The Legacies of the 1994 Winter Olympics in Lillehammer

Jon Helge Lesjø Inland Norway University of Applied Sciences E-mail: <u>jon.helge.lesjo@inn.no</u>

WORKING PAPER LILLEHAMMER OLYMPIC AND PARALYMPIC STUDIES CENTER (LOSC) Lillehammer, October 2019/February 2020

WORKING PAPER LILLEHAMMER OLYMPIC AND PARALYMPIC STUDIES CENTER (LOSC)

Jon Helge Lesjø Inland Norway University of Applied Sciences The Business School - Faculty of Economics and Social Science Box 400, 2418 Elverum Norway

Visiting address: Storhove, Nyhove room 332, Lillehammer

E-mail: jon.helge.lesjo@inn.no

Abstract

Alongside the Summer Olympics in Barcelona in 1992, the Lillehammer Games has been seen as a 'model' of Olympic legacy. This article gives an overview of the experiences 25 years following the Lillehammer Games. This study encompasses multiple domains of legacy besides sporting legacies: the leveraging on education and culture, the environment and urban development, industry, business and tourism. The results indicate both positive and detrimental legacies. The Lillehammer Games has contributed with cultural capital to the legacy of the Winter Games, and has had an agenda-setting function for the environment and the sustainability discourse in the Olympics. The Games has also made important contributions to local educational and cultural institutions and to city development. The development in the tourism industry has been more ambiguous, but the '94 Games contributed importantly to the development of two neighboring tourism resorts. The sporting venues from the Games have been extensively used in both international and national competitions since 1994, and yet the endowment fund was exhausted in 20 years. The operational deficit of the Olympic Park and the lack of a sustainable business model for international events have led to an onerous burden for the venue owners and municipal politics.

Key words: legacy model, multiple legacies, winter sport events, cultural capital, sustainability, tourism development, path dependence

Introduction

The concept of legacy in Olympic affairs was first identified in connection with the 1956 Olympics in Melbourne (Leopkey and Parent, 2012a). After Peter Ueberroth's transformative 1984 Summer Games in Los Angeles and the establishment of the LA84 Foundation, the concept again attracted attention. In 2003 the legacy thinking was institutionalised in the official documents of the Olympic Movement (Leopkey and Parent, 2012b). Often addressed hand in hand with the concept of sustainability, legacy and legacy-related trends have also attracted attention amongst Olympic scholars.

Reflecting upon the fruitfulness of the concept of legacy, Olympic scholar Vassil Girginov (2018, p. 1) began his 2018 book by declaring "It is also remarkable that legacy appears only three times in the Official Reports of the 1992 Barcelona Games and zero times in the 1994 Lillehammer Olympics, both of which have been generally considered as models for legacy". Barcelona is well known for having used the 1992 Summer Olympics as part of a

transformative plan for the entire city (Coaffee, 2007; Monclús, 2007), but what about Lillehammer – should it be regarded as a "model for legacy"? For Norwegian audiences, the statement from the then president of the International Olympic Committee (IOC), Juan Antonio Samaranch, at the closing ceremony of the XVII Olympic Winter Games (OWG) that Lillehammer had been "the best Olympic Winter Games ever!" is often remembered and recited. Internationally, the Lillehammer Games obtained a favourable reputation, not least due to its success as an international media event (Puijk, 1997).

But what about the rest of the legacy of the Lillehammer Games? Although the concept of legacy is both ambiguous and contested (MacAloon, 2008; Girginov, 2018), the concept has grown in popularity. The most widely used definition for legacy in Olympic studies was formulated by Holger Preuss (2007, p. 211) as being "Irrespective of the time of production and space legacy is all planned and unplanned, positive and negative, tangible and intangible structures created for and by a sport event that remain longer than the event itself." According to those criteria, it is relevant to investigate both the material and non-material as well as both the positive and negative impacts upon different areas the Lillehammer Games left behind.

Studies on legacy 25 years after sporting events have taken place are, as far as we know, none existent, therefore information about was has happened since that time should be of interest. At a time when the IOC is searching for new models for the OWG and the Olympic Agenda 2020 has opened up hosting the Olympics in ways that better correspond to local needs and strategies than in the past, it could be useful to examine further if and in what sense the Lillehammer Games stands out as a legacy model. Following the introduction is a review of the Olympic legacy discourse and the context of the Lillehammer case; a methodology section and an empirical presentation of four important legacy areas. The article ends with a discussion of the model's relevance and a conclusion.

Olympic Legacies and the Context of Lillehammer

From one point of view, as John J. MacAloon (2008) reminds us, legacy as a consideration to leave something behind has been part of Olympic history from the beginning of the modern Games. Both refurbishing stadiums and strengthening the host's national confidence have been addressed from early on. An early starting point for research on Olympic legacy was the International Symposium in Lausanne in 2002, at which researchers and organisers met to discuss a broad range of legacy-related issues (Moragas, Kennett and Puig, 2003). There, a multidisciplinary approach clearly emerged at the main sessions, which focused on legacies related to historical development, economics and tourism, urban and environmental issues and in sport, as well as organisational, political, cultural and symbolic legacies. Cashman's (2006) important study of the legacy of the 2000 Sydney Games followed in this tradition. Since the beginning of the current decade, research on Olympic legacy has multiplied (Koenigstorfer et al. 2019). Chappelet (2012) has found it useful to talk about legacies in the plural due to the varied types of legacy categorisation in the literature.

One tradition has been to study the impact of the Games, and the economic side has been looked at to see whether the results could pay off the investments. The IOC has been concerned about its reputation and since 2000 they have enforced the host cities to implement impact studies on a range of areas and multiple indicators, including the economic, social and environmental impact. The Olympic Games Global Impact (OGGI) projects should last for 11 years, but only for 2 years after the event. This is considered too early for legacy measurement (Gratton and Preuss, 2008). The OGGI approach has been criticised for some rigidity (Leonardsen, 2007), and Késenne (2006) has criticised the impact studies of sporting events in general for being rather unclear.

One of the reasons for today's problems finding hosts for the Games is the fact that they have become very costly and permanently ridden by cost overruns. The Oxford study from 2016, by comparing the figures in the bid books with the official reports after the Games, stated that the Olympics in general had experienced cost overruns. The Lillehammer Games in 1994 was no exception to this rule (Flyvbjerg, Stewart and Budzier, 2016).

Another challenge following the Olympics was the problems of "white elephants"; namely the situation where large stadia built for the event did not have a natural reuse after the event (Okada and Greyser, 2018).

Girginov (2018) has highlighted problems with most research on and concepts about Olympic legacy that make them infeasible for the Olympic Movement. He has proposed shifting towards thinking in terms of leverage—that is, using Olympic events as resource- and capacity-building opportunities, especially in the core areas of Olympism, sport and education. Following the arguments of MacAloon, Girginov (2018) regards the Olympics as a source of cultural heritage from which the hosts can capitalise on and enlarge. MacAloon was also concerned about the development of a 'legacy rhetoric' in the Olympic circles at the beginning of the century closely connected to the thinking in the term of protecting their 'brand'.

Preuss (2019) has further developed his event legacy framework with an emphasis on legacy outcomes caused by "structural changes that stems from the Olympic Games" (2019, p. 106). According to him, the Games always cause changes in existing structures and have consequences for people and the environment. In addition, the changes may be tangible or intangible and caused by the Games or developed indirectly by them. The outcomes can further be neutral, positive or negative, intentional or unintentional. Preuss (2019, p. 107-109) argues that when developing some fundamental principle for a generalised framework that the value the changes generate will be determined by the co-creation of actors in special circumstances and that they will alter between branches and through times.

The Lillehammer context

Chappelet (2002) has pointed out the challenge of the large growth of the OWG between 1980 and 2002. Although the OWG was born in small mountain resorts, its development into a mega event has increasingly resembled that of the Summer Games, and opportunities to host the event has likewise been rewarded to large cities (e.g. Calgary, Nagano, Salt Lake City and Turin). By contrast, small sites such as Albertville in France's Savoie region and Lillehammer have stood out as modern exceptions.

The Lillehammer Games came about at a time when legacy-oriented planning was not yet institutionalised in the Olympic movement. Lillehammer promoted its bidding campaign under the slogan "Compact Games" to comply with the IOC's priorities at the time. Their campaign for the 1992 OWG resulted in a loss to the candidature of Albertville at the IOC session in Lausanne in October 1986. At the same session, another decision of considerable importance for Lillehammer was taken: the Olympic cycle for the OWG, which from 1924 had followed the summer Olympics, was now changed to take place half way into the period of the Olympiad (the 4 years between the each edition of the Summer Games). This shift mainly came about due to commercial reasons, as an initiative from TV companies convinced president Samaranch that the revenue from the Games would be larger if the Summer Games and Winter Games were split up (Payne 2006, p. 41-43). The next Winter Games was then set up to be delivered only 2 years after the 1992 Games. This fact gave the Lillehammer campaign a 'flying start', and the city was awarded the 1994 Games by the IOC in September 1988. Lillehammer then had the advantage of being the first OWG to be the only Olympic event in the new Olympic calendar for the year 1994. The preparation for the Games took place at a time of international turmoil and was influenced by the dissolution of the Soviet Union, a number of new nations aspiring to enter the Olympic movement, and the Yugoslav Wars.

Nationally, the concept of a compact Olympics went through some regionalisation during the planning and implementation process, but the Olympic Games in 1994 were still held in a region of small towns moderately distanced from each other (Lesjø, 2003). During the planning process, the Lillehammer host was also caught up with the growth and complexity mechanism affecting the OWG, as analysed by Chappelet, and was hit by a considerable cost overrun. As the guarantor, the Norwegian state both took care of the bill as well as moved into a central power position in the project's life span towards its delivery.

The city of Lillehammer and its neighbouring region were anxious about coming under a so-called "oil shadow" of the vital petroleum-intensive economic activity on Norway's western coast at that time. Bidding for the OWG was thus the city's strategy to meet those challenges. From the outset, Lillehammer's Olympic ambitions were motivated by the possibility of the positive economic impact of hosting the OWG. The concept of post-Olympics use was therefore important in the initial thinking of Lillehammer's campaign. Subsequently, the governance networks for the Lillehammer Games changed during three distinct phases (Lesjø, 2003). First, in the period of conceptualisation and bidding, the dominant players were situated in local networks consisting of local government leaders and a local bank. That "city regime" from 1981 to 1988 was the primary node in the network that swayed the IOC to award Lillehammer the status of Olympic host city. Second, after some turmoil in 1989, a new regime was established with the central government as the head organisation that would be responsible for finances, among other things. Legacy-related issues in the regime were organised within and external to different Olympic companies, which succeeded in keeping the costs within (radically redefined) budget and left an Endowment Fund for post-Olympics operations of about NOK 400 million. Third, the period after the Lillehammer Games (1995–present) has been characterised by the decentralisation of governance to local governments, public and private companies and sport associations.

Methodology

A problem with research on Olympic legacy according to Girginov (2018) relates to methodology, specifically methodological challenges with identifying causal relationships. Holt and Ruta (2015) argue that case studies will be favourable for identifying important patterns and to give a more substantial understanding of the phenomena. The case study strategy gives the advantage of being context sensitive and gives in-depth information and valid data of the phenomena under study (Yin, 1989; Andersen, 2013). This single case study of the legacy from the Lillehammer 94 OWG could be considered an exceptional case in accordance with Chappelet's argument. Both the size of the community, as well as the circumstances around the 1994 Games have to be considered when it comes to the discussion of a possible 'models of legacy'. The size of the host city gives some advantages, compared to large host cities, when it comes to identifying the different outcomes of the Games. It will be much easier here to identify what Preuss (2019) considers the structural changes from the event, direct and indirect, tangible and intangible as well as the process of co-production of outcomes.

This study builds on data from different time periods, which reflects the long time span from the preparation for the Games and up to 25 years after. The most important sources are qualitative data from interviews, public and organisational documents, personal communication and media coverage. Interviews with 33 key informants were conducted in the period 1991- 1994 when investigating this case's decision and planning process, and additionally 29 interviews with local politicians were then collected in collaboration with other researchers (Lesjø, 2003). The information from the interviews is reanalysed to illuminate the informant's views at that time on the long-term objectives and after-use issue (legacy).

Organisational documents of the Lillehammer Olympic Organising Committee (LOOC) from this period are scrutinised (from the files located in Innlandet fylkesarkiv, Lillehammer). One legacy from the 1994 Olympic Games was the Youth Olympic Games in 2016, and a number of new interviews were conducted focusing on the organisation committee's relation to the IOC and their handling of the environment legacy. In 2019, local government documents were studied (online) as well as the press coverage on Olympic legacy; especially the local newspaper's (www.GD.no) coverage was followed closely during the year 2018/2019. The author has made use of a literature study on Olympic legacy research (Hanstad 2019), supplemented with some further search. Furthermore, secondary sources such as all relevant research reports connected to Lillehammer's post-Games period were collected and scrutinised.

Multiple Domains of Legacy

As shown in the review of the Olympic legacy research a lot of legacy areas have been considered. In studying the Lillehammer case four areas stand out as especially relevant, and we are looking for how they demonstrate structural changes and tangible and possible intangible outcomes. The core elements of Olympism – i) sport and ii) education and culture – are of course important when looking at the possible contribution from this edition of the Games. Strengthening the nation's winter sport position was an important motivation for this Olympic endeavour, as was building a new winter sport centre in the Lillehammer area. Probably the most important symbol of the 1994 Games was its iii) environmental profile, which is an important reason for including this legacy. Finally, iv) modernising the city's economic structure and to promote growth in tourism and industry were important objectives from the start of the project, which justify an interest in these legacies.

Lillehammer's legacy in sport

A problem for many host cities of mega events has been that large venues constructed for the event are later shuttered or used only rarely. By contrast, the venues from the Lillehammer Games in 1994 remain intact and in regular use for local, national and international events, and some also for the athletic practices of local citizens and youngsters. In February 2016, when Lillehammer hosted another Olympic event, the second Youth Olympic Winter Games (YOG), the venues from 1994 were used for most of the sporting events as well (Hanstad and Lesjø, 2017). The 2016 YOG also provided the opportunity to further modernise some of the venues, which has been necessary in order to keep pace with continuously updated requirements for professional skiing. Indeed, since 1994, Lillehammer has regularly appeared on the calendar of FIS for world cup competitions, and Hamar on ISU's for championships in speed skating. The latest figures illustrate the large-scale use of Lillehammer's Olympic venues during the 25 years from 1993 to 2018: 32 World and European Championship events, 129 World Cup events, 74 national championships, 162 national cups and 478 regional or mass sport events (LOLSC, 2019).

The city of Lillehammer and its Olympic region together stand out as an experienced, competent host for those sporting events. However, it is also true that some of the events suffer from low spectator interest and, in turn, a lack of a festival atmosphere in the arenas (NRK, 2020). That trend may be due not only to the schedule of international competitions but also to a problem of scale, for the number of events hosted in Lillehammer has been exceptionally large for a city home to fewer than 30,000 people. The largest ice hall in Lillehammer, Håkons Hall, is heavily used for different large sporting events as well as local activities of many kinds. Nevertheless, few of those events meet the venue's spectator capacity of 11,500, one of the largest amongst handball and ice hockey venues in the country. The alpine venue Kvitfjell, developed for the downhill skiing competition in 1994, has

extensive experience with hosting FIS World Cups in alpine speed skiing and has made several bids to host the world championship. In 2018, however, the National Ski Federation decided to promote Narvik, in northern Norway, as the Norwegian candidate instead, given the belief that it could afford more spectacular experiences for spectators and better televised content.

The venues in the Lillehammer Olympic Park operate with an annual deficit. Although they have been financed by the Endowment Fund from the Olympics at the outset in the amount of approximately NOK 138 million, a regional study 10 years after the Lillehammer Games confirmed that the Endowment Fund would be empty by 2014 (Teigen et al., 2007). The local revenues from the activities have probably exceeded the deficit. Nevertheless, even if the study had identified a potential willingness among local residents to pay for the value associated with the park, innovative financial transfers to optimise that potential would have been necessary. However, no solution was proposed to meet that challenge when the Endowment Fund, as forecasted, dried up in 2014. While the moment of truth for many events arrives when temporary event-oriented organisations close down, in Lillehammer that moment came 20 years later when the Endowment Fund was depleted. As mentioned, the sport events in the post-94 periods involved a deficit for the local hosts and have brought them into a difficult financial situation. The 25th anniversary of the Lillehammer Games was introduced with stories in the local media about how a local event organiser, Lillehammer Skifestival AS, was technically bankrupt (LK, 2019; Innlandet Revisjon, 2018), and a reorganisation was necessary. The ownership structure meant that the deficit was the responsibility of local politicians, and ultimately, local taxpayers had to foot the bill.

The Birkebeiner annual mass cross-country skiing event between Rena and Lillehammer dates back to 1932, and has evolved in ways directly and indirectly influenced by the Olympics (Gotaas, 2015). Lillehammer's new cross-country skiing stadium became the

permanent finish arena for the race, and its facilities were better prepared to accommodate the massive growth of participants following the rise of so-called "Birken culture" that took hold during the late 1990s and early 2000s. Indirectly, the Olympics also probably affected the event's ability to enlarge its product into a "Birken triple", which has been developed since 1998 in summer contests including cycling and running events.

As for all OWG hosts the venue for the bobsleigh and luge events needs to address a special concern. In Lillehammer, despite several initiatives to develop alternative activities that could increase its commercial value, the constructed venue seems to have been predetermined to permanently create deficit. Now the arena also receives financial support from the municipality and the regional county authorities as well as from the central government.

The Lillehammer Games bore an indirect impact on high-level sports in Norway in many ways, both in their organisation and performance. After the 1988 Winter Olympics in Calgary, when Norway earned zero gold medals, a foundation for the development of the Olympiatoppen ('Olympic Training Centre') was established and would build upon the expertise and cooperation of coaches from different sports (Hanstad, 2002; Augestad and Bergsgard, 2007). The merging of Norway's National Olympic Committee (NOC) with the National Association for Sport in Norway was initiated as a result of the Lillehammer Olympics and has contributed to what currently stands out as a Norwegian model of sport, which now includes parasports. Usually, Olympic host cities develop ambitions and receive resources to improve the performance of their national athletes prior to the event, and Lillehammer was no exception (Stensbøl, 2010). During a period of 10 - 15 years, Norway became established as one of the world's leading winter sporting nations. For the

longer periods and used the Olympic facilities while taking advantage of the stable winter climate and snow conditions has been influential as well.

Educational and cultural legacy

Aside from sport, education and culture represent important pillars of Olympism and should therefore constitute an important legacy-related domain. On that count, a branch of the Norwegian Top Athletes Gymnasium (NTG) was established in Lillehammer Olympic Park in 1994 as a post-Olympics user of the new sporting facilities. The NTG is a private educational foundation with the objective of training people 16 to 19 years old to qualify as future highperformance athletes as part of their general education at the upper-secondary-school level. Many early NTG students — Olympic and world champions among them — have developed international careers in their events (NTG, 2019). Programmes for the older students have also been developed at Lillehammer University College to help them to prepare for dual careers, combining education and the practice of their sports. In the period 2013 to 2019, during which time Lillehammer University College merged into Inland Norway University of Applied Sciences in 2017, the number of top athletes registered in those programmes was between 140 and 156 (Brenden, 2019). In addition, the Radio and Television Centre for the 1994 Winter Olympics was established at the same location as Lillehammer University College, which moved into those modern facilities after the Olympics. Since 1988, the student population at that campus has risen from roughly 700 to more than 5000. Although most of that growth cannot be attributed to the OWG, because the total number of students in higher education in Norway has grown considerably since the late 1980s. However, some of that growth and, more importantly its character, like the sport-study programmes established after 1994 and the bachelor's programme in sport management developed in connection with the 2016 YOG are examples of that dynamic.

Perhaps the most high-profile educational establishment on the campus of

Lillehammer University College following the decision that Lillehammer would host the 1994

Winter Olympics is the Norwegian Film School. Established in 1997 in the former Olympic

Radio and Television Center as Norway's first film school at such an advanced level, the

school has relatively few students, high admissions competition and an alumni that have

become acclaimed in the film industry. Although some small film companies have also been

established in the area, the most famous film-related episode in the region occurred when

Steven van Zandt, alias the gangster Frank Tagliano, starred in the 2012 TV series

Lilyhammer on NRK (the Norwegian Broadcasting Corporation) and Netflix that reached a

global audience.

In the atmosphere of creativity and new initiatives leading up to the Lillehammer Games, the idea of a literature festival in the name of the Nobel Prize winner Sigrid Undset, a Lillehammer resident, was born. With the help of the Cultural Department of the Lillehammer Olympic Committee, cultural advisors in the local government, national publishers and others and after pilot events in 1992 and 1993, the Norwegian Literature Festival was formally established in 1994 and has hosted a popular annual festival ever since (Eriksen, 2017).

During the Lillehammer Games, the 1984 Olympics host city of Sarajevo was a combat zone due to intensified military conflict in the Balkans. Wanting to help Sarajevo and its citizens, a young woman working on the Lillehammer Olympic Organizing Committee inspired the establishment of Lillehammer Olympic Aid to Sarajevo. The Lillehammer—Sarajevo connection was further developed by the headmaster of the Nansen Academy and one of his colleagues into what would later grow into the Nansen Dialogue Network (Sivertsen, 2015; Bryn, 2015). The overarching purpose of the Nansen Dialogue Network was to assemble people from different parts of what was Yugoslavia to exchange experiences and develop a better mutual understanding via dialogue. With the support of several Norwegian

institutions, the Nansen Dialogue Network became established on a more permanent basis, and today, the Nansen Center for Peace and Dialogue is an important branch of the Nansen Academy in Lillehammer.

Examples of more material legacies in the domain of culture includes the new art museum in the centre of town, designed by architect Snøhetta, the rehabilitation of "Banken ('cultural house')" and a new concert hall established in connection with the outdoor museum at Maihaugen. That location also encompasses the Norwegian Olympic Museum, established in Lillehammer at Håkons Hall in 1997 and later modernised and relocated for the opening of the YOG in February 2016.

Culture and nation building were important elements in the mobilization towards delivering the 1994 Games (Klausen, 1996). The cultural program in Lillehammer's preparation for the Olympics included a design program and Pictograms, and the architecture in some of the Olympic related buildings demonstrated a creative use of wood as the dominant material. The torch relay became a popular manifestation of local events and regional cultures all over the country and thus helped bring about a national enthusiasm for the upcoming event. The opening ceremony with its cultural program displayed strong elements of traditional myths, folklore, simplicity and closeness to nature (Klausen, 1999; Puijk, 1999). Spectators dressed in traditional folk dress and with the national flag in their backpacks were highly visible in the crowds around the venues. Together it gave the impression of national pride and belonging, and an expression of a certain 'Norwegianess'. The issue was raised as to whether the national pride had even developed into nationalism and ethnocentrism. Surveys measuring the value systems among the local population from 1989 to 1994 showed that the pride in being Norwegian increased during this period and significantly during the period of the Games (Kolstad, Rundmo and Svarva, 1995). Their data indicated, contrary to the Olympic ideology of internationalism and common understanding, that the

scores on indicators measuring ethnocentrism also increased. This study was not followed up, so we do not know the depth and duration of these attitudes. Some have also dwelled upon the symbolic concurrence of the national self-confidence demonstrated at the Olympics in February 1994 with the nations 'no' to Europe (the EU) in the referendum in November the same year (Klausen, 1999; Hompland, 2003). However, this is probably to overrate the influence of the Olympic festival as the popular vote in November was perfectly in line with the political sociological patterns measured in opinion polls and the long path of resistance to distant authority in the nation's history.

Environmental and urban development

Environmental awareness and the advocacy of so-called "green Olympic Games" is one of the most important legacies of the 1994 Winter Olympics in Lillehammer. Although Lillehammer's was neither the first environmental initiative nor the only one at the time, it doubtlessly influenced the IOC's adoption of environmental awareness and sustainability as a joint third dimension of Olympism, alongside sport and culture (Catelon and Letters, 2000). Gro Harlem Brundtland's speech that concluded the Lillehammer campaign for the IOC was clearly important for this isssue, although the conflict over Åkersvika at Hamar, in which a new venue for speed skating would be localised in an environmentally conscious landscape, was the definitive turning point. The consensus reached based on a negotiated solution was followed by a network of environmentalists consisting of grass root organisers, local government workers and staff members on the Lillehammer Olympic Organising Committee. Together, they encouraged activities that would symbolise the type of environmentalism that the Olympic Games would increasingly become associated with (Lesjø, 2000).

The IOC has developed an environmental policy in close collaboration with the UN's World Commission for Environment and Development as well as promoted its own Agenda

21 and follow-up measures for strategic plans oriented towards achieving sustainability. An ongoing critique emphasises that the IOC's rhetoric of sustainability chiefly functions to "greenwash" the Olympics through communicative strategies on green initiatives (johnson and Ali, 2018; Lenskyj, 1998) and alternatively that the IOC has simply adapted to mainstream corporate thinking about sustainability. The standardisation of sustainability operates within a three-dimensional concept that equally emphasises economic, social and environmental sustainability. The standardisation process refers to the standards of the International Organization for Standardization (ISO), and the 2016 YOG in Lillehammer was the first event in Norway to be authorised according to ISO Event Standard 20121 (Lesjø and Gulbrandsen, 2018; Lesjø, 2019).

In the planning period for the Lillehammer Games, heavy infrastructural investments in the Lillehammer area were made, and among the results were several new roads and a new main entrance to the town centre. Nevertheless, how successful the city has been in developing an environmentally sustainable city in the post-Olympics period has not been systematically investigated. Perhaps the most telling example has been the development of the waste management company Glør, which has enthusiastically worked for innovative solutions in waste management and treatment since 1994 and was an important contributor to the performance of the 2016 YOG. Shortly after the 1994 Games researchers concluded that Lillehammer's landscape and environment had not been damaged by the Olympics as feared by many during the construction phase (cf. Hedlund, 1990). On the contrary, they found that more or less the same direction as before had continued; the most problematic trend from an environmental point of view was the city's urban sprawl and the use of private cars (Selstad og Skjeggedal, 1994). At the time of the 25th anniversary of the 1994 Winter Olympics, Lillehammer's densification has become a hot topic on the agenda of the Municipal Planning Department and in the local press.

Industry, business and tourism

In Lillehammer, some of the most important objectives of the bidding campaign for the 1994 Winter Olympics were industrial development, job creation and the construction of a centre for winter sports and tourism. Most research on the impact of the Lillehammer Games in relation to those goals was conducted in the years shortly after the Olympics. In an influential study, Spilling (1998) concluded that the industrial impact of the Olympics was most significant before and during the event and that the long-term effect would probably continue to be marginal.

In 1993 and 1994, leaders at Lillehammer University College also devised a strategy for student growth to move into the former Pressesenteret (Olympic centre for roughly 3000 journalists and photographers) located nearby. The initiative did not succeed, but after years of financial woes, this centre was taken under the wing of SIVA, a state agency geared towards promoting industrial growth. Today, about 50 small businesses and public organisations located in the area have collectively formed what is meant to serve as a knowledge park near an institution of higher education (Haugerud, 2015).

Tourism development has typically been another of the many goals of OWG host cities. The larger cities of Salt Lake City, Turin, Vancouver and Sochi all developed strategies to increase the number of tourists in their respective regions in connection with hosting the Olympics. Moreover, as emphasised by Weed (2017), such was also the case "not least at Lillehammer 1994 where the coverage of the small Norwegian ski resorts in the region on the world stage as worthy competitors with the Alpine countries was significant" (Weed, 2017, p. 234). Studies on tourism development during the decade after Lillehammer was awarded the Olympics, with data on guest accommodations per night from 1989 to 1997, demonstrated some troublesome patterns (Teigland, 1999). Although a growth in tourist demand for the host region of Oppland county in general was slightly greater than on the national level, which also

experienced growth during the period surrounding the Lillehammer Games, other facts gave concern. Splitting the region into a core region, satellite regions and peripheral regions reveals that the growth rate was especially high in the satellite regions with alpine venues and considerable in the core region (i.e. the Olympic city); however, contrary to the expectations indicated in regional plans, stable and lower than national figures in the peripheral regions. As in Calgary and Albertville, tourist demand in Lillehammer plateaued after the city was awarded the Olympics. According to Teigland's (1999) study, the problem was the large divergence between ex ante predictions and ex post realities. The tourist boom that was predicted and planned for did not occur, for the result that investments generated excessive capacities, press on prices and bankruptcies. Alternative investments in the tourism industry, Teigland (1999) argued, would have greater effects than a policy for tourism impact stemming from mega events such as the OWG.

The growth in the region's tourist industry was foremost in Lillehammer's neighbouring municipalities of Øyer, Ringebu and Ringsaker (resort Sjusjøen). Especially the developments in Øyer and Ringsaker stood to especially benefit from investments in infrastructure made in light of the Olympics. The alpine venues built for the 1994 Winter Olympics prompted the development of two new tourist destinations: Hafjell in Øyer and Kvitfjell in Ringebu. The slopes were originally established with public funding, although the destinations have since been operated and developed by private investors (Teigen, 2009). The development of those resorts paralleled a broader shift of the winter tourism business away from hotels and small winter cabins not reflected in Teigland's (1999) data towards new second-home village developments (Flognfeldt and Tjørve, 2013). That transformation went hand in hand with the general development of wealth in Norway and new cultural and market trends, and for the communities and municipalities affected, those outcomes have been important, positive parts of the legacy of the Lillehammer Games.

Discussion

According to Preuss (2019), the Olympic Games always gives impulses for structural changes and legacy outcomes (positive or negative) generated in co-creation with people, firms or other organisations under special circumstances. The context is also important. Girginov (2018, p. 199) argues in his endeavour to rethink Olympic legacy that, "The Olympics always takes place in a special, political and economic context that is not static but changes over the lifespan of the Games and after it has finished." An important issue is how the documented legacies in the previous section came about, what processes or if you like, mechanisms, have been at work up to the event — and during the years that followed. The interplay of structural changes, agency and contemporary events stimulated new policies and institutions, displaying the importance of timing, and generated intended as well as unintended outcomes.

Chappelet (2019) makes a distinction between delivering the Games and legacy but recognises also that there is an obvious interaction as the quality of the delivery will be part of the legacy and fundamental to its reputation to increase values from the event. The delivery of the OWG in 1994 as a successful Games was a contribution to the Olympic movement and an intangible legacy of what a well-organised mega-event could demonstrate. Lillehammer's delivery of the Games was due not only to the organisers but also to a combination of organisation and good luck. Namely, Lillehammer experienced the longest period of stable high pressure with sunshine for the month the Olympics took place. The accumulated interest in winter sports among Norwegians and the tradition for cheering on national heroes as well as competitors from other nations were also important for the atmosphere. The compact location attracted people to events, as Chappelet (2002) argued as the advantage of small places and concentrated events. The small town was the site, and the enthusiasm of the public that filled the Olympic venues created a special festival atmosphere. A sense of belongingness and communitas among the spectators, visitors and locals was created similar also to what

other events have attained (Chalip, 2006; Hiller, 2012). The event enhanced the cultural capital of the OWG (MacAloon, 2008) and accentuated the festival atmosphere connected to compact Games in relatively small size cities.

Lillehammer's Games had an agenda setting function on environmental policy in the Olympic movement. A local-global mechanism was at work when implementation of environment followed as the third dimension of Olympism in the charter (Cantelon and Letters, 2000). Noteworthy is the role of grass-roots organisations like Project Environment-Friendly Olympics in Lillehammer – and Green Peace at the Sydney 2000 Games – as watchdogs that pressure towards this policy change. Without such bottom up initiatives these events would be given another profile, and the policy change would probably have been delayed.

Timing turned out to be important concerning the tourism expectations connected to the Olympics. The investments up to the Lillehammer Games turned out to produce an overcapacity in hotels (Teigland, 1999), as the market changed to favouring development of second-home villages as the most popular leisure time accommodation (Flognfeldt and Tjørve, 2013). These structural changes were market driven and outside the direct influence of the Olympics. Nevertheless, the new sport venues in Kvitfjell and Hafjell and the accelerated infrastructure investments were crucial for the regional localisation of this new growth. After years of financial problems and bankruptcies, new investors from the business community succeeded in bringing growth into these upcoming new destinations.

Another example of the influence of timing comes with the establishment of the Norwegian Olympic Museum. The Olympic Museum in Lausanne, established in 1993 after the initiative of president Samaranch, activated the cultural dimension of Olympism (Kűhn, 2019). This stimulated several after 1994, and the idea of establishing an Olympic Museum as part of the legacy of the Lillehammer Games was implemented due to a partnership between

the national sports organisation and local authorities. Since its re-localisation in 2016, the museum has been focusing on storytelling about the nation's two OWG, Oslo 1952 and Lillehammer 1994.

Most of the Olympic venues in the Lillehammer area are of too large a scale for ordinary local use. To keep the venues in top shape the owners are dependent of bringing activity into the venues to create income, which sometimes causes tensions between commercial and sporting interests. Over the years, there has been a permanent endeavour to bring new events to the venues, and to be in a position to compete with national as well as international competitors. The structural changes imposed by the large sports venues have brought the local event organisers into some type of path dependence; they have to follow the path this tangible legacy has paved by continuously running for new large events – hopefully one day also bringing the Olympics back to town. These strategies imply dependence of power relations between right holders and event organisers with the reach beyond local interests to influence.

The huge cost overrun in the planning period is also a legacy from the Lillehammer Games. Even with increased incomes compared to the bidding calculations, the Games were more costly for public funds than expected. This taught national politicians and top civil servants that in no way could hosting the OWG be a cheap endeavour and that a state guarantee would enter into competition with other public interests. Together with a new quality assurance system for public investments, which was developed in national public administration after 1994, the lessons from Lillehammer had unintentional consequences for other Norwegian cities bidding to become Olympic cities in the future. This was certainly the case for initiatives from cities like Tromsø (Hanstad, 2011), national bidder for the 2014 and 2018 Games, and probably also for the capital in their Oslo 2022 campaign (Lesjø, 2018). The

national authorities had learned a lesson about the real cost of hosting an event like the OWG, and the bidders' calculations were verified by professional agencies accordingly.

Conclusion

Could Lillehammer eventually in what way, stand out as a model for Olympic legacy? The answer of course depends to a degree on what is meant by legacy as well as being a model. As shown in this article, legacy is a multifaceted concept. The Lillehammer experience shows both direct and indirect legacy outcomes that have strengthened local institutions and served local development well. The event has also enhanced the cultural capital connected to the Winter Olympics and has contributed to the Olympic movement's adaption to claims for more sustainable events. This case also demonstrates leverage strategies where people have used the Olympics to mobilise resources and to capitalise on the new structures to strengthen their own projects in the fields of culture and education as well as in sport.

Lillehammer's history as a host of international sport events after 1994 is considerable. However, extending its legacy of festival events, especially in the Nordic sports, has been hard to achieve. The structural changes following the new sports venues that are too big for local use represent also challenges for the local community to develop in an economic sustainable way.

The Lillehammer Olympics represent an exceptional case compared with typical Winter Games from the two last decades. The OWG moved to larger cities, and there has been a considerable growth in the size of the OWG since 1994. The Olympic agenda 2020 has, however, in new ways raised the possibilities for hosting the Games more in accordance with the local host's priorities. This may also imply spreading out parts of the Games to small communities again, and the relevance of the Lillehammer model could thereby increase.

This study represents a comprehensive investigation of the legacies from the Olympic Winter Games in Lillehammer. There is, however, still a need for updated in-depth knowledge in different Olympic related sub-fields from this OWG. Concerning the broader picture, a study of the 1994 event's long standing and intangible effects on the nation's self-confidence and modernisation process could be a fascinating endeavour for historical anthropologists in the future.

References

- Andersen, S. S. 2013. *Casestudier. Forskningsstrategi, generalisering og forklaring* (2. utg.) Bergen: Fagbokforlaget. Augestad, P. and N. A. Bergsgard. 2007. *Toppidrettens formel. Olympiatoppen som alkymist*. Oslo: Novus forlag. Brenden, K. 2019. Toppidrettsstudenter. En oversikt. (Personal communication, e-mail, 23 May).
- Bryn, S. 2015. "Can dialogue make a difference? The experience of the Nansen Dialogue Network". In *20 Years in the Eye of the Storm* (p. 24-58), edited by K. Sivertsen. Lillehammer: Nansen Center for Peace and Dialogue.
- Cashman, R. 2006. The Bitter-Sweet Awakening. The Legacy of the Sydney 2000 Olympic Games. Sydney: Walla Walla Press.
- Cantelon, H. and M. Letters. 2000. "The Making of the IOC Environmental Policy as the Third Dimension of the Olympic Movement." *International Review for the Sociology of Sport* 35 (3):294-308.
- Chalip, L. 2006. "Towards Social Leverage of Sport Events." *Journal of Sport & Tourism* 11 (2):109-127. doi: 10.1080/14775080601155126.
- Chappelet, J.-L. 2002. "From Lake Placid to Salt Lake City: The challenging growth of the Olympic Winter Games since 1980." *European Journal of Sport Science* 2 (3):1-21. doi: 10.1080/17461390200072302.
- Chappelet, J.-L. 2003. The Legacy of the Olympic Winter Games: An Overview. In *The Legacy of the Olympic Games* 1984-2000, (p. 54-66), edited by M. de Moragas, C. Kennett and N. Puigh. Lausanne: IOC.
- Chappelet, J.-L. 2012. "Mega Sporting Event Legacies: A Multifaceted Concept". *Papeles de Europa* 25:76-86. Doi: http://dx.doi.org/10.5209/rev PADE.2012.n25.41096.
- Chappelet, J-L. 2019. Beyond Legacy: Assessing Olympic Games Performance. *Journal of Global Sport Management*, 4:3, 236-256. DOI: 10.1080/24704067.2018.1537681.
- Coaffee, J. 2007. "Urban Regeneration and Renewal." In *Olympic Cities. City Agendas, Planning and the World's Game, 1896-2012*, edited by J. R. Gold and M. M. Gold, 150-162. London: Routledge.
- Eriksen, T. M. 2017. "Norsk litteraturfestival Sigrid Undset-dagene. Pionertiden." In *Fåberg og Lillehammer*, 193-232. Lillehammer: Fåberg og Lillehammer historielag.
- Essex, S. J. and J. de Groot. 2017. "The Winter Olympics: Driving Urban Change, 1924-2022." In *Olympic Cities. City Agendas, Planning and the World's Games, 1896-2020*, edited by J. R. Gold and M.M. Gold, Third edition: 65-89. London: Routledge.
- Expressen. 1990. "Historien om OS, Lillehammer och Mordet på en stad» (9. desember).
- Flognfeldt, T. and E. Tjørve. 2013. "The Shift from Hotels and Lodges to Second-Home Villages in Mountain-Resort Accomodation." *Scandinavian Journal of Hospitality and Tourism* 13 (4):332-352. doi: 10.1080/15022250.2013.862440.
- Flyvbjerg, B., A. Stewart and A. Budzier. 2016. "The Oxford Olympic Study 2016: Cost and Cost Overrun at the Games." Oxford: University of Oxford. Saïd Business School. Research Paper 2016-20.
- Girginov, V. 2018. Rethinking Olympic Legacy. New York: Routledge.
- Gold, J.R. and M.M.Gold. 2017. "Introduction" in Gold, J.R. and M.M. Gold *Olympic Cities. City Agendas, Planning, and the World's Games, 1896-2020.* Thrid edition (p. 1-17). London: Routledge.
- Gotaas, T. 2015. Birken. Historien om det seige slitet. Oslo: Gyldendal.

- Gratton, C. and H. Preuss (2008). "Maximizing Olympic Impacts by Building up Legacies". *The International Journal of the History of Sport*, 25:11, 1922-1938. DOI:10.1080/09523360802439023
- Hanstad, D. V. 2002. Seier'n er vår. Men hvem har æren? En bok om det norske idrettseventyret. Oslo: Shibsted.
- Hanstad, D.V. 2011. «Milliardsprekken fra Lillehammer felte Tromsø» Aftenposten. Kronikk 19 October.
- Hanstad, D.V. 2019. «Arven etter olympiske og paralympiske leker». Oslo/Lillehammer: HINN/NIH (Report to Lillehammer municipality».
- Hanstad, D. V. and J. H. Lesjø, eds. 2017. *Ungdoms-OL på Lillehammer. Barneskirenn eller olympisk innovasjon?*Oslo: Akilles forlag.
- Haugerud, K. (2015). Arven fra Lillehammer-OL. Lillehammer: Lillehammer kommune. (Thorsrud AS).
- Hedlund, I. 1990. «Historien om OS, Lillehammer och MORDET PÅ EN STAD». Expressen söndag, 9 December.
- Hiller, H. H. 2012. Host Cities and the Olympics. An interactionist approach. New York: Routledge.
- Holt, R. and D. Ruta, eds. 2015. Introduction in *Routledge Handbook of Sport and Legacy. Meeting the challenge of major sports events*. New York: Routledge.
- Hompland, A. 2003. "Vi viser verden vinterveien" in T.B. Eriksen, A. Hompland og E. Tjønneland *Et lite land i verden. Norsk idéhistorie VI.* p. 399-433. Oslo: Aschehoug.
- Innlandet Revisjon IKS. 2018. «Selskapskontroll Lillehammer Olympiapark AS». Rapport 4-2018. http://irev.no/wp-content/uploads/2018/08/10358RapportLillehammerOlympiapark20180405Endelig.pdf (accessed 05.08.2019).
- johnson, J. and A. E. Ali. 2018. "Sustainability, greenwashing, and the light green approach to sport environmentalism" in B.P.McCullough and T.B.Kellison *Routledge Handbook of Sport and the Environment*. London: Routledge (p. 319-329).
- Késenne, S. 2005. "Do We Need an Economic Impact Study or a Cost-Benefit Analysis of a Sport Events?" *European Sport Management Quarterly*, 5:2, 133-142, DOI: 10.1080/16184740500188789.
- Klausen, A. M. 1996. Lillehammer-OL og olympismen. Et moderne rituale og en flertydig ideologi. Oslo: AdNotam Gyldendal.
- Klausen, A.M. 1999. "Norwegian Culture and Olympism: Confrontations and Adaptions" in A.M.Klausen (ed.)
 Olympic Games as performance and Public Event. The Case of the XVII Winter Olympic Games in Norway
 (p. 27-48). New York: Berghahn Books.
- Koenigstorfer, J., J. N. Bocarro, T. Byers, M. B. Edwards, G.J. Jones & H. Preuss. 2019. Mapping research on legacy of mega sporting events: structural changes, consequences, and stakeholder evaluations in empirical studies, *Leisure Studies*, DOI: 10.80/02614367.2019.1662830.
- Kolstad, A., T.Rundmo and K. Svarva. 1995. "The Consequences of the Olympic Games on the Host City Residents' Value Systems". *Corpus, psyche et societas*, 2:1, 85-94.
- Kűhn, S. 2019. "Citus-Altius-Fortius...Pulchirus? The modern Olympic Movement as platform for cultural innovation." Lillehammer: Unpublished research proposal.
- Lenskyj, H. 1998. Sport and corporate environmentalism. The case of the Sydney 2000 Olympics. *International Review for the Sociology of Sport*, 33:4, 341-354.
- Leonardsen, D. 2017. "Planning of Mega Events: Experiences and Lessons." *Planning Theory and Practice* 8(1): 11-30. Doi: 10.1080.114649350601158105.
- Leopkey, B. and M. M. Parent. 2012a. "Olympic Games Legacy: From General Benefits to Sustainable Long-Term Legacy." *The International Journal of the History of Sport* 29 (6):924-943. doi: 10.1080/09523367.2011.623006.
- Leopkey, B. and M. M. Parent. 2012b. "The (Neo) institutionalization of legacy and its sustainable governance within the Olympic Movement." *European Sport Management Quarterly* 12 (5):437-455. doi: 10.1080/16184742.2012.693116.
- Leopkey, B. and M. M. Parent. 2015. "Vancouver 2010 Olympic Winter Games. Modes of legacy network governance." In *Routledge Handbook of Sport and Legacy. Meeting the challenge of major sport events*, edited by R. Holt and D. Ruta, 82-96. New York: Routledge.
- Leopkey, B. and M. M. Parent. 2017. "The governance of Olympic legacy: process, actors and mechanisms." *Leisure Studies* 36 (3):438-451. doi: 10.1080/02614367.2016.1141973 Lesjø Lesjø, J. H. 2000. "Lillehammer 1994. Planning, Figurations and the 'Green Winter Games'." *International Review for the Sociology of Sport* 35 (3):282-293.
- Lesjø, J. H. 2003. *OL-saken. En prosess-sosiologisk studie av planlegging, politikk og organisering*. Lillehammer: Høgskolen i Lillehammer rapport 100/2003. Dr.philos. avhandling.
- Lesjø, J.H. 2018. "Olympic Ambivalence: The Oslo Process for the 2022 Winter Olympics" in M.K. Heine, R.K. Barney and L. Misener *Global Fault Lines in Olympic and Paralympic Sport*. p. 56-63. Western University, London, Canada: International Centre for Olympic Studies.

- Lesjø, J.H. 2019. "The Olympics and Environmentalism" in *The Business and Culture of Sports: Society, Politics, Economy, Environment. Vol. 4 Governance.* Maguire, J., M. Falcous and K. Liston. Eds. (p. 359-370). Farmington Hills: MacMillan Reference.
- Lesjø, J. H. and E. Aas Gulbrandsen. 2018. "The Olympics: institutionalization and standardization of sustainability." In *Routledge Handbook of Sport and the Environment*, edited by B. P. McCullough and T.B.Kellison. 109-120. London and New York: Routledge.
- LK. 2019. Forvaltningsrevisjonsrapporten "Selskapskontroll Lillehammer skifestival AS". Saksframlegg Lillehammer kommune. https://www.lillehammer.kommune.no/ato/esaoff/document/forvaltningsrevisjonsrapporten-selskapskontroll-lillehammer-skifestival-as.1397947.ece7282abe.pdf (accessed 05.08.2019).
- LOLSC. 2019. Oversikt over arrangementer fram til 2018, formidlet av Lillehammer Olympiske Legacy Sport Center 27.05.
- MacAloon, J. J. 2008. "'Legacy' as Managerial/Magical Discourse in Contemporary Olympic Affairs." *The International Journal of the History of Sport* 25 (14):2060-2071.
- Monclus, F-J. 2007. "Barcelona 1992." In *Olympic Cities. City Agendas, Planning and the World's Game, 1896-2012*, edited by J. R. Gold and M. M. Gold, 218-236. London: Routledge.
- Moragas, M. de, C. Kennett, and N. Puigh. 2003. "The Legacy of the Olympic Games 1984-2000". International Symposium Lausanne, 2002. Lausanne: IOC.
- NRK. 2020. «Iversen og Klærbo med klar beskjed til skitoppene: Vrak «dødt» Lillehammer og sats på Trondheim». https://www.nrk.no/sport/iversen_og_klaebo_med-klar_beskjed-til_ski-toppene_-vrak__dodt_lillehammer_og-bytt-til-trondheim-1.14914511 (accessed 28.02.2020).
- NTG. 2019. "Norges Toppidrettsgymnas Lillehammer". https://ntg.no/artikkel/om-ntg (accessed 17.08.2019).
- Okada, I. and S. A. Greyser 2018. *After the Carnival: Key Factors to Enhance Olympic Legacy and Prevent Olympic Sites from Becoming White Elephants.* Harvard Business School: Working Paper 19-019.
- Payne, M. 2006. Olympic turnaround. How the Olympic Games stepped back from the brink of extinction to become the world's best brand. London: Praeger.
- Preuss, H. 2007. "The Conceptualisation and Measurement of Mega Sport Event Legacies." *Journal of Sport & Tourism* 12 (3-4):207-227. doi: 10.1080/14775080701736957.
- Preuss, H. 2019. Event legacy framework and measurement, *International Journal of Sport Policy and Politics*, 11:1, 103-118, DOI: 10.1080/19406940.2018.1490336.
- Puijk, R. 1997 (ed.) Global Spotlights on Lillehammer. How the World Viewed Norway During the 1994 Olympics. Luton: University of Luton Press.
- Puijk, R. 1999. «Producing Norwegian Culture for Domestic Foreign Gazes. The Lillehammer Olympic Ceremony» in A.M.Klausen (ed.) Olympic Games as performance and Public Event. The Case of the XVII Winter Olympic Games in Norway (p. 97-136). New York: Berghahn Books.
- Selstad, T. and T. Skjeggedal. 1994. in *Byforskjønnelse uten bærekraft. En vurdering av Lillehammer-OLs miljøeffekter. Lillehammer: Østlandsforskning. Rapport 29/94.*
- Sivertsen, K. 2015. "20 Years in the Eye of the Storm. The Nansen Dialogue Network." In K. Sivertsen ed. *20 Years in the Eye of the Storm. The Nansen Dialogue Network 1995-2015.* (p.8-13). Lillehammer: Nansen Center for Peace and Dialogue.
- Spilling, O. R. 1998. "Beyond intermezzo? On the Long-Term Industrial Impacts of Mega-Events: The Case of Lillehammer 1994." Festival management and event tourism 5(3):101-122.
- Stensbøl, B. 2010. Makten og æren i toppidrettens kulisser. Oslo: Kagge forlag.
- Teigen, H. 2009. "OL i ettertid: eit døme på innovativ næringsutvikling?" In *Innovasjon, opplevelser og reiseliv*, edited by H. Teigen, M. Mehmetoglu and T. Haraldsen, 229-247. Bergen: Fagbokforlaget.
- Teigen, H., T. Onshus, and H. Holmengen. 2007. "Dersom Olympiaparken ikkje fanst". Lillehammer (unpublished report).
- Teigland, J. 1999. "Mega-events and impacts on tourism: the predictions and realities of the Lillehammer Olympics." *Impact Assessment and Project Appraisal* 17 (4):305-317. doi: 10.3152/147154699781767738.
- Yin, R.K. 1989. Case Study Research. Design and Methods. (revised ed.) Newbury Park: Sage
- Weed, M. 2017. "Olympic Tourism." In *Olympic Cities. City Angendas, Planning, and the World's Games, 1896-2020*, edited by J. R. Gold and M. M. Gold, Third edition, 230-252. London: Routledge.