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## **Editorial (Part I) - Nature Sports: A Unifying Concept**

Ricardo Melo, Derek Van Rheenen and Sean James Gammon

### **Introduction**

Nature sports serve as the contextual reference for this special issue. These sports, also labelled action sports, adventure sports, alternative sports, Californian sports, extreme sports, gravity sports, lifestyle sports, nature challenge activities, new sports, outdoor sports, panic sports, risk sports or whiz sports, among others (Bourdieu 1979; Booth & Thorpe, 2007; Davidson & Stebbins, 2011; Durán-Sánchez, Álvarez-Garcia & Del Río-Rama, part one of this special issue; Melo & Gomes, 2017a; Midol & Broyer, 1995; Pociello, 1981; Rinehart, 2017; Rinehart & Sydnor, 2003; Wheaton, 2004, 2013, 2016), comprise a group of physical activities that have the potential to challenge participants in a novel way and provide an alternative to the traditional ways of seeing, doing and understanding sport (Wheaton, 2004).

Despite their semantic differences, these terms represent distinctive ways of looking at this countercultural phenomenon (Collins & Brymer, part one of this special issue; Melo & Gomes, 2017a). As such, these terms have tended to highlight the socio-cultural characteristics of these sports that have emerged in contrast to traditional sports and their

dominant values (Booth & Thorpe, 2007; Bourdieu, 1979; Breivik, 2010; Melo & Gomes, 2017a; Rinehart & Sydnor, 2003; Wheaton, 2004).

In this regard, modern sports are popular culture practices defined by political and ideological struggle (Bourdieu, 1978; Van Rheenen, 2014). That is, while dominant forms of sporting practices often reproduce dominant cultural ideologies, such as the reigning race, class and gender relations at a particular moment and place in time (Carrington & MacDonald, 2009; Van Rheenen, 2013), these cultural practices are also contested, providing the potential for resistance and counter-hegemonic expression (Andrews, 2006; Fairclough, 2001; Reinhart, part two of this special issue; Whannel, 2009).

Nature sports activities emerged in recent decades, especially after the flourishing of a new sport paradigm that had its origin in North America in the 1960s and 1970s (Bourdieu 1979; Pociello 1981; Wheaton, 2016). These practices emerged in line with the new values and social demands that developed within the praxis of active leisure time (Betrán & Betrán, 1995), significantly reshaping the field of modern sport. These transformations are reflected in the system of practices, where their evolutions can be identified globally (Durán-Sánchez, Álvarez-García & Del Río-Rama, part

one of this special issue; Pociello, 1981) and that, in some way, explain the evolution of the concept of sport itself.

Nature sports involve either the creation of new activities such as windsurfing, mountain biking and hang-gliding or the adaptation of older residual cultural forms, such as the (re)emergence of surfing culture in California in the 1960s, or sport climbing in rock climbing (Camoletto & Marcelli, part one of this special issue; Wheaton, 2004). The emergence of these new sporting modalities in Europe took place through a dual and dynamic process. On the one hand, through the importation of new sports such as surfing, windsurfing and free flying, by the members of the great and new petty bourgeoisie (Bourdieu, 1979; Pociello, 1981). On the other hand, by the creation of new modalities through a process of internal differentiation of stabilized practices (Pociello, 1981), such as skiing and canoeing, which have given rise to new modalities such as off-piste skiing or freestyle canoeing, respectively (Melo, 2013).

These novel modalities tend to emphasize the risk factors—real or perceived—that are inherent in these sports (Breivik, 2010), as well as the characteristics associated with the lifestyles of their practitioners (Wheaton, 2004). However, as Collins and Brymer discuss in part one of this special issue, the risk-focused perspective might assume that participants

are only interested in thrills and excitement, ignoring the opportunities that these activities have for enhancing health, well-being and more meaningful connections to nature. In particular, as Houge Makenzie and Brymer argue in part one of this special issue, a growing body of literature supports the proposition that a positive psychology framework can expand current conceptualisations of nature sport participation beyond thrill or sensation seeking.

Nature sports have experienced worldwide growth in the last several decades. The diffusion of these unique sporting practices globally has generated a desire to better understand this historical phenomenon. In particular, efforts at defining and conceptualising this diverse set of physical activities has led scholars and practitioners to frame the boundaries and contours of this emerging field of enquiry. The following section highlights some of these key conceptual themes.

### **Key conceptualizations and characteristics of nature sports**

*What are nature sports?* ‘Nature sports’ is an expression that has emerged in recent years as a sports field that is related to the leisure and tourism industries, but also with environment, health and education. Nature sports comprise a group of sporting activities that are developed and experienced

in natural or rural areas, ranging from formal to informal practices, and which may contribute to sustainable local development (Melo & Gomes, 2017a), although some question the assumed linkages between nature sports participation and a genuine ethic of care for the environment (Booth, part one of this special issue). These practices are performed in a variety of natural contexts including in the air (paragliding and hang-gliding, etc.), on land (mountain biking, rock-climbing, trekking, etc.) and in water (kayaking, sailing, surfing, windsurfing, etc.).

According to Bessy and Mouton (2004), the nature sports designation only arose in the late 20th century, and was associated with the emergence of new sports venues in nature and the increased number of participants taking part in a set of social and structural practices. Nature sports reflect the social and cultural changes of late capitalism that have taken place in the last decades, which have had repercussions in the economic, technological and hyper-mediated environment.

These changes have triggered a deep transformation within the system of sports practices (Melo, 2013). Although each nature sport “has its own specificity; its own history, (politics of) identities and development patterns, there are commonalities in their ethos, ideologies as well as the consumer industries that produce the commodities that

underpin their cultures” (Wheaton, 2004, p.11). In this sense, nature sports is a complex concept which presents a set of specific characteristics that will be emphasized throughout the articles of this two part special issue. These themes and characteristics have also been found in the wider literature, as exemplified and embodied within specific sports and contexts:

***Nature based activities*** - Nature sports are developed outdoors in natural (with or without environmental protection) or rural areas. These natural spaces constitute the base for the practice of nature sports activities even if, to facilitate their practice, these spaces are modified through the placement of equipment and/or the construction of infrastructure or facilities to support these activities (Melo, 2013).

In this context, nature can be defined for the purpose of this definition as any natural setting perceived by practitioners as at most only minimally modified by human beings (Stebbins, part one of this special issue). Examples of these spaces are the sea, rivers and other watercourses, canyons, mountains, snowfields, cliffs, rock faces, forests, caves, the sky, etc. Nature sports involve a dynamic interaction between participants and these natural features (Krein, 2014), as well as the dynamic forces that create them – waves, gravity, thermal

currents, wind, rain, sun (Booth, part one of this special issue; Rinehart, 2017). Contact with nature is also seen as the main reason for practice (Melo & Gomes, 2017a), as a form of avoidance and escape from an everyday life that is routine, mundane and controlled, providing new sensations, emotions and other states of consciousness, and enabling experiences of which individuals do not have regular access to, especially in urban environments (Melo, 2013).

Excluded from the scope of what we have termed nature sports activities here are those practices developed in urban (e.g., skateboarding), artificialized (e.g., bungee jumping) or indoor (e.g., indoor rock climbing) spaces, and also motorized sports (e.g. motocross), hunting and fishing, garden visits, and golf (Bessy & Naria, 2005; Melo, 2013). However, as Camoletto and Marcelli demonstrate in part one of this special issue the dichotomy between indoor and outdoor spaces within a sport such as climbing has become less rigid over time, recognising 'nature' as a frame of reference rather than a fixed context and rigid analytical construct.

***Sustainable activities*** – Nature is also related with sustainability and, in this regard, nature sports



correspond to a set of activities, products, and services directly connected to nature, associating its practice with the new trend towards ecological consumption (Melo, 2013). Nature sports have tended to become more sustainable, soft and discrete activities, representing a relationship of complementarity with nature (Joaquim, 1997). These activities correspond to a clear manifestation of and a trend for eco-consumption (Gomes, 2009), a green version of the adventure activities (Breivik, 2010), following an ideological trend of the post-modern taste for the ecological (Betrán & Betrán, 1995).

This dimension of participation in nature sports suggests that these practices are a recent historical phenomenon and a trend structurally anchored in contemporary ways of life (Bessy & Naria, 2005). In this regard, Chazaud (2004) and Pociello (1981) point to the tendency of naturalization or greening of sports practices. Brymer and Gray (2009), in their empirical work on the representation of nature, also report that there is an ecocentric relationship between these sports and nature, a relationship that is described by participants in these activities as omnipresent and ubiquitous, a source of innate power.

On the other hand, Gomes (2009) points out that eco-activities, such as eco-tourism, eco-leisure and eco-sports, represent the imaginary construction of a return to a wild nature, to a lost paradise, and a new search for the local roots of a given locale. Nature sports evoke the search for an identity rooted in an idealised territory or place (Melo, 2013). The search for the perfect wave by surfers, the majestic place for flight by paragliders, or an unspoiled and exotic path for people who practice trekking is often connected to a kind of spiritual symbolism or quest, based simultaneously on a wandering and contemplative attitude (Gomes, 2009; Melo, 2013).

***Adventure and risk activities*** - The search for new experiences, sensations of adventure, and the challenge to abilities associated with the risk factor (real or perceived) are, in addition to connections to nature, the most accentuated reasons for practicing nature sports (Melo & Gomes, 2017b). The 'voluntary risk taking' (Lyng, 2005) emerges as a form of compensation or adaptation to the imperatives of (post)modern society (Breivik, 2010; Melo, 2017) and, in this sense, nature sports activities appear as an ideal way of respecting these imperatives.

However, adventure and risk are presented in the field of nature sports practice in a paradoxical way. On the one hand, the challenge to test bodily limits has been observed in these practices. Ultra-marathons offer one such example, where participants travel more than 200 kilometers, over the course of more than 24 consecutive hours (Cherrington, Black, & Tiller, part two of this special issue). The attempt to achieve new feats and new records (e.g. faster ascension of higher and higher mountains), practiced by experienced adventurers, acknowledges real risks and dangers. On the other hand, the market has witnessed the emergence of a set of commercialized activities that emphasise a high level of perceived risk, when in fact the risk is relatively small or non-existent (Melo, 2013). Marketing efforts intentionally promote these activities for inexperienced individuals, who believe these activities pose a great challenge to their capabilities (Dolnicar & Dickson, 2004; Melo, 2013; Palmer, 2004). In this regard, nature sports participants embrace and even fetishise notions of risk and danger (Lewis, 2013; Wheaton, 2004).

***Hedonistic and non-competitive activities*** – Nature sports activities reveal a demand for other types of sports

sociabilities, promoting comradeship, human connectedness and greater conviviality (Pociello, 1981). Results of several studies (e.g. Melo, 2013; Wheaton, 2013) have revealed the hedonistic tendency of society, coupled with a greater demand for independent and informal activities that require less organizational commitment. Conversely there has been a decreased demand for organized activities that require a greater commitment (e.g., sport clubs).

Despite some nature sports activities which remain competitive in scope, even aspiring to Olympic modalities, such as sailing, windsurfing, mountain biking (cross-country) and more recently surfing and rock-climbing, the structure of nature sports activities often varies from traditional or dominant sporting practices. These activities involve interacting with a natural or material feature, rather than with other human beings, and participants gain the opportunity to strive, employ, and develop their skills in relationship to nature (Krein, 2014). They are non-aggressive activities that involve no human bodily contact (Bourdieu, 1979; Wheaton, 2013). In this regard, nature sports participants' behaviours, preferences and the benefits accrued differ from other sport participants.

Although nature sports participants seek health and fitness benefits , they have a different set of motivations that change the emotional state involved in the nature sports activities experience, quickly changing from a state of tension to one of calm (Butts, 2001). This allows a sense of spirituality and transcendence (Watson, 2007) that facilitates “flow”, “thrill”, the “sublime” (Booth, part one of this special issue; Stranger, 2011), “rush” (Buckley, 2012), “slow time” (Arstila, 2012; Buckley 2014; Wittmann, 2011), “euphoria” (Buckley, part one of this special issue), and “hedonic” and “eudaimonic” outcomes (Houge Mackenzie & Brymer, part one of this special issue) rather than competition (Krein, 2014).

***Autonomous and individualistic activities*** – Nature sports are predominantly individualistic activities in form and attitude (Wheaton, 2013), even if some nature sports are practiced collectively, such as kayaking, or create the formation of sporting sub-cultures, such as in surfing. Nature sports have a spontaneous nature, “with participation predominantly taking place in informal settings, often without governing bodies or clubs or other forms of external regulation” (Wheaton, 2016, p. 117).

In this regard, nature sports symbolize a sense of spatial, temporal and institutional autonomy (Melo, 2013). Space autonomy refers to the freedom that practitioners seek to practice their respective activities in different locations and to gain new spaces for practice. The spaces correspond, in most circumstances, to open terrain, such as the sea, air, river or mountain, and are unbound (in a normalized and regularized way) by human action. Spatial boundaries are usually imposed by geographical accident (e.g. confluence between the sea and beach sand, or between sky and land), by physical ability (e.g., to reach the peak of a mountain or to ride a mountain bike course) or practitioners' technique (e.g., to climb a difficult path or to surf a larger or more dangerous wave). It is a phenomenon that Pociello (1981) has previously designated as the deterritorialization of nature sports practices.

Temporal autonomy refers to the possibility of a practice based on the individual's self-interest and decision-making, independently of others, during his or her free time, whether during the week or weekend, whether in the morning or afternoon. In spite of this autonomy, time remains, in contemporary society, one of the most critical factors in participant decision-making, as

it is the main constraint for the practice of nature sports (Melo & Gomes, 2017b).

Finally, institutional autonomy describes the possibility of participants' self-organization of these practices, including the size and make-up of social groups associated with these activities (Melo, 2013; Wheaton, 2013). Institutional autonomy also refers to the possibility of choosing between different sports activities, and socio-organizational contexts, ranging from the most informal to the most organized options (Melo, 2013).

- ***Active participation activities*** – Nature sports correspond mostly to a participatory ideology that contributes to an active lifestyle. These activities are predominantly about participation rather than spectating (Wheaton, 2013), which implies a “commitment in time, and/or money and a style of life and forms of collective expression, attitudes and social identity that develops in and around the activity” (p. 11).

## **Nature sports relationships**

The importance of nature sports is also evidenced by the growing attention given to other sectors, including, leisure,

tourism, the environment, health and education. In this regard, the following part of this editorial will explore the relationships between nature sports and these various sectors.

### **Nature sports and leisure**

Leisure has generally been associated with terms such as relaxation, recuperation, triviality, frivolity, and freedom from obligation (Green and Jones, 2005). These authors have argued that “the term ‘leisure’ is, in contemporary society, now so broad ranging that it has little analytical usefulness as a concept with which to explain non-obligatory activities” (Green and Jones, 2005, p. 165), such as nature sports. However, for many individuals, participation in nature sports activities such as kayaking, mountain biking, mountain climbing, rock climbing, surfing, and snowboarding, among others (Bartram, 2001; Davidson and Stebbins, 2011; Dilley & Scraton, 2010; Getz and McConnell, 2011; Kane and Zink, 2004; Portugal, Campos, Martins, & Melo, 2017; Stebbins, 2005), include involvement and progression in the form of a career, commitment and significant personal effort to acquire skills or knowledge, a sense of belonging and the acquisition of an ethos of a defined culture, the need to persevere in learning, the expectation of receiving benefits resulting from participating,



and an identity that results from participating in the selected activities (Melo, 2017).

This is what Stebbins (1992) has previously defined as serious leisure, “the systematic pursuit of an amateur, a hobbyist, or a volunteer activity that participants find so substantial and interesting that, in the typical case, they launch themselves on a career centred on acquiring and expressing its special skills, knowledge, and experience” (p. 3). From our perspective, nature sports can be classifiable in all four types of serious pursuits: amateur, hobbyist, career volunteer and occupational devotee. It should be noted, however, that Stebbins (part one of this special issue) focuses on a lack of inter-human competition within what he refers to as nature challenge activities (NCAs) and categorises them as a sub-type of “activity participation hobby” rather than as a “hobbyist sport.”

Certainly some participation in nature sports activities can be considered casual rather than serious leisure, since effort and challenge are minimal and they occur in contexts where individuals only participate once or twice in a nature sports activity, either to have an introductory experience and/or to be able to say they have done it (Davidson & Stebbins, 2011; Melo, 2017).

It is also possible to undertake pre-planned projects in nature sports activities (Davidson & Stebbins, 2011; Melo, 2017). For example, nature sports participants can enrol in “a surf trip during a week that would have been planned in advance by booking ahead the accommodation, transport and other appropriate services, and putting aside the money and time needed to do it” (Melo, 2017, p. 236). This is directly related to tourism and the development of a specific type of tourism connected to nature sports.

### **Nature sports and tourism**

Natural contexts (e.g., the environment) and nature sports are major components of tourism (Gammon, 2015; Hall & Page, 2006). The relationship between nature sports and place(s) is evident from the fact that a significant number of these sports are dependent on specific types of environments. These environments generally exist in places located at a distance from participants’ home, meaning that travel and tourism are required (Higham & Hinch, 2009; Melo & Gomes, 2016a; 2016b).

Indeed, the growing demand for travel related to sport has created the need for a new tourism segment, referred to as sport or sports tourism (Gammon & Robinson, 2003; Melo & Sobry, 2017; Van Rheenen et al., 2017; Weed & Bull, 2004).

Active participation in nature sports is directly associated with active sport tourism, one of three major components of sport tourism (Gibson, 1998). Active nature sport tourism can be divided into five types of travel: i) independent travel where nature sports participants take part in informal nature sports activities such as climbing, hang-gliding, surfing or snorkelling; ii) organized travel where participants hire the services of a touristic company or agency to engage in specific nature sport tourism activities, such as white water rafting; iii) travel to participate in nature sports competitions such as trail running events; iv) travel to develop skills in a particular practice and/or prepare for sports competitions, such as surfing camps and v) travel where tourists take advantage of nature sports facilities at a holiday destination, though nature sport is not the primary purpose of the trip, such as participating in kayaking, trekking, and mountain biking.

As Gammon and Robinson (2003) have argued, these types of active sport tourism travel refer to different motivations for the trip, ranging from primary (sport participation as the main motive for travel), to secondary and even tertiary motives (trips that follow other main motivations, such as the sun and sea).

Figures indicate that the nature-based tourism market, which includes soft (e.g., trekking) and hard nature sports (e.g.,

rafting, kayaking and hiking), is often presented as the fastest growing segment within the tourism industry, with an increase of between 10% and 30% per year (Balmford, *et al.*, 2009; Mehmetoglu, 2007). Further, it is estimated that 10% to 20% of all global international travel, directly or indirectly, is related to the enjoyment of, and interaction with, nature (Centre for Responsible Travel, 2015).

The relationship between nature sports and tourism has drawn considerable attention to the potential and real environmental, economic and socio-cultural impacts of these activities, both positive and negative. These impacts can be observed in surfing (Mach et al., part two of this special issue) and climbing (Bailey and Hungenberg, part two of this special issue), as well as in other nature sports activities (Melo & Gomes, 2016a, 2017c). In addition to these contributions, numerous leisure and tourism scholars have discussed these tripartite impacts in terms of the triple bottom line (Dwyer, 2015; Elkington, 1997; Getz, 2009; Van Rheenen, 2017), seeking to enhance positive outcomes while mitigating the negative impacts. Nature sports have a particular focus on these activities relative to the environment.

### **Nature sports and the environment**

The development of nature sports has corresponded socially and historically with the articulation of environmental policies. Nature sports and other outdoor recreation activities developed in the USA in part because of the national policies regarding the preservation of land in the second half of the 19<sup>th</sup> century, conservation and management of natural spaces in the late 19<sup>th</sup> century, and in particular through the creation of the national park system in the beginning of the 20<sup>th</sup> century (Jensen & Guthrie, 2006). The creation of the park system in the USA, followed by similar initiatives throughout the world, allowed the combination of wildlife protection with the practice of nature sports and other recreational opportunities (Bell, 2008).

Recognizing the need for local and global strategies to address environmental concerns, the Brundtland Report - Our Common Future (WCED, 1987), followed by the United Nations Conference on Environment and Development held in 1992 in Rio de Janeiro, in 1995 in Copenhagen, and in 2002 in Johannesburg, placed the concept of sustainable development on the world political agenda. Sustainable development is linked to three fundamental dimensions: economic development, social cohesion and protection of the environment, which are interconnected but also interdependent (Melo, 2013). Nature sports are directly

related with this concept of sustainability, as has been previously discussed within this editorial.

Despite the potential negative environmental impacts that may occur as a by-product of these activities, such as noise and visual pollution, soil erosion, water and air pollution, natural landscape destruction, fauna and flora destruction, and the deterioration of monuments and historic sites, nature sports promise the possibility of environmental conservation and protection when developed and managed in a sustainable and intentional manner (Melo & Gomes, 2016a). The various sites and facilities developed for these activities (trails, tracks, routes, take-off and landing areas, mooring buoys, submerged paths, shops, parking, etc.) have contributed to sound conservation management practices, thus reducing the exploitative use of the natural environment, allowing nature sports participants to enjoy nature without harming it (Melo, 2013).

As a first step, nature sports promote the active and sensitive discovery and appreciation of heritage sites. As a second step, these activities ensure an appropriation and defence of the latter, since participants who immerse themselves in nature (at least potentially) become aware of the beauty and grandeur of these places, creating the possibility for the construction of an eco-citizenship (Melo, 2013). For

example, Brymer, Downey and Gray (2009) suggest that “feeling connected to nature leads to a desire to care for the natural world and contributes to more environmentally sustainable practices” (p.193). In this regard, nature sports participants develop an intimate and reciprocal relationship with the natural world (Brymer & Gray, 2010).

Nature sports guides and service providers have an important role in the promotion of sustainability, acting as environmental interpreters, role models and activists (Melo & Leite, 2018; Pereira & Mykletun, 2012; Weiler & Davis, 1993).

Space and land management, as discussed in King and Church (part two of this special issue), remain important areas for the conservation of the environment, where nature sports and conservation combine to create a symbiotic relationship based on sustainability. Ideally, a positive economic impact can help maintain ecosystem protection, while a healthy ecosystem provides the venue for sustainable market supply, even growth (Boley and Green, 2016). Beyond these management strategies for environmental protection and conservation, another significant social benefit of nature sports participation is the potential positive impact on health.

## **Nature sports and health**

The connection between nature sports and health has been highlighted by several authors (Buckley, Brough, and Westaway 2018; Frumkin et al. 2017; Hough Mackenzie & Brymer, part one of this special issue). Buckley (part one of this special issue) argues that contact with nature through the practice of nature sports contributes to physical, psychological and social health and well-being. Europarc Federation (2018) has stated that there is increasing evidence that access to the natural environment, including practicing nature sports activities, can help guard against, treat and manage key health issues such as depression, coronary heart disease and stroke, type 2 diabetes, obesity, and dementia. Other key benefits have also been highlighted, such as therapeutic and restorative qualities which enhance recovery, reduce social isolation, and lead to greater community cohesion and opportunities to establish lifelong healthy behaviours (Europarc Federation, 2018).

Evidence from several reviews (Buckley and Brough 2017a, 2017b) has demonstrated that poor mental health imposes a range of social and economic costs on the economies of developed nations, in aggregate equivalent to around 10% of their GDP, but that these costs can be decreased or alleviated through increased exposure to nature, and by the practice of nature sports (Buckley, part one of this special issue).



In this regard, several policy initiatives at the national, regional and/or local level have been established, connecting the natural environment and health (Europarc Federation, 2018). For example, Scotland is making significant progress in the green health agenda and is seen as a front-runner within the UK and Europe in this important healthcare area (Europarc Federation, 2018). Actions to encourage more use of Scotland's outdoors as "Our Natural Health Service" are being strongly linked to public health and physical activity agendas within the Scottish Government and its health sector. Evidence indicates that green exercise can contribute to tackling physical inactivity, mental health challenges and health inequalities (Europarc Federation, 2018; Hough Mackenzie & Brymer, part one of this special issue; Pretty et al., 2007).

Finland provides another case in point, where the benefits of nature for human health and wellbeing are seen as an increasingly important topic in society. Cross-governmental cooperation and development between various sectors of the state administration and specialists from sports, outdoor and nature sectors have increased substantially over the last few years and, under the umbrella of Parks & Wildlife Finland (P&WF), the "Healthy Parks, Healthy People Finland 2025" programme has been developed. The goal of this programme is to improve the social, physical and mental well-being of the Finnish population through the utilisation of green space and

contact with nature. The aim is to inspire people to become physically active and to spend more time in the natural environment during their leisure time (Europarc Federation, 2018).

### **Nature sports and education**

The educational link with nature (and nature sports activities) has a long tradition. This pedagogical tradition is rooted in the formative process that began during the 16-17<sup>th</sup> centuries (Melo & Gomes, 2017a). Since that period, but especially since the beginning of the 20<sup>th</sup> century, many people and organizations have engaged in nature (sports) activities by attributing educational benefits to them (Cubero, 2008; Funollet, 1989; Melo & Gomes, 2017a). Examples are the naturalist movement in France, founded by Georges Hébert in the beginning of the 20<sup>th</sup> century; the Scout Movement, which emerged in England in 1907 as an initiative of Robert Baden Powell, and; Outward Bound, originally created in England by Kurt Hahn, during World War Two (Melo & Gomes, 2017a). This last programme was imported later into the United States by Joshua Miner and is considered as a precursor of the outdoor adventure education concept, which includes trekking, mountaineering, climbing, orienteering, kayaking,

and many other nature sports activities (Berry & Hodgson, 2011; Watters, 1986).

Outdoor adventure education programmes founded on nature sports activities include a “variety of teaching and learning activities and experiences usually involving a close interaction with a natural setting and containing elements of real or perceived danger or risk in which the outcome, although uncertain, can be influenced by the actions of the participants and circumstances” (Ewert & Sibthorp, 2014, p.12). This kind of education conducted in natural and wilderness settings, involves ecologic relationships, physical skills to meet situational challenges, and interpersonal growth (Gilbertson, Bates, McLaughlin & Ewert, 2006). These learning experiences encourage direct, active, and meaningful social engagement with real-life, long-term consequences (Prouty, 2007).

There has been sustained growth and interest in nature and adventure-based learning in recent years. The purposeful use of adventure and nature has now reached the point where there is a significant degree of interest in studying the subject at academic and professional levels. This is reflected in the large number of opportunities to study adventure and nature-related disciplines at post-sixteen, undergraduate and postgraduate levels in the UK, the USA, Australia, Canada, New

Zealand and elsewhere (Hodgson & Berry, 2011). This educational movement, using nature sports activities for intentional learning experiences, has evolved beyond narrowly defined sport and technical-based training, especially risk, danger, and disaster management. The movement now encompasses a broader, theoretically grounded understanding of what is necessary to plan and deliver educational experiences that aim to recognize and validate participant-centric approaches and outcomes that move beyond a singular focus on safety (Hodgson & Berry, 2011; Collins & Brymer, part one of this special issue).

### **Concluding Remarks: Nature sports as sports activities**

Based on the foregoing discussion within this editorial, it may seem unnecessary, even rhetorical, to pose the following two questions: i) can and should we consider a diverse set of physical activities that occur in relation to nature or the environment, such as mountaineering, surfing, and free-flight, among others, to be 'sports'?; ii) does this diverse set of activities constitute a particular and novel form of modern sports today, a unifying form of practice we can and should designate as 'nature sports'? We believe the answer to both of these guiding questions is resoundingly affirmative.

As noted in our introduction, sport is highly ambiguous, socially constructed and contested, and continually emerging into new forms and configurations. Sport, as a social and cultural phenomenon, influences and is influenced by the socio-cultural context in which it has developed—sharing, showing, playing and setting the values of that very context (Melo, 2017). Sport both becomes and accompanies the changes and developments of society, maintaining a systemic isomorphism relationship (Martin & Martin, 2001).

The concept that is included in the European Sports Charter and which emerged in the postmodern period, presents sports as "[...] all forms of physical activity which, through casual or organised participation, aim at expressing or improving physical fitness and mental well-being, forming social relationships or obtaining results in competition at all levels" (Council of Europe, 1992, p. 3). This definition implies a broader notion of sport, encompassing a wider range of activities not included in previous definitions that besides the competitive side, makes sports a space of satisfaction of the new social needs, of escaping the routine, of looking for evasion, of adventure and of risk (Melo, 2009). This definition is consistent with the ideas proposed by many authors, who argue that a broader definition of sport allows for increased significance in the relationship between sport and other areas of social life (e.g., Melo & Gomes, 2017a; Standeven & De Knop,

1999), offering myriad meanings attributed to new forms, including those that are associated with leisure, tourism, health, education, the environment and nature.

Nature sports activities meet precisely this new conception of sport, as they favour the development of novel and emerging sports projects, allowing participants to experience and perform varied practices, from the structured to the more informal, while favouring self-organized forms which are at least currently the most popular among nature sports participants (Bessy & Mouton, 2004; Melo, 2013; Melo & Gomes, 2016b).

In accordance with Krein's (2014) proposition, competition against others is not an essential component of nature sports. Instead, natural features play at least one of the primary roles that human competitors utilize in traditional or standard sports (Krein, 2014). As Booth describes within part one of this special issue, nature sports participants interact with surfaces, textures and fluids of physical geographical features as well as the dynamic forces that create them. It is a reframing of the ontological assumptions grounded in dominant definitions of sport regarding both competition and nature, whereby social connections with the environment need not be antagonistic and one based on controlling and conquering nature.

Considering these factors, and contrary to traditional and dominant definitions of sport, we contend that nature sports must be included within the sport concept, culturally and analytically situated within its own unique body of literature. The following contributions within the first part of this special issue explore the dynamic, embodied intersection of nature and human beings engaged in a diverse collection of sporting activities.

We wish to thank the authors for their innovative and probing scholarship, as their contributions offer conceptual heft to this emerging field of research. The authors have challenged fellow scholars to question existing theoretical assumptions and heuristic biases within the field and to broaden our perspectives to be more inclusive, expansive, intentionally relational and participant-centred. In particular, these contributions have underscored the need to reconceptualise nature within the nature sport literature as a set of fluid positions and orientations through which embodied experiences inscribe and produce meaning and purpose.

## **Volume One Contributions**

The first part of this special issue, then, focuses on the current state of the nature sport literature, seeking to expand

our conceptual understanding of this diverse array of activities. The authors in this collection examine existing analytical concepts and categories, challenging several theoretical assumptions, such as the separation of nature from culture and a heuristic bias on risk taking and risk management in nature sports.

In his critical commentary, Robert A. Stebbins seeks to unpack some of the terminological and conceptual challenges confronting scholars at the nature-sport nexus. The author defines nature challenge activities (NCAs) as leisure activities pursued in one or more of six elements of nature, including air, water, land, plants, animals and ice or snow. Stebbins distinguishes these activities from sport, which he defines as inter-human, competitive, physical activity with a recognised set of rules.

In the first contribution of this part of the special issue, Douglas Booth criticises traditional and dominant definitions of sport as social constructions that render the natural environment passive and malleable for human meaning and use. He argues that social constructionism has obscured “the sensuous experiences of embodiment.” As such, the author envisions nature sport as a potential vehicle for embodied and political enquiry, a transformative ontology in which nature



and culture embrace and converge to form “co-constitutive” relationships.

This dynamic relationship between human beings and nature expressed within these sporting practices is further complicated by the relocalisation of nature sports to artificial spaces, such as wave parks or indoor climbing walls and facilities. Utilizing interviews and participant observation in the second paper of this part of the special issue, Raffaella Ferrero Camoletto and Davide Marcelli explore the impact of indoorisation on the construction of authenticity among participants, questioning what constitutes a “real climber?” While these authors argue that the dichotomy between indoor and outdoor practices has declined since artificial climbing walls were first introduced in the 1960’s, their study investigates how climbers give meaning to the relative ‘naturalness’ of their practice. The process of indoorisation has prompted the development of new forms of climbing, increasingly spectacularised with shocking colors and unique shapes, where nature is now defined as “a convertible and adjusted scenery.” As a result, nature becomes a frame of reference for articulated distinctions and hierarchies among climbers.

In “Practice in Nature: State of the Art of Research,” Amador Durán-Sánchez, José Álvarez-García and María de la

Cruz del Río-Rama conduct a descriptive and exploratory literature review that reveals disparate terminology across multiple academic disciplines with conflicting theoretical assumptions. While the vast majority of authors come from North America, Western Europe and Oceania, the most common terms found in the key word search for publications within this literature review were “extreme” and “risk” sports, highlighting an emphasis on danger, overcoming fear and conquering nature. Yet emerging scholarship, including contributions to this part of the special issue, contest traditional definitions and models that fail to capture a wide range of research outcomes, myriad motivations and lived experiences of nature sport participants.

For example, in the next contribution to this special issue, Susan Houge Mackenzie and Eric Brymer suggest that a positive psychology or well-being framework can expand current conceptualisations of nature sports. Rather than focusing on performance metrics and deficit models of risk seeking, the authors argue that adventurous nature sport activities facilitate both hedonic (pleasure, positive emotions and the avoidance of pain) and eudaimonic (well-being, self-realisation and purpose/meaning) outcomes. Meta-analyses of adventure education and adventure therapy studies have found evidence of improved self-awareness, acceptance and

resilience, as well as autonomous decision-making among participants. Nature sport activities have been successfully utilized to reduce emotional and behavioral symptoms, such as anger and anxiety, and foster chemical dependence recovery, particularly among younger program participants. According to these authors, these successes may be due to how adventurous nature sports help forge intimate and meaningful connections to others (social relatedness) and to nature, fundamental dimensions of human health and well-being.

While Houge Mackenzie and Brymer highlight the positive impact of nature sports on youth, Ralf Buckley suggests that these activities can make substantial contributions to the physical, psychological and social health (e.g., a cascade effect) of aging participants. Using an auto-ethnographic approach, the author analyses ageing trajectories within ten adventurous nature sports, finding that exercise and euphoria temporarily override chronic pain and psychological stress associated with aging. Buckley argues that older participants pay closer attention to their natural surroundings and savour these experiences more intensely than younger participants. In addition to the improved quality of life for older participants engaged in lifelong nature sports, the author points out the positive economic impact on national healthcare

as an important public policy issue today despite the lack of literature on the subject.

In the final contribution to this first part of the special issue, Loel Collins and Eric Brymer articulate a participant centered approach for the design and facilitation of learning and participant experience within nature sports activities. The authors demonstrate that risk management and disaster prevention have been emphasized above all else in the content and training of adventure recreation providers while participation experiences have been largely ignored. In support of findings made by other contributors in this part of the special issue, Collins and Brymer argue that learning design must move beyond a risk-centric approach to one that recognizes individual differences and situational demands while intentionally promoting the relationship between learners and the environment. This novel approach of intentional collaboration and reflection among a community of practice will enhance the personal and social benefits of nature sports, firmly placing the participant at the centre of the learning process.

In the second part of this special issue, we continue to explore participant benefits and outcomes through selected case studies while also addressing concerns of environmental impact and the need for an integrated approach to resource

management and stakeholder engagement within the growing nature sport industry. The second issue will highlight nature sports as a global phenomenon, a diversified market and sensory experience for a shifting demographic of participants.

This shifting demographic reflects a new profile of participation, far more inclusive and expansive than previously conceived. Like nature itself, these sporting activities have become an open and inviting terrain, a growth market for the many rather than the few—for boys as well as girls, men and women, young and the ageing, as well as opportunities for participants with varying degrees of ability. Increased demand and diversification challenges both public and private entities to balance potential economic growth with environmental and social sustainability. With growth we see opportunity but also the need for responsibility. This two-part special issue contextualizes the rise of nature sports within a global climate requiring ethical attention and intention.

## References

Andrews, D. L. (2006). *Sport--Commerce--Culture: Essays on Sport in Late Capitalist America* (Vol. 11). New York: Peter Lang.

- Arstila, V. 2012. "Time Slows Down During Accidents." *Frontiers in Psychology* 3: 196.
- Balmford, A., Beresford, J., Green, J., Naidoo, R., Walpole, M., & Manica, A. (2009). A global perspective on trends in nature-based tourism. *PLoS biology*, 7(6).
- Bartram, S. (2001). Serious leisure careers among whitewater kayakers: A feminist perspective. *World Leisure Journal*, 43(2), 4-11.
- Bailey, A. W., & Hungenberg, E. (2018): Managing the rock-climbing economy: a case from Chattanooga, *Annals of Leisure Research*, DOI: 10.1080/11745398.2018.1488146
- Bell, S. (2008). *Design for Outdoor Recreation*. New York: Taylor & Francis.
- Berry, M., & Hodgson, C. (Eds.) (2011). *Adventure education: an introduction*. London: Routledge.
- Bessy, O., & Mouton, M. (2004). Du plein air au sport de nature. *Nouvelles pratiques, nouveaux enjeux. Cahier Espaces: Sports de nature. Évolutions de l'offre et de la demande*, 81, 13-29.
- Bessy, O., & Naria, O. (2005). Les enjeux des loisirs et du tourisme sportif de nature dans le développement durable de la Réunion. In P. Boucher, & C. Sobry (Edits.), *Management et marketing du sport: du local au global* (pp. 307-339). Paris: Éditions Septentrion.
- Betrán, J., & Betrán, A. (1995). La crisis de la modernidad y el advenimiento de la posmodernidad: el deporte y las prácticas físicas alternativas en el tiempo de ocio activo. *Apunts: Educación Física y Deportes*, 41, 10-29.
- Boley, B. B., & Green, G. T. (2016). Ecotourism and natural resource conservation: the 'potential' for a sustainable symbiotic relationship. *Journal of Ecotourism*, 15(1), 36-50.
- Booth, D. (2018): Nature sports: ontology, embodied being, politics, *Annals of Leisure Research*, DOI: 10.1080/11745398.2018.1524306
- Booth, D., & Thorpe, H. (2007). *Berkshire Encyclopedia of Extreme Sport*. Great Barrington: Berkshire Reference Works.
- Bourdieu, P. (1978). 'Sport and Social Class'. *Social Science Information*, 17, 819-840.
- Bourdieu, P. (1979). *La Distinction: Critique sociale du jugement*. Paris: Editions de Minuit.
- Breivik, G. (2010). Trends in adventure sports in a postmodern society. *Sport in Society*, 13(2), 260-273.
- Brymer, E., G. Downey, and T. Gray. 2009. "Extreme Sports as a Precursor to Environmental Sustainability." *Journal of Sport & Tourism* 14 (2-3): 193-204.
- Brymer, E., & Gray, T. (2009). Dancing with nature: rhythm and harmony in extreme sport participation. *Journal of Adventure Education & Outdoor Learning*, 9(2), 135-149.
- Brymer, E., and T. Gray. (2010). "Developing an Intimate 'Relationship' with Nature Through Extreme Sports Participation." *Leisure/Loisir* 34 (4): 361-374.

- Buckley, R. (2012). Rush as a Key Motivation in Skilled Adventure Tourism: Resolving the Risk Recreation Paradox. *Tourism Management*, 33, 961-970.
- Buckley, R. C. 2014. "Slow Time Perception can be Learned." *Frontiers in Psychology* 5: 209.
- Buckley, R. (2018): Nature sports, health and ageing: the value of euphoria, *Annals of Leisure Research*, DOI: 10.1080/11745398.2018.1483734
- Buckley, R. C., and P. Brough. 2017a. "Nature, Eco and Adventure Therapies for Mental Health and Chronic Disease." *Frontiers in Public Health* 5: 220.
- Buckley, R. C., and P. Brough. 2017b. "Economic Value of Parks via Human Mental Health: An Analytical Framework." *Frontiers in Ecology and Evolution* 5: 1247.
- Buckley, R. C., P. Brough, and D. Westaway. 2018. "Bringing Outdoor Therapies Into Mainstream Mental Health." *Frontiers in Public Health* 6: 119.
- Butts, S. (2001). Good to the Last Drop: Understanding Surfers' Motivations. *Sociology of Sport Online*, 4(1), Retrieved from <http://www.physed.otago.ac.nz/sosol/v4i1/v4i1butt.htm>.
- Camoletto, R., & Marcelli, D. (2019): Keeping it natural? challenging indoorization in Italian rock climbing, *Annals of Leisure Research*, DOI: 10.1080/11745398.2018.1561307
- Carrington, B., & Macdonald, I. (2009). *Marxism, cultural studies and sport*. New York: Routledge.
- Centre for Responsible Travel. (2015). The Case for Responsible Travel: Trends & Statistics 2015. Retrieved from: <https://ecotourism.app.box.com/s/rxiyp65744sqilmrybfk8mys3qvjbe9g> [Accessed 05 May 2015].
- Chazaud, P. (2004). *Management du tourisme et des loisirs sportifs de pleine nature*. Voiron: Editions PUS.
- Cherrington, J., Black, J., & Tiller, N. (2018): Running away from the taskscape: ultramarathon as 'dark ecology', *Annals of Leisure Research*, DOI: 10.1080/11745398.2018.1491800
- Collins, L. & Eric Brymer, E. (2018): Understanding nature sports: a participant centred perspective and its implications for the design and facilitating of learning and performance, *Annals of Leisure Research*, DOI: 10.1080/11745398.2018.1525302
- Council of Europe (1992). *European Sports Charter*. Rhodes: Council of Europe.
- Cubero, H. (2008). *El pensamiento y la biografía del profesorado de Actividad Física en el Medio Natural: un estudio multicaso en la formación universitaria orientado a la comprensión de modelos formativos*. Valladolid: Universidad de Valladolid. Tesis doctoral inédita.
- Davidson, L., & Stebbins, R. (2011). *Serious Leisure and Nature: Sustainable Consumption in the Outdoors*. Houndmills, Basingstoke, UK: Palgrave Macmillan.

- Dilley, R., & Scraton, S. (2010): Women, Climbing and Serious Leisure. *Leisure Studies*, 29(2), 125-141.
- Dolnicar, S., & Dickson, T. (2004). No risk, no fun - The Role of Perceived Risk in adventure tourism. *Proceedings of the 13th International Research Conference of the Council of Australian University Tourism and Hospitality*.
- Durán-Sánchez, A., Álvarez-García, J., & Del Río-Rama, M. (2019) Nature sports: state of the art of research, *Annals of Leisure Research*, DOI: 10.1080/11745398.2019.1584535
- Dwyer, L., 2015. Triple bottom line reporting as a basis for sustainable tourism: opportunities and challenges. *Acta Turistica*, 27(1), pp.33-62.
- Elkington, J. (1997). *Cannibals with forks. The triple bottom line of 21st century*. Oxford: Capstone.
- Europarc Federation. (2018). *Health & Well-being benefits from Parks & Protected Areas*. Regensburg: Europarc Federation.
- Ewert, A., & Sibthorp, j. (2014,). *Outdoor Adventure Education: Foundations, Theory, and Research*. Champaign, IL: Human Kinetics.
- Fairclough, N. (2001). *Language and power*. New Jersey: Pearson Education.
- Frumkin, H., G. N. Bratman, S. J. Breslow, B. Cochran, P. H. Kahn Jr, J. J. Lawler, and S. A. Wood. 2017. "Nature Contact and Human Health: A Research Agenda." *Environmental Health Perspectives* 125: 075001-1.
- Funollet, F. (1989). Las actividades en la naturaleza. Origen y perspectivas de futuro. *Apunts: Educación Física y Deportes*, 18, 4-11.
- Gammon, S. (2015). Sport Tourism. Finding its place?. In S. Gammon & R. Elkington (Eds.), *Landscapes of Leisure. Space, Place and Identity* (pp. 110-122). London & New York: Palgrave Macmillan.
- Gammon, S., & Robinson, T. (2003). Sport and Tourism: A Conceptual Framework. *Journal of Sport & Tourism*, 8(1), 21-26.
- Getz, D., 2009. Policy for sustainable and responsible festivals and events: Institutionalization of a new paradigm. *Journal of Policy Research in Tourism, Leisure and Events*, 1(1), pp.61-78.
- Getz, D., & McConnell, A. (2011). Serious Sport Tourism and Event Travel Careers. *Journal of Sport Management*, 25, 326-339.
- Gibson, H. (1998). Active Sport Tourism: Who Participates? *Leisure Studies*, 17(2), 155-170.
- Gilbertson, K., Bates, T., Mclaughlin, T., & Ewert, A. (2006). *Outdoor Education: Methods and Strategies*. Champaign, IL: Human Kinetics.
- Gomes, R. (2009). El ocio y el deporte en la época del turismo global. *Apunts: Educación Física y Deportes*, 97, 37-46.
- Green, C., & Jones, I. (2005). Serious Leisure, Social Identity and Sport Tourism. *Sport in Society: Cultures, Commerce, Media, Politics*, 8(2), 164-181.
- Hall, C., & Page, S. (2006). *The Geography of tourism and Recreation. Environment, place and space* (3rd ed.). London: Routledge.



- Higham, J., & Hinch, T. (2009). *Sport and Tourism: Globalization, Mobility and Identity*. Oxford: Elsevier.
- Hodgson, C., & Berry, M. (2011). Introduction. In M. Berry & C. Hodgson (Eds.), *Adventure education: an introduction* (pp. 1-4). London: Routledge,
- Houge Mackenzie, S., & Brymer, E. (2018) Conceptualizing adventurous nature sport: A positive psychology perspective, *Annals of Leisure Research*, DOI: 10.1080/11745398.2018.1483733
- Jensen, C., & Guthrie, S. (2006). *Outdoor Recreation in America* (6th ed.). Champaign: Human Kinetics.
- Joaquim, G. (1997). Da Identidade à Sustentabilidade ou a Emergência do «Turismo Responsável». *Sociologia Problemas e Práticas*, 23, 71-100.
- Kane, M., & Zink, R. (2004). Package adventure tours: markers in serious leisure career. *Leisure Studies*, 23(4), 329-345.
- Kerr, J. H. & Houge Mackenzie, S. (2018): 'I don't want to die. That's not why I do it at all': multifaceted motivation, psychological health, and personal development in BASE jumping, *Annals of Leisure Research*, DOI: 10.1080/11745398.2018.1483732
- King, K. & Church, A. (2019). Beyond transgression: mountain biking, young people and managing green spaces, *Annals of Leisure Research*, DOI: 10.1080/11745398.2019.1571928
- Krein, K. (2014). Nature Sports. *Journal of the Philosophy of Sport*, 41(2), 193-208.
- Lewis, N. (2004). Sustainable Adventure: Embodied Experiences and Ecological Practices within British Climbing. In B. Wheaton (Ed.), *Understanding Lifestyle Sports – Consumption, Identity and Difference* (pp. 70-93). London: Routledge.
- Lyng, S. (Ed.) (2005). *Edgework: The Sociology of Risk-Taking*. New York: Routledge.
- Mach, L., Ponting, J., Brown, J., & Savage, J. (2018): Riding waves of intra-seasonal demand in surf tourism: analysing the nexus of seasonality and 21st century surf forecasting technology, *Annals of Leisure Research*, DOI: 10.1080/11745398.2018.1491801
- Martin, R., & Martin, J. (2001). *Culturas Deportivas y Valores Sociales: Una Aproximación a la Dimensión Social del Deporte*. Apunts: Educación Física y Deportes, 64, 33-45.
- Mehmetoglu, M. (2007). Typologising nature based tourists by activity-theoretical and practical implications. *Tourism Management*, 28, 651-660.
- Melo, R. (2009). *Desportos de Natureza: reflexões sobre a sua definição conceptual*. *Exedra*, 2, 33-56.
- Melo, R. (2013). *Desportos de Natureza e Desenvolvimento Local Sustentável: Análise dos praticantes e das Organizações Promotoras dos Desportos de Natureza* (Unpublished Doctoral Dissertation). University of Coimbra, Coimbra, Portugal.
- Melo, R. (2017). Understanding Nature Sports Participation: A Literature Review. In R. Melo & C. Sobry (Coords.), *Sport Tourism: New Challenges in a Globalized World* (pp. 241-275). Newcastle upon Tyne: Cambridge Scholars Publishing.

- Melo, R., & Gomes, R. (2016a). Nature Sports and Sustainable Local Development: Practitioners and Organizations Managers' Perspectives in Portugal. In C. Sobry (Ed.), *Sport Tourism and Local Sustainable Development* (pp. 75-100). Lille: L'Harmattan.
- Melo, R., & Gomes, R. (2016b). Understanding Nature Sports Organizations in Portugal. *The Open Sports Sciences Journal*, 9, 13-25.
- Melo, R., & Gomes, R. (2017a). A Sociocultural Approach to Understanding the Development of Nature Sports. In R. Melo & C. Sobry (Coords.), *Sport Tourism: New Challenges in a Globalized World* (pp. 60-90). Newcastle upon Tyne: Cambridge Scholars Publishing.
- Melo, R., & Gomes, R. (2017b). Nature Sports Participation: Understanding Demand, Practice Profile, Motivations and Constraints. *European Journal of Tourism Research*, 16, 108-135.
- Melo, R., & Gomes, R. (2017c). Profiling the Typologies of Nature Sports Organizations in Portugal. In M. Peris-Ortiz, J. Álvarez-García & M.C. del Rio-Rama (Edits.), *Sport Management as an Emerging Economy Activity* (pp. 235-255). Cham: Springer.
- Melo, R., & Leite, D. (in press). Nature sports guides and sustainable local development: a case study in the Coimbra region, Portugal. In C. Sobry (Ed.), *Proceedings of the STC'18. Sport Tourism Conference – Sport tourism and Local sustainable Development*.
- Melo, R., & Sobry, C. (Coords.) (2017). *Sport Tourism: New Challenges in a Globalized World*. Newcastle upon Tyne: Cambridge Scholars Publishing.
- Midol, N., & Broyer, G. (1995). Toward an Anthropological Analysis of New Sport Cultures: The Case of Whiz Sports in France. *Sociology of Sport Journal*, 12, 204-212.
- Page, S., & Dowling, R. (2002). *Ecotourism*. Essex: Prentice Hall.
- Palmer, C. (2004). Death, Danger and the Selling of Risk in Adventure Sports. In B. Wheaton (Ed.), *Understanding Lifestyle Sports - Consumption, Identity and Difference* (pp. 55-69). London: Routledge.
- Pereira, E., & Mykletun, R. (2012) Guides as Contributors to Sustainable Tourism? A Case Study from the Amazon. *Scandinavian Journal of Hospitality and Tourism*, 12(1), 74-94
- Pociello, C. (1981). La force, l'énergie, la grâce et les réflexes. Le jeu complexe des dispositions culturelles et sportives. In C. Pociello (Ed.), *Sports et société* (pp. 171-237). Paris: Editions Vigot.
- Portugal, A., Campos, F., Martins, F., & Melo, R. (2017). Understanding the relation between serious surfing, surfing profile, surf travel behaviour and destination attributes preferences. *European Journal of Tourism Research*, 16, 57-73
- Pretty, J., J. Peacock, R. Hine, M. Sellens, N. South, and M. Griffin. 2007. "Green Exercise in the UK Countryside: Effects on Health and Psychological Well-Being, and Implications for Policy." *Journal of Environmental Planning and Management* 50 (2): 211-231.

- Prouty, D. (2007). Introduction to adventure education. In D. Prouty, J. Panicucci & R. Collinson (Eds.), *Adventure education: Theory and applications* (pp. 3-17). Champaign, IL: Human Kinetics.
- Reinhart, K. (2019). Climbing in Saxon Switzerland (GDR) – a path to freedom in a socialist dictatorship, *Annals of Leisure Research*, DOI: 10.1080/11745398.2019.1577745
- Rinehart, R. 2017. "Alternative, Extreme (and Avant-Garde) Sport." In *The Routledge History of American Sport*, edited by L. Borish, D. Wiggins, and G. Gems, 414–428. Abingdon: Routledge.
- Rinehart, R., & Sydnor, S. (2003). *To the Extreme – Alternative Sports, Inside and Out*. Albany: State University of New York Press.
- Standeven, J., & De Knop, P. (1999). *Sport Tourism*. Champaign (USA): Human Kinetics.
- Stebbins, R. (1992). *Amateurs, professionals, and serious leisure*. Montreal: McGill-Queen's University Press.
- Stebbins, R. (2005). *Challenging mountain nature: risk, motive and lifestyle in three hobbyist sports*. Calgary, AB: Detselig.
- Stebbins, R. (2019). *Sport and Nature: A Comment on Their Relationship*. *Annals of Leisure Research*.
- Stranger, M. (2011). *Surfing Life: Surface, Substructure and the Commodification of the Sublime*. Surrey: Ashgate Publishing.
- Thorpe, H. (2009). The psychology of extreme sport. In T. Ryba, R. Schinke and G. Tenenbaum (Eds.), *The cultural Turn in Sport and Exercise Psychology* (pp. 361-384). Morgantown: Fitness Information Technology.
- Van Rheenen, D. (2013). Exploitation in college sports: Race, revenue and educational reward. *International Review for the Sociology of Sport*, 48(5), 550-571. Reprinted in *Sport and Leisure Management*, M. Weed (Ed.). NZ: Canterbury Christ Church University, December 2013.
- Van Rheenen, D. (2014). A skunk at the garden party: The Sochi Olympics, state-sponsored homophobia and prospects for human rights through mega sporting events. *Journal of Sport & Tourism*, 19(2), 1-18.
- Van Rheenen, D. (2017). Promoting responsible sustainability in sport tourism: A logic model approach. In M. Dodds, K. Heisey, & A. Ahonen (Eds.), *Routledge handbook of international sports business* (pp. 317-332). New York, NY: Routledge.
- Van Rheenen, D. Cernaianu, S., Sobry, C., & Wille, F. (2017). Sport tourism research in the 21st century: Future prospects for an evolving epistemology. In R. Melo & C. Sobry (Eds.), *Sport tourism: New challenges in a globalized world* (pp. 26-46). Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- Watson, N. (2007). Nature and Transcendence: The Mystical and Sublime in Extreme Sports. In J. Parry, S. Robinson, N. Watson & M. Nesti (Eds.), *Sport and Spirituality: An Introduction* (pp. 95-105). London & New York: Routledge.

Watters, R. (1986). Historical Perspectives of Outdoor and Wilderness Recreation. In R. Watters (Ed.), *Outdoor Program Manual* (pp. 1-9). Pocatello: Idaho State University Press.

WCED. (1987). *Our Common Future: Report of the World Commission on Environment and Development*. Oxford University press: Oxford.

Weed, M., & Bull, C. (2004). *Sports Tourism: Participants, Policy and Providers*. Oxford: Elsevier.

Weiler, B., & Davis, D. (1993). An exploratory investigation into the roles of the nature-based tour leader. *Tourism Management*, 14(2), 91-98.

Whannel, G. (2009). Between culture and economy: understanding the politics of media Sport. In Carrington, B. and McDonald, I. (eds.) *Marxism, cultural studies and sport*, London: Routledge, 68-88.

Wheaton, B. (2004). Introduction: Mapping the lifestyle sport-scape. In B. Wheaton (Ed.), *Understanding Lifestyle Sports: Consumption, Identity and Difference* (pp. 1-28). USA and Canada: Routeledge.

Wheaton, B. (2013). *The cultural politics of lifestyle sports*. Routledge.

Wheaton, B. (2016). Lifestyle sport. In B. Houlihan, & D. Malcolm (Eds.), *Sport and Society: A student introduction* (3rd ed., pp. 109-133). London: Sage.

Wittmann, M. 2011. "Moments in Time." *Frontiers in Integrative Neuroscience* 5: 66.