Proposing a new conceptualisation for modern sport based on environmental and regulatory constraints

Running head: NEW CONCEPTUALISATION OF MODERN SPORT

Proposing a New Conceptualisation for Modern Sport based on Environmental and Regulatory Constraints: Implications for Research, Coach Education and Professional Practice

Loel Collins*[1] & Howie J. Carson[2]

[1]Plas y Brenin, National Outdoor Centre, Capel Curig, UK

[2]Institute for Sport, Physical Education and Health Science, Moray House School of Education and Sport, The University of Edinburgh, Edinburgh, UK

*Loel Collins (Corresponding Author): Email – loel.collins@pyb.co.uk, ORCID ID – 0000-0002-7478-1140

Howie J. Carson: Email – Howie.carson@ed.ac.uk, ORCID ID – 0000-0002-3785-606X

Abstract

Recent expansion of the sporting domain has meant sports have lacked distinct definitions. These definitions have pertained to specific activities and/or a general perception of an assumed experience, which arguably misunderstands these modern sports. Recent growth in this domain is encouraging, however, a clear understanding of modern sports remains a requirement for optimal research, coaching practice and, participation. Therefore, we critically consider the difference between these types of sport. In an attempt to address this, this paper revisits current definitions of these modern, non-competitive, sports. Specifically, we exemplify issues of conflation within research as justification for our desired clarity. Secondly, we propose a two-dimensional conceptual framework to meaningfully differentiate between these sporting domains and finally, propose several implications for future research, education and applied practice. We hope this article brings clarity within research and the potential positive flow to enhancing education to achieve appropriate outcomes for various participants.

Key words: action sport, adventure sport, extreme sport, lifestyle sport, participation

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Introduction

Over recent years there has been increased attention towards research within adventure and action sports, specifically relating to their coaching and participation characteristics (Brymer & Schweitzer, 2017a; Collins & Brymer, 2020; Immonen et al., 2017; Krein, 2014; Melo & Gomes, 2017; Rossi & Cereatti, 1993; Self et al., 2007; Slanger & Rudestam, 1997; Wheaton, 2004). Indeed, this reflects the positive increase in participation within these sports and consequently a demand for suitably qualified coaches, instructors and guides to meet the demand (O'Keefe, 2019). Globally, there is a similar trend in sport, exercise and physical activity and, therefore, a necessity for greater appreciation of this increasingly diverse domain.

From a traditional sports perspective, understanding these factors has been relatively straightforward, since participation within competitive notions of sport are constrained within relatively rigid definitions. One example of this is The Systeme Sportif presented by Darbon (2011), which contains five conditions to define sport; (1) a series of universally applied rules and regulations written in a rulebook; (2) the application of said rules by institutions who oversee the application of the rules to ensure no foul play; (3) the principle of equality of competition to ensure a 'level playing field' among participants; (4) a particular sporting space to be created, defined clearly in the above rulebook and; (5) specific time durations laid out in advance which are also laid out in the above rulebook (see also Guttman, 1978; Mason, 1989; Papakonstantinou, 2009, for a histrorical perspective). Indeed, research is abundant within the sport science and coaching domain to address and inform decision making in

practice for athletes performing within such systems (e.g., Close et al., 2019; Kompf & Arandjelović, 2017; Orth et al., 2016). A problem occurs, however, when we examine more recent uses of the term 'sport' within non-competitive participation, as we see in adventure and action sports; therefore, this position article aims to address the issue of definition and its implications for practitioners.

Background

Interest in non-competitive sport has led to the creation of new terms such as action (e.g., Ellmer et al., 2019; Immonen et al., 2017), adventure (e.g., Collins & Collins, 2016; Houge Mackenzie & Brymer, 2020; Puchan, 2004), extreme (Cohen et al., 2018; Tomlinson et al., 2005) and lifestyle (e.g., Wheaton, 2004) sports as key characteristics of their engagement. Moreover, reflecting substantial development within these new sports, many have demonstrated the infrastructure required to meet the criteria and regulations of the International Olympic Committee (IOC, 2021) to be included within competitive Olympic sports, disciplines and events; as we have seen with climbing (Tokyo 2020[1]), BMX (Beijing 2008), skateboarding (Tokyo 2020), ski cross (Vancouver 2010), half-pipe (Sochi 2014) and slopestyle (Sochi 2014). Positively, there has been much growth through engagement in these activities (e.g., psychological, health, social, physical, cultural). However, we argue that researchers have insufficiently and/or usefully defined and, therefore, been able to differentiate between these sporting terms to have optimal benefit within society (e.g., Berry et al., 2015; Ellmer et al., 2019; Puchan, 2004). Importantly, a lack of definitional clarity can be problematic for research when attempting to compare data. Unacknowledged heterogeneity between and, as we later argue, within these sporting domains means that

[1] At the time of writing this manuscript the Tokyo 2020 Olympic Games have been postponed to 2021 due to COVID-19 restrictions.

data may not always be presented as valid nor reliable. This can challenge the interpretation and evaluation of the current literature which, in turn, limits the rationale for, and application of, research findings. Equally, from an applied perspective, professional coaching practice within these domains should be founded on sound evidence, including from the research literature. If it is not clear from which domain data are *genuinely* being reported, this could result in a lack of complete, or incorrect, understanding of appropriate actions against a range of possible client needs (Carson et al., 2020; Martindale & Collins, 2005); therefore a shared understanding of what these terms mean are essential. Indeed, sport science and coaching articles have recently stressed the importance of a nuanced 'expertise' approach which focuses on bespoke, individually-tailored solutions within practice, versus 'competency' based approaches which encourage standardised and repeatable solutions for all participants (Carling, 2013; Collins et al., 2015;).

Therefore, we firstly, briefly explore current definitions of these new non-competitive sports. Specifically, we exemplify issues of conflation within research as justification for our desired clarity. Secondly, we propose a two-dimensional conceptual framework to meaningfully differentiate between these sporting domains and finally, propose several implications for future research, education and applied practice.

Conflating Terms Seemingly Underpin Barriers to Research and Impact

The (relative) historic, academic and popular perspectives of these new non-competitive sports emphasise elements such as lifestyle or counter-culture (Collins & Brymer, 2020; Wheaton, 2004), risk and risk taking (Brymer & Schweitzer, 2017a; Rossi & Cereatti, 1993; Self et al., 2007; Slanger & Rudestam, 1997), the need for specialist equipment and skills (Collins & Brymer, 2020), engagement with nature (Immonen et al., 2017; Krein, 2014; Melo & Gomes, 2017), specific personalities and

demographics (Brymer & Schweitzer, 2017b; Collins & Brymer, 2020), versus competition, setting records and prestige that are associated with competitive notions of sport. The myriad of definition has been partially unpicked from a participant's perspective (Collins & Brymer, 2020), however we consider dimensions that underpin this shift in the sporting landscape and why this might be problematic for various stakeholders (e.g., practitioners and researchers). We initially review extreme and lifestyle sports that we consider to be misleading, followed by two more helpful definitions, action and adventure sports.

Extreme Sports

Extreme sport and high-risk sport represent activities where the likely outcome of a mismanaged mistake or accident is death (Brymer & Schweitzer, 2017b; Frühauf et al., 2017). Tomlinson et al. (2005) concluded that there was no agreed definition of extreme sports, but that they took place with little regulatory structure or rules. These sports were conceived as dangerous in nature. However, Cohen et al. (2018) later defined these sports as "a predominately competitive (comparison or self-evaluative) activity within which the participants are subjected to natural or unusual physical and mental challenges such as speed, height, depth or natural forces" (p. 6). Crucially, this definition allows more activities to be considered as extreme sports. Inevitably when examining extremes, participation is highly specialised, for instance; powerboat racing, stunt plane racing, BASE jumping, waterfall kayaking and extreme skiing (Brymer, 2010). However, research and observations (see Brymer & Gray, 2009; Cohen et al., 2018) identify that almost *any* activity can be made extreme and thus meet the criteria (e.g., Xtreme triathlons, extreme ironing and even extreme eating competitions; Darling, 2018; DuBois, 2020). Therefore, in contrast to Tomlinson's definition, the shift towards regulated and competitive forms of extreme activity, potentially as a result of society's moral objection to the self-regulated danger involved (Olivier, 2006), contradicts Cohen

et al. due to a performer being able to train and adapt to these (apparently) extreme conditions. Accordingly, an extreme experience for one individual might not be for another, irrespective of the task (cf. Carson et al., 2020).

'Lifestyle' or Alternative Sports

Participants of lifestyle or alternative sports frequently ascribe to a particular set of sub-sociocultural norms (Collins & Brymer, 2020), such as climbers and surfers (Gilchrist & Wheaton, 2016). Engagement is often less about the activity and more about the cultural and social capital (Bourdieu, 1986). Lifestyle sports are delineated by shared practice; which includes dress codes, behaviour and specific terminology. Participation is linked to an identity and choice rather than an organized structure, sometimes even a counter-culture becomes *the* culture. Like extreme, these lifestyle sports are present within competitive domains which conflicts with the originating participation rationale.

We suggest that both extreme and lifestyle are unhelpful terms for defining types of sport due to the fact that most sports can be made extreme and/or reflect a lifestyle. Clearly, simply participating does not equate to a lifestyle, nor should a sport be defined culturally (Brymer, 2005). Indeed, an individual's nature of engagement leads to a sport being extreme and/or becoming *their* lifestyle (Collins & Brymer, 2020). In this regard, extreme and lifestyle are not useful as definitions. Additionally, they are also potentially misleading when defining sport participants, since not all conform to stereotypic perceptions (Crust, 2020). However, these terms may have a value when seeking to understand psychological/socio-cultural factors. We now address two more useful terms that better represent the activities they aim to define, but are often contextually misunderstood.

Action Sports

Action sport describes sports characterised by individuality and a lack of regulations or "activities that either ideologically or practically provide alternatives to mainstream sports and mainstream sport values" (Rinehart, 2000, p. 506). Action sports occur in manufactured environments (e.g., indoor Climbing, Parkour in the streets), constructed spaces (e.g., skate parks) and retain a close cultural relationship with the natural world (van Bottenburg & Salome, 2010), although that relationship is only partially recognised in the literature (e.g., Ellmer et al., 2019). Primarily, performance is measured by how successfully participants can develop complex and aesthetic skills by exploring the participant's bodily limits (Booth & Thorpe, 2007; Willmott & Collins, 2015). Thorpe (2016) suggests that many action sports are less dangerous than some competitive sports, similar to adventure sports, therefore the association with notions of high-risk is empirically unfounded (Willmott & Collins, 2015).

As such, action sports concern the action, in the same manner as competitive sports are competitive. However, this perception is unclear due to their inclusion within the Olympics (e.g., Half Pipe in the Winter Olympics and skateboarding in the Tokyo Olympics; Willmott & Collins, 2015). Unlike the performance origins of action sports, these competitive, outcome-based versions adhere to the tenets set out by Darbon (2011) and so have changed focus considerably. Nonetheless, action sports share a more consistent, self-referenced, definition and so participants from a competitive context should not be uncritically considered homogeneous with another (Thorpe & Wheaton, 2013).

Adventure Sports

Adventure sports are commonly referred to in a tourism context (Cohen et al., 2018) and, like extreme sports, have been associated with risk (Peacock et al., 2017).

Adventure sports have been presented on a soft–hard continuum, representing the degrees of challenge, uncertainty, intensity, duration and control (Perdomo, 2014; Varley, 2006). The association with tourism frequently engenders a greater element of *perceived* risk but little *real* risk; an important component to the commodification of risk (Brown, 2000; Loynes, 1998; Varley, 2006). However, this overlooks many independent participants who learn to undertake these activities, sometimes with the assistance of a coach (Collins & Collins, 2017; Eastabrook & Collins, 2020). The associated link with commodified instructor-led or guided adventure, and therefore as a touristic activity, is sometimes a misrepresentation of adventure sport.

Environmentally, however, adventure sports take place in a physically and mentally testing environment and possibly provides thrills, excitement, mastery, connection to nature (Kerr & Houge Mackenzie, 2012) and a deeper pro-environment identity (Collins & Brymer, 2020; Sharma-Brymer et al., 2017). Increasingly it is difficult to identify a particular activity as an adventure sport. As mentioned earlier, climbing and whitewater kayaking formats can be competitive sports (e.g., slalom) or action sports (e.g., free style), *and* adventurous. Equally, commodified and sportified formats frequently minimise real risk to ensure safety as a legality or to create a level 'playing field'.

Clearly, comprehending the nature of sport is a longstanding, complex and unresolved matter. However, the need for clarity is essential to be able to research and practice with accuracy and precision to meet client needs. Our discussion has highlighted that extreme and lifestyle sports might be best examined through a psychological and socio-cultural lens and that it is not the activity itself that defines it as an extreme or lifestyle sport. Action and adventure have distinct characteristics for the tasks in question and, therefore, could offer useful ways forward. In this way, *any*

activity can be adapted to suit the outcomes of clients, be they competitive, socio-cultural or psychological. To be clear, an individual might want to surf to win, surf for personal recognition, surf to explore new environments or be part of a particular surfing culture. In doing so, it might be useful to consider a new conceptualisation of modern sport that avoids creating misperceptions or misrepresentations within/across participants in practice and research. To this end, we consider two dimensional constraints, (1) an environment in which to participate and (2) a regulatory structure that we now consider in greater detail, as constraints to provide such impact.

Delineation by Environmental and Regulatory Constraints

The complexities in defining non-competitive sports have led us to conclude that these terms have not always been considered in parallel. Consequently, the criteria that would distinguish each is missing (within the academic discourse at least) and has been confused within academia and practice. Indeed, we suggest that this is further compounded by the commodification, commercialisation and industry marketing of extreme and adventure sports in particular. Rather, it should be considered that different manifestations of sport simply have different characteristics. Such an approach would avoid definitions according to activity types (e.g., climbing and canoeing), since any can be extreme, lifestyle, competitive, action or adventure.

In examining the two aforementioned constraints, we realise the potential to automatically associate the term ‘constraints’ with the ‘constraints-led approach’ (Immonen et al., 2017; Newell, 1986). However, it is not our intention to align this new conceptualisation within any particular theoretical perspective. We also do not see it appropriate for a single theoretical perspective to have exclusive use of the term ‘constraint’ when in fact all coaching, no matter what perspective is taken, involves constraints with a small rather than capital “C” (L. Collins & Collins, 2016).

Environmental Constraints

We conceptualise environmental constraints on a spectrum, 'wholly manufactured' to 'natural'. Wholly manufactured is exemplified by Olympic competition environments; for instance, a slalom ski run in which the snow is pisted to provide race conditions and the route is clearly specified by gates. Similarly, white water slalom sites used in Olympic competition are manufactured. This contrasts with a natural, 'hyper-dynamic' (Collins et al., 2019), environment in which nothing is controlled. Such as, a white water river without any man made interference, or back country skiing.

Insert Figure 1 here

In between these, the environment can be *managed*, *modified* or *maintained*, as progressive characteristics. A managed environment is a re-purposed environment that was previously manufactured; for example, the streets in Parkour or a city marathon race in which a route is intentionally defined (e.g., to engage the crowd, change the level of challenge). A modified environment is natural but an infrastructure is created and some aspects have been physically altered to enable the activity; for instance, resort skiing with a lift system, whereby runs are graded, marked and patrolled and the snow consistently pisted. These modifications facilitate access and consistent participation with the activity. Another example is white water kayaking utilising a dam controlled natural river course in which the flow is modified (e.g., the National White Water Centre, Wales). A maintained environment is natural, with steps taken to ensure safety; for example, itinerary ski routes; these are monitored to reduce avalanche risk, but the snow remains unpisted. In kayaking, this environment would be reflected in the White

Water World Series in which a section of high grade white water is utilised. Entries are by application or invitation, with safety cover and a competitive infrastructure provided but no alteration to the river bed or flow.

Engagement within these different environments is enabled by equipment and technology advancements, but also different motivations for participation (Eastabrook & Collins, 2020). Therefore, some participants may, either out of choice or training necessity, engage in sports that take place across a range of these environments, while others may participate within a single environment. Consequently, by including indoor sports, these environments challenge the concepts of open-aired predefined sporting venues, as previously suggested by Darbon (2011) and Mason (1989).

Regulatory Constraints

At its extremes, regulation is highly constrained (e.g., rules enforced by an International Governing Body) or governed by the participant's own ethical values. For example, athletic regulations monitor the behaviour of athletes, have referees to apply and legislate those regulations and if these are broken an athlete will expectedly be penalised. Conversely, one may consider mountaineering at altitude (>5,000m), with its inherent risks, in which a climber can choose to take drugs to artificially enhance and/or enable performance (e.g., oxygen) and/or to deal with the debilitating effects of altitude (e.g., Diamox). While mountaineering is subjected to some degree of regulation, these pertain to regulations governing the number of participants permitted to climb for environmental reasons and are not directed toward the activity per se (i.e., how to climb).

Between these extremes, adapted regulations enable participation under less competitive but still structured constraints. For instance, socially agreeing and modifying regulations by participants, even when knowingly in breach of the externally

governed rules. Such contexts include impromptu football games in the park, using unspecified markers as goal posts and the players self-regulating between teams as to the duration of the match, or golf in which players agree to mulligan shots (i.e., a penalty-free second attempt) or winter rules (i.e., to protect the course condition during winter months). Notably, participation under socially accepted regulations are often applied to competitive activities. Accordingly, participants engage with various degrees of regulations from a rule book, pending social agreement.

A further subcategory exists closer towards the internal (self-)regulation, whereby rules are held within a community of practice and determined at an entirely local level. It is not a manipulation of pre-defined rules as explained by social regulation, but regulation by a community of practice. Examples include the use of chalk while climbing (Pesterfield, 2007) or accepted etiquettes on playwaves by freestyle kayakers.

Insert Figure 2 here

These differing regulations change the nature of the activity and desired outcome. It is clear that a conceptualisation is therefore less dichotomous than previously suggested (i.e., competitive vs. non-competitive), with nuanced regulatory constraints within these non-competitive forms.

Conceptualising Modern Sports

In addition to the described dimensions, extreme and lifestyle are included as supplementary characteristics of participation within our new conceptualisation of modern sport (Figure 3). Accordingly, location across these spectrums can be considered as extreme and/or lifestyle. We have exemplified how different activities can

be engaged in differently. Notably, action (top left), adventure (top right) and competitive (bottom extremity) terminologies of a particular activity are included, in addition to socially-regulated versions of competitive (lower-central area) activities. Finally, when positioning a specific sporting activity, it is not necessarily the case that existing activities could be located *anywhere* across these spectrums.

Insert Figure 3 here

Implications for Future Research, Education and Practice

Addressing our initial concerns, we see implications for sport science and coaching research, education and professional practice. From a research perspective, these dimensions can offer a useful guide when identifying and recruiting participants. For instance, to inform the eligibility criteria to ensure appropriate examination of processes, practices or characteristics. Secondly, to inform intervention designs to ensure greater validity against participants' 'normal' engagement, introduce meaningful novelty or to compare and contrast different participants (e.g., competitive vs. 'trad' climbers; Bobrownicki et al., 2021). Finally, when evaluating data, study comparisons will be more equitable and lead to stronger conclusions.

Regarding education, the proposed framework enables sport to be considered through something other than a competitive lens, thus recognising a range of different participant motivations for example. Subsequently, this illustrates the necessity for broad approaches to suit the different contextual and cultural demands. Indeed, Mees et al. (2020) proposed the development of 'adaptive expertise' rather than a 'routine expertise' to enable flexibility. In summary, Mees et al.'s suggestion is for a set of metacognitive and behavioural skills that facilitate many different approaches to be

taken by the practitioner with both competence and confidence. In contrast, a routine expertise approach would represent a practitioner that is competent and confident in a narrower set of behaviours, usually not experiencing a high degree of cognitive load or requirement for high decision making skill. Importantly, understanding the framework supports a practitioner to hold a sophisticated epistemology in which pedagogic agility is a requirement.

Building on these implications, the consequences for informing practice should be stronger. Ojala and Thorpe (2015) identified the important cultural component during the coaching process. For example, in their case study, this was exemplified by the coach needing to comprehend performers' previous 'action sport' engagement within Finnish snowboarding when transitioning to a 'competitive' participation (i.e., park and pipe into the Winter Olympics). Snowboarders were reluctant to accept coaching associated with competitive sport, preferring a community of practice (anti-authoritarian) ethos. In this context, not adapting to the culture has been identified as suboptimal practice (Collins et al., 2016). Equally, when working within a highly regulated sport (e.g., paracanoe), understanding the nuanced regulations governing participation and culture in each classification (sub)category is needed to avoid disqualification, or to optimise potential. In contrast, working with a non-competitive paracanoeist would afford much greater freedom. This regulatory challenge is very real, since practitioners may often work across different domains within this sport (Collins et al., 2019). Therefore, the framework helps promote inclusivity across different participation forms. Professional practice in the modern era must fulfil performer needs within different notions of sport, such as, those with a desire to compete, engage socially and/or explore personal development.

Conclusion

We have aimed to improve the translation from research to practice by addressing terminology used to define sports. Through exploration of new sporting domains, ‘extreme’ and ‘lifestyle’ were deemed unhelpful as definitions, since any sport can become extreme and/or a lifestyle. However, these terms still have a value when seeking to understand psychological/socio-cultural factors. Action and adventure sports were conflated with competitive sport and/or tourism, which can also be misleading. Our proposed conceptualisation of sports, based on environmental and regulatory constraints, enables any sport and participants to be considered in these differential terms. Finally, we have explained how researchers, educators and practitioners may benefit from this conceptualisation by comprehending crucial characteristics that may be differential across the various sport science and coaching disciplines. We hope these ideas will stimulate widespread discussion and development of practice.

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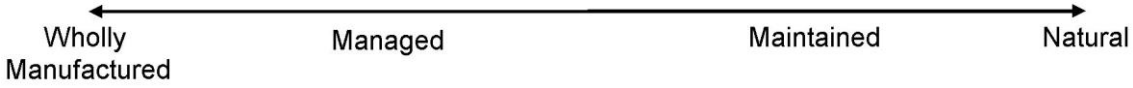
553 **Figures**

554 Figure 1



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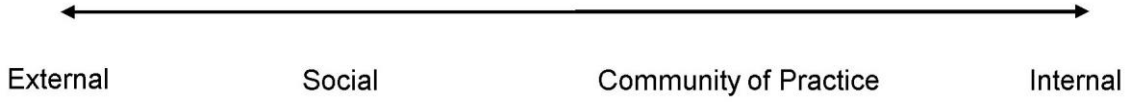
557 Figure 2



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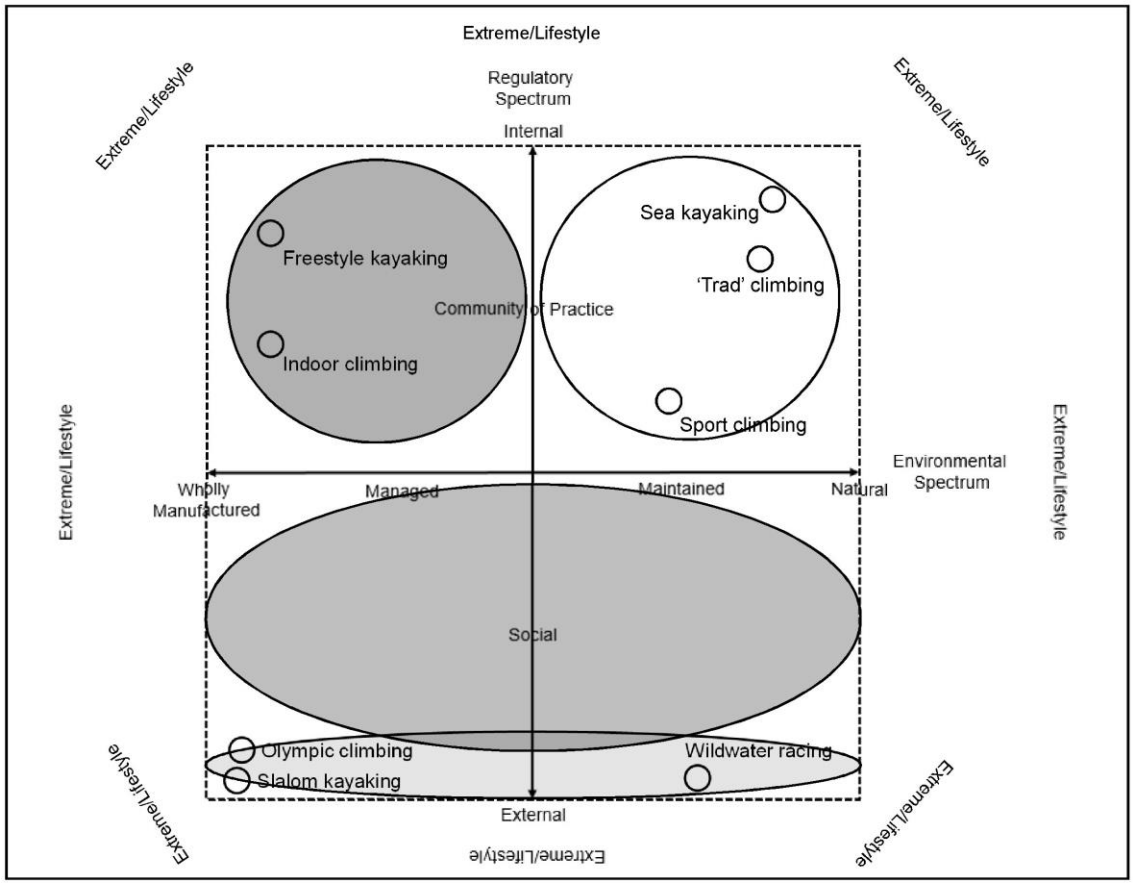
560 Figure 3



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562 **Figure Captions**

563 *Figure 1.* Environmental dimension ranging from ‘Wholly manufactured’ (left) to
564 ‘Natural’ (right)

565

566 *Figure 2.* Regulatory dimension ranging from ‘External’ (left) to ‘Internal’ (right)

567

568 *Figure 3.* Two-dimensional framework to conceptualise modern sports. Regulatory and
569 environmental dimensions enable positioning of a sport within this framework to
570 identify a specific type of engagement. Extreme and lifestyle characteristics can
571 be applied to any position within the framework. Climbing and kayaking sports
572 are positioned on the framework to exemplify its intended use.