

# Introduction

## Balancing Performance and Environmental Sustainability

*Daniel Svensson, Erik Backman,  
Susanna Hedenborg and Sverker Sörlin*

---

### Introduction

Climate change and environmental degradation is not a threat in a distant future – it is already affecting sports across the globe (e.g., Orr & Inoue, 2019; Ross & Orr, 2022). For winter sports, the impact of warmer climate is already a hot topic. Cross-country skiing, alpine skiing, or ice bandy is not what it was 30 years ago. As with many other sports, cross-country skiing has undergone numerous changes with regard to, for example, equipment, technique, ski wax, and the construction of tracks for skiing. The climate change during the last decades has also changed the most fundamental condition for cross-country skiing, namely, the snow. Today, artificial snow is, more or less, a prerequisite in many parts of the world in order to practise cross-country skiing, and the number of indoor facilities for cross-country skiing is growing. Alpine skiing is threatened too as ski resorts have difficulties promising snow, and as skiing seasons are changed dependent on the snow situation. Ice bandy, the third example, is today often played in indoor arenas, as ice in the outdoors can be difficult to maintain (Andersson, 2020). The cases of cross-country skiing, alpine skiing, and ice bandy show how climate change and environmental degradation are not a threat in a distant future – it is already affecting sports across the globe. However, summer sports are in no way spared. Heatwaves impact runners, cyclists, footballers, equestrians, and other athletes severely. Air pollution and extreme weather conditions are among the most evident threats (Bernard et al., 2021). Iconic events like Tour de France have had to face extreme temperatures and related consequences for participants and spectators (Orr, 2022).

Modern sports are intimately linked to broader developments and started to grow in tandem with the industrialisation of society in the 19th century. With the rise of globalised capitalist economies and tremendous increases in transportation, GDP, energy consumption, etc., millions and millions have been lifted out of poverty. It is this development that has increased our possibilities in so many ways, giving us better health, longer lives, and better opportunities. However, these positive effects have been unevenly distributed and also resulted in many negative consequences. The environmental impact is one, and what we

focus on here. The link between industrialised capitalism and modern sports have been analysed in detail (Gross & Roeder, 2022; Guttmann, 1978; Ingham, 1978; R. Millington et al., 2022), and we believe that the whole concept of sportification is in many ways a reflection of the growth paradigm which has guided our economies. Only in sport, the growth of profits is not the primary target (even if it has become increasingly important given the rise of globalised sport economies). Instead, it is about increasing performance.

The winter and summer sports mentioned above may here serve as examples of how the rapid development of sports has consequences for aspects such as performance, meaning-making logics, fair conditions, and, not least, the influence that sport has on the environment. What will happen with these, and other sports, in another 30 years when the global warming has further increased temperature levels and the need for natural resources to practise sport? Will the basic ideas of equal opportunity, fairness in competition, standardised rules and arenas, increased performance levels, and uncertainty of outcome still prevail?

In his classic *From Ritual to Record*, Allen Guttmann (1978) outlined a theory for how sports develop. Although he did not use the term himself, it has become known as *sportification* (or in some instances: *sportisation*). Guttmann's (1978) general point was that sports are developing along similar patterns, towards increasing quantification, organisation, specialisation, regimentation, and several other criteria. The motif behind the development boils down to the logic of sports: to improve and to perform better, in the words of the International Olympic Committee (IOC): *Citius, Altius, Fortius* (faster, higher, and stronger).

Sportification goes hand in hand with an increased management in more detail, the development of advanced technologies, and more far-reaching scientific contributions. This development, which has been labelled a techno-scientific revolution (Fouché, 2017), has undoubtedly contributed to the tremendous growth of the sports economy during the last 100 years, as well as an impressive increase in results and performance levels in most sports. This development is in turn linked to the comprehensive competition logic that drives sportification of performance and practice in predominantly Western sport, rooted in the cultivation of able bodies, and maximum performance, what in German was called *Leistung* (Eichberg, 1978).

However, as sports have developed in tandem with the global industrial economy it is also facing similar problems. Over the last decade, sport organisations, supporters, athletes, scholars, and others have begun to problematise the consequences of an ever-growing sports economy and the constant strive for increasing performance levels, growing events, and intensified travel (e.g., Backman & Svensson, 2022; Heck, 2019; Loland, 2001, 2006, 2018; McCullough & Kellison, 2018; Svensson et al., 2020). Recent books and articles have analysed the variety of environmental issues and initiatives in sport (e.g., Hognestad et al., 2022; McCullough & Kellison, 2018; McCullough et al., 2022; Triantafyllidis & Mallen, 2022; Wheaton, 2020; Wilson & Millington, 2020). Furthermore, large research projects and research groups have been started on this topic in many countries,

including Sweden (Mistra Sport & Outdoors), North America, and the UK (The Sport Ecology Group).

While many highlight how sport organisations, facilities, participants, and supporters still act in unsustainable ways, there are also an abundance of positive examples. Several national and international federations and associations of sport, such as the IOC, the Union of European Football Associations (UEFA), and Fédération Internationale de Football Association (FIFA), have begun to address environmental issues in a more ambitious manner. However, there is still scepticism towards whether some of the major events will succeed in their environmental efforts (Boykoff & Mascarenhas, 2016; Collins et al., 2009; Geeraert & Gauthier, 2018; Miller, 2016).

The introduction will present an overview of the chapters in the book and how they relate to each other. Before that, however, the competition logic and the sportification model – a model for understanding how sports develop from, to quote Allen Guttmann, *Ritual to Record* – will be described. We do that to problematise the role of sport in society and pose questions about whether sportification and a strong focus on increasing performance can go hand in hand with a sustainable development.

## Varieties of competition – Existing and emerging

Sport is the epitome of competition. The competence of athletes is their ability to provide competitiveness. That is how it is, and the logic of competition has become hegemonic. But it hasn't been like that for very long. Competition as we know from contemporary sport is largely a phenomenon of the last hundred years, with some minor early forays in earlier periods. Competitive sports have developed alongside with competition in economy and society and have become ever more advanced and sophisticated and painstakingly pursued. It has also expanded into new areas, which were previously protected from marketisation and its ensuing competition. Sustainability and competition have a complicated relationship. Competition can improve ecological efficiency and there is a substantial “green growth” literature (Hajer, 1995; World Commission on Environment and Development, 1987) and an impressive array of strategies in individual countries, and in the OECD since 2009 (<https://www.oecd.org/greengrowth/>). The overall outcome of the efficiency gain is, however, a “rebound effect” through growth of production and consumption. As a result, environmental decline and climate change have grown almost in tandem with competition. On the other hand, a promise is repeatedly held out that more competition would ultimately free us of this relationship, despite its dismal track record.

Sport is one of several sub-sections of societies where the growth and competition logic reigns. Important for sports was military competition and imperialism, where the logic of war and conquest suggests that it is hard not to use what is available in terms of technological development and force. The goal is to win or gain, or at least to not lose (Hickey, 2011; Mangan, 1981, 2000, 2012).

Environment is typically ranked low in such a traditional brute force competition logic. But what happens if climate change becomes a “hyper threat” (Boulton, 2022), considered the super evil and super enemy and acknowledged as such by the military? “Comprehensive security” includes, since its introduction in the 1980s, a wider range of security building forces, including climate, environment, health, food, and natural resources (e.g., Westing, 1989).

The logic of capitalist market competition has also influenced sport (Smart, 2007). Many alternative forms of sportive activities have already been proposed for modesty, degrowth, downshifting, playfulness, “de-sportising”, and new rules of the game (Sterchele, 2015, drawing on a large literature). Limits on competition are accepted in war as well as in trade and commerce, and in the politics that regulate them. With drastic challenges and increasing environmental and public health stress, it is likely that more constraints will be urged, or forced to lower risk and stay within what has been called “planetary boundaries” (Rockström et al., 2009; Steffen et al., 2015).

Changes of the rules of the competition game for sustainability and green transition may lead to reform of competition more generally, although it remains an open question whether this will happen at all and if it does, the process will likely be slow. Might such reformed or selective competition be applicable in sport? Could it start earlier in sport and even be more decisive there? Would it be possible to consider new forms of sports in the transformations ahead? Is it possible to abstain from competition and develop other varieties of fitness and entertainment? Is there performance involved in giving up ambitions of winning? Might there also be other kinds of sport entertainment and spectator sports where sustainability is cultivated?

These are the kinds of overarching, future-directed questions, which we have had in mind as we have designed the structure and chapters of this volume. We will find innovation in different areas; certainly, in the competitive sports themselves, where sustainability initiatives have been taken in recent years, ranging from policies on low carbon travel to attempts to regulate environmentally friendly materials. But just as often, initiatives come from the concerned peripheries of sport. Media formats have emerged where sport is integrated in news and infotainment about science, environment, weather, and climate, such as European media formats for weekend winter sports and televised international championships. The Swedish TV show *Vinterstudion* [The Winter Studio], shown every weekend from November through March, is a case in point where increasingly winter, snow, and cold have become not just a backdrop but contested conditions for sport itself. The link to climate issues is obvious. When winter is no longer taken for granted, the worship of winter through media may be a substitute? Can winter sports become a “campfire” around which people gather to engage with sustainability, for the “right to be cold” as Canadian Inuit activist Sheila Watt-Cloutier (2015) has suggested? Media is one of several arenas where experimentation is going on to join transformative societal change with growing demands from policy and public opinion to make sport and athletic competition align with sustainability goals.

## The sportification model

When Allen Guttmann's (1978) *From Ritual to Record* was published, he outlined a model for how sports have developed from a ritualistic activity to an organised, rationalised, and specialised endeavour with focus on performance enhancement and record breaking. Guttmann used seven characteristics: secularisation, equality, specialisation, rationalisation, bureaucratisation, quantification, and records (Guttmann, 1978, pp. 54–55). Guttmann argues that records are especially interesting as an essential part of modern sports, while all the other criteria can be found in various degrees also in older versions of sport. Records depend on the ability to measure and compare results over time and thus rely on increasingly advanced technology. As our ability to measure records in detail has grown, so has the importance of records. However, the strong emphasis on records do not fully cover what sportification is. While records are important, many of the other criteria have continued to develop. If records separate ritualistic pre-modern sports from modern sports in an industrialised world, then we argue that some of the other characteristics are better tools to understand the developments of sport in the last 50 years. In this book, we use sportification not as a mountain-top where spectators can arrive at, sit down, and enjoy the view. Rather, we see sportification as a process which through technological, scientific, and economic developments make most sports increasingly complex and demanding.

Following Guttmann, many scholars have used, expanded on, revised, and critiqued the sportification model. It has been further developed by many scholars (e.g., Collinet et al. 2013; Elias & Dunning, 2008; Goksøyr, 1988; Heere, 2018). It has also been critiqued (Eichberg, 1995; see also Lidström and Carlsson, this volume), not least for perceived homogenisation and re-enforcing of power structures related to ethnicity, sexuality, and gender (Pfister, 2007; Von Der Lippe, 1994). To give a full overview of all the suggested criteria and dimensions of sportification would be a Sisyphean task. And while we are certainly no strangers to the thought of running endless intervals uphill, we here instead want to outline what we see as the most commonly used sportification criteria and briefly explain how we interpret them in this book. Building on earlier research on the sportification model (e.g., Yttergren, 1996, 2013), we include the following: specialisation, rationalisation, standardisation, regimentation, organisation, equalisation, and quantification. We will now explain what we mean by the seven characteristics and give some examples of each of them.

*Specialisation* refers to the increasing level of specialised roles, training, equipment, etc. that can be seen in most sports. If a football team in the 1920s had one or two generalist coaches dealing with more or less all aspects of coaching, a 2020s elite football team has dozens of coaches specialised in various aspects such as fitness, nutrition, offence, defence, tactics, and throw-ins (!). A typical cross-country skier in the 20th century would compete in all disciplines, while a 2020s skier is most likely to specialise in sprint or long-distance races. And when specialisation is happening in a sport, it becomes harder for generalists to

compete. Increasing specialisation is therefore both a driver of and a result from hardening competition.

*Rationalisation* covers the growing importance of systematic, scientific knowledge as a base for things such as training, preparations, nutrition, acclimatisation, with the purpose of increasing performance, and reducing the risk of injury. The growth of sport science and of sport-related uses of basic science across the world over the last century is a testament to the importance of rationalisation.

*Standardisation* links to equipment, rules, arenas, and many other aspects in sport. In the early days of a sport, the size of the ball or the length of the pitch may vary quite a lot, especially when competing against athletes or teams from other countries. In a sport that has gone through a long and far-reaching sportification process, it is unlikely that such differences will remain. Standards will have been established along the way, thus also introducing an element of path dependence and a co-dependence between sport and industry (Fouché, 2017; Gross & Roeder, 2022).

*Regimentation* refers to the increasingly detailed rules and regulations regarding all aspects of a sport, including what types of equipment are allowed and what techniques can be used. Doping is one example where regimentation is important for the legitimacy of sport.

*Organisation* is especially important, as it links all other aspects of sportification to the actual governing entities that can administrate and develop issues such as rules or standardised arenas. It is a remarkable difference from the early days of sport in the 19th century when local clubs were the main organising force, to our current situation with extremely influential international organisations that operate on a global scale. FIFA, IOC, and World Athletics are all examples of this. The organisational pyramid is then completed by continental, national, regional, and local organisations, and all the way down to the individual clubs. At all levels, sport organisations can function as the backbone of sportification.

*Equalisation* is perhaps the most elusive of these aspects of sportification. It usually refers to the uncertainty of outcome, a key ingredient in most sports. However, it can also be interpreted in a more ambitious way, as a process of making sports more equal in relation to gender, ethnicity, class, sexuality, age, physical ability, or any other factor that historically has been used for limiting people's access to sport. Sportification is no guarantee for more equality but can, in some sports such as skateboarding (D'Orazio, 2021) and football (Svensson & Oppenheim, 2018), have potential to challenge traditional structures and ideas.

*Quantification* links to the records that Guttmann (1978) highlighted in his title. As sports have developed, so has our ability to measure performance and keep records of earlier results in training sessions and competitions from rather basic data (i.e., the time it takes to run a specific distance or the height an athlete jumps) to more advanced and much larger sets of data regarding the number of specific passes in a football match that leads to a clear-cut goalscoring chance or the number of goals a team "should" statistically have scored, given the number of good chances they created in a game (known as *expected goals*, Xg). To put it bluntly, if your team has a high Xg but don't score any goals, you may want to take a discussion with your striker.

While the seven characteristics of sportification above are presented individually, they also relate to and reinforce each other. For example, it would be difficult to ban the use of certain performance-enhancing substances (regimentation) if their effect had not been scientifically determined (rationalisation) and if there were no international organisations to implement and follow up on such a ban (organisation). Not unlike the United Nations' (UN) Sustainable Development Goals (SDG), each criterion of sportification contributes to the whole. They are related and often mutually reinforcing, though also sometimes in conflict. It is, to name but one such tension, easy to see how an increased level of rationalisation and quantification based on the use of more advanced (and expensive!) technology could make equalisation even harder. Professionalisation can offer opportunities to advance specialisation through more time available for training and recovery, while it may challenge equalisation. Looking at how such issues have developed in action sports (Thorpe & Dumont, 2019), it is clear that professionalisation can be an important (and somewhat controversial) driver of the sportification logic. New technologies, advanced materials, and cutting-edge science are entangled with coaches, athletes, and environments in complex ways (Denison, 2022), which further underlines the need for more research on how sustainability comes into play in sports.

## **Sportification and sustainability**

While we have seen a growing literature of sports and the environment in recent years (see e.g., McCullough & Kellison, 2018; Wilson & Millington, 2020), sportification and the core idea of increasing performance have so far not been addressed to any major extent. *Citius*, *Altius*, and *Fortius* can be beautiful at the sports arena, but how does it work in relation to a society that needs to lower its environmental impact? This leads to our main focus: can sportification and its associated focus on increasing performance contribute to a growing environmental impact of sports? Is there even something fundamentally problematic with the idea of sportification and the strife to be faster, higher, and stronger?

In this book, we will analyse challenges and links between sportification and the environmental impact of sports. What environmental implications does sportification have in various sports and in the sports sector in general? Is it possible to pursue sportification criteria such as professionalisation, quantification, specialisation, and organisation without increasing the environmental impact? Are there even ways to use and adapt sportification for more sustainable development in sports, primarily environmental but also linking to social and economic aspects? The sports sector, viewed from a wide perspective, including competitive elite sport, youth sport, and school physical education, with its long tradition of regimentation and quantification, may be well suited to engage in environmental issues. Sports are accustomed to setting limits to performance enhancement for ideological reasons. Doping, for example, is one area where sportification has been limited because of ethical reasons. High-altitude training, hormone levels, and equipment are other areas where limits have been set, although performances

would probably have been even higher without any regulations of these. Could environmental impact become another such example? If so, what would that do to sports as a whole, and how would it manifest in different sports? Is there a potential in inscribing environmental concerns into the fundamental ambitions of sport? The irony in that one of the most famous visualisations of our environmental predicament (the Great Acceleration curve) has the shape of a hockey stick should not be lost here (McNeill & Engelke, 2016). Ice hockey is one of the most modern sports in terms of indoorisation and of removing environment from the equation. Other sports, such as ice bandy or cross-country skiing, have been much more dependent on nature both in practice and in rhetoric (Andersson, 2020; Sörlin, 2011; Svensson, 2016). This would indicate that while many of the problems concerning sport and the environment are international and global in scope, perceptions, and traditions on national, regional, and local levels shape the way we understand them. Ultimately, different levels of sportification may result in very different environmental impacts, and ideas about how sport, practices, and landscape are connected.

## **The structure of this volume**

The parts and chapters in this book all address links and interrelations between sportification and sustainable development. However, they do so from a multitude of different perspectives and research fields, including sociology, philosophy, history, pedagogy, and sport science. In order to strengthen connections between the contributions, and to point at the most important overall perspectives, we have divided the book into three parts. **Part I** will focus on the overarching logics and issues in the relation between sportification and sustainability. **Part II** deals with contemporary trends and developments and how these could challenge the sportification model. **Part III** zooms in on youth sports and education and specifically on how the balance between sport, performance, and sustainability is managed in physical education. We have chosen these three parts as they together address what we believe are the most critical areas where more knowledge is needed in order to fundamentally change the sporting world in a more sustainable direction. We will now introduce the three parts and the chapters included and then wrap up this introduction with some of the most important findings and conclusions.

## **The parts and chapters in the book**

### ***Part I – Overarching logics and issues: Tensions and entanglements between sport, performance, and sustainability***

As hopefully have become clear by now, this book explores tensions between sport, performance, and sustainability. We depart from the sportification model and have used this introduction (and also the first chapter of Part I, written by the four editors) to set the stage. The role of overarching logics in sport, such as the



ambition to perform better, has been our focus. We have done so with a historical and sociological perspective but also acknowledge that philosophical underpinnings of established values in sport need further attention. Sports philosophy can contribute with deeper understanding of the historical–philosophical roots of values in sport, as well as important perspectives on the future developments.

Asking questions, problematising the taken for granted, and suggesting new ways of understanding sports, Sigmund Loland presents an interpretation of “natural athletic performance” that can inform the understanding of sport as a human practice and serve as a regulative idea in the shaping of its rules and practices. Loland points to how sports practised according to the idea of “natural athletic performance” can connect participants in deep and interactive ways with their organic nature and thereby with the environment of which they are parts.

## **Part II – Developments and processes: Challenges to the performance paradigm?**

Sports follow certain logics, where sportification is key to pursue increasing performance levels and competitiveness. However, not all sport is about competition and performance. There are many other values at play, which becomes especially clear when looking at emerging sports, traditional sports, or adventure sports. All of these can challenge established logics of modern sports in various ways. In Part II, we have three chapters that all explore potential challenges to sportification and the performance paradigm.

Social media influencers play an important role in shaping our views and understandings of contemporary times. In Simon Beames and Jack Reed’s chapter, influencers’ posts are studied. The selected influencers present narratives on adventurous physical activities which could have been interpreted within the frame of *Citius*, *Altius*, and *Fortius*. Yet, their narratives don’t adhere to sportification. Instead, they clearly represent voices in which working against climate change and for the reaching of UN’s SDG are central. Beames and Reed’s analysis points to contradictions in the narrative of sportification of physical activities and an environmentalist perspective.

There is a lack of knowledge with regard to how active presence in these artificial facilities influences sporting practitioners’ thoughts about the environmental impact of their own practice in sport. In the chapter by Backman, Svensson, and Danielski, they critically discuss environmental issues connected to sports facilities in a general sense and more specifically in relation to artificial sports and outdoor facilities. In doing this, they use several theoretical models and concepts (Engström et al., 2018; B. Millington & Wilson, 2016; Sandell, 2016) to discuss the current research with examples taken from the illustrative artificial landscapes of cross-country skiing, canoe slalom, and turf-based sports.

Johan Carlsson discusses padel, a fast-emerging racket sport in Europe, especially Sweden, and some of its conditions and consequences in relation to different aspects of sportification (such as institutionalisation, eventification, and

commercialisation) and environmental sustainability. Padel is a relatively new sport in Sweden; therefore, it is interesting to pose questions around whether agents in a new sport are more environmentally aware when they adhere to sportification. Carlsson even questions whether sportification is a fruitful perspective to understand environmental challenges in padel? He shows that there are several challenges not the least connected to consumption patterns (the buying of new equipment) and the growing number of arenas. Lastly, he examines how agents in padel can get more motivated to create systems for environmental sustainability that can not only recognise the force of sportification but also challenge it when needed.

In the chapter by Lidström and Carlsson, they analyse the development of lassoing as a competitive sport among the Sámi, an indigenous population residing in Northeastern Europe. Lidström and Carlsson have a particular interest in deviations from the characteristic features of modern sport (such as universal measurability, fairness, and standardisation of rules and equipment) and their intention is to depict alternate developments and new directions for how sports are organised and performed in a post-modern (and post-colonial) context.

### ***Part III – Education and sport sustainability: Pedagogical, social, and environmental challenges in school sport and physical education***

Environmental sustainability education plays an important role in preparing citizens to think and act in a more sustainable manner (Dingle & Mallen, 2020). It is sometimes conducted in the form of interdisciplinary project and sometimes in the form of subject-specific education. Environmental sustainability is in many countries often well supported in school curricula documents. In this part, two subject contexts from the Swedish school system, physical education (Isgren Karlsson & Backman) and school sport (Larneby), are portrayed with regard to how they relate to different aspects of sustainability.

In the chapter by Isgren Karlsson and Backman, the relationship between how environmental sustainability is presented in national curricula and how it is perceived by physical education teachers is explored. Using an explanatory sequential approach to both quantitative and qualitative data, and basing the analysis of Bernstein's (2000) concept of classification, this chapter contributes to the discussion of how teachers enact their governing school documents when it comes to environmental sustainability in physical education.

In the chapter by Larneby, the aim is to reflect on and discuss how the merging of education and sport in school sport can have consequences for gender norms and social and environmental sustainability. She uses examples from previous studies as illustrations of how sustainability is expressed in school sport. Further, sustainability is discussed in relation to gender as a power relation, based on questions of how logics of sport and education and sustainability is managed within educational steering documents.

## Beyond performance – Sustainable sporting futures

While research on relations between sport and environment have grown tremendously over the last decade, we argue that potential tensions between sustainability and performance have largely escaped scrutiny. Much of the work on sport sustainability, sport ecology, and sport geography have had a contemporary focus, and the historical developments and choices need further attention. This book addresses these historical dimensions, as well as their implications for current and future sport sustainability. We argue for the importance of asking fundamental questions about the relationship between sport and sustainability. To do this, there is an urgent need to historicise the environmental issues of sport in new and innovative ways, adding chronological depth to complement the often-contemporary approaches in sport management. This book offers perspectives from leading scholars from sport history, sport pedagogy, sport philosophy, environmental history, and sport science. In doing so, we speak to readers from all those fields and hope to inspire interdisciplinary discussions.

Our ambition has been to both problematise and develop the sportification model, which is one of the fundamental theories used in sport-related research in humanities and social sciences. We argue that one result of more than a century of increasing sportification has decontextualised sport in a number of ways. The landscapes of modern sport are highly specialised and standardised (Bale, 1994). While many sports emerge in a specific geographic and cultural context, the globalisation of sport has turned sport facilities and landscapes into what Swedish scholar Mattias Qviström (2013) has labelled *portable landscapes*. Building on this idea, and the concept of *contextual sport* as laid out by Millington and Wilson (2016), we argue that a recontextualisation is necessary for sports to address environmental aspects in a meaningful and credible way. In this process, it will be important to acknowledge traditional games and sporting heritage, as well as local and indigenous sporting traditions and knowledge about relations between the human body in motion and the environment (Wheaton et al., 2021). If sportification is to be sustainable in the long term, environmental considerations need to become part of its core logic. Just as sports have tended to develop towards more specialisation and rationalisation, we now need a stronger focus on *environmentalisation* as part of the sportification process.

To enable such an environmental turn in sport, we argue that it is crucial to see sportification not as a set of criteria that are either present or not present in a specific sport. Instead, sportification is a process with a set of underlying values (e.g., that increasing performance is positive and important in its own right). Standardisation, rationalisation, quantification, and many of the other criteria are continuously pursued and developed, driven by the strife for performance. To exemplify, football was no doubt as much a sport in the 1920s as it is today but the level of sportification is totally different. To exemplify, having one generalist coach is a step on the sportification ladder but no way near the complexity of present-day football teams at the highest level, which have dozens of coaches and

other specialists in their organisations. Sportification has been used as a checklist with a set of boxes that can be ticked and once they are, an activity (such as padel or e-sports) has transformed into a sport. We strongly believe – and show throughout the book – that sportification is an ongoing process with ever-more ambitious and far-reaching implications for specific sports as well as the sector as a whole.

That said, the process is not a natural given but can (and has been) be shifted in various ways. Performance-enhancing elements, such as doping or high-altitude training, have been regulated and new technologies have been banned. The latest example is the Corona crisis, which showed that sport organisations on all levels can make rapid changes in response to extreme situations in ways that were previously impossible to predict. In Sweden, not only meetings but also various arrangements, such as exercise races, were digitalised and many began to exercise and be physically active in outdoor environments (Svensson & Radmann, 2021). Coaches, as well as athletes, in sports tell, for example, that they moved training from indoor halls to surrounding parks or natural areas. Exercises were done in new ways – possibly ways that could develop into more environmentally sustainable alternatives to the indoor sports activities. A trend, at least for adult exercisers in Sweden, appeared to be that although sports activities decreased, physical activity remained unchanged. For younger practitioners (especially young adults), however, a reduced participation in sports seems to have affected physical activity negatively. More of them testify that they lacked what they experienced as the most important driving force for practising sports – the competition. This underlines the importance of analysing the driving forces for peoples' involvement in sports – possibly pointing to that some sport activities can be changed into more environmental alternatives, whereas others will be difficult to change (e.g., Book et al., 2022; Hedenborg et al., 2022).

This introduction, as well as the individual chapters, all point at potential ways in which environmental concerns can get on the sports agenda. On a structural level, we need policy documents, regulations, and organisations to make environmental sustainability part of their *modus operandi*. Organisations, such as UEFA, have been important in establishing and developing sports based on logics of sportification (Vonnard et al., 2016). Now, sportification needs to include an environmental dimension and make it a priority when it inevitably comes into conflict with other aspects of sport. While this can be critiqued for undermining the strive for excellence and increasing performance in sport, we have already many historical examples of how certain values and ideas have been prioritised over performance. We have outlawed doping, we have limited the use of certain technologies, and we have gone rather far in trying to preserve a space for “natural” performance (see Loland, this volume). This idea of natural performance could be complemented with a broader ecological dimension, meaning to perform within the ecologic boundaries in a way that would be sustainable in the longer perspective. There is, after all, nothing wrong with aiming to be stronger, to run faster, or jump higher. To paraphrase the most famous document of modern international

environmentalism (World Commission on Environment and Development, 1987), a sustainable sportification is one which allows us to meet the sporting needs of the present without compromising the ability of future generations to meet their sporting needs. As this book aims to show, such an ambition is not a threat to the values of sport. It is business as usual that is the real threat. We can still aim for increasing our performances in sport – as long as we also perform well regarding environmental sustainability.

## References

- Andersson, T. (2020). Bandy v. ice hockey in Sweden. *Sport in Society*, 23(3), 361–376.
- Backman, E., & Svensson, D. (2022). Where does environmental sustainability fit in the changing landscapes of outdoor sports? An analysis of logics of practice in artificial sport landscapes. *Sport, Education and Society*. <https://doi.org/10.1080/13573322.2022.2073586>
- Bale, J. (1994). *Landscapes of modern sport*. Leicester University Press.
- Bernard, P., Chevance, G., & Kingsbury, C., Balliot, A., Romain, A.-J., Molinier, V., Gadais, T., & Dancause, K. N. (2021). Climate change, physical activity and sport: A systematic review. *Sports Medicine*, 51, 1041–1059.
- Bernstein, B. (2000). *Pedagogy, symbolic control & identity: Theory, research, critique* (2nd ed.). New York: Rowman & Littlefield.
- Book, K., Hedenborg, S., & Andersson, K. (2022). New spatial practices in organised sport following COVID-19: The Swedish case. *Sport in Society*, 25(7), 1343–1358.
- Boulton, E. G. (2022). PLAN E: A grand strategy for the twenty-first century era of entangled security and hyperthreats. *Journal of American Military Studies*, 13(1), 92–128.
- Boykoff, J., & Mascarenhas, G. (2016). The olympics, sustainability, and greenwashing: The Rio 2016 summer games. *Capitalism Nature Socialism*, 27(2), 1–11. <https://doi.org/10.1080/10455752.2016.1179473>
- Collinet, C., Delalandre, M., Schut, P., & Lessard, C. (2013). Physical practices and sportification: Between institutionalisation and standardisation. The example of three activities in France. *The International Journal of the History of Sport*, 30(9), 989–1007.
- Collins, A., Jones, C., & Munday, M. (2009). Assessing the environmental impacts of mega sporting events: Two options? *Tourism Management*, 30(2009), 828–837.
- Denison, J. (2022). Coaching matters: Programming, pedagogy and performance. *Sports Coaching Review*. <https://doi.org/10.1080/21640629.2022.2140396>
- Dingle, G., & Mallen, C. (2020). *Sport and environmental sustainability. research and strategic management*. Taylor and Francis.
- D’Orazio, D. (2021). Skateboarding’s Olympic moment: The gendered contours of sportification. *Journal of Sport and Social Issues*, 45(5), 395–425.
- Eichberg, H. (1978). *Leistung, spannung, geschwindigkeit*. Klett Cotta.
- Eichberg, H. (1995). Problems and future research in sports sociology. A revolution of body culture? *International Review for the Sociology of Sport*, 30(1), 1–19.
- Elias, N., & Dunning, E. (2008). *Quest for excitement: Sport and leisure in the civilizing process*. University College Dublin Press.
- Engström, L.-M., Redelius, K., & Larsson, H. (2018). Logics of practice in movement culture: Lars-Magnus Engström’s contribution to understanding participation in movement cultures. *Sport, Education and Society*, 23(9), 892–904.

- Fouché, R. (2017). *Game changer: The technoscientific revolution in sports*. Johns Hopkins University Press.
- Geeraert, A., & Gauthier, R. (2018). Out-of-control Olympics: Why the IOC is unable to ensure an environmentally sustainable Olympic Games. *Journal of Environmental Policy & Planning*, 20(1), 16–30.
- Goksøy, M. (1988). *Sivilisering, modernisering, sportifisering: Fruktbare begreper i idrettshistorisk forskning?* Oslo Universitet.
- Gross, R. S., & Roeder, C. F. (2022). Gearing up: Materials and technology in the history of sport. *The International Journal of the History of Sport*. <https://doi.org/10.1080/09523367.2022.2040931>
- Guttmann, A. (1978). *From ritual to record: The nature of modern sports*. Columbia University Press.
- Hajer, M. A. (1995). *The politics of environmental discourse: Ecological modernization and the policy process*. Clarendon.
- Heck, S. (2019). Assessing the ecological impact of ultramarathon events in protected natural sites: 'Le grand raid Réunion'. *Heritage*, 2(1), 749–760.
- Hedenborg, S., Fredman, P., Skriver Hansen, A., & Wolf-Watz, D. (2022). Outdoorification of sports and recreation: A leisure transformation under the COVID-19 pandemic in Sweden. *Annals of Leisure Research*. <https://doi.org/10.1080/11745398.2022.2101497>
- Heere, B. (2018). Embracing the sportification of society: Defining e-sports through a polymorphic view on sport. *Sport Management Review*, 21(1), 21–24.
- Hickey, C. F. (2011). A potent and pervasive Ideology': Athleticism and the English elementary school. *The International Journal of the History of Sport*, 28(13), 1852–1890.
- Hognestad, H. K., Giulianotti, R., Thorpe, H., Langseth, T., & Gils, B. (2022). Editorial: Environmental sustainability in sports, physical activity and education, and outdoor life. *Frontiers in Sports and Active Living*, 4, 853599. <https://doi.org/10.3389/fspor.2022.853599>
- Ingham, A. G. (1978). *American sport in transition: The maturation of industrial capitalism and its impact upon Sport*. University of Massachusetts.
- Loland, S. (2001). Record sports: An ecological critique and a reconstruction. *Journal of the Philosophy of Sport*, 28(2), 127–139.
- Loland, S. (2006). Olympic sport and the ideal of sustainable development. *Journal of the Philosophy of Sport*, 33(2), 144–156.
- Loland, S. (2018). Performance-enhancing drugs, sport, and the ideal of natural athletic performance. *American Journal of Bioethics*, 18(6), 8–15.
- Mangan, J. A. (1981). *Athleticism in the Victorian and Edwardian public school: The emergence and consolidation of an educational ideology*. Cambridge University Press.
- Mangan, J. A. (Ed.) (2000). *Making European masculinities: Sport, Europe, gender*. Routledge.
- Mangan, J. A. (Ed.) (2012). *'Manufactured' masculinity: Making imperial manliness, morality and militarism*. Routledge.
- McCullough, B. P., & Kellison, T. B. (2018). *Routledge handbook of sport and the environment*. Routledge.
- McCullough, B. P., Kellison, T., & Melton, E. N. (2022). *Routledge handbook of sport and sustainable development*. Routledge.
- McNeill, J. R., & Engelke, P. (2016). *The great acceleration: An environmental history of the Anthropocene since 1945*. Harvard University Press.
- Miller, T. (2016). Greenwashed sports and environmental activism: Formula 1 and FIFA. *Environmental Communication*, 10(6), 719–733. <https://doi.org/10.1080/17524032.2015.1127850>

- Millington, B., & Wilson, B. (2016). *The greening of golf: Sport, globalization and the environment*. Manchester University Press.
- Millington, R., Giles, A. R., van Luijk, N., & Hayhurst, L. M. C. (2022). Sport for sustainability? The extractives industry, sport, and sustainable development. *Journal of Sport and Social Issues*, 46(3), 293–317.
- Orr, M. (2022). Tour de France: Future heatwaves may make it untenable to hold the race in July. *The Conversation*, July 27. Retrieved from <https://theconversation.com/tour-de-france-future-heatwaves-may-make-it-untenable-to-hold-the-race-in-july-187725>
- Orr, M., & Inoue, Y. (2019). Sport versus climate: Introducing the climate vulnerability of sport organizations framework. *Sport Management Review*, 22(4), 452–463.
- Pfister, G. (2007). Sportification, power, and control: Ski-jumping as a case study. *Junctures: The Journal of Thematic Dialogue*, 2007(8), 51–67.
- Qviström, M. (2013). Landscapes with a heartbeat: Tracing a portable landscape for jogging in Sweden (1958–1971). *Environment and Planning A*, 45(2), 312–328.
- Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin III, F. S., Lambin, E. F., Lenton, T. M., Scheffer, M., Folke, C., Schellnhuber, H. J., Nykvist, B., de Wit, C. A., Hughes, T., van der Leeuw, S., Rodhe, H., Sörlin, S., Snyder, P. K., Costanza, R., Svedin, U., ... Foley, J. A. (2009). A safe operating space for humanity. *Nature*, 461, 472–475.
- Ross, W. J., & Orr, M. (2022). Predicting climate impacts to the Olympics games and FIFA Men's world cups from 2022 to 2032. *Sport & Society*, 25(4), 867–888.
- Sandell, K. (2016). Ecostrategies: Presentation and elaboration of a conceptual framework of landscape perspectives. *Tourism*, 64(1), 63–80.
- Smart, B. (2007). Not playing around: Global capitalism, modern sport and consumer culture. *Global Networks*, 7(2), 113–134.
- Sörlin, S. (2011). *Kroppens geni: Marit, petter och skidåkning som lidelse*. Weyler.
- Steffen, W., Richardson, K., Rockström, J., Cornell, S. E., Fetzer, I., Bennet, E. M., Biggs, R., Carpenter, S. R., de Vries, W., de Wit, C. A., Folke, C., Gerten, D., Heinke, J., Mace, G. M., Persson, L. M., Ramanathan, V., Reyers, B., & Sörlin, S. (2015). Planetary boundaries: Guiding human development on a changing planet. *Science*, 347, 6223. <https://doi.org/10.1126/science.12598>
- Sterchele, D. (2015). De-sportizing physical activity: From sport-for-development to play-for-development. *European Journal for Sport and Society*, 12(1), 97–120.
- Svensson, D. (2016). *Scientizing performance in endurance sports: The emergence of 'rational training' in cross-country skiing, 1930–1980*. KTH Royal Institute of Technology.
- Svensson, D., Backman, E., Hedenborg, S., & Sörlin, S. (2020). Idrottens växande ekologiska fotavtryck – Sportifiering, inomhustrend och miljöpåverkan. In Å. Bäckström, K. Book, B. Carlsson, & P. Fahlström (Eds.), *Sport management del 3 – Idrottens marknader och konsumtionskultur*. SISU Idrottsböcker.
- Svensson, D., & Oppenheim, F. (2018). Equalize it!: 'Sportification' and the transformation of gender boundaries in emerging Swedish Women's football, 1966–1999. *The International Journal of the History of Sport*, 35(6), 575–590.
- Svensson, D., & Radmann, A. (2021). Keeping distance? Adaptation strategies to the Covid-19 pandemic among sport event organizers in Sweden. *Journal of Global Sport Management*. <https://doi.org/10.1080/24704067.2021.1936592>
- Thorpe, H., & Dumont, G. (2019). The professionalization of action sports: Mapping trends and future directions. *Sport in Society*, 22(10), 1639–1654.
- Triantafyllidis, S., & Mallen, C. (2022). *Sport and sustainable development*. Routledge.
- Von Der Lippe, G. (1994). Handball, gender and sportification of body-cultures: 1900–40. *International Review for the Sociology of Sport*, 29(2), 211–231.

- Vonnard, P., Quin, G., & Bancel, N. (2016). *Building Europe with the ball*. Peter Lang Verlag.
- Watt-Cloutier, S. (2015). *The right to be cold: One Woman's story of protecting her culture, the arctic and the whole planet*. Penguin.
- Westing, A. H. (1989). The environmental component of comprehensive security. *Bulletin of Peace Proposals*, 20(2), 129–134.
- Wheaton, B. (2020). Surfing and environmental sustainability. In B. Wilson & B. Millington (Eds.), *Sport and the environment* (pp. 157–178). Emerald Publishing Limited.
- Wheaton, B., Waiti, J. T. A., Olive, R., & Kearns, R. (2021). Coastal communities, leisure and wellbeing: Advancing a trans-disciplinary agenda for understanding ocean-human relationships in Aotearoa New Zealand. *International Journal of Environmental Research and Public Health*, 18(2), 450.
- Wilson, B., & Millington, B. (2020). *Sport and the environment. politics and preferred futures*. Emerald Publishing Limited.
- World Commission on Environment and Development. (1987). *Our common future*. Oxford University Press.
- Yttergren, L. (1996). Stockholm and the rise of modern sports, 1860–98. *The International Journal of the History of Sport*, 13(3), 404–408.
- Yttergren, L. (2013). The professionalisation and scientification of athletics training in Sweden 1910–1957: Two examples: Ernie Hjertberg and Gösse Holmer. *Stadion: Internationale Zeitschrift für Geschichte des Sports*, 40(1), 57–71.