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Sport clubs, policy networks, and local politics

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ABSTRACT

Sports clubs cooperate with other clubs, sports organisations, and public and market actors to organise sports. In this article, we study the way clubs cooperate through a *sports club network* involving only sports clubs and a wider *sports policy network* consisting of all relevant actors related to those clubs (e.g. the clubs, public and private actors, sports governing bodies, clubs outside the municipality). The context is a medium-sized Norwegian municipality. We answer three questions. First, what do these cooperative networks look like (e.g. density, centralisation and clustering)? Second, how do the networks develop (based on a theoretical framework comprising strategies, institutions and trust)? Third, what are the implications of the network characteristics we find for the dominant sports-for-all policy?

Methodologically, we depend on traditional network analyses and exponential random graph models (ERGMs), which include endogenous factors (density, reciprocity and transitivity), exogenous factors (actors' attributes) and covariate networks (geographical distance between clubs). Based on theory, we suggest that the network structures we describe empirically make the clubs well suited for organising broad inclusive mass sports, but less so for inclusion of special targeted groups who are not as attracted to traditional club sports.

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Introduction

Without sports clubs, not many sports would be organised. Sports clubs, however, do not provide sports on their own (Thibault and Harvey 1997, Cousens and Barnes 2009, Misener and Doherty 2013, 2014, Jones *et al*. 2018). To offer sports to their members, sports clubs must collaborate with other clubs, and they depend on their local communities for members and volunteers. To obtain political and financial support, municipalities and local businesses are crucial partners. Sports organisations[1] help clubs with their sports, and clubs hosting larger events might get assistance from the police and transport authorities with traffic and security.

To understand how sports clubs succeed on their own terms as providers of sports activities and as sports policy implementers, it would be useful to study sports clubs as part of a broader political and organisational context: How do various actors cooperate and thereby establish inter-organisational relations and, through these relations, build various types of networks? Analysing such networks could teach us about how much and what type of cooperation exists (e.g. degrees, density) and how such relations are structured (e.g. centralisation, clustering). This could further tell us where we find influential actors and how these actors are positioned for cooperation and innovation. Hence, the purpose of this study is to examine the cooperative relations between sports clubs and other relevant actors from a social network perspective, and then to investigate how these relations matter for how sports clubs provide

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sports and function as policy implementers in a local community. We ask three questions: What do such a sports network look like? How do the social relations within this network develop? What are the implications of the network's structure for 'sports-for-all' policies?

To answer these questions, we study one sports network in one municipality from two perspectives. First, we zoom in on the actors closest to the sports activity – the sports clubs – and ask the clubs about the other sports clubs with whom they collaborate. This is what we call the *sports club network*. Second, we zoom out and question the same clubs about the public actors, market actors, sports organisations and other actors with whom they cooperate. We also ask the three most central actors in this field (i.e. the municipality, the regional sports confederation, and the sports council) about their relations with these clubs. From this larger dataset that includes the key actors in the field, we describe a *policy sports network*. The sports club network is, therefore, a more focused subset of the larger sports policy network.

Most existing studies of collaboration in sports involve a small selection of elite sports, and these studies' dominant focus is on formalised relations between a few actors cooperating in specific projects (Lindsey 2009, MacLean *et al*. 2011, Lucidarme *et al*. 2018). In contrast, our study is original in investigating actors involved in all sports, focusing on grassroots sports and including all actors (e.g. large and small; political, voluntary or private) and all relations (e.g. formal or informal) that are relevant to the development of grassroots sports at the local level. We study how sports clubs and other actors collaborate within a context large enough to include most types of actors relevant to sports clubs, yet small enough to be convenient for an empirical study – i.e. a medium-sized Norwegian municipality. By studying an entire locality, we both get a fuller picture of sports as they currently operate and contribute to 'a more comprehensive understanding of collaboration in sport' (Lindsey 2009, p. 86; see also Provan and Milward 2001). Applying social network methods and concepts, we also respond to requests for social network analyses in sports studies (Quatman and Chelladurai 2008, Misener and Doherty 2013, Wäsche *et al*. 2017, Jones *et al*. 2018).

The point of *social network analysis* (SNA) is to research relations (i.e. organisational cooperation) between actors, not primarily to study actors' attributes. The descriptive part of our study follows this traditional SNA approach and, based on the most central concepts in the SNA tradition, investigates: (i) the number of relations between actors within these networks, (ii) whether these networks contain central and influential actors and (iii) whether subgroups of actors tend to cluster. More recent developments within network methodology (e.g. exponential random graph modelling [ERGM]) make it possible to combine information on network structures with both actors' attributes and the influence of other exogenous networks on our network of interest. Accordingly, we will also study how network structures depend on actors' attributes (e.g. which types of sports are organised by clubs) and clubs' locations (e.g. the geographical distance between clubs). After describing the two networks, we will explain their structures and discuss what these networks' characteristics might imply for the dominant sports-for-all policies in the field.

In the next sections, we describe the context of the study and review research and theories relevant to our topics. Next, we present the data and methods, before we analyse the sports club network and the policy sports network. The first descriptive findings are presented in figures and network statistics. In the second empirical section, we use ERGMs to explain the structure of our networks. We test hypotheses linked to specific network dynamics (i.e. degrees, centrality, clusters), actor attributes (i.e. club capacities, sports, sector) and a contextual variable (i.e. how the clubs are geographically situated relative to each other). We end the article with a summary and discussion of two questions: Why do local sports clubs and other actors cooperate as our empirical results show? What are the strengths and weaknesses of these network structures given the hegemonic sports-for-all policies?

Context

At the heart of Norwegian sports, we find 12,000 local clubs. In these clubs, 41% of members are female, and the age distribution is as follows: 0–5 years: 4%, 6–12 years: 26%, 13–19 years: 18%, 20–

25 years: 8%, and 26 years and older: 45%. The sports with the greatest participation, measured by the number of members of corresponding sports associations are: football (374,099), company sports (198,796), skiing (154,608), handball (127,572), gymnastics (104,636), golf (100,834), track and field (77,856), swimming (67,601), cycling (47,924) and fighting sports (40,869). The overall aim of Norwegian sports policies is 'sports for all' (Whitepaper nr 26, 2012), and these policies have two pillars: (i) financial support for facilities and (ii) financial funding of the two-tiered sports federation: The Norwegian Olympic and Paralympic Committee and Confederation of Sports (NIF).

The NIF (Figure 1) includes one tier with 11 regional sports confederations (RSCs) and another with 54 national sports associations. Most of the clubs are relatively small; a few clubs, nevertheless, have a large proportion of the members: 31% of the clubs have fewer than 50 members, 18% have 50–99 members, 19% have 100–199 members, 19% have 200–499 members, 8% have 500–999 members, and 4% have more than 1000 members. Sixty-six percent of the clubs are single sports clubs, and 34% are multisport clubs. Many of the clubs are still voluntarily organised: 10% have full-time employees, 7% part-time, and 83% have no paid manager (Bergsgard *et al*. 2007, Seippel and Skille 2015, Seippel 2019). In terms of club longevity, Norwegian sports clubs consist of a mix of old and new: 33% of the clubs were founded before 1946, 34% between 1946 and 1989, and 33% after 1989.

Norwegian sports' broad participative orientation is reflected in the NIF's unique form of 'Regulations on Children's Sport' (Støckel *et al*. 2010). The idea is that sports for youth and children should be safe and fun, and competition for those below the age of 13 should follow specific regulations. A further indication of Norwegian sports' particularities is found in the results from the SIVSCE project. A sample of sports clubs in nine European countries were shown the statement, 'Our club sets high value on sporting success and competition' and were asked the extent to which they agreed (Breuer *et al*. 2017). Norwegian clubs had the lowest average score on this question (i.e. they are, compared to other European countries, sceptical towards sporting success and competition). So, on one hand, Norwegian sports policies have a clear grassroots orientation; however, public sports policies are also intended to support elite sports, and Norway is among the most successful elite sports nations in the world (Kuper and Szymanski 2014). All in all, Norwegian sports have an explicit

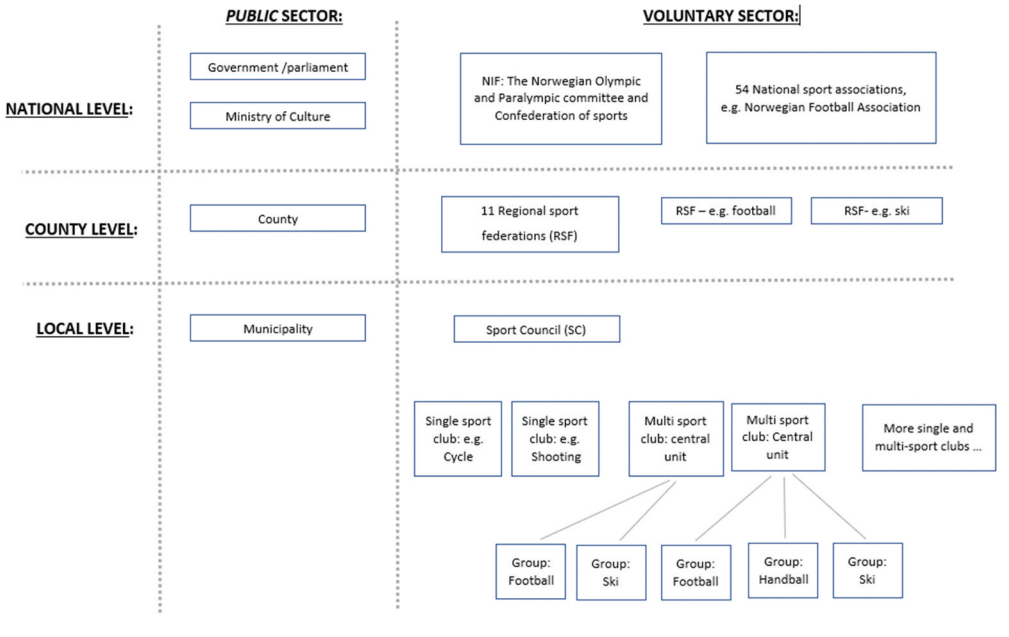

Figure 1. Norwegian sports system.

and institutionalised commitment towards grassroots sports while, at the same time, elite sports hold a strong position.

The Norwegian sports system is described as corporatist with tight links between voluntary and public actors (Bergsgard and Rommetvedt 2006). Recent research also shows that, for municipalities, sports clubs and sports councils (SCs) are the most important actors when cooperating with the voluntary sector at the local level (Eimhjellen and Loga 2017). The municipalities are important to the sports clubs, yet their roles vary throughout the country (Bergsgard and Nødland 2009, p. 117, Rommetvedt 2002; Whitepaper nr 26, 2012). On the one hand, the rules for state funding of sports facilities require the involvement of municipalities and, by that, a minimum of local sports policies in most regions. On the other hand, municipalities are not legally obliged to contribute to sports, so, in the end, their involvement depends on local initiatives. Most importantly, municipalities' financial situations vary, and their sports policies tend to reflect their overall financial situation.

Every municipality with three or more sports clubs should have one SC that operates at the intersection of the municipality and the sports federation to which it belongs. The SC is supposed to represent all clubs and sports in a municipality, and board members come from local clubs. SCs provide services for the clubs, coordinate activities in the municipalities (e.g. advise the funding of facilities), promote clubs' interests towards the municipality and help out in the implementation of sports policies (Seippel 2008, Waldahl 2009, Grix 2010). Approximately 10% of the state funding goes directly to the clubs, and the SCs have an important role in distributing these resources. An active SC could indeed be helpful to the clubs, and a large majority of sports clubs see the SC as an important political body and a great source of support at the local level (Bergsgard and Nødland 2009, p. 133).

In sum, the field of local sports comprises a host of various actors with both common and divergent interests. On the one hand, the clubs compete for resources such as members, volunteers, financial funding and (access to) facilities. On the other hand, clubs are supposed to collaborate to access resources and to implement policies. The recent increase in expectations for cooperation between sports clubs comes both from the sports themselves becoming more serious and professionalised and from governance-like policies intensifying the institutional pressure for collaboration and interorganisational cooperation.[2]

Theoretical and conceptual framing

In this study, we focus on one sports club network and one sports policy network where the former is a subset of the latter. Our aim is to combine insights from SNA and previous studies of relevance to our topic of sports clubs and sports policies, and we develop six sets of hypotheses reflecting central concepts in the SNA discourse: degrees, centralisation, clustering, organisational capacities, trust and geographical distances (Wasserman and Faust 1994, Borgatti *et al*. 2013, Robins 2015). For each of these SNA-inspired hypotheses, we present relevant research results in the field, add theoretical reflections where useful, and conclude with hypotheses or more open questions, formulated in SNA terms, which are relevant and applicable to our network data.

Descriptions: degrees, centralisation and clusters

Even though the knowledge of sports clubs networks is limited, many sports researchers expect great impacts from collaboration in the field of sports: 'The value of IORs [inter-organisational relations] cannot be overstated' (Babiak and Willem 2017, pp. 274–275; see also Barnes *et al*. 2018, Jones *et al*. 2018, MacLean *et al*. 2011, Thibault and Harvey 1997). The importance of IORs is also emphasised in the burgeoning literature on organisational capacities (Hall *et al*. 2003, p. 10, Swierzy *et al*. 2018). From this, a pivotal empirical question becomes: How much cooperation (i.e. how many relations) do we expect to find in the networks we investigate?

Theoretically, there are several convincing reasons for cooperation. First, sports clubs should cooperate for *strategic* reasons: to gain and share information, win power and legitimacy, work

efficiently, avoid risks and uncertainties (e.g. transaction costs), shun duplications, achieve synergies, integrate and coordinate policies (e.g. avoid collective action problems), improve planning and mobilise resources (Babiak and Thibault 2009, Leifeld and Schneider 2012, Lindsey 2013, Wicker *et al*. 2013, Greve *et al*. 2014, Wäsche 2015, Ingold and Leifeld 2016, Lucidarme *et al*. 2016, Babiak and Willem 2017, Jones *et al*. 2017, Dobbels *et al*. 2018). Second, empirical studies also emphasise the growing *institutional* expectations for collaborative strategies. This pressure comes from neoliberal government policies and trends related to globalisation, new technologies, commercialisation and professionalisation (Thibault *et al*. 1999, Alexander *et al*. 2008, Babiak and Thibault 2008, Dickson and Cousens 2008, Lindsey 2009, Grix 2010, Lazer 2011, MacLean *et al*. 2011, Babiak and Willem 2017, Ibsen and Levinsen 2019). Third, two characteristics of the Norwegian sports context also favour interorganisational relations. First, sports clubs are accustomed to collaborating to help deliver their sports locally. Second, Barnes *et al*. (2018, p. 10) point to the importance of 'actors playing *coordinating roles*' for relations to develop, and the Norwegian sports system has actors – especially the SC – who are supposed to facilitate cooperation at the local level.

Some circumstances also work against cooperation. Clubs have at least partially divergent interests, and a lack of trust or differences in resources and capacities could hinder collaboration (Babiak and Thibault 2009, Lindsey 2013). An additional finding highlighted in recent research is the often silent local resistance towards governance policies in the voluntary sector (e.g. public authorities want sports clubs to provide health, but sports clubs want to focus on sports (Fahlen *et al*. 2014, Lucidarme *et al*. 2016, Edwards and Rowe 2019, Seippel 2020).

In social network terms, the topic of how much cooperation we should expect is a question of degrees (i.e. the number of ties for each actor in a network) and density (i.e. the number of ties in a network as a proportion of all potential ties in the network; (Wasserman and Faust 1994). Taken together, most strategic interests, institutions and traditions work in favour of high degrees and dense network structures among Norwegian sports clubs and their co-actors. It is, nevertheless, difficult to predict the number of degrees between the sports clubs; so, as a start, we leave the question open – no hypothesis – as to how many and how dense these relations are. When expanding our scope from clubs only to the larger policy sports network, we expect to find some additional central actors (i.e. municipality, SC, RSC) but also many sparser and ad hoc network actors more marginal to the field of sports. Overall, the density of this larger policy network is probably lower than for the sports club network.

Among empirical researchers, Lindsey (2013) distinguishes between three characteristics of interorganisational sports networks: size, formalisation and cross-sectional status. Babiak and Thibault (2008, p. 282) focus on IOR 'as a voluntary, close, long-term, planned strategic action between two or more organisations with the objective of serving mutually beneficial purposes in a problem domain' (p. 282). In their conceptual review article, Babiak and Willem (2017, p. 274) describe IORs as 'enduring, strategic, close, [and] focused' (p. 274). Concurrently with a massive focus on strategies and formalities, researchers also emphasise that IORs cannot merely be strategic and formal. Babiak and Thibault (2008) conclude that the evidence from their study 'revealed that the management of IORs for the CSC [community sport clubs] was complex and that while some formal control mechanisms existed to structure the IORs, the *informal processes* [emphasis added] played a critical role in IOR management' (Babiak and Thibault 2008, p. 282, our emphasise).

To grasp these diverse types of interorganisational relations and especially the basic distinction between the formal and the informal, SNA contains two useful concepts. First, planned, formal and strategic networks imply, in network terms, centralisation; some actors within a network have more ties than other less-connected actors (Wasserman and Faust 1994). As such, these actors are central in the network. When the central actor's links are not reciprocated, the result is a hierarchical network. Centralisation is important because it is assumed that central actors are also influential, and hierarchies could strengthen centralisation even more. We will use one more measure – fragmentation (An and Liu 2016) – to look for actors that might be influential. This measure is

based on how network structures are affected when actors are (hypothetically) eliminated from the network.

Second, SNA research points to situations where some actors are closer to and more focused on each other than other actors. In network terms, this implies that some networks are more clustered than others: some actors cooperate more with each other than with other actors in the network (Wasserman and Faust 1994).

How much centralisation and clustering should we expect to find in the sports network? The club network consists of many, mostly small organisations. It is supposed to be fairly dense (see previous section) and is relatively open and informal. Hence, we hypothesise ($H_{Centralisation}$) this network to be even and equal and not particularly centralised or hierarchical. The policy network contains three actors – the SC, municipality and RSCs – whose tasks supporting cooperation almost by definition make them more central to the field than most clubs, more concerned with planning and strategies, and potentially utilising more one-way communication. Accordingly, we expect the policy network to be more centralised and hierarchical than the sports club network.

For sports clubs, we expect the field to be equal, trustful and inclusive, without strong incentives to exclude specific clubs. From this, we assume ($H_{Cluster}$) a relatively low level of clustering among sports clubs. Even though we suppose the policy network to be somewhat more centralised and hierarchical, we expect these central actors' many links to be relatively evenly spread out. For the sports policy network, therefore, the outcome should be a relatively low level of clustering.

Explanations and implications: strategies, institutions, trust and space

Clubs have strategic and institutional reasons for cooperation. Yet, cooperation might be costly, and not all clubs have the same opportunities or capacities to establish relations with other actors. Hence, we hypothesise ($H_{Capacities}$) that clubs with more organisational capacities will tend to cooperate more than others. For the sports club network, we operationalise organisational capacity by club size (i.e. number of members). For the larger sports policy network, the number of members is not a relevant measure for all actors; instead, we make a distinction between sectors (e.g. clubs, public actors, market actors and sports organisations) and assume that the municipality and the sports organisations, in particular, have capacities for networking because collaboration is part of their missions.

Besides strategy, institutional rules and expectations could also explain how actors behave and the development of networks. Clubs will tend to cooperate because the SC, the state, the municipality and the sports organisations encourage them to do so (Alexander *et al*. 2008, p. 271, Babiak and Willem 2017, pp. 277–278, DiMaggio and Powell 1983, Oliver 1991, Thibault *et al*. 1999). Given that these expectations apply more or less to all actors, we assume that institutional pressures work, more or less equally, for all clubs. The municipality and sports organisations are, however, themselves representatives of these institutional forces, and we should expect ($H_{Institution}$) them to cooperate more and to be more central in the larger policy network than the sports clubs are.

Research shows that *trust* is helpful for nearly all types of interaction (Lin *et al*. 2001, Castiglione *et al*. 2008). Trust operates at the intersection of strategies and institutions; cooperation generates social trust and strong institutions, and good institutions provide trust and support cooperation (Wollebæk and Selle 2007). In our case, we propose that trust is both caused by and results from cooperation (Seippel 2006, Babiak and Thibault 2008, Doherty and Misener 2008, Cousens and Barnes 2009, Lucidarme *et al*. 2016, Barnes *et al*. 2018). Trust is especially relevant for two parts of our analyses. First, trust is important for the social mechanism of *homophily*, which means that actors with similar attributes tend to trust each other and interact more easily than dissimilar actors (J. M. McPherson and Smith-Lovin 1987; J. M. McPherson *et al*. 2001). Hence, we expect ($H_{Homophily}$) clubs representing similar sports to cooperate with each other more than clubs from different sports.

Moreover, researchers distinguish between various types of network structures according to their social functioning. On the one hand, we have networks with categorically similar people who interact

effortlessly because they understand each other easily; they have the same experiences, interests and knowledge. In the network literature, this describes strongly bonded groups (Putnam 2000) based on strong social ties (Granovetter 1973): They are helpful for coordinating action. On the other hand, we find networks of people from categorically dissimilar groups where common understandings could be more precarious because different forms of interests, experiences and knowledge are brought together. Putnam (2000) speaks of these as *bridged groups*, and Granovetter (1973) describes their social ties as weak. Such networks are more helpful for generating new knowledge and ideas than bonded groups, but could be less conducive for easy-going social interaction (Corritore *et al*. 2020). Effective and innovative groups require a balance between the two. If our previous hypotheses are confirmed, sports clubs should be seen as a relatively uniform, close and bonded group of actors, and this could be a hindrance for sports clubs' and policy actors' ability to fulfil various sports policies.

One of the simplest, though most obvious, reasons for cooperation is an open opportunity structure and physical contact, which both follow from geographical closeness and availability (Moody 2001, Greve 2005, Rivera *et al*. 2010). Many clubs, being in the business of sports and coming from the same district, are familiar to each other, but geographical closeness could make cooperation even easier. Hence, we have estimated the distance between clubs in kilometres and hypothesise ($H_{geography}$) that sports clubs located near each other geographically will cooperate more often than more distant clubs.

Data and methods

To investigate the cooperation between sports clubs and actors from more sectors, a municipality as a place where most types of actors are present and interact is a suitable case. We first chose an 'average' municipality in terms of geographical centralisation (i.e. score around 800 of 1000 based on reachability of working places and service provision), population (i.e. approx. 20,000 residents) and income (i.e. median income somewhat below average; www.ssb.no). Second, we made sure that the municipality had a functioning SC. Finally, we ensured that the sports clubs represented a sufficient variety of sports. Although one should take care in not generalising from this case, we expect our findings to have relevance for many Nordic municipalities and for comparable locations in nations with sports systems akin to a Nordic model.

To decide our sample, we started with all registered single- and multi-sport clubs within the chosen municipality (Belbo 2018). Single-sport clubs are obvious units in our study. The multi-sport clubs pose a challenge because they often consist of two types of groups: one or more groups for activities (e.g. the football group) and one mainly central administrative unit (i.e. not organising specific sports). Both the groups for specific sports and the administrative unit could interact with actors in their surroundings. To catch all significant cooperative ties, we have chosen to treat both the central sections of the clubs and their respective subgroups as separate organisational units. We identified 22 sports clubs and an additional 24 subgroups within the municipality.

We next contacted the clubs and subgroups by email and phoned non-responders to establish contact. We did not insist on including every subgroup of every club in the sample. As some sports clubs are small, the subgroups do not always operate separately, and we would end up with duplicate data. Among those contacted (i.e. 22 clubs plus 15 subgroups), two clubs did not want to participate, and a total of six clubs and subgroups never responded. One club was to end operations in October 2017 and was therefore excluded. In total, 29 interviews were conducted with representatives from 17 sports clubs, nine subgroups, and three additional actors, including the municipality, the regional sports confederation, and the sports council.

Missing data occurs when clubs and subgroups choose not to participate. One option is to exclude these actors from the sample. If these actors are mentioned by others, the remaining network data would, however, be misleading, and we would be wasting data. We, therefore, follow the advice of Borgatti *et al*. (2013, p. 76) and assume that if clubs did not respond, they would have

mentioned the same actors in their network as those who nominated them. Although there is a risk of this presumption not always being right, we argue that – especially considering the high level of reciprocity in our data – this is more accurate than treating the missing values as zeroes. Hence, our final data consists of 35 club actors, and ties are directed (i.e. we specify which directions they take).

What we call the policy network, build on yet extend the sports club network in two ways. First, we included three actors we knew beforehand to be important for local sports politics – the municipality, the regional sports confederation, and the sports council. Second, we also asked our interviewees for all other co-actors, both inside and outside the municipality. These actors could be political and public actors (e.g. the county, other municipalities), other sports clubs, other sports organisations (e.g. national units, RSCs for specific sports), other voluntary organisations (e.g. nature or outdoor recreation organisations) and market actors (e.g. local companies, owners of facilities). A question of importance in all networking studies concerns boundaries (Wasserman and Faust 1994, pp. 30–31). Our sports club network is clearly bounded by the municipality, whereas the policy network has its base in the municipality but also reaches out to neighbouring and even national organisations.

Data were collected through interviews based on an interview guide. The first question, and the one relevant for this study, was 'Which of the sports clubs in the municipality have you been in contact with the last 12 months?' Participants could name as many co-actors as they considered appropriate for their club, and we used both name generators (e.g. names of the clubs, the municipality, sports organisations and the SC) and open-ended questions to identify actors. This first question was followed by questions on the resources relevant for the contact (e.g. economic, physical or human) and the substantive content of the contact (e.g. facilities, competition, marketing, recruitment). The same strategy was used for the question on non-sports-club cooperation. We assume that asking for the concrete resources and substance involved in the contacts ensures that the cooperation covered in our data is substantial and involves more than superficial, non-consequential contacts.

We collected data on 35 club units, ranging from 6 to 1,409 members ($M = 212$, $SD = 290.5$). For the ERGM analyses, we recoded the size variable into three values – small: 4–100 (1), medium: 101–250 (2), and large: 251–1,409 (3). The clubs organise a wide selection of sports. Six clubs offer soccer, three have shooting and cross-country skiing, and two supply handball and floorball/bandy activities. Golf, tenpin, funkis, curling, orienteering, cycling, volleyball, powerlifting, karate, 'sports in school', speed skating, dogsledding and swimming can all be found in one club. Six units are central club organisations. We recoded the sports variable into the following six categories: central unit, soccer, skiing, shooting, other team sports, and other individual sports. Geographical distance is measured in kilometres between the clubs and varies from co-location (0) to 35.7 ($M = 12.5$, $SD = 7.8$). In the sports clubs network, all actors are obviously sports clubs; in the larger policy network, however, there are (the same) 35 sports club units within the municipality, 26 sports clubs from outside the municipality, 12 public actors, 19 sports organisations, 8 market actors and 8 (non-sport) voluntary organisations.

We do separate parallel analyses for the sports club network and the wider sports policy network. This makes it possible both to emphasise the particulars of each network type and to compare them. We first visualise the networks and give some basic statistical descriptions (i.e. degrees and densities). Second, we identify the most central and influential actors in the field, examine whether specific actors are especially important for the linking of the network as a whole (i.e. fragmentation) and investigate how the networks tend to cluster and establish subgroups. Third, we supplement these analyses with ERGMs (Lusher *et al*. 2013, Harris 2014), which show how a network consists of specific configurations of links (e.g. degrees, reciprocity, transitivity and homophily) and how they set their imprint on the network. The outcome (i.e. dependent variable) in ERGMs is a dichotomous variable indicating the probability of a link between actors based on the values of the predictor variables. The outcome could be interpreted much like logistic regression models (Hunter *et al*. 2008, p. 2, Lusher *et al*. 2013, pp. 52–

54), yet the dependent variable is not telling us something about an actor, as in ordinary regressions, but whether we tend to find a link between actors.

ERGMs have three types of predictors. Some of these are genuinely structural and *endogenous* to the network. Density is such an endogenous characteristic; it is specific to a network working independently of actors' attributes: the denser the network, the higher the probability of cooperative relations. Networks with low levels of reciprocity tend to be hierarchical, and networks with high transitivity tend towards closure and clustering. *Exogenous* predictors cover the effects of the attributes of the actors involved in the networks (e.g. how large clubs tend to cooperate more than smaller clubs). A third set of covariance predictors tells us how the networks in focus *depend on other networks* – in our case, the geographical distance between clubs. We evaluate the fit of the models from shifts in Aikake information criterion (AIC) or Bayesian information criterion (BIC) values, but we will also present goodness of fit (GOF) measures indicating how well our models predict the characteristics found in our real networks. We used *R* and the network package *statnet* to visualise and analyse the data (Butts 2008, Hunter *et al*. 2008, Morris *et al*. 2008, R Core Team 2018).

Results: visualisations, basic statistics, and ERGMs

Visualisations

What do the sports club network and the sports policy network look like? Figure 2 shows the sports club network – cooperative relations between the sports clubs – which consists of one large component (almost all clubs), one small group of three clubs (violet), and six isolates (clubs without

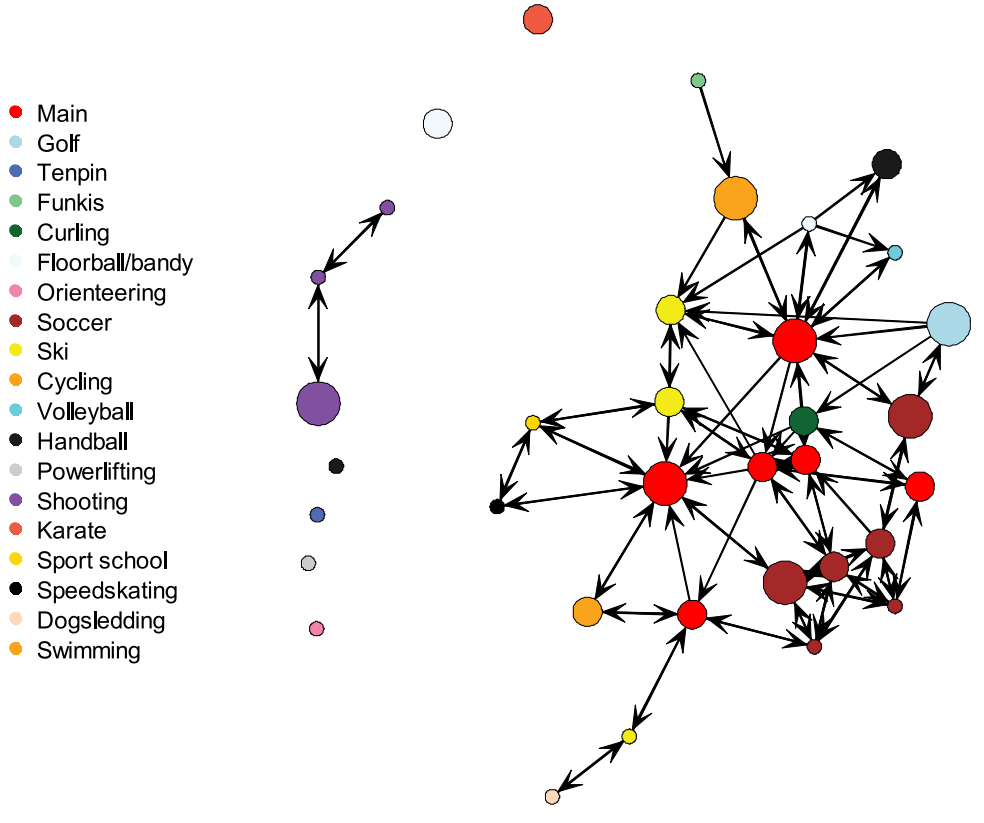

Figure 2. Sports club network. Size of nodes reflects number of members; colour of nodes represents sports.

co-actors). For the large component, most clubs – apart from two clubs with only one link to the rest – seem to have at least three links to others and appear well integrated. The nodes' sizes reflect club size (i.e. number of members). We ask whether larger clubs have more links than smaller clubs; yet, it is difficult to deduce this from Figure 2. Given the one dominant component, it is also hard to detect true clustering visually; it looks, however, like there is a tendency towards sports-homophily – that is, similar sports (i.e. colours) tend to attract each other.

Figure 3 exposes the larger sports policy network. We see that most of the sports clubs (black) from Figure 2 are at the centre of the plot. Compared to the sports club network, there are two 'new' categories of actors. One group, the more influential, appears at the centre of the network and includes public and political actors (e.g. the municipal administration, elected politicians), sports organisations (e.g. SC, RSC) and some market actors (e.g. local bank). A second group of more marginal, ad-hoc actors is at the margin of the network and seems to have unique relations to single clubs. These actors are market actors (e.g. event co-hosts), sports organisations (e.g. regional sports organisations) and public actors (e.g. police, road authorities, county administration). The most populated group among these more marginal co-actors is sports clubs outside the municipality.

Figure 4a shows the distribution of degrees in the sports club network. Previous research claims that social networks often have rather skewed degree distributions (Barabasi 2003, Watts 2004, Ansell *et al*. 2016, 2017). Compared to such findings, degrees in the sports club network appear rather evenly distributed. In the sports policy network (Figure 4b), we find a more skewed degree distribution, where most of the actors have only a few links, but a few actors have considerably more degrees.

Degrees, centralisation, influence, and clustering

Degrees and density. Our two networks are moderately large: 35 and 108 actors with 95 and 270 ties, respectively (see Table 1). The average degrees in the two networks are similar (2.7 and 2.5), yet the smaller sports club network is much denser than the policy network: 8% of all potential edges (0.08) are realised in the club network compared to only 2% in the policy network (0.02). We posed no hypotheses for density and used an explorative approach. We suggest, however, that the combined

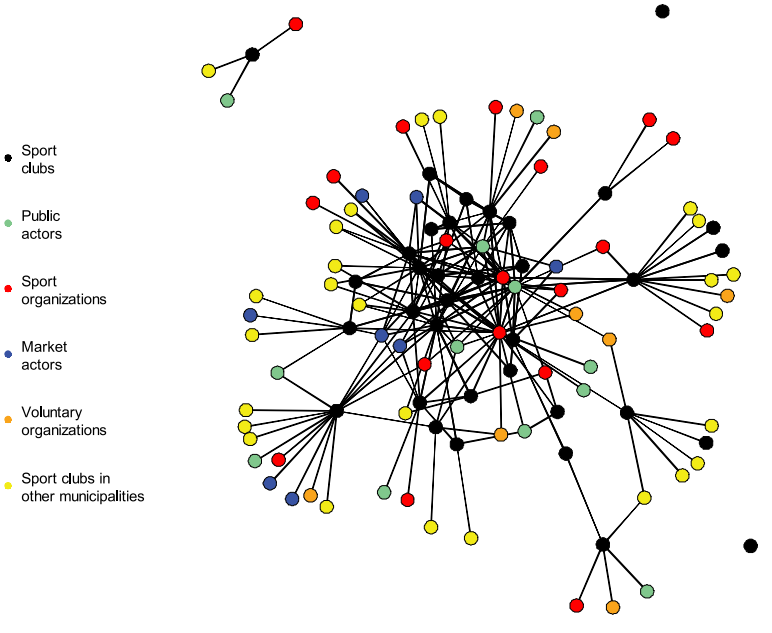

Figure 3. Sports policy networks, coloured by sector.

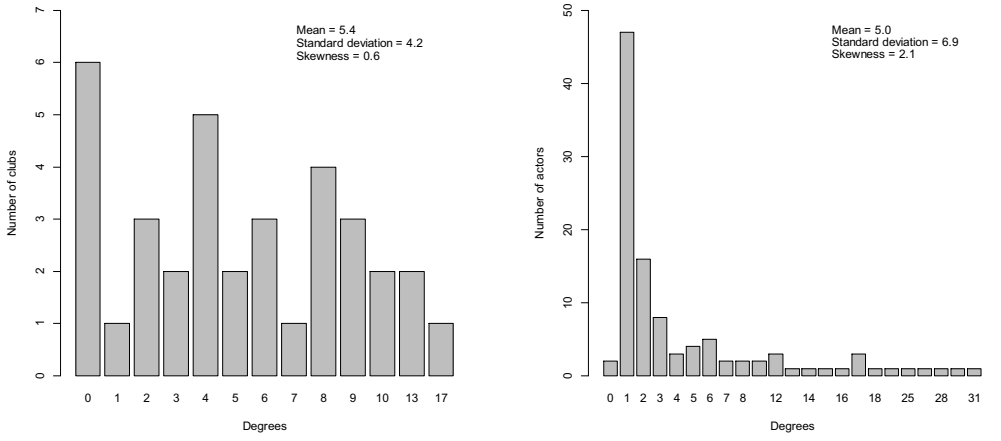

Figure 4. Distribution of degrees (a) sports clubs, (b) actors in policy network.

effect of each sports club being in touch with 2.5 co-actors and the sports club network having a density of 8% could qualify as relatively dense.

Centralisation. Organisations partake in formal and informal networks, and we assume ($H_{Centralisation}$) that the networks in the field of local sports tend towards the informal (i.e. they are relatively equal and non-hierarchical). Centralisation measures vary between 1 and 0, and the measures for our two networks (Table 1) are 0.18 and 0.12, respectively. These relatively low levels of centralisation support our hypothesis.

We examine centralisation because we assume it can tell us something about power and influence (Freeman 1978, Borgatti 2004). The critique against the most common measure of centralisation (i.e. based only on number of degrees, as used here) is that it includes little information about those to whom an actor is linked: If a club is close to many non-central clubs, centrality does not equal influence. A measure that takes the centrality of co-actors into account is the *eigenvector centrality* (Wasserman and Faust 1994). The eigenvector centrality is 0.21 and 0.36 for clubs and policies, respectively. For this measure, the policy network is clearly more centralised than the club network, which reflects the importance of being close to the more central actors in the policy network and nuances our hypothesis. A further indication of the hierarchical nature of networks is the tendency for links to be reciprocal (i.e. the higher the proportion of links returned, the less

Table 1. Descriptive network measures of *sport club network* and *sport policy network*.

	Sport clubs network	Sport policy network
Degrees		
Number of actors	35	108
Number of ties	95	270
Average degree	2,7	2.5
Density	0.080	0.023
Centralisation		
Centralisation, degree	0.18	0.12
Centralisation, eigenvector	0.21	0.36
Reciprocity	0.97	0.98
Fragmentation		
Max	0.82	0.91
Min	0.74	0.89
Difference	0.07	0.02
Cluster		
Cluster global	0.26	0.06
Transitivity	0.27	0.27

hierarchy exists). Table 3 shows that there is a high level of reciprocity in both our networks, a finding that furthers the impression of a non-hierarchical sports field of equal actors and, again, supports our assumptions.

Fragmentation. Actors could also inhabit strategic and influential positions in a network without having many ties to others (i.e. centrality). This could happen when one actor is the only actor linking other sets of actors, thus operating as a bridge or a broker (Putnam 2000, Burt 2005). The broker could be influential because it becomes hard for actors to meet without involving the broker. Fragmentation (An and Liu 2016) is one way to test whether a network contains brokers. The idea is to remove one actor at a time to see whether this elimination affects the way the rest of the actors in the network are linked (measured as betweenness). The result of the fragmentation test for our networks is clear – there are no single actors that decisively influence the structure of the network as a whole (Table 1). Again, we find that the sports field consists of equal and non-hierarchical networks.

Clustering. Are there strong subgroups in our networks? For the clubs, we immediately see (Figure 2) that there are six isolates, three clubs in a group of their own, and the 26 remaining clubs together in one large group. For the larger policy network, the picture (Figure 3) is more complex: two isolates, one small group, and the rest together in a group. The 'rest', however, looks different from the clubs' network; it has a core (similar to the clubs plus some new actors) and a set of satellite actors. Both networks have main components that are large and include almost everyone.

An indication of the extent to which actors cluster is evidenced by the level of *transitivity* (i.e. the tendency for cooperation developing from friends to those friends' friends and excluding others). In Table 3, we see that the level of transitivity is 0.27 for both networks, which is relatively low and supports our hypothesis ($H_{Cluster}$). A more complex measure, the *global clustering coefficient* (i.e. realised triads proportional to potential triangles), reveals largely the same situation: low levels of clustering; yet, for this measure, there is a difference between the two networks. The policy networks are almost non-clustered, while the clubs' network tends to cluster at a certain level.

ERGMs: networks, attributes, and space

We have described what happens in two interorganisational networks: a certain propensity to link up with little hierarchy and fairly low clustering. Next, with ERGMs, we examine how these endogenous network characteristics, organisational attributes and geographical location work together (i.e. controlled for each other) and contribute to the emergence of the sports club and the sports policy networks.

A challenge for ERGM modelling is determining which independent variables to include (Morris *et al*. 2008, Lusher *et al*. 2013). For the sports club network, we have chosen a set of endogenous network predictors (*name of R-syntax in parentheses*), including basic propensity for linking up (*edges*), reciprocity (*mutual*) and clustering/transitivity as edgewise (*gwesp*), dyadwise (*gwdsp*) and cyclic triads (*ctriple*). For actors' attributes, we hypothesised that large actors (i.e. those with many members) should have more links than small actors (*nodefactor*) and that clubs organising similar sports might cooperate more with each other than with other clubs (*nodematch*). Finally, geographical distance (*edge covariance*) is included to determine whether clubs' locations matter for networking. For the policy network, we have again included the most common predictors: propensity (*edges*) and reciprocity (*mutual*). This simple model has, compared to more complex models, a low (i.e. favourable) AIC/BIC but an unimpressive GOF. The model does not degenerate when we add measures of transitivity (i.e. *triangles, gwesp, gwdsp, ctriple*), but the results are models with a higher (i.e. less favourable) AIC/BIC than the simpler model. For endogenous variables, therefore, we choose to make do with propensity and reciprocity. For actor attributes, we have included one variable for sector (*nodefactor)*: Do some sectors link up more than others? In this final model, we have a lower AIC/BIC than for the simpler models, even though the GOF still indicates that this simple model is far from optimal (see Appendix, Figure A1 and A2).

Table 2. Sport club network. ERGM estimates, standard errors, z-values and statistical significance.

	Estimate	Std.Error	z-value	Pr(>|z|)
Propensity:				
Edges	−2.67	0.50	−5.33	<1e-04***
Centralisation/hierarchy:				
Mutual	4.46	0.50	8.94	<1e-04***
Clustering/transitivity:				
gwesp.fixed.0.2	1.02	0.27	3.86	0.0002***
gwdsp.fixed.0.2	−0.10	0.08	−1.23	0.2420
Ctriple	−1.43	0.53	−2.69	0.0095**
Actor attributes/capacity:				
Size[a] 101–250 (nodefactor)	0.56	0.21	2.61	0.0013**
Size 251–1409 (nodefactor)	0.48	0.25	1.91	0.0240
Actor attributes/homophily:				
Central org (nodematch)	1.05	0.32	3.21	0.0013**
Individual sports (nodematch)	−0.34	0.50	−0.69	0.6955
Team sports (nodematch)	−0.40	0.63	−0.65	0.7085
Soccer (nodematch)	2.46	0.54	4.39	<1e-04***
Ski (nodematch)	1.50	0.62	2.39	0.0182*
Shooting (nodematch)6	2.37	0.63	3.73	0.0001***
Edge covariance				
Distance between clubs	−2.06	0.29	−7.09	<1e-04***
AIC: 371				
BIC: 442				

0 '***' 0.001 '**' 0.01 '*' 0.05 '.'
[a]Compared to the smallest clubs: 6 to 100 members

Table 3. Sport policy network. ERGM estimates, standard errors, z-values and statistical significance.

	Estimate	Std.Error	z-value	Pr(>|z|)
Propensity:				
Edges	−3.27	0.11	−29.10	<1e-04***
Hierarchy:				
Mutual	3.67	0.22	17.05	<1e-04***
Actor attributes/influence				
Public actors[a] (nodefactor)	−0.42	0.13	−3.33	0.0009***
Sport organisations (nodefactor)	−0.57	0.11	−5.39	<1e-04***
Market actors (nodefactor)	−0.88	0.19	−4.57	<1e-04***
Voluntary org. (nodefactor)	−1.49	0.28	−5.34	<1e-04***
Sport clubs outside (nodefactor)	−1.52	0.17	−9.19	<1e-04***
AIC: 2080				
BIC: 2132				

0 '***' 0.001 '**' 0.01 '*' 0.05 '.'
[a]Compared to sport clubs within the municipality

For the sports club network (Table 2), the edge variable presents the basic propensity for a tie between clubs controlled for all other effects represented by our variables. As such, it has a role comparable to the intercept in ordinary regression models. Next, we find a high, positive, significant effect of reciprocity: If one actor has a tie to another actor, the tie tends to be reciprocated. High reciprocity implies interaction on equal terms and low centralisation (support $H_{Centralisation}$). Transitivity and closure are often the hardest network configurations to capture and interpret in ERGMs. The edgewise pairs are positive and significant, thereby indicating a tendency for one type of clustering, but the dyadwise is negative, although not significant. A negative, significant cyclic closure coefficient (i.e. ctriple) points to the absence of cyclic triads. The picture is complex, yet the conclusion remains that the clubs have a certain tendency towards clustering (nuancing $H_{Cluster}$).

Theoretically, we suggested that the larger clubs are better positioned (i.e. have the organisational capacities) to establish IORs. The ERGM shows that both medium-large and large clubs tend to have more links than the smaller clubs (support $H_{Capacities}$). Do clubs with similar sports tend to cooperate? Figure 2 suggests they do, and the ERGM gives a set of positive and significant effects for

four of the six sports we included in the model – the central group, football, skiing and shooting sports cooperate more than others (support $H_{Homophily}$). Finally, we also see that clubs geographically close to each other are more prone to interact with neighbouring clubs than with more distant clubs (support $H_{Geography}$).

For the policy network (Table 3), the ERGM confirms, but only marginally adds to, what we already know from visualisations and basic statistics. We see a certain propensity for cooperation, and we find a high level of reciprocity. We furthermore find that sports clubs have the highest level of cooperation, followed by public actors, sports organisations and other sectors that cooperate at a lower level (partly support $H_{Institution}$).

Discussions: explanations and implications

We have described how Norwegian sports clubs cooperate – both among themselves in a sports club network and with other actors as part of a larger sports policy network – and the context for these networks. Besides descriptions, we also asked for explanations (i.e. Why do our networks look like they do?) and discussions (i.e. What are the implications of these networks' characteristics for sport-for-all policies?).

Explanations: why do the networks look like they do?

We outlined a theoretical framework consisting of three parts – strategic incentives, institutional pressures, and trust – and we next interpret our findings in light of this framework. The first remarkable feature of the sports club network is its density, and we claim that, as an organisational network of a certain size, the sports club network is relatively dense. The policy network has less-clear boundaries and appears sparser.

We suggest that the sports club network's density comes, first, from the clubs' *strategic* incentives, which make it reasonable to cooperate to get access to resources (e.g. facilities, funding, volunteers and members). When including a wider set of actors as in the policy networks, some actors are more marginal to the sports field and will have few incentives for extensive cooperation with more sports actors. Hence, the policy network is sparser. *Institutions* encourage, and in some cases demand, cooperation between the clubs. We also find actors (e.g. SC, RSCs and the municipality) who have as their jobs to facilitate and motivate cooperation. As a result, these policy actors themselves also become central actors in the policy network.

On one hand, sports activities themselves are conducive to network-building: Teams and individuals must repeatedly meet to exercise and compete. Additionally, the field of sports in a local community is cohesive and mainly consists of trustful actors who have known each other for a long time. This familiarity makes it easy to interact. On the other hand, this convenience and traditionalism could also lead to a certain inertia in the field (Stinchcombe 1965). Together, these factors make cooperation for many actors a 'low-hanging fruit' achieved effortlessly, while it also creates a situation where clubs turn complacent, conservative, unprepared, and even resistant to change. In sum, it looks like the context is conducive to cooperation at the same time as traditions and embeddedness in the local community undermine the strategic and institutional incentives for further interorganisational relationships. In sum, this explains the relatively high levels of cooperation but also a certain underachievement in more complex network-building.

Second, we found the sports club network to be less centralised and hierarchical than many other social networks. The policy network is more skewed and more like 'normal' social networks. Even though there are gains to be made from *strategic* cooperation in our context, the *institutional* guidelines also seem to stifle such incentives. Given specific characteristics (e.g. number of members), the clubs have, more or less, a right to a certain level of funding. That is, the fairness of the institutional context does not always motivate clubs to establish organisational relations to obtain funding at the cost of other clubs. They are 'all in', regardless of specific actions. This lack of strategic

motivation also comes from the types of problems clubs experience. In a recent study, Norwegian sports clubs report that human resources (i.e. members and volunteers) are what they worry about, while finances and facilities are further down the list of problems (Breuer *et al*. 2017). To secure human resources, the most important strategy will often be to work towards clubs' local constituencies, not other clubs or policy actors. For the policy network, the networking roles for some actors (i.e. municipality, RSB, SC) are *institutionalised* and, thus, inevitably make them the nodes through which much of the interaction takes place.

Third, social and organisational networks often have a tendency for clustering. Yet, even though we find a certain level of clustering among sports clubs, the indications of closure in the two networks we describe in this study are weak overall. When actors *strategically* choose their co-actors, they will try to secure their interests and avoid those they distrust – that is, those with whom they will not share strategically important information (Coleman 2000). The result could be closed groups: clustering. In our field of sports, we assume that the clubs mostly know and trust each other, there is (almost) no need for secrecy when acquiring resources and the result is trustful interaction and low levels of clustering. The *institutional* context functions relatively democratically and transparently, and this lowers the clubs' (and other actors') risk of being left behind when resources are distributed; incentives for creating exclusive relationships with selected co-actors are low.

Implications: how fit are the networks for furthering 'sports for all'

A discussion of implications requires some premises: What are the purposes of sports clubs and the sports policy system? For both public actors and sports organisations, an overall aim is high levels of participation: 'sports for all' (NIF, 2015; Whitepaper nr 26, 2012). Voices critical of the system are also concerned with participation: The present sports system is inefficient (because of lack of opportunities) or unfair (because specific social groups are excluded; (Bergsgard 2017).

The response to quests for more participation and inclusion of non-active or vulnerable groups has typically been some type of professionalisation (Dowling *et al*. 2014, Seippel 2019). The capacity of sports clubs must improve: more education and systematic knowledge and more specialised organisations. If the answer to the current situation's challenges is professionalisation, how will the existing local sports system be able to fulfil the sports-for-all policies?

On one hand, the Norwegian sports system is successful, with 93% of youths affiliated with a sports club at some time (Bakken 2017). At this level, the sports system succeeds because it contains many opportunities at the local level, is not very specialised, and has low thresholds for participation. The structure of the sports field as described in our analyses – relatively dense, low level of centralisation and clustering – could be well suited to a basic 'sports-for-all' vision. On the other hand, both policies and critiques are more ambitious than a vague 'for all' policy. Their aim is to achieve a higher level of activity among specific groups (e.g. children, women, the elderly, minorities, disabled persons and those not attracted to traditional sports). The critique claims that these groups tend to lack the opportunities for sports they are entitled to under a traditional 'sports-for-all' policy.

Success along these more specific and inclusive lines, however, requires adjustment to various social groups' needs and interests. To provide opportunities for more groups, sports clubs must take new and special measures, develop distinctive competencies and cooperate in more specialised settings. Translated into 'network language', we need a sports field with more specialisation (i.e. more centralisation and clustering). This is exactly what the Norwegian sports system at the club level is not designed for, and, given what we have described as its basic structures, this specialisation is not easily achieved.

Retaining high low-threshold participation at the same time as new groups are included requires maintaining the strengths of the present low-level system while building a capacity to respond to the needs of specific groups. In network structure terms, one needs to balance bonding and bridging capacities and the presence of strong and weak ties (Granovetter 1973, Putnam 2000). The aims should be to bring in more advanced knowledge and expert competencies at the same time as one maintains unity, equality and cohesion in local clubs willing to take on the new challenges. The

challenge will be to maintain the strength of the present inclusive system and at the same time to support a set of weaker networks (i.e. bridges or brokerages) to increase innovation and enable more specialised opportunities in sports for groups excluded in the present system. Motivating the present actors for a more change-oriented approach while simultaneously maintaining the strengths of the present system will be the future challenge in developing more inclusive sports networks.

Summary and future research

We have described the interorganisational relations between most actors in the field of sports in a Norwegian municipality. We focused both on clubs alone (i.e. a sports club network) and a sports policy network including both clubs and other types of actors. The sports club network was relatively dense, without central actors and with a fairly low level of clustering. The policy network was sparser; it had more central actors yet also operated without much clustering. We have applied two ERGM models to further investigate how network configurations, club attributes and geographical distance together produce the structures of these two networks. Next, we have explained the emergence of these network structures in light of theories on strategic interests, institutional procedures and various forms of trust structures. Finally, we have discussed the implications these network structures together might have for the dominant sports policies and pointed to the need for balancing various forms of network structures (e.g. bonding and bridging).

There are many ways that studies of IORs and networks might contribute to the future understanding of the functioning of sports clubs and sports policies. We have presented our case from the perspective of what we see as an average municipality. There are obvious differences, however, between local communities. Our networks could have looked different (e.g. sparser, more centralised, more clustered) in a larger city or smaller community. Future studies would benefit from looking at cases – for example, more urban with more elite sports and more professionals – that might broaden the picture of the field of sports addressed in this study. It could also be interesting to compare sports to other organisational fields.

We have based our studies on dichotomous data: A directed tie between two actors is either present or absent. A study with valued networks telling us how often or how 'intense' actors cooperate could have yielded more nuances. Including data on the content of the relations could deepen the analyses of the actors' intentions and experiences – the ever-present weak point of structural studies (Emirbayer and Goodwin 1994) – and contribute to better descriptions, more advanced explanations and more informed understandings of the implications of the structures of sports systems. As for network boundaries, it is also obvious that a more comprehensive, systematic study of non-local networks could add significantly to what we have been able to examine here. This, together with a focus more from the point of view of non-club actors, could benefit the policy perspective. We have chosen one set of presumptions when discussing the implications of our findings, but something else (e.g. elite sports) could have revealed strengths and weaknesses different from those we have described here.

Notes

1. We make a distinction between *sports clubs* – the local units organising sports – and *sports organisations*, the actors making up the larger sports governance body.
2. Sport clubs – and in general, actors in the voluntary sector – are urged to cooperate with each other, public actors and market actors (Whitepaper nr 26, 2012). We also find the same encouragements in NIF's policy papers (NIF, 2015). Sport associations also tend to support cooperation as exemplified by the Football Association's ambitious club development programme, Quality Club (see Seippel 2019). For international perspectives, see Ibsen and Levinsen, 2019.

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Appendix: Goodness of Fit

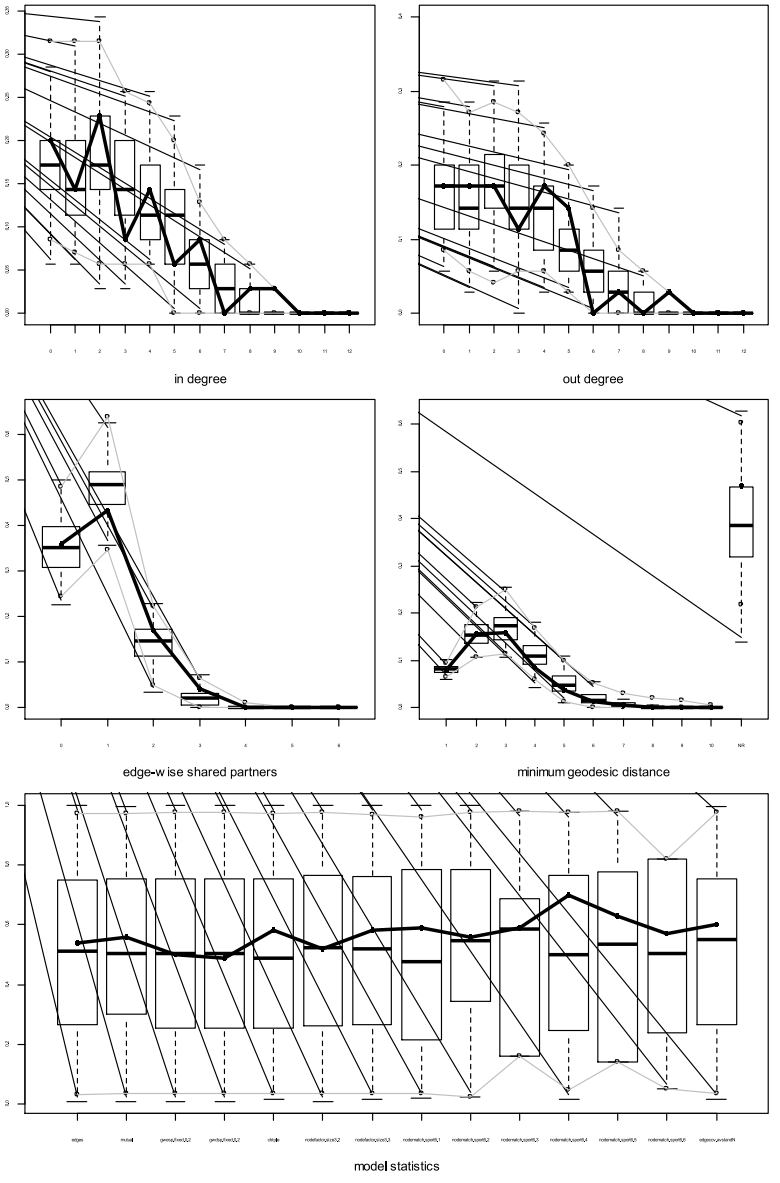

Figure A1 (appendix). Goodness of fit for Sport Club Network. A sample of graphs is randomly drawn from the specified model and the figures show the statistics of the quantiles for a selection of measures for the simulated sample. In a good fit, the observed statistics should be near the sample median (0.5).

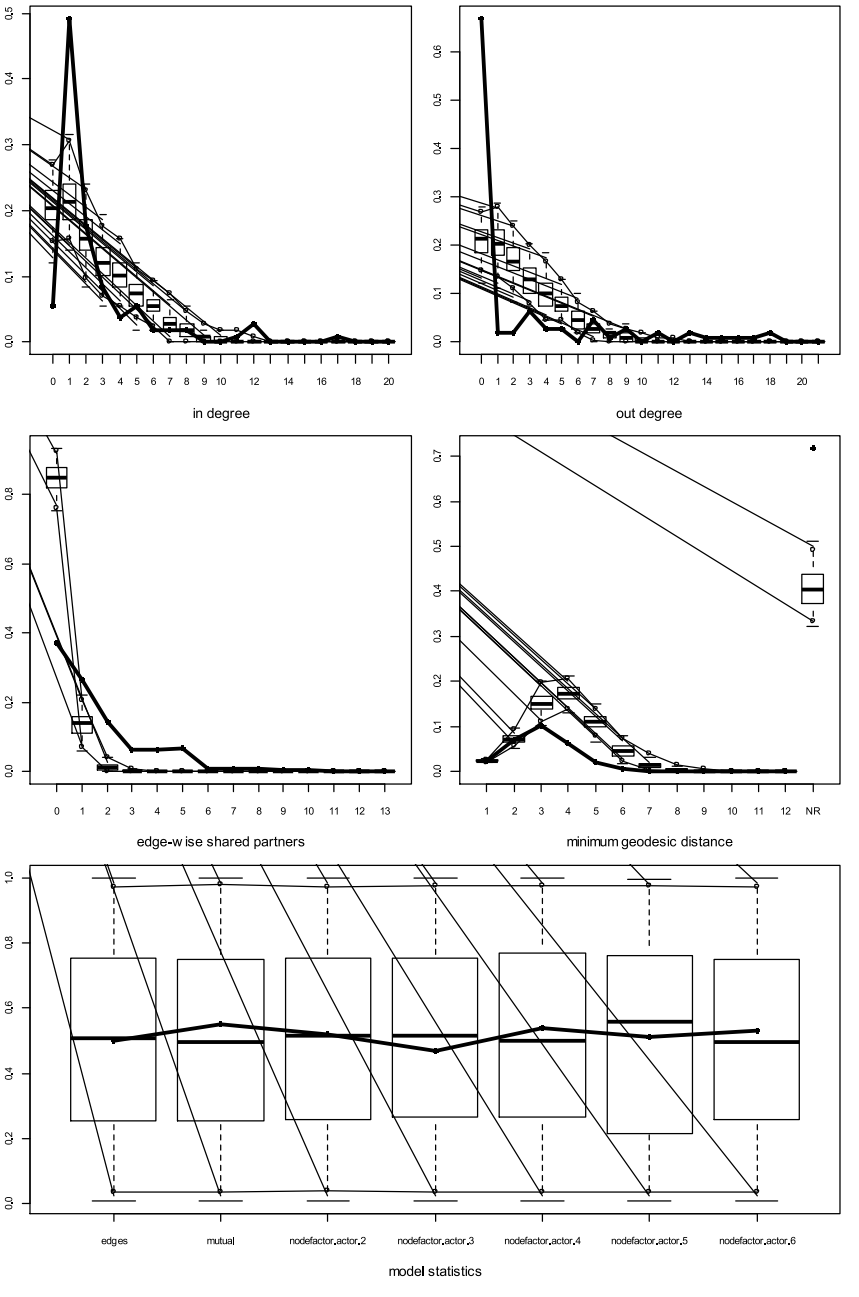

Figure A2 (appendix). Goodness of fit for Sport Policy Network. See Figure A1 for more info.