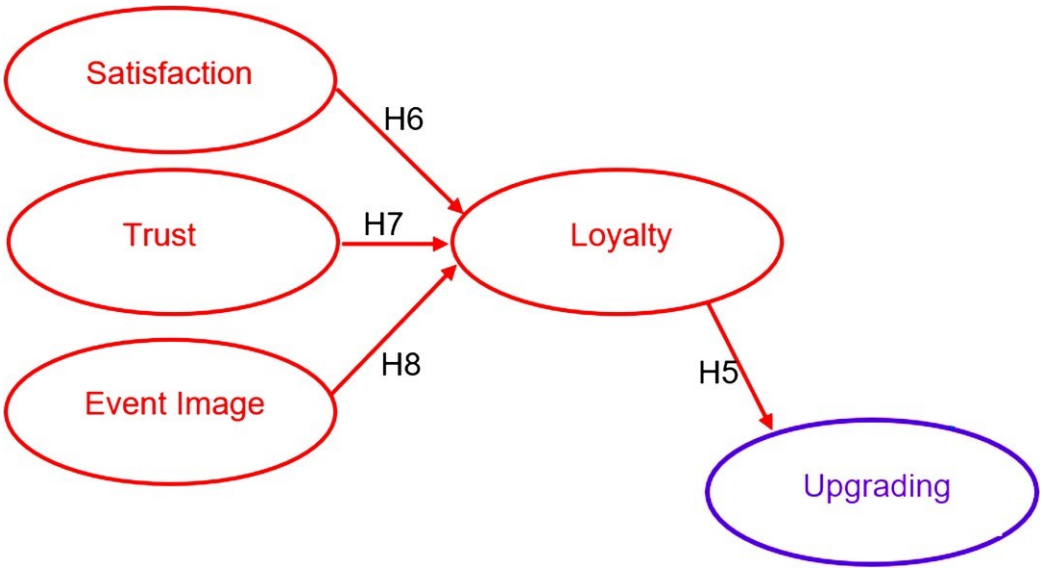


Figure 2. Loyalty-related branch of the model.

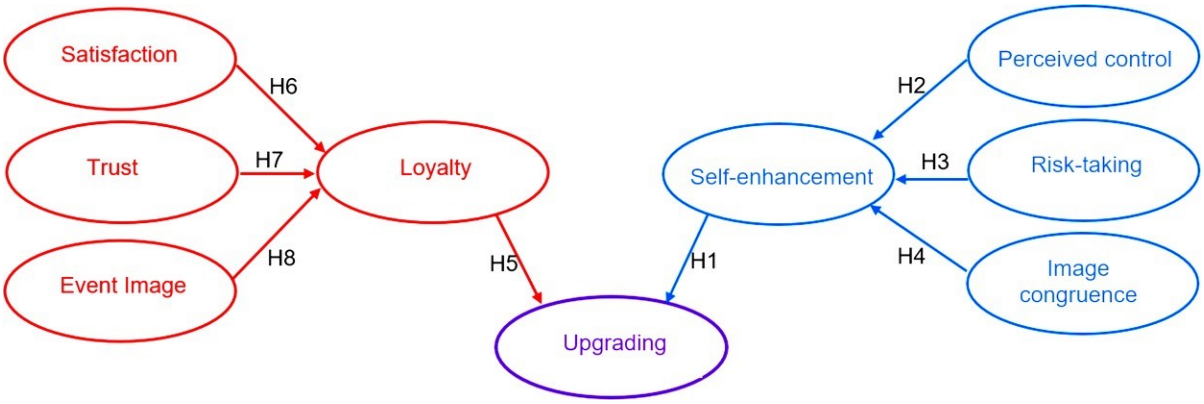


Figure 3. The full theoretical model.

2.3. Distance and age

Finally, previous literature suggested that the distance that consumers travel to reach a venue affects expenditures, attendance, and the need for further activities

(Daniels & Norman, 2003). Accordingly, we split the conceptual model between consumers coming from near and far distances for between-group comparison.

From a managerial perspective, it is instead age that matters: the highest growth in many extreme sports has occurred in the age group over 40, which has the greatest spending power and often comprises a large sector of memberships (often around 30% of annual memberships; Team USA, 2016). Accordingly, we split the model between younger and older athletes for between-group comparison.

3. Method

3.1. Sample and measurements

In extreme sports, over 70% of revenues come from the active consumer-athletes (ISPO, 2016; Nielsen Scarborough, 2017), and most extreme disciplines have developed a specific economic offering, made of different brands, products, and services, usually organized into major events. The economic offerings following events such as the BMX Championships or the Ironman Championships nowadays enjoy such success in marketing their brand (Ironman's revenues alone are U.S. $932 million; Roethenbaugh, 2017) that they are virtually synonymous with extreme sports for most laypersons (Team USA, 2016; University of BMX, 2018), and for the literature (Brymer & Houge-Mackenzie, 2016; Atkinson, 2008). Accordingly, the data were collected in summer 2016 through a questionnaire administered to consumer-athletes

participating in two leading championships for extreme sports: the BMX European Cup in Italy and Ironman in Austria.

In both events, the consumers-athletes had to register and had to wear a numbered bib. Thus, for each event the researchers randomly extracted three-hundred numbers and interviewed the athletes with the matching bib. A total usable sample of 580 respondents was collected (mean age = 41.35; 75.7% males; mean training = 10.30 hrs/week). The participant's demographics compare well with data about the average population into extreme sports (mean age = 44, TBI, 2014; 60-80% males: Group Y Network, 2016; TeamUSA, 2016; 8–12 hrs/week average training: Beer, 2015; University of BMX, 2018).

Following the guidelines by Podsakoff, MacKenzie, Lee, and Podsakoff (2003), the questionnaire was administered personally to minimize the risk of partly completed questionnaires, and the questions were pre-tested on a pilot sample, to ensure they were easy to understand and not ambiguous. Furthermore, to reduce evaluation apprehension and social desirability biases, respondents were reassured there were no right or wrong answers, and were asked to answer questions honestly (Podsakoff et al., 2003).

The questionnaire comprises two parts: the first part briefly introduces the questionnaire and explains that it is an independent research study conducted by a university and that the data are anonymous and will not be sold to anyone; the second part contains the scales for the constructs and sociodemographic questions (age, gender, provenance, training hrs/week).

The present study adopts measures for the intention to upgrade from Visentin and Scarpi (2012), self-enhancement from Shoham et al. (2000), perceived control from Kang, Hahn, Fortin, Hyun, and Eom (2006), risk-taking attitude from Eysenck and Eysenck (1977), image congruence from Gwinner and Eaton (1999), affective loyalty and satisfaction from Picón, Castro, and Roldán (2014), trust from Balaji, Roy, and Lassar (2017), and the measures and procedure for event image from Grohs and Reisinger (2014). Survey items were measured using 7-point Likert scales ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

3.2. Reliability and validity

Anderson and Gerbing's (1988) two-step procedure was followed to ensure an adequate measurement model, that is to examine the relationship between the latent variables and their measures. The confirmatory factor analysis displays a ratio of the chi-square to its degrees of freedom of 3.08, and the other fit indices (comparative fit index [CFI] = 0.96, root mean square error of approximation [RMSEA] = 0.06]) are satisfactory. Thus, the estimated covariance approximates the observed covariance among the constructs. Additional tests assess convergent validity, reliability, and discriminant validity. The confirmatory factor analysis (Table 1) provides strong support for the convergent validity of the measures, with all factor loadings exceeding the recommended 0.6 threshold (Bagozzi & Yi, 1988), the composite reliability (CR) and the average variance extracted (AVE) being greater than the recommended 0.7 and

0.5 thresholds, respectively (Fornell & Larcker, 1981). In the present study, the minimum CR is .81, and the minimum AVE is .56.

Finally, the test of discriminant validity relies on a comparison of the AVE estimate for each construct with the squared correlation between any two constructs (Fornell & Larcker, 1981). Discriminant validity exists if the minimum AVE exceeds the squared correlation between the two variables. Table 2 lists the correlations (below the diagonal) and squared correlations (above the diagonal) among the latent variables. The lowest AVE is 0.56 (perceived control), and the highest squared correlation between any two variables is 0.20 (perceived control and satisfaction). These results confirm the discriminant validity of the constructs. The measurement model thus meets all relevant psychometric properties.

4. Results

We tested all data for normality with a Shapiro-Wilk test (Shapiro & Wilk, 1965), which indicated that the data were not normally distributed (Micceri, 1989). We therefore used structural equation modelling to test the hypotheses, using AMOS 18 and selecting the asymptotically distribution-free estimation method, which is appropriate for large samples (Huang & Bentler, 2015) that are not normally distributed (Byrne, 2010).

4.1. Full model

The model yields no significant differences in the path estimates between the two sampled events ($p(\Delta\chi^2) > 0.10$), and the goodness-of-fit statistics indicate that the proposed model fits the data reasonably well, with a ratio of the chi-square to its degrees of freedom within the 3.0 criterion and a RMSEA value within the 0.08 criterion (Hooper, Coughlan, & Mullen, 2008; Iacobucci, 2010; $\chi^2/df = 2.76$; RMSEA = 0.06; $p(\text{RMSEA} < 0.05) < 0.001$; NNFI, CFI = 0.93). Table 3 lists the structural model results that are graphically presented in Figure 4.

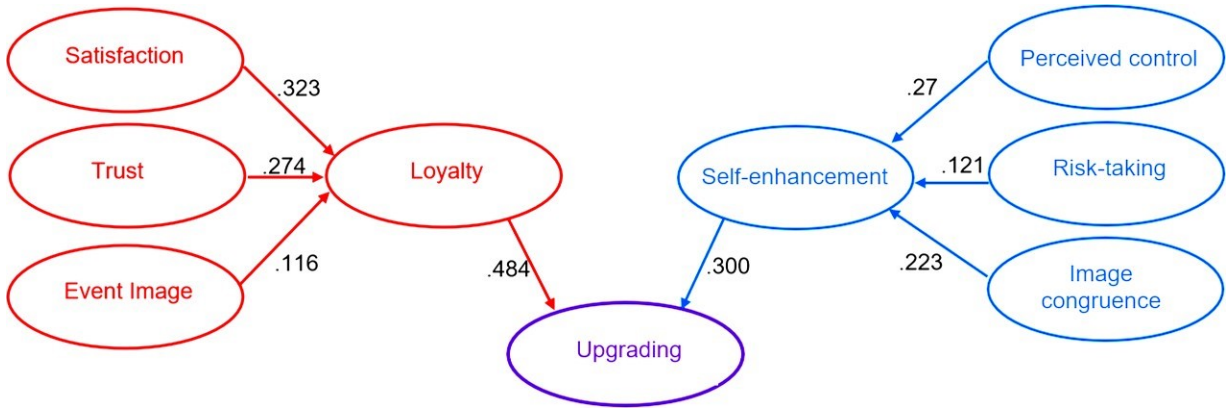


Figure 4. Structural equation modeling results.

As shown in Figure 4, the decision to increase the level of expenditures in equipment and merchandising is driven both by loyalty (β= 0.499) and by self-enhancement (β = 0.300). This evidence supports H1 and H5. In particular, it proves that the self-enhancement-based model branch is a significant addition that contributes to predicting upgrade in the context of extreme sports.

Regarding the self-enhancement-based model branch, the effect of perceived control (β = 0.273), risk-taking attitude (β = 0.121) and image congruence (β = 0.223) on self-enhancement are significant (see Table 3). This evidence supports hypotheses H2, H3 and H4, respectively. As the direct effect of perceived control (β = 0.023, p = 0.65), risk-taking attitude (β = 0.087, p = 0.10) and image congruence (β = 0.084, p = 0.13) on the intention to upgrade is not significant, self-enhancement fully mediates the relationship between perceived control, risk-taking attitude and image congruence on the intention to upgrade. This provides additional support for the robustness of the relationships hypothesized in hypotheses H2, H3 and H4.

Regarding the loyalty-based model branch, the effects of satisfaction (β = 0.323), trust (β = 0.274) and event image (β= 0.116) on loyalty are significant (see Table 3). This evidence supports hypotheses H6, H7 and H8, respectively. As the direct effect of satisfaction (β =, .047, p = 0.57), trust (β = 0.060, p = 0.47) and event image (β = 0.028, p = 0.55) on the intention to upgrade is not significant, loyalty fully mediates the relationship between satisfaction, trust and event image on the intention to upgrade. This provides additional support for the robustness of the relationships hypothesized in hypotheses H6, H7 and H8. Evidence from the loyalty-based model branch compares well to that by previous research that found no direct effect of trust or satisfaction on upgrade, but an indirect through affective loyalty (Visentin & Scarpi, 2012).

The combined evidence of the two branches further highlights that next to the image of the event per se (β = 0.116), it matters also how that image fits with consumers' image of themselves (β = 0.223).

In summary, the findings support the two-branch structure of the theoretical model. At the same time, the results extend studies on the efficacy of loyalty as driver of upgrade showing that there is a whole other branch that affects it significantly, highlighting that edgework-theory related considerations can effectively integrate the understanding of consumers intention to upgrade their relationship with the brand in the domain of extreme activities.

4.2.Multigroup model for distance

To compare participants coming from close and far distance, they have been median split into sub-groups (Iacobucci, Posavac, Kardes, Schneider, & Popovich, 2015) based on the travelled distance (split at 250 Km = 155 miles). The multigroup-model procedure runs the same structural model simultaneously on the different subsets (Byrne, 2010) and shows a reasonable fit (χ^2/df = 2.83; RMSEA = 0.07; p(RMSEA < 0.05) < 0.001; NNFI, CFI = 0.92). We then tested for metric invariance by first constraining all factor loadings to be equal for the two groups and then releasing the constraint, looking at the significance in the variation in the chi-square. A non-significant chi-square difference in comparison shows lack of significant deterioration of model fit ($\Delta\chi^2(181) = 106.54$, $p > 0.10$). This indicates that invariance across the distance groups holds (Van de Schoot, Lugtig, & Hox, 2012).

Estimates for the two groups are reported in Table 4 and shown in Figure 5.

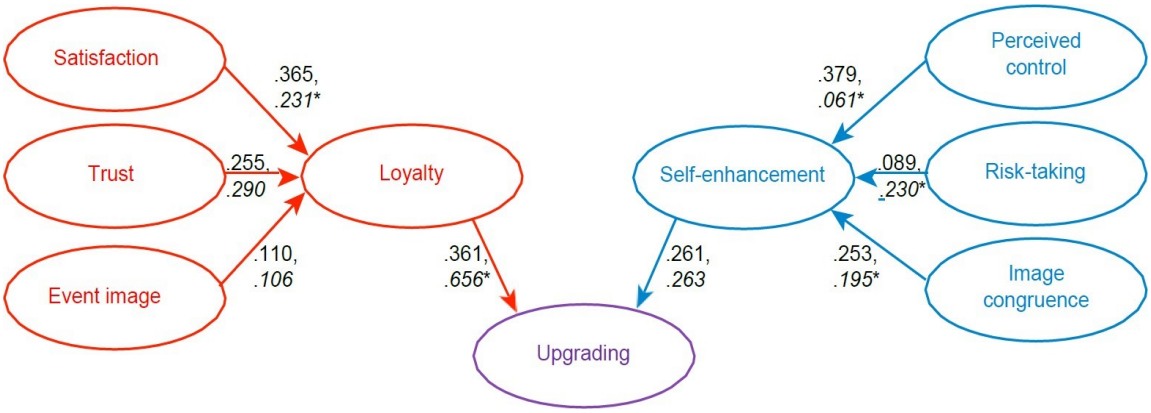


Figure 5. Multigroup model for distance results.

Note: *italics* = *distant consumers*; * = path coefficients between the two groups are significantly different ($p < .05$)

The findings for the multigroup comparison for distance show that self-enhancement has the same impact on upgrading regardless of the distance traveled ($\beta_{close} = 0.261$ vs. $\beta_{far} = 0.263 < p > 0.05$). In turn, self-enhancement is affected more strongly for closer than for distant participants by perceived control ($\beta_{close} = 0.379$ vs. $\beta_{far} = .061$; $p < 0.05$) and image congruence ($\beta_{close} = 0.253$ vs. $\beta_{far} = 0.195$; $p < 0.05$), but less by risk-taking attitude ($\beta_{close} = .089$ vs. $\beta_{far} = 0.230$; $p < 0.05$).

Loyalty has a stronger impact on upgrading for distant than for close consumers ($\beta_{far} = 0.656$ vs. $\beta_{close} = 0.361$; $p < 0.05$). In turn, satisfaction has a stronger impact on loyalty for the latter ($\beta_{close} = 0.365$ vs. $\beta_{far} = 0.231$; $p < 0.05$), while no significant difference is found between groups for the impact of trust ($\beta_{close} = 0.255$ vs. $\beta_{far} = 0.290$; $p > 0.05$) and event image ($\beta_{close} = 0.110$ vs. $\beta_{far} = 0.106$; $p > 0.05$) on loyalty.

Separately, an ANOVA on loyalty shows that participants traveling longer distances are overall not more loyal than those traveling shorter distances ($F(1, 576) = 0.01$, $p = 0.93$, $\eta^2 = 0.001$). Rather, loyalty works differently in the two groups.

4.3. Multigroup model for age

To compare participants of younger and elder age, they have been median split into sub-groups (Iacobucci et al., 2015) based on respondent's age (split at 41 years). The multigroup-model procedure runs the same structural model simultaneously on the different subsets (Byrne, 2010) and shows a reasonable fit ($\chi^2/df = 2.85$; RMSEA = 0.07; $p(RMSEA < 0.05) < 0.001$; NNFI, CFI = 0.90). We then tested for metric invariance by first constraining all factor loadings to be equal for the two groups and then releasing the constraint, looking at the significance in the variation in the chi-square. A non-significant chi-square difference in comparison shows lack of significant deterioration of model fit ($\Delta\chi^2(181) = 117.54$, $p > 0.10$). This indicates that invariance across the age groups holds (Van de Schoot et al., 2012).

Estimates for the two age groups are reported in Table 5 and shown in Figure 6.

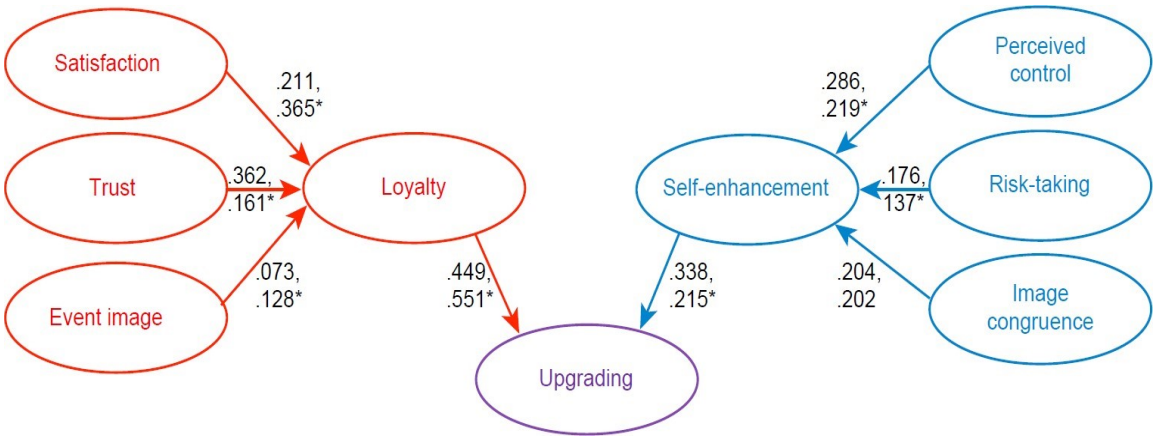


Figure 6. Multigroup model for age results.

Note: *italics = older consumers*; * = path coefficients between the two groups are significantly different ($p < .05$)

The findings for the multigroup comparison for age show that the relationship between self-enhancements and risk-taking attitude is the same for younger and older consumers, ($\beta_{young} = 0.176$ vs. $\beta_{old} = 0.137$; $p > 0.05$). Similarly, for the relationship between self-enhancement and image congruence ($\beta_{young} = 0.204$ vs. $\beta_{old} = 0.202$; $p > 0.05$). Instead, perceived control impacts self-enhancement stronger for younger ($\beta_{young} = 0.286$) than for older consumers ($\beta_{old} = 0.219$; $p < 0.05$). Furthermore, self-enhancement has a greater impact on upgrading for younger ($\beta = 0.338$) than for older participants ($\beta = 0.215$).

Conversely, loyalty has a stronger impact on upgrading for older ($\beta_{old} = 0.551$) than for younger participants ($\beta_{young} = 0.449$; $p < 0.05$). In turn, trust impacts loyalty more in younger ($\beta_{young} = 0.362$) than older participants ($\beta_{old} = 0.161$; $p < 0.05$), while the opposite is found for satisfaction ($\beta_{young} = 0.211$ vs. $\beta_{old} = 0.365$; $p < 0.05$) and event

image ($\beta_{young} = 0.073$ vs. $\beta_{old} = 0.128$; $p < 0.05$). Separately, an ANOVA on self-enhancement shows that older consumers do not feel more self-enhancement than the younger ones ($F(1, 576) = 1.596$, $p = 0.21$, $\eta^2 = 0.003$), thus ruling out that the differential impact on the intention to upgrade is due to different levels of self-enhancement. Rather, self-enhancement works differently between the two groups. Similarly, an ANOVA on loyalty shows that younger consumers are not more loyal than the older ones ($F(1, 576) = 2.058$, $p = 0.15$, $\eta^2 = 0.004$). Rather, loyalty works differently between groups.

5 General discussion

Studies on active participation in sports are very sparse, as the majority of extant literature usually considers passive sport participation, such as fans or watchers (Richelieu & Pons, 2006). Previous studies have probably neglected active participation because in traditional sports the number of athletes is significantly smaller than the number of fans and spectators, and merchandising expenditures come mostly (if not solely) from the latter. Instead, by setting the analysis in the context of extreme sports, the present research answers calls in recent literature to fill a further gap by addressing active participation (Ramchandani, Davies, Coleman, Shibli, & Bingham, 2015), as active participants are responsible for most of the revenues in extreme sports (ISPO, 2016; Nielsen Scarborough, 2017).

This research offered a parsimonious but powerful representation of the drivers of the intention to upgrade that combines two separate streams of literature: on one

hand, a branch addressing in sports marketing drivers of upgrading that are familiar and well assessed in industrial and relationship marketing, such as loyalty, trust, satisfaction, and image. On the other hand, this research posed that those constructs might tell only part of the story in the context of extreme sports, because extreme activities emphasize a sense of challenge, thrill, risk, and self-improvement and have been shown by psychological literature to induce different behavioral patterns. Thus, basing on the psychological literature on edgework theory and cognitive adaptation, a self-enhancement-based branch was developed in the model that addresses further drivers of the intention to upgrade, pertaining to unique psychology of edgework individuals.

The findings validate previous research in showing that satisfaction, trust and event image are relevant drivers of loyalty and answer calls for a better understanding of upgrading in the B2C context (Scarpi & Visentin, 2015). They also add that while event image might be functional to attracting consumers from afar to a sports venue (Brown, Smith, & Assaker, 2016), image it is less relevant for making consumers upgrade their relationship with the brand. The findings also expand the framework by introducing the concept of self-enhancement, adapted from the psychological theory of edgework. The present study further combines risk-taking attitude, perceived control and image congruence with self-enhancement to demonstrate that they influence the consumer's intention to upgrade. In addition, the findings show that it matters how the event image is interiorized by consumers and experienced in relationship with personal capabilities and self-image.

Furthermore, findings from multigroup comparisons show that the drivers of the intention to upgrade depend on consumer's age and the distance traveled to reach the event venue. Specifically, younger consumers are driven more than older consumers by self-enhancement. Moreover, loyalty in older consumers is driven mostly by satisfaction, whereas for younger consumers trust is more important than satisfaction in driving loyalty. This recalls the suggestion of some scholars noting that younger consumers usually devote much resources to developing their own consumer knowledge (Mittal & Kamakura, 2001); as they go through this process, they are more likely to rely on perceptions of trust to compensate for such lack of experience. Moreover, with regard to the distance traveled to reach the sports venue, risk-taking is important in shaping the intention to upgrade for those coming from afar, whereas control has a greater impact on the intention to upgrade for those coming from nearby. Loyalty is more important in shaping the intention to upgrade for those coming from afar; conversely, self-enhancement is more important in shaping the intention to upgrade for those coming from nearby.

Overall, our findings show that loyalty is a necessary step toward upgrading but is flanked by other drivers. These drivers account for the role of personal enhancement and require looking at consumers on a more personal, psychological level. When these additional, psychological factors are accounted for, intention to upgrade emerges as a combination of loyalty, satisfaction, trust and event image but also of self-enhancement, risk-taking attitude, perceived control, and image congruence. Loyalty should not be pursued as the single goal by extreme sports brands: giving consumers a sense of self-enhancement is nearly equally important in upgrading the relationship with them.

In a nutshell, the present research shows that in extreme sports the drivers of upgrading include both marketing-related variables (satisfaction, trust, event image, loyalty) and features related to the unique psychology of extreme consumer-athletes (perceived control, risk-taking attitude, image congruence, self-enhancement). These drivers are not mutually exclusive. Rather, they should be jointly addressed for a richer understanding of extreme consumers' upgrade intention.

6. Managerial implications

By setting the analysis in the context of extreme sports, whose estimated worth exceeds $US 6 billion (Forbes, 2014), and by focusing on upgrading, the present research might offer useful implications to practitioners. Marketers are directing their efforts from customers' mere satisfaction with the status quo to customer intentions to upgrade in the future, through buying more (or more expensive) equipment, services, and products, as witnessed both in academic (Marinova & Singh, 2014) and managerial literature (Apptivo, 2016).

This research clearly shows that both individual and event-related factors drive the intention to increase activities and purchases. In other words, the bond between athletes and event can be strengthened if the organizers create opportunities to improve the relationship with participants, trading-up with the same customer base. The present research explicitly addresses psychological drivers that can be affected by event organizers' actions. Managers could emphasize consumers' perceived control over the event by providing information about the percentage of those who complete the event, their age, their level of training, the number of medical interventions, and so on (all information that, in the sampled events, the organizers had available, but did not think

about disclosing to the participants). Similarly, image congruence between the self and the event also affects self-enhancement and, in turn, the intention to upgrade, suggesting that managers should adopt a more customer-based perspective in delivering the image of the event rather than merely pushing their own preferred image. This is to say, managers should be aware that the intention to upgrade is driven not only by the image of the event itself, but also by how such image fits the self-perception of the customers and inasmuch as it helps them achieve self-enhancement. The more consumers feel that the event fits with themselves and helps them improving, the more they will increase their expenditures.

Furthermore, organizers usually are fully aware of the age distribution and can often rely on the time series (e.g. in the present research we sampled events that have been taking place for years). The findings from the present research show that age matters, in that for younger consumers the two drivers of upgrading (loyalty and self-enhancement) are built mainly by trust regarding the event and by perceived control, respectively, whereas they are built mainly by satisfaction and perceived control for older consumers. Thus, managers might consider diversifying their communication by age group accordingly.

Similarly, managers usually have a clear picture of the distance traveled by athletes, as athletes usually must register to the event and provide a zip code alongside their name. The present findings suggest that also the distance traveled has an impact on what drives upgrading. Specifically, perceived control for consumers that come from closer distances, and risk-taking attitude for consumers coming from farther distances. Again, this evidence would suggest how to target different groups.

7. Limitations and future research

This study is not meant to be conclusive nor exempt from limitations. First, the conceptual model is based (also) on edgework and cognitive adaptation, yet different psychological perspectives on extreme sports have been developed (like, for instance: Sensation Seeking Theory, Zuckerman, 1979; reversal theory, see Apter, 2001) that were neglected in this study in order to provide a more operationalizable model.

Second, the present research did not address the possible role of the sports event venue, although literature in tourism has shown that event and destination images could interact to influence behaviors (Kaplanidou & Vogt, 2007).

Nevertheless, the authors believe that the complementarity of self-enhancement and loyalty in driving upgrading, as well as the different responses of specific consumer segments, offer useful insights, and invite researchers and practitioners to envision extreme sports events within a broader framework. In this vein, future research could include an analysis of the motivations leading consumers to participate in extreme sports and voluntarily endure risks and potential threats. In addition, future research could investigate also passive participants in extreme sports, to identify what features can boost the probability of turning it into active participation.

Tables

Table 1. Construct measures and confirmatory factor analysis results.

Measures	Factor loading	CR	AVE
Intention to upgrade		0.92	0.79
As a result of attending this event, I will purchase more frequently new sport equipment.	0.77		
As a result of attending this event, I will increase my expenditures for sports merchandise.	0.96		
As a result of attending this event, I will purchase more sports equipment.	0.92		
Affective loyalty		0.86	0.67
I really like attending this event	0.81		
To me, this event is clearly the best one in which to perform	0.85		
I believe this is a good event	0.79		
Self-enhancement		0.94	0.79
I am a better person than I was when I began this event.	0.84		

Measures	Factor loading	CR	AVE
I have not changed much since I began this event (reversed).	0.89		
This event has changed my perspective	0.93		
Being able to measure my improvement helps me become better at this event/activity.	0.89		
Trust		0.81	0.59
I trust this event.	0.70		
I have a trustworthy perception of this event.	0.88		
I have confidence in this event.	0.72		
Satisfaction		0.89	0.70
This event meets my needs.	0.86		
This event is as good as or even better than other events.	0.81		
This event gives me what I expect.	0.80		
In general, my experience with this event is positive.	0.88		

Measures	Factor loading	CR	AVE
Event image		0.94	0.79
This event is cool.	0.94		
This event is innovative.	0.87		
This event is active.	0.94		
Risk-taking tendency		0.89	0.68
I often long for excitement.	0.87		
I quite enjoy taking risks.	0.82		
I often long for excitement.	0.87		
Perceived control		0.81	0.56
It is easy to perform at this event.	0.77		
As far as this event is organized, it is easy for me to perform in it.	0.72		
There are few obstacles for me to perform in this event.	0.80		

Measures	Factor loading	CR	AVE
Image congruence		0.90	0.76
This event and I have a similar image.	0.82		
The ideas I associate with myself are related to the ideas I associate with this event.	0.80		
My image of this event is very different from the idea I have of myself.	0.98		

Table 2. Means, standard deviations, correlations, and squared correlations.

Variables		Mean	Standard deviation	1	2	3	4	5	6	7	8	9
1	Image congruence	4.2	1.6	1	0.12	0.18	0.03	0.02	0.05	0.01	0.02	0.00
2	Trust	4.4	1.4	0.34	1	0.13	0.08	0.06	0.12	0.09	0.03	0.01
3	Upgrade	4.6	1.3	0.42	0.36	1	0.06	0.09	0.12	0.11	0.01	0.01
4	Event image	4.9	1.2	0.19	0.29	0.25	1	0.01	0.05	0.07	0.02	0.00
5	Self-enhancement	4.3	1.5	0.13	0.25	0.30	0.09	1	0.06	0.03	0.00	0.00
6	Perceived control	4.9	1.3	0.22	0.34	0.34	0.23	0.25	1	0.20	0.01	0.00
7	Satisfaction	5.3	1.1	0.09	0.30	0.33	0.26	0.17	0.45	1	0.00	0.00
8	Risk-taking	3.4	1.5	0.15	0.17	0.11	0.14	0.03	0.11	0.06	1	0.01
9	Affective loyalty	5.2	1.3	0.04	-0.08	0.08	-0.03	-0.06	-0.05	-0.07	-0.12	1

Notes: Squared correlations are listed above the diagonal, with correlations below the diagonal

Table 3. Structural equation modeling results.

Hypothesis	Path	Estimate (*SE*)	p-value
H1	Self-enhancement ⟶ upgrading	0.300 (0.058)	< 0.001
H2	Perceived control ⟶ self-enhancement	0.273 (0.051)	< 0.001
H3	Risk-taking attitude ⟶ self-enhancement	0.121 (0.048)	0.012
H4	Image congruence ⟶ self-enhancement	0.223 (0.049)	< 0.001
H5	*Loyalty ⟶ upgrading*	0.484 (0.073)	*< 0.001*
H6	*Satisfaction ⟶ loyalty*	0.323 (0.061)	*< 0.001*
H7	*Trust ⟶ loyalty*	0.274 (0.052)	*< 0.001*
H8	*Event image ⟶ loyalty*	0.116 (0.043)	*0.007*

Note. Fit: χ^2/df = 2.76; RMSEA = 0.06; p(RMSEA < 0.05) < 0.001; NNFI, CFI = 0.93.

Table 4. Multigroup model for distance results.

Path	Group	Estimate (SE)	p-value
Self-enhancement ⟶ upgrading	Close	0.261 (0.078)	< 0.001
	Distant	*0.263 (0.061)*	*< 0.001*
Perceived control ⟶ self-enhancement	Close	0.379 (0.061)	< 0.001
	Distant	*0.084 (0.067)*	*0.205*
Risk-taking attitude ⟶ self-enhancement	Close	0.089 (0.054)	0.098
	Distant	*0.230 (0.069)*	*< 0.001*
Image congruence ⟶ self-enhancement	Close	0.253 (0.054)	< 0.001
	Distant	*0.195 (0.066)*	*0.003*
Loyalty ⟶ upgrading	Close	0.361 (0.098)	< 0.001
	Distant	*0.656 (0.078)*	*< 0.001*
Satisfaction ⟶ loyalty	Close	0.365 (0.064)	< 0.001
	Distant	*0.231 (0.079)*	*0.004*
Event image ⟶ loyalty	Close	0.110 (0.054)	0.043
	Distant	*0.106 (0.053)*	*0.045*
Trust ⟶ loyalty	Close	0.255 (0.059)	< 0.001
	Distant	*0.290 (0.079)*	*< 0.001*

Note. Fit: χ^2/df = 2.83; RMSEA = 0.07; p(RMSEA < 0.05) < 0.001; NNFI, CFI = 0.92.

Test for metric invariance: $\Delta\chi^2(181) = 106.54$; $p > 0.10$

Table 5. Multigroup model for age results.

Path	Group	Estimate (SE)	p-value
Self-enhancement ⟶ upgrading	Younger	0.338 (0.081)	< 0.001
	Older	*0.215 (0.062)*	< 0.001
Perceived control ⟶ self-enhancement	Younger	0.286 (0.078)	< 0.001
	Older	*0.219 (0.055)*	< 0.001
Risk-taking attitude ⟶ self-enhancement	Younger	0.176 (0.063)	0.249
	Older	*0.137 (0.061)*	0.026
Image congruence ⟶ self-enhancement	Younger	0.204 (0.056)	< 0.001
	Older	*0.202 (0.065)*	0.002
Loyalty ⟶ upgrading	Younger	0.449 (0.092)	< 0.001
	Older	*0.551 (0.082)*	< 0.001
Satisfaction ⟶ loyalty	Younger	0.211 (0.081)	0.009
	Older	*0.365 (0.064)*	< 0.001
Event image ⟶ loyalty	Younger	0.073 (0.063)	0.249
	Older	*0.128 (0.047)*	0.006
Trust ⟶ loyalty	Younger	0.362 (0.076)	< 0.001
	Older	*0.161 (0.062)*	0.009

Note. Fit: χ^2/df = 2.85; RMSEA = 0.07; p(RMSEA < 0.05) < 0.001; NNFI, CFI = 0.90.

Test for metric invariance: $\Delta\chi^2(181) = 117.54$; $p > 0.10$

Part 2

Advertising on the edge: appeal effectiveness in extreme sports

Daniele Scarpi, Francesco Raggiotto, Andrea Moretti

Abstract

Nowadays, extreme sports are a solid industry enjoyed by millions of people, and many brands use extreme sports as contexts for advertising. Interpreting extreme sports through different psychological theories, in two experiments the authors compare the effects on persuasiveness, product attraction and behavioral intention of challenge- and difficulty-focused messages in extreme and traditional sports contexts, for high- and low-involvement brands. They find those appeals to affect ad persuasiveness, product attractiveness, purchase intention, and willingness-to-pay positively in extreme sports, but negatively in traditional sports. Follow-up qualitative interviews highlight that extreme and traditional sports are perceived as different worlds. Results hold regardless of consumers' participation type or preferred sport type.

1. Introduction

There is a tight relationship between sports and advertising. Sports can be incorporated in advertising and used as a context to convey advertising appeals, and the most obvious example is sports sponsorship. But besides sponsoring activities (Olson, 2010), sports often serves as a meta-linguistic tool to convey specific meanings and appeals and to achieve positioning (McDonald, 1996), as advertising within sports contexts can influence consumer perceptions of appeals, brands and products (Chandrasekaran, Srinivasan, & Sihi, 2017). In this vein, seven years ago, Pyun and James (2011) noted how sport had become "an important advertising platform for many corporations because of the flexibility, broader reach, and higher levels of brand or corporate exposure that sport platforms afford" (p.33). Their words have been prophetic, as seven years later sport advertising has become a mass phenomenon and has wildly trespassed that original domain. Nowadays, hundreds of brands advertise in the context of sports on any possible media, including social media, even for products and services that are unrelated to sports (e.g. Unicredit Bank).

In the 2000's, the phenomenon under everyone's eyes was sport advertising, and everyone meant by that traditional sports, as the interest of major brands in extreme sports was very limited (Puchan, 2005a). While Lyberger and McCarthy (2001) and Pyun and James (2011), among many others, highlighted in those years the importance of evaluating the effectiveness of advertising in traditional sport, the present research highlights instead the importance of investigating the effectiveness of advertising in extreme sports. In the 2000's there was no need to specify that "sports" were traditional

sports when investigating sport advertising. Even the name “extreme sport” came later, as ‘free sports’, ‘adventure sports’, ‘lifestyle sports’, ‘alternative sports’ and ‘action sports’ were competing and often confusing terms (Brymer & Houge Mackenzie, 2016). But extreme sports saw a gargantuan growth in popularity since the 2000’s: from being a young, largely unknown and niche phenomenon, they become a whole new multi-billion dollars industry (NFS-Sport Management 2017). For instance, wakeboarding has surged 32% in the US alone (3.5 million people), Triathlon claims over 6 million U.S. participants, and BMX participation has grown so much that it is now an Olympic sport (Xtremesports, 2008; Triathlete, 2014; Team USA, 2016). Overall, more than 22 million people per year regularly participate in extreme sports in the US alone (TBI, 2014) (that’s half the population of Spain, or two-thirds the population of Canada), be it BMX (Bennett & Lachowetz, 2004), skydiving, base jumping, snowboarding, cliff diving, or ice climbing (Brymer & Houge Mackenzie, 2016) as well as bungee jumping, caving (T A Bentley et al., 2001) or triathlon (Atkinson, 2008) for extreme endurance.

This growth in popularity that has been witnessed globally (Thorpe, 2014; Forward with Toll, 2016), and annual extreme sports events such as the X Games are attended by hundreds of thousands of people (STATISTA, 2018a) and viewed by about a million (STATISTA, 2018b). Marketing and advertising investments in extreme sports have increased to catch up, as reflected by the interest in extreme sports of internationally renowned brands and media operators, and by the number of advertising campaigns set into the context of extreme sports. For instance, Red Bull has been a pioneer in advertising its products in the context of snowboarding, BMX, and extreme

motor racing. But many other brands advertise their products in the contexts of extreme sports, from Timex watches to Oakley glasses, from Argon 18 bicycles to Vans apparel.

In their rush to find trendy new sports disciplines and attractive contexts, now that the context of traditional sports has been consolidated (and maybe exploited), marketers today are increasingly using extreme sports as an advertising setting, drawing from their imagery to communicate values and visions and to enlarge their customer base; extreme sports are used also by a number of brands that often sell products unrelated to sports (e.g., watches, batteries, cameras, perfumes). Even advertising strategies from major producers of traditional sports equipment set their advertising in the context of extreme sports, like the 2011 Nike campaign 'The Chosen,' likely to engage a new market segment whose estimated potential in revenue was $390 million for Nike alone (The New York Times, 2011). Last but not least, the spending power of extreme sports lovers tends to be higher than the national average (ChronReport, 2011).

This evidence highlights the relevance of finally investigating also extreme sports as a context of advertising. As Pyun and James (2011) anticipated, advertisers continue to look for new techniques, media and contexts for advertising. This process that initially lead to the "discovery" of sport as a context for advertising, has eventually lead to the discovery and exploitation of extreme sports.

In addition, when investigating traditional sport advertising, Pyun and James (2011) noticed a difference with non-sport contexts for advertising. This difference was in the higher level of commitment and involvement from the spectators and could be ascribed to a different mind-set of the individuals compared to a non-sport audience. In

a similar fashion, when investigating extreme sport advertising, we highlight a difference with traditional sport contexts for advertising. And again, this difference lies in the mindset of the individuals. People into extreme sports, indeed, behave and think differently from the average consumer (Buckley, 2012): they perceive painful challenges and threatening difficulties as positive rather than negative, have a high tendency to seek sensations, and enjoy watching and/or doing activities that push their physical and psychological limits as they attribute a cathartic value to difficulties and risky challenges (Laurendeau, 2011). Unable to explain the behavior of individuals who love extreme activities, the literature in psychology has advanced edgework theory (Lyng, 2014; Brymer & Houge Mackenzie, 2016), posing that such individuals voluntarily seek out challenges (Bunn, 2017), pain, and potential danger (Laurendeau 2011), driven by feelings of self-enhancement and invincibility through struggle. Yet, few studies—if any—have so far translated these considerations into the domain of advertising. Thus, the question is left open as to whether something has to be changed when switching from traditional to extreme sports as a setting for the communication. And given the multi-billion-dollar value of extreme sports (Ironman's revenues alone are U.S. $932 million; Roethenbaugh, 2017), this question is no mere academic speculation.

In the present research, the authors adopt the theoretical perspective of cognitive adaptation and edgework theory to understand the relationship between ad and sports type (extreme vs. traditional). This theoretical base would help explain some of the mixed outcomes in the success of previous advertising campaigns by brands that staged

themselves in the context of extreme sports, and would provide a rationale for the dos and don'ts for brands considering advertising in the context of extreme sports. The underlying assumption and—ultimately—the main finding of the present research is that, due to their specificities, extreme sports as contexts for advertising work differently than traditional sports; thus, ads must differ and employ different psychological mechanisms.

Finally, it is worth noticing that literature in sport advertising is currently facing two challenges. On one hand, the efficacy of sport advertising has been assessed in terms of recall, message memorization and attitudes toward the ad, rather than assessing more behavioral consequences, such as for instance purchase intention. On the other hand, most of the previous studies on sport advertising have suffered from the limitation of relying on students as respondents (and mostly US students from specific U.S. areas; Lee, Kwak, Lim, Pedersen, & Miloch, 2011), thus threatening the external validity of their findings. Although the use of students as respondents is largely accepted, it should be integrated with validation on the field (Bellezza, Gino, & Keinan, 2014). For instance, acknowledging this methodological issue, Wolfsteiner, Grohs, and Wagner (2015) corroborated their findings on sport advertising and ambush marketing with a survey study. To provide an answer to these challenges, the present research focuses on message persuasiveness, product attractiveness, willingness to pay and purchase intention to measure sport advertising effectiveness, relying on data from hundreds of potential and actual consumers from data panels.

The paper is organized as follows: the next section relates considerations from cognitive adaptation (Taylor, 1983) and edgework theory (Lyng, 2014) to advertising appeals related to difficulty and challenge. Specific hypotheses are formulated and then tested in two experiments comparing ad efficacy in the context of traditional and extreme sports. Additional insights to the numerical evidence from the two studies is provided by a further qualitative analysis. The conclusions discuss the findings, providing managerial implications and limitations.

2. Theoretical background and hypotheses

After years of ambiguity between terms such as 'free sports', 'adventure sports', 'lifestyle sports', 'alternative sports' and 'action sports', there still is no shared agreement in the literature about an exact definition of extreme sports, (Brymer & Houge-McKenzie, 2016). Yet, there is agreement that extreme sports are activities where individuals love pushing the physical and psychological limits of their personal safety (Le Breton, 2000) and/or endurance (Atkinson, 2008), and love taking risks, as a wrong move could lead to significant injury (e.g. in performing a trick in BMX; Kusz, 2003; or risks of heart failure in Triathlon; Annals of Internal Medicine, 2017).

As Lee et al. (2011) suggested in their -mostly unanswered- pioneering call for studies on extreme sports advertising, the key for understanding advertising in the context of extreme sport is understanding consumers' psychology. While they investigated consumers' psychology in terms of personal involvement and attitudes

toward sport, nowadays much more is known about the psychological drivers of consumers of extreme sports. Specifically, studies in psychology have assessed that extreme sport consumers adhere to a behavioral pattern of voluntarily exposing themeselves to dangers, so that literature in psychology agrees that extreme activities are a setting where individuals think differently, displaying unique psychological drivers and reactions (Lyng, 2014), and sports are no exception (Buckley, 2012). So much so that neither the literature in psychology nor the literature in sport management have used the difficulty in the performance or the sense of challenge in the execution as criterion to separate between traditional and extreme sports. Instead, it is the participant's deliberate willingness to actively seek (avoid) dangerous situations (Lyng, 2014; Laurendeau, 2011) envisioning them with positive (negative) value and meanings (Laurendeau, 2011) that characterizes extreme (traditional) sports. Extreme activities are sought precisely because they require pushing one's physical and mental limits to the edge and are pursued to discover and push forward those limits (i.e., the "edge"; Brymer & Houge Mackenzie, 2016; Milovanovic, 2005). The ultimate goal for extreme sport lovers is feeling strong sensations by successfully overcoming ordeals (Gyimóthy & Mykletun, 2004; Beckman, Whaley, & Kim, 2017), and this feeds the idea of belonging to an elite group of "superior" men/women (Lyng, 2014). In summary, risk-taking is a positive value in extreme sports, leading to, rather than discouraging, undertaking extreme difficulties and challenges (Brymer & Schweitzer, 2013). Thus, extra difficulties are not uncommonly added to already-challenging situations to make them even harder and to provide even more sensation. But while marketers have

grasped the visual, spectacular side of extreme sports, they may have neglected the psychological underlying mechanisms.

Cognitive adaptation theory (Taylor, 1983; Taylor, 2011) explains instead threat-related behaviors in traditional activities. According to cognitive adaptation, difficulties and challenges are present in traditional activities but are unsought and actively minimized to restore a safe condition (Taylor, 2011). Indeed, situations pushing one to the limits and exposing one to difficulty lead to painful psychological processes of positive adjustment (Taylor et al., 2003) to rebuild self-identity and to minimize the perception of those challenges and difficulties (Jayawickreme & Blackie, 2014). Coherently, actions that threaten self-preservation actions are often against the rules in traditional sports, where sensationalism does not usually stem from putting oneself in dangerous situations, but from gameplay, extraordinary actions, choreography, etc.

Literature has widely documented that congruency between the message and the picture used in an ad is a powerful driver of positive reactions (Moorman, Neijens, & Smit, 2002) and that congruency in general positively affects various kinds of consumer responses, such as credibility and perceived value (Orth & Malkewitz, 2008); Van Rompay & Pruyn, 2011), be it congruency between visual and verbal information (Heckler & Childers, 1992), product type and color (Bottomley & Doyle, 2006), or shape and typeface (Van Rompay & Pruyn, 2011). Yet, congruency or fit-based theories such as perceptual fluency (Reber, Winkielman, & Schwarz, 1998) would be unable to provide an explanation of the difference between traditional and extreme sports in this regard, as the latter do not fit better with difficulty and challenge

than the former. Indeed, the difficulties and challenges found in traditional and extreme activities often require similar levels of training and dedication, self-discipline, and self-regulation (Brymer, 2010), but the sets of cognitive, behavioral, and motivational processes they activate are very different, if not opposites (Laurendeau, 2011; Lyng, 2014). Consistently, literature in sport psychology has posited metacognitive inferences and domain-general skills as integral to the genesis of performance in sports (Ericsson, 2006). Training athletes to develop and engage in metacognition equips them with the proper beliefs and mental setting to excel in sports, be their traditional or extreme (MacIntyre, Igou, Campbell, Moran, & Matthews, 2014). Yet, the required mental setting of thoughts and feelings is different between traditional and extreme sports (e.g., Laurendeau, 2011), so that the psychological skills and self-regulation differ and lead to the application of different psychological strategies (MacIntyre et al., 2014), triggering different meta- cognitive control processes that allow a different mind-set in accordance with the perceived task demands (MacIntyre & Moran, 2012). Contemporary evidence from cognitive psychology further supports the different valence of difficulties and risky challenges between traditional and extreme sports, as they activate a different meta- imagery, that is "beliefs about the nature and regulation of their own imagery skills" (Moran, 2002, p. 415). Meta-imagery refers to the voluntary nature of imagery and the conscious awareness during sport tasks and has recently received attention in psychology, emerging as key in differentiating individuals engaging in sport activities (Moran et al., 2012). By asking sport enthusiasts to indicate what mental imagery processes they used, literature documented that athletes employ imagery in creative

ways while living the sport experience, beyond the mere activation of motor skills (MacIntyre & Moran, 2007). Meta-imagery is sometimes akin to introspection (MacIntyre et al., 2014), and in this vein, literature has found that individuals participate in extreme sports driven by specific psychological needs and desires (Willig, 2008), and has provided evidence of differences in the personality traits of extreme and traditional sports enthusiasts (Rhea & Martin, 2010) and of a difference idea of the self (Hardie-Bick & Bonner, 2016). Accordingly, other studies have associated extreme sports participation to thrill-seeking (Self et al. 2007), need for control (Milovanovic 2005), self-sufficiency and openness to change (Rhea & Martin, 2010), that are consistent with the adoption of different meta-imagery processes. Evidence from neuroscience further supports the differences in the psychological processes between traditional and extreme sport lovers (Thomson, Carlson, & Rupert, 2013), as neuropsychological reward mechanisms are activated when individuals are subjected to extreme experiences and fear, releasing dopamine. The feeling of transformation that extreme sport lovers reported (e.g. Lyng & Matthews, 2007) may stem from the release of this hormone that alters feelings of self-improvement and incentive salience.

Hence, the authors posit that advertising appeals related to difficulty and challenge might work differently in the contexts of extreme and traditional sports. Specifically, translating into the domain of advertising the aforementioned theoretical considerations, the authors derive the following hypotheses:

H1. Difficulty-based appeals positively affect message persuasiveness (H1a), product attractiveness (H1b), brand attitude (H1c) and purchase intention (H1d) when advertising in the context of extreme sports.

H2. The effect of difficulty-based appeals does not hold when advertising in the context of traditional sports.

H3. Challenge-based appeals positively affect message persuasiveness (H3a), product attractiveness (H3b), brand attitude (H3c) and purchase intention (H3d) when advertising in the context of extreme sports.

H4. The effect of challenge-based appeals does not hold when advertising in the context of traditional sports.

It is worth noticing that challenge refers to challenging oneself (or the viewer) as opposed to difficulty that is referred to the activity. In other words, challenges encourage the performer to try harder to achieve a better self and are centered on the evaluating self (Zimmerman, 2000). Instead, difficulty refers to the hardness to deal with and overcome the ordeal, it is task-centered and processed in the frontoparietal brain area that constitutes the cognitive control network (Cole & Schneider, 2007).

2.1. Active and Passive Sports Participation

Individual participation in sports can be passive (e.g., spectatorship) or active (actual participation). Different drivers for active and passive participation have been identified in the literature, such as escapism from ordinary life (Trail, Fink, &

nderson, 2003) and social significance (Jae Ko, Zhang, Cattani, & Pastore, 2011) for passive participation; and competition (Crofts, Schofield, & Dickson, 2012) and willingness to pursue healthy lifestyles (Mallett & Hanrahan, 2004) for active participation. Yet, there is a lack of consensus on the effects of active/passive participation, and there are calls in the literature for their comparison (Kaplanidou & Vogt, 2010; Ramchandani, Davies, Coleman, Shibli, & Bingham, 2015). This problem is new in the literature as in traditional sports, especially regarding advertising, the focus has always been on passive participants. Two reasons for the lack of focus on active participants and for a comparison of active and passive participants can be easily explained by two considerations. First, the disproportionate number of passive participants, compared to the actives. Second, a fundamental source of revenues in the sports industry is constituted by merchandising expenditures (Correia & Esteves, 2007), that are often driven by advertising (Fink, Trail, & Anderson, 2002) and that, in traditional sports, come from the passive participants. However, when it comes to extreme sports these two arguments loose much of their strength, as in extreme sports participation is intrinsically more active, entailing an extraordinary involvement and commitment, so much that even passive participation in extreme sports frequently has some connection with active participation (Bennett & Lachowetz, 2004). For instance, extreme sports event spectators are mostly young actual -or aspiring- practitioners, a primary market target in the extreme sports industry for active athletes (Bednall, Valos, Adam, & McLeod, 2012). Second, also in extreme sports merchandising is a relevant source of revenues, accounting for over 50% of total revenues (TBI, 2014), yet over

70% of revenues come from the active consumer-athletes rather than from the (passive) spectators (ISPO, 2016; NerdWallet, 2015; Nielsen Scarborough, 2017).

From a theoretical point of view, it is worth noticing that no evidence is available on the effects of active/passive engagement in extreme sports accounting for the psychological specificities of extreme individuals. However, some considerations on the relationship between active and passive participation in extreme sports may be derived by taking into account sensation-seeking (Zuckerman, 2015). Sensation seeking is a characteristic of edgework individuals (Schroth, 1995; Bakir, 2010) and has been frequently associated to extreme sports (Marengo, Monaci, & Miceli, 2017). It refers to the continuous looking for an optimal level of stimulation, through "the seeking of varied, novel, complex and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experiences" (Zuckerman, 1994, p. 27). To maintain an optimal level of stimulation, sensation seekers look for risk, difficulty and challenge in increasing levels, with the aim to increase the intensity of the stimulation (Roberti, 2004). Such craving for emotions can be satisfied both by actively engaging in risky, challenging situations (Brymer & Houge Mackenzie, 2016), and by passively watching others engaging in those activities (Palmgreen et al., 1995), for instance by watching action-oriented media; Hoffner & Levine, 2007). In this vein, there is empirical support that passively watching action-oriented, sensational sports can satisfy edgework individuals' sensation-seeking tendency (McDaniel, 2003). Furthermore, passive and active participation are not mutually exclusive, and each can boost the probability of engaging in the other

(Ramchandani et al., 2015). Reading previous findings through the theoretical lenses of edgework and cognitive adaptation, both active and passive participation are rooted in commitment to and interest in the sporting events (Hinch & Higham, 2001). Though the final choice about which specific sport or event to follow might differ between active and passive participant, they both share the same psychological drivers (Hallmann, Kaplanidou, & Breuer, 2011). These considerations would suggest that, overall, attitudes and psychological drivers or those watching and performing extreme sports might be comparable (McDaniel, 2003). Thus, we advance the following hypothesis:

H5. The efficacy of difficulty- and challenge-based appeals is the same for active and passive sports participants.

Note that H5 is relevant managerially also, as it pertains to the need to split, or not, the audience into two separate segments.

3. Empirical studies

3.1. Stimuli Selection and Testing

Stimuli selection underwent four phases with a total of 400 respondents recruited from a panel by Toluna, a leading provider of on-demand consumer insights with a community of over 14 million consumers. In the first pre-test, 50 respondents (M_{age} = 35.22; 47% female) were provided a definition of extreme sports based on Gyimóthy and Mykletun (2004) with examples from Brymer and Houge Mackenzie (2016), then shown pictures of various products and asked about their match with and

meaningfulness to extreme and traditional sports on a scale from 1 ("not all") to 7 ("completely"). Watches were chosen because they scored equally high for extreme (M = 6.02) and traditional sports (M = 6.11, p > .10). Observation of real ads suggests that many watch brands set their advertising in traditional (e.g., Wyler, Citizen), in extreme (e.g., Alpine, Sector), and in both sports types (e.g., Seiko, Suunto, TAG Heuer, Timex).

In the second pre-test, 100 respondents (M_{age} = 38.68; 50% female) were shown, in random order, 15 verbal appeals from real ads set in the context of sports. Respondents rated how much the appeals focused on difficulty or challenge (on two items ranging from 1 = "not at all" to 7 = "completely"). Based on the absolute and relative ratings, the authors identified three appeals: one scored highest on difficulty ("If it was easy, everyone would do it"; M = 6.03, p < .05) and one on challenge ("Don't limit your challenges. Challenge your limits"; M = 6.23, p < .05). A third appeal was identified that scored equally low (≤ 3) on both dimensions and was retained as the baseline appeal ("I live for these moments"; p > .10).

In the third pre-test, another 100 respondents (M_{age} = 36.61; 42% female) were shown, in random order, 40 images from print ads set in the context of sports. Respondents rated how much the images pertained to traditional or extreme sports (on one item ranging from 1 = "traditional" to 9 = "extreme"). Two images were selected for extreme (M_1 = 7.98, M_2 = 8.28) and two for traditional sports (M_1 = 1.88, M_2 = 2.02). The four images had a similar layout, referring to traditional versus extreme biking, and were equally liked (p > .10).

In the fourth pre-test, an international graphic agency mocked-up 12 ads to be used as stimuli, joining the three appeals with the four images (controlling for color balance, saturation, proportions, size of the endorser, and overall "melting" the images to make them graphically consistent). Six mock-up ads closely mimicked the structure, layout, size, and graphic of a real ad by TAG Heuer and were used in Study 1. The other 6 mock-up ads closely mimicked the structure, layout, size, and graphic of a real ad by Timex and were used in Study 2. These brands were chosen to represent high and low involvement as identified by another 50 respondents (M_{age} = 37.51; 40% females). Finally, the stimuli were tested on a sample of another 100 respondents (M_{age} = 40.72; 44% females) who—using a 7-point scale–rated them for realism (all mean scores ≥ 6.11) and readability (all mean scores ≥ 6.21). Because the graphic elements of an ad might contribute to its overall appeal alongside the written text, those respondents evaluated again the focus on difficulty and challenge (mean scores ≥ 6.12 for respective focus; mean score ≤ 3.05 for baseline appeal; 7-point scale) and the extremeness of the sport (mean scores ≥ 6.14 and ≤ 3.14 respectively; $p < .05$). Congruency between the written and pictorial part of the ad was also pretested (Moorman et al., 2002), to ensure that differences in the outcomes were not due to higher or lower congruency in certain stimuli, but to different reactions toward difficulty and challenge (mean scores ≥ 4.82; $p > .10$; —7-point scale).

Examples of the stimuli are in the Appendix.

3.2. Design and Sample

Study 1. Based on the results from the four pre-tests, respondents were randomly assigned to one of six conditions according to a 2 (sports type: extreme vs. traditional biking) × 3 (ad focus: difficulty, challenge, neither) between-subjects experimental design. Respondents were asked to assess ad persuasiveness (Chang, 2011), product attractiveness (Fuchs, Schreier, & van Osselaer, 2015), brand attitude (MacKenzie & Lutz, 1989) and purchase intention (Yoo & Donthu, 2001). Next, they were asked about the perceived extremeness of the sport, as a manipulation check, the match between brand image and sport type (Tingchi-Liu, Huang, & Minghua, 2007), and sensation seeking (Hoyle, Stephenson, Palmgreen, Lorch, & Donohew, 2002) as controls. Items ranged from 1 ("not at all") to 7 ("completely"), except for willingness-to-pay. Finally, respondents were asked to provide demographic information and to describe their sports participation (active/passive; extreme/traditional).

Four hundred eighty participants (M_{age} = 36.40; 45.80% female; 50.20% active participants) were recruited from a panel by Toluna.

Study 2. In Study 2 we include a lower involvement brand because the management literature suggests that it could impacts the opportunities that dealers have to add value to the brand (Steiner, 2004). With lower-level (i.e., economy) brands, elements beside the brand itself (e.g. the retailer, the context, etc.) could play a more prominent role in shaping consumer reactions (Lemon & Nowlis, 2002). To accommodate the differential effects for different brands, we build on previous literature that suggested that the effectiveness of marketing instruments may differ

between brand or price tiers (Verhoef, Langerak, & Donkers, 2007). Similarly, also

Lee et al. (2011) highlight how product involvement has often been examined by advertising scholars because of "the perceived personal relevance that it offers a consumer" (p.74), of the different routes of message elaboration it might activate according to the elaboration likelihood model of Petty and Cacioppo (1986). Furthermore, other studies have suggested that individuals' level of involvement with a product impacts the emotional arousal evoked by advertising related to that product (McGrath & Mahood, 2004). Thus, to increase the validity of the findings from Study 1, Study 2 replicated the analysis using a lower-involvement brand (Timex; defined as a common brand also by Noseworthy & Trudel, 2011, p. 1013), that is the other set of pictures identified from the stimuli pretest. A total of on another 250 respondents from a different panel by Toluna (M_{age} = 37.83; 47.50% female; 48.50% active participants) took part in Study 2. By considering a different brand and different ads, Study 2 also rules out that the effects from Study 1 apply only to those ads. A sample of 250 offline French participants naive to the purpose of the study was drawn from the general population for Study 2

4. Results

4.1. Results from Study 1

Scales. Scale reliability ranged from .85 to .92; factor analysis (maximum likelihood; oblimin rotation) confirmed that brand attitude, ad persuasiveness, product attractiveness and purchase intention are distinct factors (75.72% of variance explained;

composite reliability > .7 and AVE > 0.5; Fornell and Larcker 1981).

Manipulation check. Respondents correctly recognized the sports context of the ad as being traditional (M_{trad} = 2.84) or extreme (M_{extr} = 5.63, F(1, 474) = 427.87, p < .001).

Control. The match between brand image and sports type confirmed that the chosen brand has no particular association with one sports type (M_{trad} = 4.37 vs. M_{extr} = 4.47, F(1, 474) = .410, p = .522). Lovers of extreme sports scored higher in sensation-seeking than lovers of traditional sports (M_{trad} = 3.67 vs. M_{extr} = 4.94, F(1, 474) = 104.070, p < .001).

Main study. A multivariate analysis of variance was run with ad appeal, sports type, and participation as independent variables, and with ad believability, brand attitude, product attractiveness, purchase intention, and willingness-to pay as dependent variables. No significant main effect was found for sports type (Wilks λ = .978, F(5, 454) = 2.038, p = .072) or ad appeal (Wilks λ = .941, F(10, 908) = .434, p = .930), but a significant Appeal × Sport interaction emerged (Wilks λ = .862, F(10, 908) = 6.992, p < .001). Follow-up univariate analyses revealed that the interaction has an impact on ad persuasiveness (F(2, 459) = 21.400, p < .001), product attractiveness (F(2, 459) = 11.373, p < .001), purchase intention (F(2, 459) = 5.852, p = .003), and willingness-to-pay (F(2, 459) = 3.522, p = .030), but not on brand attitude (F(2, 459) = .022, p = .978).

This evidence provides initial support for H1 through H4, except for H1c and H3c (i.e. appeals' impact on brand attitude). Thus, the authors ran post-hoc comparisons

of the appeals. Challenge- and difficulty-based appeals were found to be equally effective ($p_{persuas} = .782$, $p_{attract} = .183$, $p_{purch} = .360$, $p_{wtp} = .476$). However, in extreme sports they were more effective than the baseline appeal in shaping persuasiveness ($M_{base} = 3.85$ vs. $M_{Chal\&Dif} = 4.64$; $F(1, 226) = 22.106$, $p < .001$), product attractiveness ($M_{base} = 4.21$ vs. $M_{Chal\&Dif} = 4.84$; $F(1, 226) = 7.835$, $p = .006$), purchase intention ($M_{base} = 2.58$ vs. $M_{Chal\&Dif} = 3.24$; $F(1, 226) = 6.789$, $p = .010$), and (marginally) willingness-to-pay ($M_{base} = 2.37$ vs. $M_{Chal\&Dif} = 3.24$; $F(1, 226) = 3.006$, $p = .084$). Instead, a pattern switch was found in traditional sports, where the baseline appeal was more effective for ad persuasiveness ($M_{base} = 4.74$ vs. $M_{Chal\&Dif} = 3.82$; $F(1, 237) = 19.462$, $p < .001$), product attractiveness ($M_{base} = 4.88$ vs. $M_{Chal\&Dif} = 4.11$; $F(1, 237) = 12.865$, $p < .001$), purchase intention ($M_{base} = 3.39$ vs. $M_{Chal\&Dif} = 2.90$; $F(1, 237) = 4.392$, $p = .037$), and willingness-to-pay ($M_{base} = 3.36$ vs. $M_{Chal\&Dif} = 2.47$; $F(1, 237) = 3.927$, $p = .049$). Overall, this evidence supports hypotheses H1a,b,d, H2a,b,d, H3 and H4.

Finally, the authors addressed active/passive participation, finding no significant main effect (Wilks $\lambda = .991$, $F(5, 454) = .861$, $p = .507$) or interaction (participation × sport: Wilks $\lambda = .987$, $F(5, 454) = 1.214$, $p = .301$; participation × appeal: Wilks $\lambda = .986$, $F(10, 908) = .665$, $p = .758$). This evidence supports H5. Noticeably, results do not change between extreme and traditional sports-loving respondents (Wilks $\lambda = .984$, $F(5, 454) = 1.458$, $p = .202$), suggesting that effects are due to the sports type used as the ad context, rather than to the sports type preferred by the respondents.

No effects emerged for gender (Wilks $\lambda = .988$, $F(5, 418) = 1.028$, $p = .401$),

age (Wilks λ = .991, F(5, 418) = .726, p = .604) or favorite sport-type (Wilks λ = .990, F(5, 418) = 1.002, p = .406).

4.2. Results from Study 2

Controls: As in Study 1, respondents passed the check for sports type (M_{trad} = 2.81 vs. M_{extr} = 5.58, F(1, 248) = 160.341, p < .001) and match-up (M_{trad} = 4.94 vs. M_{extr} = 4.76, F(1, 248) = .566, p = .453); sensation-seeking was higher for extreme-sports lovers (M_{trad} = 3.84 vs. M_{extr} = 4.60, F(1, 248) = 7.932, p = .005). An independent samples t-test showed that brand involvement is significantly lower in Study 2 than in Study 1 (t(1, 703) = −6.899, p < .001).

Main study. Overall, results from Study 2 corroborate the findings from Study 1, providing evidence in support for hypotheses H1 through H5, expect for H1c and H3c (i.e. appeals' impact on brand attitude). Specifically, a multivariate analysis of variance showed again no main effect for sports type or ad appeal, but a significant Appeal × Sport interaction (Wilks λ = .924, F(5, 203) = 2.509, p = .032). Follow-up univariate analyses showed an impact on ad persuasiveness (F(1, 193) = 6.042, p = .015), product attractiveness (F(1, 243) = 19.583, p < .001), willingness-to-pay (F(1, 243) = 10.218, p = .002), and (marginally) purchase intention (F(1, 243) = 3.335, p = .069), but not on brand attitude (F(1, 243) = 16.81, p = .196), as in Study 1.

Despite the change in brand and ads, in Study 2, similar to Study 1, for extreme sports challenge- and difficulty-based appeals were more effective than the baseline appeal for purchase intention (M_{base} = 4.49 vs. $M_{Chal\&Dif}$ = 5.13; F(1, 118) = 4.919, p

= .029), product attractiveness (M_{base} = 3.89 vs. $M_{Chal\&Dif}$ = 5.09; F(1, 118) = 16.856, p < .001), and willingness-to-pay (M_{base} = 2.51 vs. $M_{Chal\&Dif}$ = 3.83; F(1, 118) = 4.271, p = .042), but not for persuasiveness (M_{base} = 3.21 vs. $M_{Chal\&Dif}$ = 3.37; F(1, 118) = .128, p = .722).

Again, the pattern switched for traditional sports, where challenge- and difficulty-based appeals were instead the least effective for purchase intention (M_{base} = 4.11 vs. $M_{Chal\&Dif}$ = 3.15; F(1, 122) = 4.690, p = .033), product attractiveness (M_{base} = 5.10 vs. $M_{Chal\&Dif}$ = 4.44; F(1, 122) = 5.165, p = .025), and willingness-to-pay (M_{base} = 4.66 vs. $M_{Chal\&Dif}$ = 2.87; F(1, 122) = 5.736, p = .019), but not for persuasiveness (M_{base} = 4.63 vs. $M_{Chal\&Dif}$ = 4.38; F(1, 122) = 1,472, p = .228).

No effect emerged for gender (Wilks λ = .979, F(5, 186) = .595, p = .704), age (Wilks λ = .975, F(5, 186) = .702, p = .623) or favorite sport-type (Wilks λ = .960, F(5, 186) = 1.129, p = .348).

4.3. Ruling out congruency-based explanations

To rule out that findings from Study1 and Study 2 are merely a consequence of higher (lower) congruency between the message and the picture used in the ad for extreme (traditional) sports, respondents in both studies were asked to rate how congruent they felt the messages were with the pictures they saw. Consistently with pretest 4, difficulty- and challenge-based messages were not perceived less consistent when associated with the traditional rather than extreme sport picture (M_{trad} = 4.86 vs M_{extr} = 4.64 F(1, 475) = .926, p = .337 in Study 1; M_{trad} = 5.13 vs M_{extr} = 5.35

F(1, 244) = 1.041, p = .305 in Study 2). This evidence rules out that respondents' more positive reactions toward difficulty- and challenge-based appeals in extreme sports stem as a consequence of higher or lower congruency with the sport type and rather shows that challenge and difficulty have a different valence in the contest of extreme sport, in accordance with Edgework theory and Cognitive Adaptation.

Finally, respondents were also asked to rate the two sports in terms of difficulty and challenge, to ensure once more that the effects are due to the different meaning and value of difficulty and challenge between the two contexts, in line with the body of addressed theories, and not due to higher (lower) perception of difficulty and challenge in extreme (traditional) sports. Results are in line with pretest 4 and confirm that traditional and extreme sports were perceived equivalent in difficulty (M_{trad} = 6.03 vs M_{extr} = 6.14 F(1, 475) = .323, p = .571 in Study 1; M_{trad} = 5.75 vs M_{extr} = 6.00 F(1, 244) = 1.257, p = .264 in Study 2) and challenge (M_{trad} = 6.29 vs M_{extr} = 6.16 F(1, 475) = .438, p = .475 in Study 1; M_{trad} = 6.13 vs M_{extr} = 6.25 F(1, 244) = 1.041, p = .509 in Study 2).

5. Qualitative study

5.1. Study 3: Qualitative Follow-Up Analysis

Study 3 qualitatively explores consumers' reactions to advertising in the domain of extreme sports, providing further insights to the numerical evidence from Study 1 and Study 2, and further increasing the ecological validity of the quantitative findings.

t was decided to continue the interviews until there was convergence. No predefined number was targeted; rather interviews were conducted till there was no new information gain (Grace & O'Cass, 2002). Following this line of thought the research was terminated after 16 interviews (40% females, mean age = 37) that represented equally active and passive participants for extreme and traditional sports.

In-depth, semi-structured interviews were conducted with an introspective approach to explore consumers' reactions to difficulty- and challenge-based appeals in extreme and traditional sports, following McCracken (1988) recommendations. The interviews were directed as an open dialogue to encourage participants to describe their perceptions and were moderated by two researchers and audio recorded (mean length = 45 minutes).

Each interview began with a set of "grand tour" questions (McCracken, 1988) about participants' personal backgrounds, sports interests, and activities. It also helped the interviewers develop empathy with the respondents and increase familiarity with their vocabulary. The second phase of the interview turned to the description of how respondents chose sporting events to watch/attend and their motivations for their choice of extreme/traditional sports.

During the third phase of the interview, the authors gathered the data to pursue the study's aim. The researchers' guide consisted of questions such as "When a product not related to extreme sports is advertised using content and images related to difficulty and challenge, what is your reaction?"; "What values should a 'true' extreme athlete respect, according to you?"; and "How do you feel about the use of difficulty- and

challenge-related themes in advertising goods for traditional/extreme sports?"

Finally, respondents were shown the advertisements used in Study 1 and Study 2 and other ads set in traditional and extreme sports settings and asked to describe the feelings and reactions the ads elicited. Note that the authors had already identified consumers' reactions to the ads from the two empirical studies but did not present the findings to respondents during the interviews because they wanted to elicit their feelings spontaneously.

5.2. Qualitative Analysis

To comprehend how an individual perceives, feels, judges, makes sense of, and talks about a phenomenon, the authors attempted to enter the participant's world using and interpreting each personal view (Patton, 2005). Specifically, they content-analyzed the data using an interpretational analysis to reveal patterns and themes.

Several levels of analysis were completed by reviewing the transcription from the interviews. The authors identified raw data themes that captured the primary ideas characterizing each participant's response (e.g., fear of jumping from a height) and grouped them into patterns, or first-order themes (e.g., risk avoidance). The secondary level of analysis evaluated specific second-order themes within the data (e.g., endurance, victory, control), which were then classified into general dimensions (e.g., self-enhancement).

5.3. Qualitative results

The results of the interviews aligned with those of the two empirical studies in conjunction with the addressed literature, further validating the ecological validity of the findings. Specifically, participants' opinions quickly converged on the idea that, in the context of traditional sports, individuals are likely not meant to dangerously push their personal limits or to engage in situations whose difficulty pushes the limits of their physical and mental abilities to the point of posing a threat.

You know, it is not that traditional sports do not have difficulty, no way, they are hard to do, god knows, but you do not want to see the sweat there, you want the result, the medal, the finish line, not the blood. I have done traditional sports for about 10 years, was like a professional you know, but now I'm in extreme sports, the spirit is entirely different you know. It's not harder or easier for me, it's a different philosophy. (Ciril, 39, clerk)

I don't separate between sports and challenge. I'd say that when you feel the challenge, you might be able to master any situation, no matter how difficult and threatening. (Andrea, 35, financial advisor)

Challenge and difficulty were perceived as relevant in traditional sports too, and pertained to the challenge of the game, to the match against an adversary, to the feeling of being able to perform the task, and to dedication, self-control physical effort and training, in line with similar findings by Brymer (2010). This reverberated on

perceptions of marketing communications set within traditional sports, where the emphasis was on attributes such the positive values of sports (e.g., respect for others, teamplay, self-control), sociable experiences, and sometimes the presence of celebrity athlete endorsers. Those views were shared equally by respondents favoring traditional or extreme sports. The qualitative interviews provided significantly different insights about extreme sports. Respondents (passively and actively) following extreme sports saw challenges to one's mental and physical limits and extreme, even life-threatening difficulties as the positive core of the sports experience, consistent with similar findings by Self et al. (2007) and with the activation of a different creative meta-imagery beyond the mere activation of motor skills, consistent with (MacIntyre & Moran, 2007). Respondents were keen on marking the difference between extreme and traditional sports as two different worlds and saw the main difference in extreme sports as related to pushing one's own limits forward through actively seeking difficulty and ordeals by successfully mastering increasingly complex and dangerous situations.

At the beginning, I wasn't exactly looking for extreme. I was looking for something different. I used to do mountain biking; however, at some point I got bored. I began practicing [downhill]. I was looking for more, for thrill, adventure, see how far I could go. […] It was exciting to face increasingly risky roads, with the worst weather possible; sometimes I thought I was really going to kill myself. At that time, I considered mostly only those brands inspiring the same feelings and relating to that. (Ronald, 24, unemployed)

I can't compare extreme with ordinary sports, I don't even like the idea!

Extreme sports are a world apart, that's why I like watching them. Only when you push your limits can you see who you really are. (Michelle, 46, employee)

Consistent with the results from the ruling out in the quantitative studies, respondents did not state that traditional sports are less congruent with effort, training, dedication or difficulty than extreme sports, but they perceived painful challenges and threatening difficulties as negative in the former and positive in the latter. Words such as difficulty and risk were used to describe extreme sports with a positive valence (seeking), but with a negative valence in traditional sports (avoidance), another finding that aligns with previous qualitative research on sports (Hardie-Bick & Bonner, 2016).

The authors thus posit that results from Study 1 and Study 2 might be explained by the fact that traditional and extreme sports activate different meta-imagery, where - despite difficulty and challenge in the execution being equal- the psychological meaning changes for the individuals, and so does the way they react to communication.

6. Discussion

Extreme sports have received much attention internationally in marketing theory and practice, yet few if any studies have investigated their efficacy as a setting for advertising. We build on the considerations by previous literature on traditional sports as a context for advertising (e.g. Pyun & James, 2011) but update them to the present-day context of extreme sports. To the best of the authors knowledge, this is the first attempt to specifically investigate appeal effectiveness of advertising in extreme sports. Furthermore, we provided an empirical analysis, and in doing so we focused on

variables of particular relevance for practitioners. While previous studies on advertising in traditional sports typically considered message memorization and liking of the ad as dependent variables, we focused instead on message persuasiveness, product attraction and behavioral intention. Finally, it is worth noticing that while previous studies on sport advertising have often suffered from being based on convenience sample of students as respondents (Olson 2010; Lee et al. 2011), we relied instead on answers from data panels of potential and actual consumers.

The present research is not meant to be conclusive but to advance knowledge in several directions by taking into account the psychological features that characterize action sports. Based on a heterogeneous body of literature, the authors proposed a theoretical perspective to interpret the link between sport type and ad appeal focus, identifying two key elements: difficulty and challenge. While difficulty and challenge are logically related to a stereotypical "warrior myth" embedded in certain sport advertising campaigns (Gee 2009, 2015), the present research addressed the efficacy of specific appeals in shaping persuasiveness, behavioral intentions, willingness-to-pay and purchase intention in extreme sports. It showed that difficulty- and challenge-based appeals work well for ads set in the context of extreme sports but not when applied to brands advertising in traditional sports. Although consumers acknowledge difficulty and challenge in both sport context, they envision them with different "eyes of the mind". The results hold regardless of the viewer's sports participation (active vs. passive) or favorite sport, which aligns with recent findings in traditional sports (Masanovic, Zoric, & Gardasevic, 2017; Bajramović, Zorić, & Mašanović, 2018), and are backed by two empirical studies with over 700 respondents.

The quantitative findings are further validated by qualitative interviews that increase the study's robustness and ecological validity, and support that results are not due to congruency or fit between text and image, but because of the psychological meaning and valence that difficulties, risks and challenges have in extreme sports, as the authors predicted on the base of the addressed body of theories from psychology and sport psychology.

Overall, the present research offers a theory-based explanation of the phenomenon and findings and might help explain some of the contradictory results experienced by brands that advertise(d) in the context of extreme and traditional sports.

7. Managerial implications

Extreme sports are a multi-billion-dollar international market that is gaining momentum worldwide as a setting for advertising for many brands, from Monster Energy to Sector, from Mercedes to Panasonic. By setting the analysis in the context of extreme sports—whose estimated worth exceeds $US 6 billion (Forbes, 2014)—and by focusing on purchase intention and willingness-to-pay, the present research might offer useful implications to help practitioners invest in the industry of extreme sports, as we referred to specific appeals and used behavioral responses rather than perceptions alone as dependent variables. The results show that advertising works differently in the context of extreme sports. Specifically, emphasizing difficulty and challenge works fine here, whereas it is negative in the context of traditional sports. Follow-up in-depth qualitative interviews allow managers to be aware that the differences are due to the psychological meaning that difficulties and challenges acquire in extreme sports. Thus,

jumping on the bandwagon of extreme sports is not always advisable for brands, and care is needed. Specific examples of images and text have been provided in the present research as to how successfully manage advertising in the context of extreme sports.

Furthermore, this research clearly shows that what matters is the sporting context that the ad is set in, not the way the audience lives sports. This is good news for practitioners as they do not need to separate consumers based on sports participation or sport preference. Finally, advertisers should be aware that extreme sports lovers do not deny effort, training, dedication and challenge in traditional sports, yet they do not want "common people" to meddle in their disciplines. On the other hand, managers might find it useful to know that traditional sport lovers do not want to focus on limits-pushing ordeals, though also traditional sports require a considerable amount of discipline, endurance and hard training.

Overall, the authors propose an easy yet effective way to increase the efficacy of advertising in the context of extreme sports—based on edgework theory, cognitive adaptation and meta-imagery—that appears useful to implement or at least to be aware of. Practitioners could take advantage of the suggestions from the present research to read their current advertising campaigns with the theoretical lenses provided here.

8. Limitations and future research

The present research found that difficulty- and challenge-based appeals can work efficiently for brands advertising in extreme sports, in the category of watches. Broadening the spectrum of product and appeal types might result in a better understanding of the efficacy of advertising brands in extreme sports.

Furthermore, future research could investigate the effectiveness of the appeals in

time, as more exposure to difficulty and challenge might reduce their effect through habituation.

Appendix

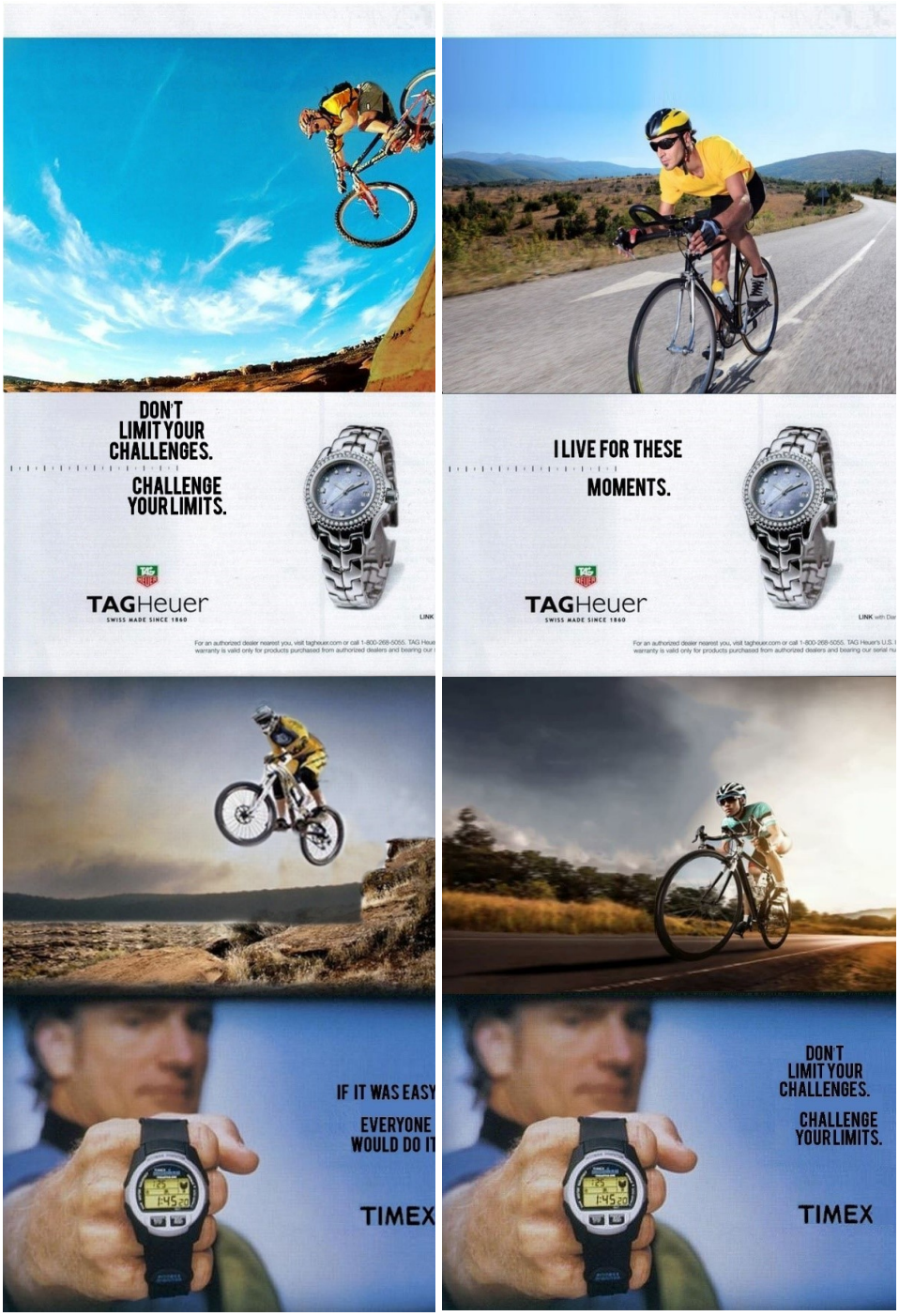


Fig. 1. Examples of the Stimuli

Part 3

Risk is my business. Determinants of revisit intentions in extreme sporting events

Francesco Raggiotto

Abstract

Multi-billion-dollar revenues and thousands of people involved, qualify extreme sports as a growing marketing phenomenon. This study explores in the context of extreme sport events the relationship between sensation-seeking tendency, event satisfaction, event image fit, and revisit intention of active participants, basing on sensation seeking theory. We propose a model investigating the determinants of consumer-athletes intention to visit again extreme sport events. The model is empirically tested with the SPSS PROCESS macro on 240 active participants in extreme sport events. The findings suggest that sensation-seeking leads to revisit intention only through satisfaction, especially when event image fit is strong.

Introduction

We can define extreme sports as those activities subjecting participants to extraordinary physical and mental challenges such as speed, depth, or natural forces, and which often entail risks and/or extreme endurance. Extreme sports involve physical prowess and a particular attitude towards the world and the self. Examples are

skydiving, BMX, base jumping, snowboarding, cliff jumping and motor racing (Brymer and Houge Mackenzie 2016), but also caving (Bentley and Page 2001) and triathlon (Atkinson 2008).

In the extreme sports industry, contrary to traditional sports, active consumer-athletes make over 70% of revenues (rather than passive spectators, NerdWallet, 2015; ISPO, 2016; Nielsen Scarborough 2017). Notably, the number of athletes-consumers in extreme sports is fast growing. For instance, since 2014 more than 22 million athletes yearly participate in extreme sports (TBI, 2014); wakeboarding has reached 32% in the US alone (3.5 million people), and snowboarding surged 7.2 million U.S. participants (up 51% from 1999).

Arguably, the average income of extreme sports athletes-consumers tends to be higher than the national average (ChronReport 2011), making them a large, high-potential, appealing target market. Hence, not surprisingly, many extreme sports disciplines have devised specific events, such as the BMX World Championship or the ESPN X-Games. Events are nowadays the bulk of the extreme sports industry and represent unique occasions for participants to gather and compete. Many of these events have grown from niche sports to globally renowned competitions, attracting thousands of athletes from around the world, and having become multimillion brands. For instance, the Ironman brand is worth US$650 million, attracting about 3,000 athletes and generating US$932 million revenues (Roethenbaugh 2017).

From a managerial viewpoint, athletes' revisit intention for such events is crucial (Shonk and Chelladurai 2008), no less than it is for events in general (Risitano et

al. 2017). Accordingly, the present research addresses revisit intention as the dependent variable. The plethora of studies considering revisit intentions as the major dependent variable witnesses the central role of this construct, in a variety of settings, from festivals (Baker and Crompton 2000) to destinations (Stylos et al. 2017)to traditional sports tourism (Shonk & Chelladurai, 2008).

Weirdly, despite the clear managerial relevance of extreme sports events (in terms of, for instance, massive participation and revenues), previous research has not addressed revisit intention for sporting events outside of traditional sports (e.g., football; Richelieu and Pons 2006).

On one hand, this may be due to the relatively recent, groundbreaking popularity of extreme sports; on the other hand, as we specify in the theoretical background, extreme athletes are differentiated from average individuals due to specific psychological differences, so that the mechanisms driving their intention to revisit are likely to be driven by different psychological levers as well.

This study aims to fill this gap by investigating the determinants of revisit intention for extreme sporting events. In doing so, we use concepts and constructs from the psychological literature addressing extreme behaviors, as well as from sport management literature; this allows to consider some key specificities of extreme athletes noted by literature in psychology. According to psychological literature, extreme sports differ from traditional sports also with respect to the kind of individuals practicing them (Lyng, 1990), which exhibit different behavioral drivers than those of traditional athletes (Laurendeau 2006). Extreme individuals actively seek sensations which

originate from risks (Milovanovic 2005), and engage in exhausting, even potentially deadly activities aiming to constantly push forward their physical and psychological limits to seek strong sensations (Brymer & Houge-Mackenzie, 2016).

In particular, from sensation seeking theory, we derive the construct of sensation seeking tendency, and fit (congruence) between the image of the event and the image of the self, while from sport management literature we derive the concept of satisfaction. Recent research called for a more thorough investigation of the drivers of satisfaction toward an event when individual physical performance actively contributes to the event consumer experience (Du et al. 2015). However, despite attention to event satisfaction and sporting event satisfaction (e.g. Brown et al., 2016; Du et al., 2015), most studies have considered passive participation (e.g., Ko et al., 2011; Lee et al. 2011); extreme sports settings make no exception (Tsuji et al. 2007).

Also, these psychological specificities have been hardly put in relation with managerially relevant outcomes. However, notably previous studies have suggested that such intrinsic psychological characteristics of extreme sports, may have important marketing implications, but also that marketing related variables might work differently in this context (Puchan, 2005; Self, Henry, Findley, & Reilly, 2007). Accordingly, we investigate how event revisit intentions for extreme consumers-athletes could be shaped by not only a set of marketing-related variables usually addressed in the behavioral intentions literature and in traditional sport management research, but also by context-specific variables related to the unique psychology of extreme individuals. Findings provided in this study suggest that a thorough understanding of revisit intention toward extreme sporting events requires a deep consideration of unique psychology-related

elements of extreme athletes to be successfully managed.

The present research provides multiple contributions. First, it is set in the context extreme sporting events rather than traditional ones, and addresses active rather than passive participation, thus answering recent calls for research (e.g., Du et al., 2015). Second, it integrates considerations from psychology within a managerial framework to identify linkages between the unique characteristics of individuals engaging in extreme activities with a managerially relevant outcome (revisit intentions).

In the following, we develop a model embedding insights from sensation-seeking theory and test it on data from natural settings provided by some of the major extreme sporting events, and ultimately summarize results providing theoretical as well managerial implications.

1. Theoretical background and hypotheses

1.1. Sensation-Seeking tendency and event satisfaction

Sensation-seeking theory can help understanding individual involvement in extreme sports. It is based on the sensation-seeking personality trait (Schroth 1995), which refers to the individual need to continuously look for an optimal level of stimulation by means of "the seeking of varied, novel, complex and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experiences" (Zuckerman 1994, p. 27). It refers to a personal trait urging individuals to seek new experiences and intense sensations to maintain an optimal level of arousal, thus leading him/her to voluntarily taking

the risks which usually these experiences are associated to (Zuckerman 1994). Experiences sensation- seekers look for are usually denoted by novelty, intensity and riskiness; sensations- seekers look for incremental levels of such characteristics, to increase the intensity of experienced stimulation (Roberti 2004). This psychological mechanisms has been recently compared to addiction (Heirene et al., 2016; Frühauf et al., 2017).

Recent research has highlighted positive associations between sensation seeking and a variety of risky behaviors, such as adventure tourism (Holm et al. 2017) and extreme sports (Marengo et al. 2017). Arguably, individuals denoted by sensation seeking motives have been exhibiting a frequent engagement in extreme sports (Heirene et al, 2016).

Such multiple evidence from these studies might suggest that events properly aligning with participants' optimal levels of arousal will be more likely to induce more positive reactions from the participating athletes. Accordingly, a study by Xu et al. (2012) set in storm chaser events found significant, positive associations between event satisfaction and sensation-seeking. Based on these considerations and findings, we advance the following:

H1: Sensation-seeking tendency positively influences athletes' satisfaction with the event.

1.2. Event satisfaction and revisit intentions

Marketing and sports marketing research have pointed satisfaction as a crucial determinant of positive consumer outcomes, such as customer retention (Yoshida and

James 2010) and patronage (Kwon et al. 2005). A lot of research has shown the link between consumer satisfaction and consumer attitudes. Attitudes are known as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly and Chaiken, 1993, p. 1). When an individual positively or negatively evaluates a certain object, such evaluation is reflected in the attitudes towards that object (Fishbein and Ajzen 1975). This process of attitude-formation can be direct (e.g., through the direct experience), or indirect (e.g., through exposure to word of mouth). Once a consumer forms its attitudes, they are likely to drive his/her responses (Fazio et al. 1989), behavioral intentions (Downs and Hausenblas 2005), and post-purchase outcomes (like satisfaction, Oliver, 1999; Hellier et al, 2003). Sports consumption makes no exception, so that a positive relation between event participants' satisfaction and their revisit intentions has been observed (Kaplanidou & Gibson, 2010).

Accordingly, we advance the following hypothesis:

H2: event satisfaction has a positive impact on revisit intentions.

1.3. The role of event image fit

Event images in general and specifically of sporting events is usually conceptualized following Keller's (1993) theoretical framework, which suggested that brand images are constituted of attitudes, attributes, benefits, and costs with respect to a certain entity (Kaplanidou & Vogt, 2007). Accordingly, Gwinner (1997) defined event image as "overall subjective perceptions of the [event] activity" (p. 148). Sport events' images are crafted to carry significant meaning for the participants and refer, for

instance, to physical activity components (Kaplanidou and Vogt 2007) and/or to relevant subculture associations among participants (Green 2001; Kaplanidou & Vogt, 2007).

In the sport industry, brands are often associated with events, to the point that event and brand image frequently overlap (Gwinner & Eaton, 1999; Walker et al., 2013). Consumers associate functional, symbolic, and emotional meanings to sporting events (Filo et al. 2008): accordingly, event image can be defined as the consumer's holistic interpretation of the meanings (s)he attributes to an event (Gwinner and Eaton 1999). The extreme sports industry is particularly characterized by highly symbolic, iconic events (e.g. X-Games) that have been labeled as sophisticated (Bennett and Lachowetz 2004) and innovative (Franke and Shah 2003), and act as symbols of their respective sport discipline. Positive images of an object usually reinforce consumers' positive intentions toward that object (Graeff 1997); similarly, perceptions of event image influence participants' intention to take part in the event again in future, though usually indirectly (Kaplanidou & Vogt, 2007).

The fit (or congruence) of brand image with consumer image is a core concept in marketing (Hosany and Martin 2012)and was found to be relevant in a number of consumption contexts, from retail (Das 2013) to tourism (Usakli and Baloglu 2011) to food (Shamah et al. 2016). Sports marketing research in traditional sports settings has devoted too a great deal of attention to image fit (or congruence) between an event and the brand sponsoring/organizing it (Du et al. 2015; Papadimitriou et al. 2016), suggesting a determinant role of image congruence in determining purchase intention (Koo et al. 2006). However, literature is apparently limited when it comes to fit between

the event and the image of the consumer rather than of the brand (Kwak & Kang, 2009), even more in the context of extreme sports.

Consumer affective state during consumption can determine satisfaction or dissatisfaction (Wirtz 1994). Image congruity triggers an emotional response towards a certain object (i.e., the brand/event), and, accordingly, has been indicated as a key determinant of customer satisfaction (He and Mukherjee 2007). In a similar fashion, (Escalas and Bettman 2005) suggested that consumers choose brands/events whose images are perceived as matching the group they wish to belong to. Accordingly, event image might play a crucial role in fostering consumers' tendencies to revisit an event. It is quite established that consumers make use of image cues to come closer to their desired self and to remark their differentiation from dissociative groups (in this case, non-extreme individuals; Lyng and Matthews 2007). Thus, in extreme sporting events, which carry strong image-related cues, consumers' intention to revisit may increase significantly when image fit is higher.

Thus, we propose the following:

H3: Event image fit moderates the relationship between satisfaction and revisit intentions, with a more positive event image fit leading to a stronger revisit intention.

1.4. Sensation seeking tendency and revisit intention

By applying insights from the psychological literature on extreme individuals to a consumer setting, we offer a theoretical framework emphasizing the interaction between the unique characteristics of extreme individuals (i.e., sensation-seeking

tendency), and some key consumer outcomes (i.e., satisfaction), and considering in turn the impact of satisfaction on revisit intentions. This is to say, we posit satisfaction as mediator of the relationship between sensation seeking tendency and revisit intention.

Researchers in psychology suggested that extreme individuals' positive attitude toward risks is linked to an active search for those risks (Lyng, 1990), but sensation-seekers do not exhibit inherently differential levels of satisfaction compared with non-sensation seeking individuals (Brymer & Houge Mackenzie, 2016). We hence consider the effect of sensation seeking on revisit intention as being indirect rather than direct. More formally, we advance that satisfaction is a full mediator of the relationship between sensation seeking tendency and revisit intention. In other words, sensation seeking tendency can be harnessed into a managerially relevant behavior -such as revisit intention- only through satisfaction.

Accordingly, we propose the following:

H4: Sensation seeking tendency has no direct effect on revisit intention but has an indirect effect through satisfaction.

2. Research context and sample description

Skydiving can be also defined as sport parachuting. The origins of this sport can be dated back to 1800s, when early exhibition jumpers used to employ the newly invented parachutes to launch from hot air balloons. During 1900s, with the introduction of the airplane the use of parachutes was mainly related to military purposes. However, after the end of the Second World War, the use of parachute was gradually extended also outside the military; several civilian parachute organizations

were created, and in 1948 the World Air Sports Federation included parachuting among air sports. With the diffusion of the aerial free flight, this sport was increasingly identified with the English term “skydiving”. From the 1960s on, skydiving became an increasingly popular sporting discipline, and experienced many evolutionary patterns, both technological (e.g., the invention of new materials) and in terms of techniques (e.g., the introduction of new free fall flying techniques). Today, skydiving represents a remarkably popular phenomenon: for instance, in 2017 3.2 million jumps were performed in the U.S. alone (United States Parachute Association 2017).

Early development of snowboarding can be traced back yet to the 1960s. However, the actual shift in popularity was achieved in the mid-1980s, with early specialized manufacturers being able to devise a clever diversification of their products, as well as creating a unique market appeal (Langran 2012); such popularity was almost simultaneously harnessed by the creation of specific snowboarding areas within existing skiing areas. In 1998 snowboarding was included among Olympic sports. Since 1999, popularity of snowboarding experienced a remarkable growth, surging today 7.2 million U.S. participants (up 51% from 1999) (Xtremesports 2008).

In the 1970s Southern California, children were imitating the contemporary motocross champions by riding modified bikes on dirt tracks. This practice gained a rapid popularity, thanks also to its depiction in Bruce Brown’s motocross documentary “On any Sunday”, starring the actor and avid racing motorcyclist Steve McQueen (American Bycicle Association 2015). 1981 saw the foundation of the International BMX Federation; the year after, the first BMX world championship was held. In 1993, BMX was integrated into the Union Cyclist International (UCI). By the mid-1990s, BMX popularity was further revived with its inclusion among disciplines admitted to

the X-Games (Kusz 2003), one of the most iconic events in the extreme sports industry (Forbes 2014).

Despite some competitions including multiple sports have been yet reported in the early 1900s, 1974 marked the first time in which a sporting competition was referred to as "triathlon": in California, the San Diego Track Club, organized the first triathlon race, codifying the three sports disciplines which still nowadays compose any triathlon race: swimming, cycling, and running. In 1978 a group of enthusiasts organized in Hawaii a competition that later would have represented the prototype for the long-distance Ironman triathlon. 1989 saw the creation of the International Triathlon Union, and in 1994 Triathlon became an Olympic sport. Today, around triathlon revolves an entire industry, involving multi-million brands and thousands of athletes: for instance, the Ironman brand (which from a specific kind of triathlon is now a brand encompassing a number of championships, series, and triathlon-related products and services) is worth US$650 million, attracting about 3,000 athletes and generating US$932 million revenues (Roethenbaugh 2017).

These sports can also be found in lists of the world's most extreme sports (e.g., Xtremesports 2008) and are considered extreme also by academic literature (Atkinson, 2008; Brymer & Houge Mackenzie, 2016).

Based on these considerations, the data were collected through a questionnaire administered to athletes participating in competitions for these extreme sports

A total sample of 240 respondents was collected. Notably, 75% were males, reflecting the demographics of a male-dominated world and reflecting well the population of extreme sports according to media reports (TBI, 2014) and to academic literature (Schreier et al. 2007). The majority of participants fell within the 19-49 age

range, mostly holding a high school diploma.

Socio-demographic variables of survey respondents (N=240)		
	Percentage	*No.*
Gender		
Male	75%	180
Female	25%	60
Total	*100%*	*240*
Age		
Less than 19	20%	48
19-29	27%	64
30-39	24%	58
40-49	19%	46
50-65	7%	17
Above 65	3%	7
Total	*100%*	*240*
Education		
Primary school	1%	2
Junior high school	14%	34
Senior high school	60%	144
University or above	25%	60
Total	*100%*	*240*

Table 1. Socio-demographic profile of the sample

3. Model estimation

To examine the hypotheses within the model, the model was tested with the PROCESS macro for SPSS. The mean scores on the items for each construct (Hayes, 2013) were used. Following Figure 1, event image fit was put as the moderator of the relationship between event satisfaction and revisit intentions. Satisfaction was entered as the mediator of the relationship between sensation-seeking and the intention to revisit. SPSS- PROCESS model 14 was chosen (Hayes, 2013), that is the model for mediated moderation. The statistical significance of the effects was evaluated by means of 5,000 bootstrap samples to create bias-corrected confidence intervals (CIs; 95%). An interval not containing zero indicates significance at the .05 level (Hayes, 2013).

4. Results

4.1. Scales and measurements

The present study adopted measures for revisit intention from Kaplanidou and Gibson (2010); for event image fit from Grohs and Reisinger (2014); for sensation seeking from Hoyle et al (2002), and satisfaction toward the event from Picon, Castro, & Roldan (2014). Survey items were measured using 7-point Likert scales ranging from 1 (strongly disagree) to 7 (strongly agree).

For all measures, we checked for composite reliability, internal consistency, convergent validity and discriminant validity following standard procedures from extant

literature (Fornell and Larcker 1981; Hair et al. 2010). Composite reliability scores were all above the recommended threshold of .70, with values ranging between .86 and .95; we checked for internal consistency using Cronbach's alpha, which, for all constructs, was above .70 (values ranging between .82 and .90).

Average Variance Extracted (AVE) was used to assess convergent validity; all scores met the recommended threshold of .50 (values ranging between .66 and .85). Finally, square root of AVE was greater than the intercorrelations between scales, supporting discriminant validity. We tested for item cross-loadings, of which none was higher on another construct than on their own. Results of these checks support the scales reliability and validity.

4.2. Moderated mediation model

The results from SPSS-PROCESS are reported in Fig. 1.

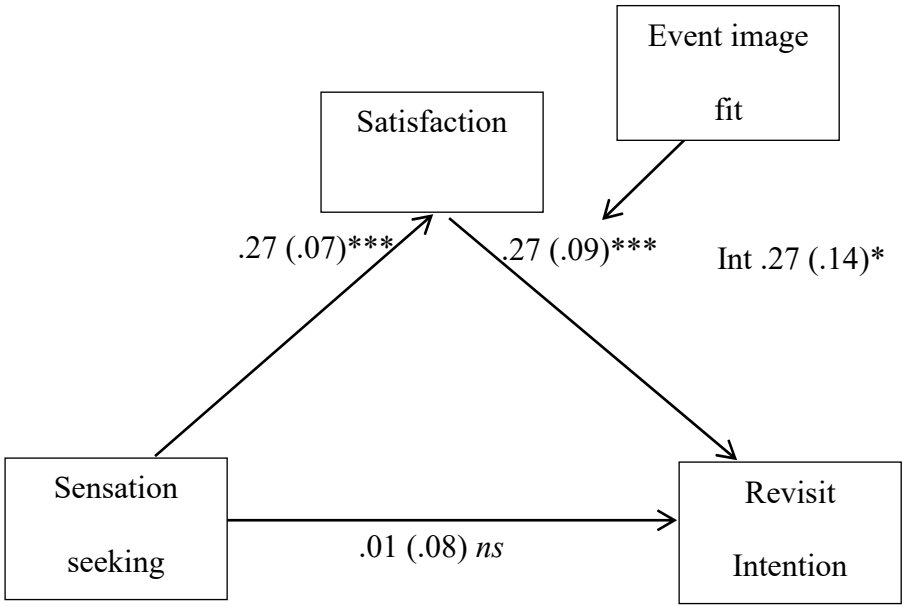
H1: The estimates indicate that sensation seeking tendency positively influences satisfaction ($B = .27$; $p < .001$): H1 is hence supported.

H2: The estimates indicate a positive impact of satisfaction on revisit intention ($B = .27$; $p < .001$). Thus, H2 is confirmed.

H3: The estimates indicate that event image fit significantly moderates the effect of satisfaction on revisit intention ($B = .27$; $p < .05$). In particular, the linkage between satisfaction and revisit intention was stronger when individuals exhibited a stronger event image fit ($Effect_{high} = .15$ vs. $Effect_{low} = .08$). Thus, H3 is confirmed.

H4: The estimates indicate that the direct effect of sensation-seeking tendency on revisit intention is not significant (B = .01; p = .87). This supports H4 and suggests that sensation-seeking tendency has an effect on intentions only through satisfaction. This also means that satisfaction is a full mediator of the relationship between sensation seeking and revisit intention.

In summary, this means that revisit intention was stronger for individuals who were sensation seekers, but also highly satisfied with the event and displayed a stronger event image fit.



Int = Interaction; * $p < .05$; *** $p < .001$

Figure 1. The model with estimates

Hypothesis	*Estimate (Std. Error)*	*Significance*	*Supported/Not supported*
H1 (Sensation Seeking ⟹ Satisfaction	.27	Significant	Supported
H2 (Satisfaction ⟶ Revisit Intentions)	.27	Significant	Supported
H3 (Moderating role of Image fit)	.27	Significant	Supported
H4 (Sensation Seeking → Revisit Intentions)	.01	Non-Significant	Supported

Table 2. Results of Hypothesis Testing

5. Discussion

With its multi-billion-dollar value, the extreme sports market tends to revolve around events that are function like brands: they have a specific positioning, can attract thousands of athletes, and gather sponsoring by major other brands like Red Bull, Mercedes, Gatorade, etc.

A lot of research testifies that revisit intention is central for the event success, with sporting events making no exception (Shonk & Chelladurai, 2008). It is worth noting that extant research is quite incongruent to investigating behavioral intentions in extreme sports, as, so far, virtually no study has accounted for the specificities of

extreme sports practitioners (Brymer & Houge Mackenzie, 2016). Available theoretical perspectives, mostly developed within traditional sports settings, have not been able to fully account for the psychological perspectives and behavioral drivers of sensation seeking individuals.

The present study based on sensation seeking theory to identify the determinants of the behavior of extreme individuals and translated those constructs into managerially relevant outcomes -such as revisit intention- in the context of extreme sport events. Thus, we proposed a unique model that uses reliable variables whose use outside their original domain of psychology has been very limited, but that works and shows that the inclusion of the sensation seeking tendency variable is important. Moreover, the model gives empirical confirmation of a positive relationship between satisfaction and revisit intentions, and shows that it is impacted by the psychological fit between the event and the participants.

This study addresses ”classic” drivers of revisit intentions from the sports marketing literature, such as satisfaction, but also shows that -as extreme activities entail a sense of thrill, and extreme participants have been pointed by psychological literature as exhibiting unique behavioral patterns- also specific psychological variables are important in this context.

Further, studies on active participation in sports are notably lacking, as the majority of extant contributions usually considers passive sport participation (for instance, sport events’ spectators). Active participation may have been probably neglected in traditional sports because the number of athletes is significantly smaller if

compared to the number of spectators. Oppositely, setting the analysis in the context of extreme sports allows to present study to check for the relevance of psychological constructs from sensation-seeking theory, and to simultaneously answer recent calls about filling the gap related to active participation (Ramchandani et al. 2015), as the majority of revenues in extreme sports come from active participants (NerdWallet, 2015; ISPO, 2016; Nielsen Scarborough, 2017).

Conclusion

As the study is set in an industry whose estimated worth exceeds $US 6 billion (Forbes 2014), and given the importance of revisit intentions for any event practitioner, the present study might offer some managerial insights.

The analysis considers those psychological drivers which can be addressed by the actions of event marketers. For instance, managers could address consumers' sensation-seeking tendency by providing increasing levels of difficulty and novelty, this may provide unique competitive benefits, leading to the development of highly-differentiated, innovative events; further, this is might be a likely source of benefits for the image of the event itself, as well as a source for a better market positioning. The key role of the fit between the self the event image moderates the relationship between satisfaction and revisit intentions, suggesting the need to adopt even in extreme sports event management a more customer-based perspective in delivering the image of the event, rather than merely pursuing the image desired by event managers. In this sense,

managers should be aware that revisit intention is driven not only by the image of the event itself, but also by how such image fits the self-perception of the customers and to the extent to which they perceive it as useful to maintain their own optimal level of arousal. The more consumers feel that the event fits with themselves -as sensation-seekers-, the more the likelihood they revisit the event in the future.

Managerial knowledge on how to target sensation-seekers may benefit of the results of this analysis as well, regarding how such sensation-seeking tendency can interact with satisfaction judgments that ultimately translate in higher revisit intention. In this sense, results of this study suggest that participants' inner, psychological involvement in extreme sports is not likely to directly translate into higher revisit intention by itself. Rather, there is a systematic interrelation with event-related features which drive the probability individuals will revisit the event in the future. From a managerial viewpoint, event organizers should hence consider a meticulous definition of how the event deploys and transmits itself and its image to participants.

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Appendix

SPSS PROCESS Script

```
Run MATRIX procedure:

************* PROCESS Procedure for SPSS Release 2.16.1 ******************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2013). www.guilford.com/p/hayes3

**************************************************************************
Model = 14
    Y = REVISIT
    X = SENS_SEEK
    M = SATISFAC
    V = FIT_EVENT_SELF

Sample size
        239

**************************************************************************
Outcome: SATISFAC

Model Summary
        R     R-sq      MSE        F      df1      df2        p
      .26      .07     1.55    16.79     1.00   237.00      .00

Model
            coeff       se        t        p     LLCI     ULCI
constant     3.39      .36     9.38      .00     2.68     4.10
SENS_SEEK     .27      .07     4.10      .00      .14      .41

**************************************************************************
Outcome: REVISIT

Model Summary
        R     R-sq      MSE        F      df1      df2        p
      .36      .13     1.86     8.89     4.00   234.00      .00

Model
            coeff       se        t        p     LLCI     ULCI
constant     2.80      .53     5.25      .00     1.75     3.85
SATISFAC      .27      .09     3.02      .00      .10      .45
SENS_SEEK     .01      .08      .17      .87     -.14      .16
FIT_SELF    -1.01      .71    -1.43      .16    -2.41      .39
int_1         .27      .14     1.90      .06     -.01      .55

Product terms key:

 int_1    SATISFAC    X     FIT_SELF
```

```
****************** DIRECT AND INDIRECT EFFECTS ************************

Direct effect of X on Y
   Effect       SE         t         p     LLCI     ULCI
      .01      .08      .17      .87     -.14      .16

Conditional indirect effect(s) of X on Y at values of the moderator(s):

Mediator
         FIT_SELF   Effect  Boot SE BootLLCI BootULCI
SATISFAC      .00      .08      .03      .02      .15
SATISFAC     1.00      .15      .06      .06      .28

Values for quantitative moderators are the mean and plus/minus one SD from mean.
Values for dichotomous moderators are the two values of the moderator.

****************** INDEX OF MODERATED MEDIATION ************************

Mediator
           Index SE(Boot) BootLLCI BootULCI
SATISFAC      .07      .05      .00      .20

When the moderator is dichotomous, this is a test of equality of the
conditional indirect effects in the two groups.

****************** ANALYSIS NOTES AND WARNINGS ************************

Number of bootstrap samples for bias corrected bootstrap confidence intervals:
     5000

Level of confidence for all confidence intervals in output:
    95.00

NOTE: Some cases were deleted due to missing data. The number of such cases was:
  1

------ END MATRIX -----
```