Topics and trends: 30 years of sociology of sport

Ørnulf Seippel

Taylor & Francis
Taylor & Francis Group

ORIGINAL ARTICLE

Check for updates

Topics and trends: 30 years of sociology of sport

Ørnulf Seippel

Norwegian School of Sport Sciences, Oslo, Norway

ABSTRACT

What is and was the sociology of sports all about? Through the method of topic modelling, I will investigate the content of all articles (full text, $N = 1923$) from what has historically been the three leading sociology of sport journals – *Sociology of Sport Journal*, *International Review for the Sociology of Sport* and *Journal of Sport and Social Issues* – from 1984 to 2014. The study extracts 20 dominant topics: from the vague but central topic of Culture via Organization & Politics, Gender, Race, and Body to the less central, but more specific, topic of Football, Nationalism and Globalization. Additionally, I look at how the three journals have their strongholds in these topics, and how the topics have fluctuated over time. The results are discussed against the background of previous reviews and studies in the sociology of sports.

Introduction

Sociology of sports has become a vital and voluminous scientific field with seminal books, journals, conferences, celebrities, and jubilees. Most with an interest in these affairs have an impression of the field from what they have read, their main interests in the field, what they have (dis)liked, and what they have missed. Nevertheless, a systematic and full overview of the topics in the field has long been beyond our grasp. The main reason for the absence of such an overview, which is not peculiar to the field of sociology of sports, is the difficulty of producing such a summary validly and reliably. The field has grown to a size where it is beyond the capacity of an individual to read all the articles in the main journals systematically, and available quantitative methods have not been up to the task of providing such an overview: 'One could overcome this by undertaking a full reading of each paper to analyze the content of the article, but this would be an intensely time-consuming project and beyond the task of most people' (Dart, 2014, 664).

Recent years' advances in methods for content- and text analyses have, however, made such overviews possible (Blei & Lafferty, 2009; Grimmer & Steward, 2013; Grün & Hornik, 2011; Steyvers & Griffiths, 2014) and in this article, I will apply the methods of

topic models to provide a fuller picture of the field of sociology of sports. To achieve this aim, I will answer five descriptive[1] questions: (1) What have been the main topics in the historically leading sociology of sports journals – *Sociology of Sport Journal* (SSJ), *International Review for the Sociology of Sport* (IRSS), and *Journal of Sport and Social Issues* (JSSI) – for the last 30 years? (2) Which topics have been dominant? (3) How do the topics vary between journals? (4) How have the status of various topics changed over time? (5) How do the topics change by journal over time?

Even though a complete quantitative overview of the field of sociology of sports has been missing, there have been several reviews and studies of parts of the field, and in the next section, I will present some of these reviews and studies as a backdrop to the subsequent empirical analysis. Next, I will present data and methods applied in the study. The empirical part of the study has four parts. First, I will present the topics that have been central to the field. Then, I will show which topics have been most influential. Third, I will look at how these topics have been covered in different places (i.e. journals) and times (i.e. years). I will end the article with a discussion of my findings compared to results from previous studies.

Background

I will use findings from previous studies of the field of sociology of sport to structure the subsequent analyses, and first refer to three reviews of the sociology of sport observed from 'outside' the field itself. Each article covers one decade and are all published in *Annual Review of Sociology*. Next, I will build on some of the insights from Dominic Malcolm's (2012) in-depth study of the development of the field of sociology of sports. Finally, I will pick up some of the main points from Dart's recent quantitative study, 'the first large-scale assessment of the sociology of sport as represented in three of its leading journals' (Dart, 2014, 664).

The earliest reviews from the *Annual Review of Sociology* are, naturally, concerned with the institutionalization of the field, which at the time of Lüschen (1980) was still more or less in the making. Frey and Eitzen (1991) also worry about the stability and position of the field, whereas Washington and Karen (2001) seem less concerned: By 2000, the sociology of sports was declared a settled field. Although all three reviews touch on institutional, methodological and epistemological issues, the topics most thoroughly addressed by all three are themes and theories.

Early on, Lüschen (1980) claims that the field started out as mainstream sociology:

> Two years after its initiation the IRSS was strongly research oriented and published more articles based on empirical data than any other major journal except for the AJS. The emphasis in the IRSS then shifted to the more qualitative and review articles … Analytic statistics are evident only in a minority of sport sociological articles. (Lüschen, 1980, 324–325)

Lüschen then goes through a long list of approaches: comparative analyses, sports in modern society, politics, economy, education, stratification, socialization, organizations, groups, professionalization, structures, deviance, violence, and discrimination. Just as interesting for this study, however, are the themes he claims are lacking: studies of policies, sports practice, and physical education (Lüschen, 1980, 338).

Ten years later, Frey and Eitzen ([1991](#)) emphasized three theory traditions as central to the field: functionalism, conflict theory, and cultural theory. They further specified what these perspectives involved. Socialization and organization come from the functionalist camp; hegemony, class, power, sexism, racism, conflict, and deviance are associated with conflict theory; and cultural theory is presented as the more advanced perspective.

In Washington and Karen's review (2001), the topics and theorists were much the same as for the previous studies. They promoted cultural theory, and Bourdieu was seen as a leading star in this field. They also endorsed *new institutionalism* (DiMaggio & Powell, [1983](#)) as an approach that should be developed and applied. Stratification and inequalities were central issues, operating along three dimensions: social class, gender, and race. New institutionalism raised two new issues: globalization and media studies.

Malcolm ([2012](#)) gives a comprehensive picture of the development of the field of sociology of sports – scope, methods and organizations – and a very stimulating interpretation of what has happened to the field as a process of professionalization. Of special interest for this study, Malcolm selects five topics, each given a whole chapter, for special discussions. The first of these, 'sociology of sport and social theory', is mostly in line with the reviews presented above and the fifth, celebrity, appears as more marginal to the present study. For the three topics of race/ethnicity, gender and the body, Malcom, however, provides useful additional context, and for each of these topics, Malcolm shows how they become more prevalent during the period covered in the present study, but also how the phenomena are increasingly seen as more contested and, reflecting such a view, are studied as social constructions emerging through various discourses. For these three topics – race, gender and body – Malcolm also shows how they by time are made part of larger multidisciplinary cultural studies.

Prior to the 50th anniversary of the International Sociology of Sport Association and IRSS (Pike, Jackson, & Wenner, [2015](#)), Dart ([2014](#)) made the most systematic quantitative study to date – 'beyond the individual and impressionistic' (Dart, [2014](#), 646) – of the topics, sports, countries, methods, and theories of the sociology of sports. Although there are some shortcomings in Dart's study, which is based only on titles and abstracts, the findings give a substantial and stimulating picture of what the articles in the three chosen journals have been all about. For the current study, Dart's study of themes is the most important. His conclusion, combining the content of the three main journals in the field, is that politics, economics, and psychology are the dominant themes, followed by race/ethnicity, sex/sexuality, and feminism. Dart's study is not optimal for detecting differences between journals: 'This broad brush does not capture this level of detail' (Dart, [2014](#), 664).

Dart's brief review of the field, introducing his own empirical study, gives the impression that the sociology of sports has moved from a mainstream positivist quantitative position to something less coherent and systematic. The first claim is backed by a citation from Coakley ([1987](#)), who, based on the first 14 issues of SSJ, states: 'Sociology of sport research in the United States emphasizes 'issue-related' quantitative studies rather than qualitative or theory based studies' (76). As a sign for the present situation, Dart quotes Silk and Andrews ([2011](#)), claiming that a 'debilitating blend of introspective and ineffectual parochialism … has plagued the sociology of sport,' which 'has become increasingly nebulous and will not survive as a sub-discipline within a wider, hostile neo-liberal atmosphere' (Dart, [2014](#), 647). This statement gives

the impression of a field riddled by conflicts, whereas Dart's (2014) conclusion is, nevertheless, rather confident: 'I feel fortunate to be working in a dynamic field … with a rich diversity of topics' (664).

This admittedly brief review gives some weighty arguments for a study like the present. First, a study based not just on titles and abstracts, but on the full texts, could obviously add to our understanding of both the situation within the sociology of sport and the development of the field. Second, a more inductive approach – independent of coding based on a preceding idea of what we think is characteristic of the field – of a corpus of texts so large that no one would be thoroughly familiar with it should be welcome. Third, 'insufficient data was available to offer a trend analysis' (Dart, 2014, 664), yet a better understanding of time trends and differences between journals would be useful for a field apparently characterized by both changes and conflicts (or, to restate in a positive manner, a field described as dynamic and diverse).

Whereas the main objective of this study is to describe a scientific field (i.e. sociology of sports), results from previous studies are useful for structuring discussions of the results from this study. For example, as suggested early on by Lüschen (1980), and later by Dart (2014): Has the field shifted from a quantitative to a qualitative orientation? What about the topics declared missing in the early stages of the field: politics, sports practice, and physical education? At least the first topic – politics – seems, according to Dart (2014), to have become more significant today. What about themes as socialization and organization (i.e. structural functionalism), hegemony, class, and power (i.e. conflict theory), and culture? Dart's (2014) study does not confirm all these topics as central; therefore, intriguing questions could include: Are these topics dominant, and where and when do they eventually come into prominence? Culture is promoted as the idea to which a sociology of sports should adhere and seen as central in Malcolm's study, but in Dart's findings, it is not obvious that culture has a crucial position in the field. So, what is the status of culture and/or cultural studies within the sociology of sports? Social inequality – as to race/ethnicity, gender, and social class – is put forward as a worthy theme, and race and gender also come up in both Malcolm and Dart's findings, but what about social class and social stratification? These are some of the questions that come forward from this short review, and would be interesting to discuss in light of results from this study.

Data and methods

Data in this study consist of all articles ($N = 1923$) in full text, published in the three leading journals in the field of the sociology of sports – SSJ, *Journal for Sport and Social Issues* (JSSI), and IRSS – over the last 30 years (1984–2014).[2] We prepared data as usual in computer-assisted text analysis (Feinerer, Hornik, & Meyer, 2008; Grimmer & Steward, 2013): Articles in PDF format are converted first to text format (.txt), then to small caps, then to text where all white spaces, punctuation, and numbers are removed. Next, stop-words (common words as e.g. 'the', 'is', 'at', 'which' and 'it'), and a further list of high-occurrence words which complicate the analyses without adding to the results (e.g. 'sociology' and 'sports') are taken out of the text.

All analysis are done with *R* (R Core Team, 2016), a statistical program also fit for text analyses. *R* consists of a core module and a large number of available packages.

Two of these packages have been of importance in this study. The *tm* package (Feinerer & Hornik, 2017; Feinerer et al., 2008) was used in the first step of preparing the texts for analyses. Second, the *topicmodels* package (Grün & Hornik, 2011), which uses corpora prepared in *tm*, was applied to do topic modelling analyses.

According to DiMaggio, Nag, and Blei (2013), there are three requirements for reliable content analysis covering large text corpora which differ from the guidelines stressed for traditional text analyses (Krippendorff, 2004; Neuendorf, 2002; Weber, 1990): (1) Texts should be treated similarly (i.e. automated); (2) The approach should, since it is impossible for the researcher to have the full overview of all texts, have a certain inductive character, and (3) It should be possible to study the text-elements in context. The method used in this study, *topic modeling* (Blei & Lafferty, 2009; Steyvers & Griffiths, 2014), fulfils these three requirements: It easily takes on a large amount of texts, it treats the texts similarly, and it looks for patterns in the texts not being predetermined (through coding), which results in words and topics having a contextual character.

The *topic models method* is based on the latent Dirichlet allocation (LDA; Blei & Lafferty, 2009; Steyvers & Griffiths, 2014). The method works by looking up topics which consists of distributions of terms based on the tendency of words to come together in articles. Topics are then linked to texts (i.e. articles), and the importance of each topic for each article is estimated. That is, the collection of topics and words are characteristic of the articles included in the study. The presentation of the topics are simply lists of words, reflecting their centrality to the topic at hand ('parameters of the posterior topic distribution for each document'; Grün & Hornik, 2011, 11), which indicate what the topics are all about.

The method works by looking for the latent processes that could have generated the distribution of words found in the articles: What should a distribution of words look like in order to – with the highest possible probability – produce exactly the texts we are studying? The answer and result is a set of latent dimensions (i.e. the topics as distributions of words) that each contribute a certain influence in the articles. The method is inductive with respect to the fact that it looks up latent dimensions without guidance from the researcher. Stating that the interpretations of social phenomena (Emirbayer, 1997) and texts (Gadamer, 1996) are relational and contextual is nothing new, and these characteristics come to the fore in topic modeling in several ways. First, topics consist of collections of words, so the words as a whole and their relationship to each other (not single words or strings of words) make up a topic. Second, articles are built up around several topics, so each article gets its meaning from a set of topics working together. Third, the words going into the topics are not restricted to one topic (e.g. 'identity' is one of the words related to *nationalism*, *football*, *gender*, and the *body*). Topics are not restricted to one article, but are given meaning in each article, conjoined to other topics. What is also interesting with the method of topic models is that it not only provides the necessary statistical and technical tools to answer such questions, but also responds better than ordinary quantitative methods to requirements often seen as central to cultural studies, such as intertextuality, polysemy, and heteroglossia (DiMaggio et al., 2013, 582; Jockers, 2013).

The strength of the methods – inductive approaches and contextual interpretations – makes them reliable, but do, of course, also imply that the researcher should know

the field studied in order to be able to interpret the findings: Avoiding coding before-hand, makes the need for interpretation afterwards indeed vital, and the validity of the study depends partly on the soundness of these interpretation. The methodological challenge is to make sense of groups of words: How do they represent topics?

Even though one of the strengths of the method is its inductiveness and contextuality, one important decision is left to the researcher(s): How many topics should we expect? The decision is partly based on substantial assumptions, partly based on empirical findings, and there are no correct solutions to this challenge. In this case, it seems reasonable to assume that a whole scientific field operating over a period of 30 years, in different journals with various geographical orientations, should comprise a large number of topics. At the same time, the purpose of a study like this is to look for an interpretable number of topics (e.g. more than 10? less than 50?). I have tested models with five, 10, 20, 30, 40, and 50 topics, and have settled on a model with 20 topics. These results give room for a reasonable diversity, while at the same time being narrow enough to give meaning to the situation and development of the field.[3]

Results

What is it all about: which topics?[4]

Table 1 presents 20 lists, each representing one topic consisting of 30 concepts. Making sense of these lists requires interpretative work through qualitative text analysis (Gibbs, 2007), and the labelling of topics, done by author, is partly based on well-known categories from the sociology of sports, partly based on more inductive reasoning. A first brief look at the lists makes it very clear that the topics have different forms. There are very general themes (e.g. *Player* in the first topic), where words work more like 'sensitizing concepts' (Blumer, 1969) and several concepts together must be applied to get at the theme of the topic. Yet, there are also more specific themes (e.g. *Football* in the sixth topic), where a single concept gives immediate meaning to a whole topic, and further concepts just add to or specify this meaning. Moreover, there are concepts that one would think of as very central to sports studies that represent approaches more than themes, such as f ex 'power', and there are several concepts that mostly deepen and extend the meaning of topics by, for example, pointing at a spatial link (e.g. *urban* or *Irish*), specific researchers (e.g. Elias), methods (e.g. variable), approaches (e.g. critical), and/or social institutions (e.g. family).

Topic 1. Player – what do sports consist of? Whereas several topics have a distinct theme or indicate something resembling a research question, the first topic is one which obviously tells a relevant story, yet is not easily reduced to one term. It seems reasonable that sports studies are about players, and the terms thereafter add up to a comprehensive description of what makes up sports activities: 'players' in a 'team' participating in a 'league', 'playing' and 'game' and sports (e.g. 'baseball', 'hockey', 'basketball', 'football') on a field in a 'season': a 'performance'. Apart from the players, we also have 'fans', 'managers', and organizations ('NFL,' 'MLB'), and most of these are, as indicated by the sports cited, 'American'.

Topic 2. Nationalism. This is the topic with the highest number of regions, nations, and nationalities. In addition to these regional markers, this is about politics ('political'),

Table 1. Twenty topics solution.

Topic 1 Player	Topic 2 Nationalism	Topic 3 Urban	Topic 4 Culture	Topic 5 Interview
[1] player	cricket	city	culture	interview
[2] team	south	urban	case	coach
[3] league	ireland	public	state	experiences
[4] baseball	irish	economic	value	young
[5] game	political	golf	public	team
[6] professional	identity	local	problem	participant
[7] hockey	northern	space	relation	identity
[8] playing	indian	stadium	power	thing
[9] american	ethnic	million	event	player
[10] fan	africa	facilities	member	school
[11] positions	national	environmental	game	going
[12] major	jewish	market	sporting	feel
[13] season	british	business	context	talk
[14] basketball	team	community	seen	boy
[15] home	israeli	economy	nature	children
[16] ball	israel	state	view	want
[17] position	cultural	course	control	felt
[18] football	muslim	pool	history	field
[19] manager	game	club	individual	lot
[20] nfl	nation	private	change	parent
[21] played	arab	development	rule	playing
[22] performance	nationalism	commercial	early	say
[23] mlb	politics	political	still	room
[24] year	rodeo	government	according	friends
[25] dominican	nationalist	land	therefore	training
[26] national	caribbean	growth	cultural	family
[27] field	west	impact	issue	personal
[28] base	community	major	professional	club
[29] coach	sporting	tourism	several	told
[30] advantage	state	industry	relationhip	lives

Topic 6 Football	Topic 7 Organization and politics	Topic 8 Body and health	Topic 9 Subculture	Topic 10 Olympics
[1] football	organization	body	japanese	olympic
[2] fan	policy	health	japan	game
[3] club	development	athlete	drinking	national
[4] soccer	club	injury	alcohol	international
[5] violence	community	drug	snowboarding	political
[6] english	program	fitness	risk	country
[7] england	government	risk	racing	nation
[8] supporter	capital	medical	rider	ioc
[9] game	member	pain	skateboarding	event
[10] london	youth	exercise	race	korean
[11] identity	international	training	snowboarder	state
[12] team	local	doping	climbing	chinese
[13] player	national	medicine	culture	china
[14] spectator	political	weight	skaters	south
[15] scottish	canada	running	ski	war
[16] cup	organizational	bodybuilding	cycling	korea
[17] british	state	runner	derby	global
[18] match	resource	steroid	style	government
[19] dunning	public	performance	skiing	security
[20] league	activity	fat	youth	nike
[21] national	group	bodybuilder	blog	rights
[22] matches	education	activity	surfing	nationalism
[23] european	funding	trainer	subculture	committee
[24] elias	change	substance	roller	north
[25] scotland	health	problem	identity	politics
[26] united	canadian	obesity	consumption	military
[27] fandom	support	aerobics	young	sporting
[28] class	young	healthy	lifestyle	sydney
[29] hooliganism	voluntary	risks	cyclist	president
[30] giulianotti	management	control	adventure	pride

Table 1. Continued

Topic 11 Activity	Topic 12 Media	Topic 13 Globalization	Topic 14 Athlete and school	Topic 15 Gender
[1] activity	media	global	athlete	women
[2] culture	coverage	national	coach	men
[3] game	athlete	rugby	athletic	gender
[4] value	television	cultural	college	female
[5] problem	game	canadian	school	male
[6] development	olympic	identity	student	sexual
[7] education	event	media	athletics	body
[8] rule	audience	globalization	program	girl
[9] system	newspaper	zealand	ncaa	masculinity
[10] club	news	canada	academic	sex
[11] structure article	nation	football	feminist	
[12] science	journalist	culture	education	masculine
[13] german	content	hockey	team	woman
[14] situation	image	local	division	power
[15] competitive	photograph	international	institution	femininity
[16] level	televised	australian	coaching	gay
[17] country	team	migration	basketball	sexuality
[18] worker	fan	maguire	intercollegiate	identity
[19] leisure	viewers	australia	title	feminine
[20] conditions	time	transnational	state	lesbian
[21] towards	story	player	studentathlete	messner
[22] action	mass	country	university	difference
[23] germany	communication	team	harassment	athlete
[24] results	tennis	league	men	gendered
[25] group	commentary	european	collegiate	image
[26] according	female	sporting	black	participation
[27] individual	magazine	economic	male	hegemonic
[28] ofsport	broadcast	london	educational	relation
[29] movement	narrative	corporate	higher	boy
[30] training	journalism	production	national	rugby

Topic 16 Disability and European	Topic 17 Participation and race	Topic 18 Body and minoriy	Topic 19 Quantitative	Topic 20 Power
[1] disability	france	participation	black	body
[2] native	french	activity	white	cultural
[3] indian	paris	school	american	space
[4] mascot	handball	athlete	race	discourse
[5] american	club	variable	racial	power
[6] boxing	dutch	age	african	critical
[7] animal	norwegian	data	racism	theory
[8] disabled	practice	effect	basketball	practices
[9] paralympic	norway	female	cultural	culture
[10] bird	sporting	difference	whiteness	foucault
[11] boxers	martial	involvement	culture	london
[12] hunting	gymnastics	male	discourse	identity
[13] image	judo	education	media	relation
[14] chief	danish	factor	athlete	knowledge
[15] name	netherlands	respondent	identity	education
[16] imagery	soccer	significant	nike	politics
[17] birding	arts	results	male	political
[18] boxer	bourdieu	status	united	self
[19] thai	national	finding	jordan	bourdieu
[20] cleveland	training	sample	america	human
[21] ipc	field	level	asian	technology
[22] activity	denmark	participant	nba	theoretical
[23] nickname	activity	behavior	king	class
[24] camp	federation	student	popular	understanding
[25] ablebodied	integration	percent	racist	subject
[26] fighting	space	higher	image	forms
[27] birdwatching	practices	gender	ethnic	experiences
[28] dogs	traditional	family	state	production
[29] supporter	basque	youth	color	field
[30] wheelchair	ethnic	value	michael	feminist

'identity', 'religion', 'culture', and 'nationalism'/'national'/'nationalist'. Together, these indicate a common theme of how sports are parts of political and cultural struggles for national identities. With its many geographical indicators, this is also among the topics with a clear and distinct meaning. For nations/nationalities, (Northern) Ireland/ Irish is at the top of the list. Thereafter, we meet the Indian, African, Jewish, British, Israeli, Muslim, Arab, and Caribbean. It is also interesting to note that the only sports mentioned on this list are cricket and rodeo. Cricket is a recurring candidate when discussing sports and national identities – especially as colonialists versus colonies (Kaufman & Patterson, 2005).

Topic 3. Urban. This topic involves three classes of concepts. First, we have a class of spatial indicators: 'city', 'urban', 'local', 'space', 'community', 'land', and 'area'. Second, we see that a central theme is linked to these spaces, in the context of sports: 'facilities', 'stadiums', and 'pools'. The third class of concepts is less coherent, but tends to tell us what kinds of conflicts the combination of urban spaces and facilities imply. These concepts include economic ('million', 'market', 'business', 'private', 'commercial', 'industry', 'tourism') challenges, environmental problems, and political actors ('public', 'community', 'state', 'government', 'development') involved. Tellingly, the only sport identified for this topic is 'golf', which nicely illustrates several of the issues represented in the above concepts. Golf is a sport that has an urban bourgeois connotation, yet also has a high demand for space. This easily integrates the planning and constructing of golf facilities with questions of politics and urban planning.

Topic 4. Culture. As shown above, there is a long tradition of promoting the sociology of sports as some type of cultural sociology, and the way this topic emerges in this analysis indicates that this has been a successful endeavour. As for the first topic (i.e. *player*), *culture* is also less distinct than *nationalism* and *urban*. This could simply reflect that culture is linked to many, if not most, things. Directly linked to 'culture' (and 'cultural') is 'value'. Next, concepts such as 'state', 'public', 'power', 'control', and 'rule' show how culture is studied in a context of power and public conflict. Furthermore, there are concepts telling us how this culture is linked to various phenomena of sports: 'event,' 'member,' 'game,' and 'professional.' The conclusion nevertheless seems to be that this topic is a very general one, applicable in many settings, and sums up a long list of themes and approaches.

Topic 5. Interview. This is the only topic headed with a methodological indicator: 'interview.' This is paired with a list of words suggesting a qualitative approach to sports: 'experiences,' 'participant,' 'identity,' 'feel'/'felt,' 'talk,' 'say,' 'told', and 'lives.' To what themes is this method linked? We find a rather broad and open list of themes, indicating that this is a method for studying sports activities in a relatively general context ('coach,' 'team,' 'player,' 'club'), although with a certain interest in youth ('young,' 'boy,' 'children'), and the contexts ('school' and 'parent') within which they do sports.

Topic 6. Football. Football and soccer are the obvious main themes in this topic. Moreover, there are two types of concepts referring to, respectively, subthemes and geographical affiliations. A main subtheme is the group of 'fans,' 'supporters,' and 'spectators,' and these terms are, in turn, linked to themes as 'violence'/'hooliganism', 'identity' and 'class.' This is very much a 'British' (i.e. both 'English' and 'Scottish') concern. Three authors have written on this topic: 'Elias' and 'Dunning' with theories of

civilization which ended up with studies of hooliganism, and 'Guilianotti', who has written extensively on the sociology of soccer.

Topic 7. Organization and politics. This is, again, a topic pointing to relatively distinct themes: organization of sports and sports politics. Organizational aspects are directly covered in 'organization/al', 'club', and 'members', while politics is linked to 'policy', 'political', 'state', and 'public'. Organizational questions seem to be linked to 'development', 'program', 'voluntary', 'management', and 'organization', whereas political aspects come up in 'community', 'local', 'national', and 'international' (politics). These topics also call on economics: 'capital', 'resources', and 'funding'. In sum, this is the section in the sociology of sports related to political science and (sport) management studies.

Topic 8. Body and health. A topic coming easily to sports scientists is the 'body,' and two topics dealing mainly with the body emerge in this study. This first body topic is 'health'. This discourse seems to be largely concerned with the activities that bring health to the body: 'fitness', 'exercise', 'activity', 'training', and 'running'. Thereafter, however, the body is also characterized in terms that are more problematic. One such theme concerns negative side effects of exercise: 'injury', 'pain', and 'risks'. A second subtheme is related to 'obesity', 'weight', and 'fat'. Third, doping is addressed through 'drug', 'steroid', and 'substance'. In this case, we have a clear-cut theme – the body – related to a range of activities and, thereafter, a set of problems.

Topic 9. Subculture. Subculture is one of the topics which is distinct, but not as easily interpretable as some other specific topics. I have labelled it *subculture* even though the term itself is far down the list, and the first concepts in the list are not obviously addressing subcultural themes. There are, however, a host of subculture activities in this topic: 'snowboarding'/'snowboarder,' 'skateboarding', 'climbing', 'skaters', and 'surfing'. Furthermore, there are several themes that are often part of studies of subcultures: 'risk', 'adventure', 'style', 'youth', 'young', 'lifestyle', 'identity', and 'consumption'. If subcultures are studied as forms of deviance from the main culture, it also makes sense to link them to 'drinking', 'alcohol', and, again, 'risks'.

Topic 10: Olympics. This theme is about the Olympics and its corollaries: 'games', 'events', 'IOC', and 'president'. Put into a political context ('government'), regional levels – 'country', 'state', 'nations', 'national', 'nationalism', 'international', and 'global' – play important roles. Among other concepts are the rather brutal 'war', 'security', and 'military'. The more concrete geographical anchoring of this issue is Asia, specifically 'Korean'/'Korea', and 'Chinese'/'China'.

Topic 11. Activity. The concepts in this list are, on the one hand, recognizable and close to the theme of sports (e.g. 'activity' and 'game' near the top), yet, on the other hand, they are also hard to interpret coherently. The topic is related to 'culture' and 'value'; it has something to do with 'problem' and 'development'. Overall, this is probably the topic with the least comprehensible content.

Topic 12. Media. A topic with a clear-cut top concept, 'media', is followed up with many matching or supplementing words. We have some general concepts aimed at media content, including ('mass') 'communication', 'coverage', 'content', 'image', 'photograph', and 'narrative'. Specific media are also pointed out (e.g. 'television', 'televised', 'broadcast', 'magazine', 'newspaper', 'news', 'article'), and particular groups related to media are highlighted (e.g. 'audience', 'journalist', 'viewers'). Themes

addressed through a discourse on media include 'Olympics', 'game', 'event', 'team', and 'fan'. Finally, the term 'female' indicates that media is also addressing a more general concern (gender).

Topic 13. Globalization. A recurrent theme here, pointing towards the crux of the topic, is illustrated by regional markers: 'global', 'national', 'globalization', 'nation', 'local', 'international', 'transnational', 'country'. Next, it seems these are themes studied through a specific perspective: 'culture'/'cultural', 'identity', and 'media'. The way this topic is problematized points toward 'migration' and economic ('corporate') questions. There are two sports indicators – 'rugby' and 'hockey' – and the nations and regions involved are 'Canada/ian', 'New Zealand', 'Australia/n', 'Europe/an' and 'London'.

Topic 14. Athletes and school. Two distinct themes come together as one in this topic. The first is a core of sports; the actors involved are: 'athletes', 'coach', 'students', 'student-athletes', 'men', and 'team.' Next, the contexts of those involved stand out: 'college', 'school', 'academic', 'education', 'institution', 'intercollegiate', 'NCAA' and 'university'. The sports mentioned are 'football' and 'basketball'; the problems identified are 'harassment' (sexual) and race ('black').

Topic 15. Gender. Gender is among the topics coming out with the clearest, most coherent and united profile. 'Women', 'men', 'gender', 'female', 'male' and 'girls' show what this is all about – 'masculinity' and 'femininity' indicate that the discourses related to these distinctive characteristics are central to the topic. Apart from this more general topic of gender, the subtopic coming to the fore is 'sexuality' (e.g. 'sex,' 'gay,' 'lesbian'), as articulated through the lenses of 'power' 'identity', and 'differences'. This is also one of a few topics associated with a theorist: 'Messner'.

Topic 16. Natives and disability. This is also a topic with two distinct themes, and at first it is not obvious how they go together. First, a familiar topic from the literature on sports and disabilities ('able-bodied'), is linked to events ('Paralympics'), and equipment ('wheelchairs'). Second, we find several terms relating to questions of native sports, mostly with an American twist ('Indians', 'chief'), and it seems that a central subject in this topic is related to mascots ('image', 'imagery'); this, in turn, is related to animals ('birds', 'dogs'). As far as sports, 'boxing', 'fighting', 'hunting' and 'birding'/'birdwatching' are present; the latter two seem related to the Native discourse.

Topic 17. European. This topic consists mainly of a list of non-British European nations and nationalities: 'French'/'France', 'Dutch'/'Netherlands', 'Norwegian'/'Norway', 'Danish'/'Denmark', and 'Basque'. Although these nations and nationalities are linked to sports (e.g. 'handball', 'martial arts', 'gymnastics', 'judo' and 'soccer'), it is not obvious why exactly these sports appear in this context.

Topic 18. Participation and quantitative. Participation and activity are at the core of this topic, and they are linked to certain places (e.g. 'school') and actors or roles (e.g. 'athlete'). Several of the terms in this topic, nevertheless, seem to hint at quantitative analyses: 'variable', 'data', 'effect', 'factor', 'respondent', 'significant', 'results', 'finding', 'sample', 'percent', and 'value'. It seems that most studies of participation and activity in sports are conducted through quantitative methods.

Topic 19. Race. This is another easily interpretable topic: 'black', 'white', 'race', 'racial', 'whiteness', 'racist', 'ethnic', and 'color' all point in the direction of the theme: 'race'. Moreover, the topic is about 'American' and/or 'African' people. The way to theorize about race is through the concepts of 'culture'/'cultural', 'discourse', and 'identity'. This
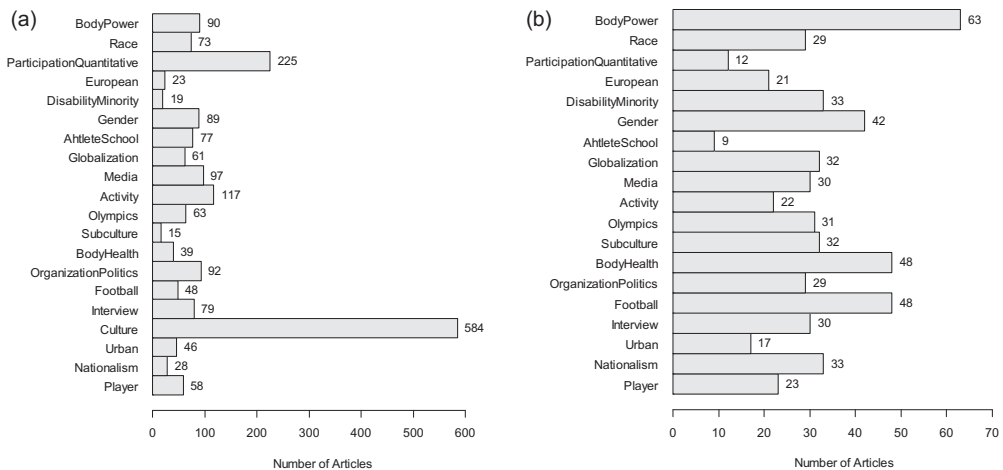
is about 'media' and 'image', and the prominent sport is 'basketball'/'NBA' through 'Michael'/'Jordan' and 'Nike'.

Topic 20. Body and power. The last topic is an interesting one with, up front, a term which is also the most important in a previous topic (i.e. Topic 8). This time, 'Body', however, relates to a different setting – critical theory – with 'cultural'/'culture', 'space', 'discourse', 'power', 'identity', 'relation', 'knowledge', 'technology', 'self' and 'politics'/'political' all resonating very neatly and a theorist associated with the topic: 'Foucault'. Another theorist, 'Bourdieu', is referenced, and the concepts related to his works are 'class' and 'field'.

Influence of topics

There are several ways to estimate the importance of the topics. The results presented here (Figure 1(a)) show how often each topic appears as the most important topic in an article. There is a clear frontrunner – *Culture* – which is the most important topic in 584 (i.e. close to one-third) of 1923 articles. Culture as a topic, could however, both contain culture as a theme or other themes addressed through cultural studies. To provide a clearer impression of what these culture articles are all about, I checked out the second most important topics in the articles where culture was the most important topic (Figure 1(b)). Three subthemes stand out. First, culture is very much about body – primarily as *BodyPower*, but also as *BodyHealth*. Next, many football articles exhibit a cultural bent. Finally, articles on *gender* using a cultural approach are common.

After *Culture*, the second and third most influential topics, respectively, are *ParticipationQuantitative* and *Activity*. Following these three topics – each dominant in more than 100 articles – is a set of more distinct topics, each dominant in more than 70 articles: *Media* (97 articles), *OrganizationPolitics* (92), *BodyPower* (90), *Gender* (89), *AthletesSchool* (77), and *Race* (73). Three topics influence more than 50 articles each:

Figure 1. (a) Number of articles in which a topic is the most central and (b) number of second most central topics in articles where *Culture* is the most central topic.

Olympics (63), *Globalization* (61), and *Player* (58). Finally, influencing between 30 and 50 articles – still quite an influence – are *Football* (48), *Urban* (46), and *BodyHealth* (39).

Topics in journals over time

The results in Figure 1(a,b) describe which topics have been central in the sociology of sports field over the last 30 years. The next question is: How dominant are the various topics in the sociology of sports journals? In Figure 2, I have included the scores for each topic for each of the journals.

Two patterns stand out in these figures. First, the overall influence of the topics, as shown by the heights of the bars, is evident (as in Figure 1). Second, and our focus here, we see differences between the journals when it comes to dominant topics. For the most influential topic, *culture*, the differences between the three journals are small: Culture is the dominant topic in the sociology of sports, and it is widespread. The second most influential topic – *participation & quantitative* – seems to be a topic not for *JSSI*, whereas this topic is a little more central to *SSJ* than *ISSR*. *Activity*, the third most important topic, has the clearest link to one journal; *ISSR* is almost alone in giving place to this topic. For *BodyPower*, SSJ is clearly the most vocal journal. Looking for particularities in journals apart from the most central topics, we find that *ISSR* is the leading outlet for *OrganizationPolitics*, *Football*, *Olympics,* and *European* articles. In comparison, *SSJ* dominates for the topics *Interview*, *BodyHealth,* and *DisabilityMinority*. Finally, *JSSI* has its strongholds in the topics *Race*, *AthleteSchool*, *Media*, *Urban*, and *Player*.
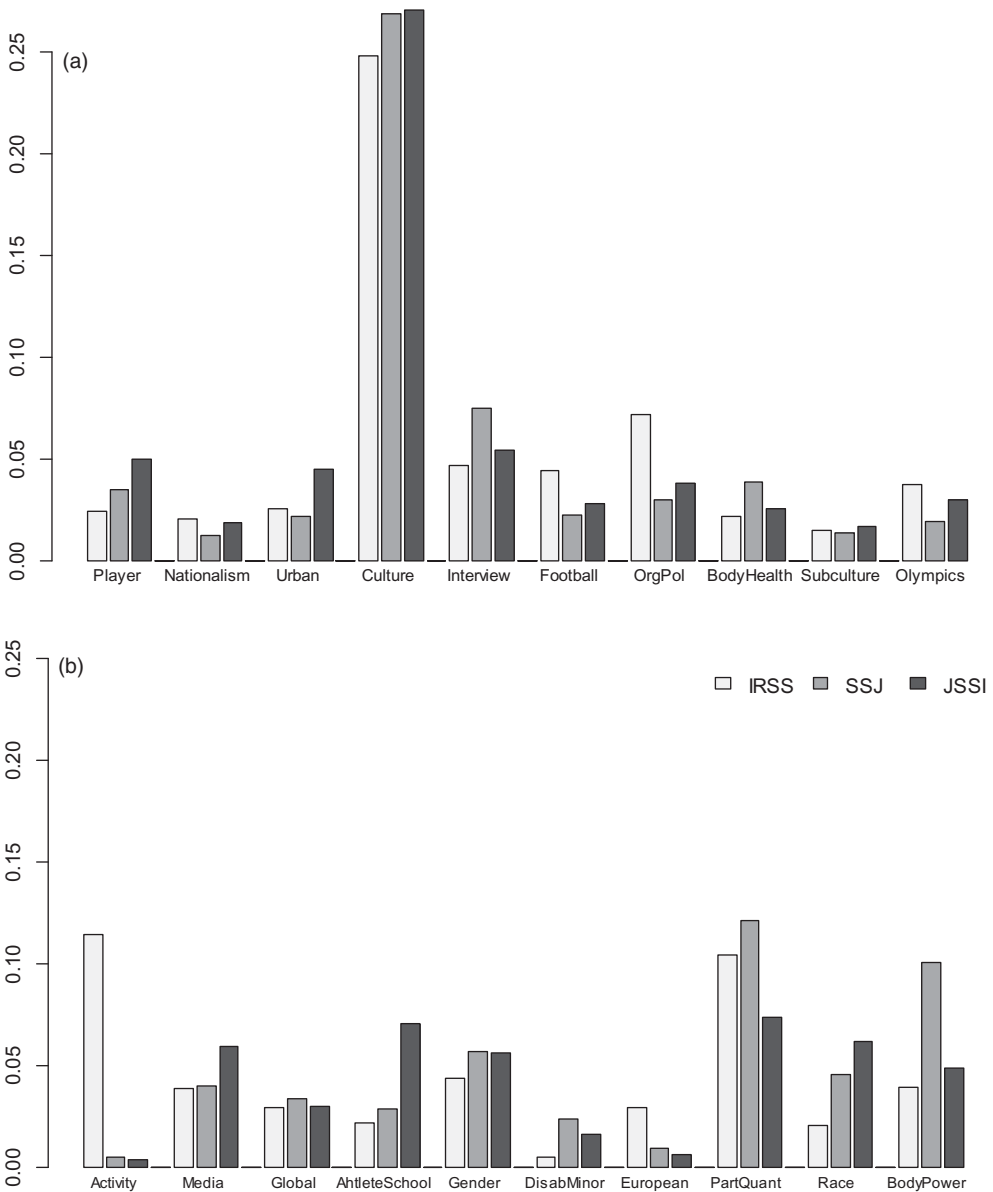
Over 30 years, it seems reasonable to assume the occurrence of some thematic ups and downs. Figure 3(a–d) shows how each of the 20 topics (based on the average influence of each topic for each year) develop over time. To visualize changes, the topics are distributed to four figures according to the topics' influences – from small (Figure 3(a)) to large (Figure 3(d)). Accordingly, the scales differ between the four figures.

For the least influential topics (Figure 3(a)), we see two types of developments: *Subculture* and *BodyHealth* are clearly increasing through the period, whereas *European*, *DisabilityMinorities,* and *Nationalism* plot an inverted U-shape. The latter three topics increase for a time, then decrease towards the end of the period.

Two topics that are a little more prominent (Figure 3(b)) show very distinct tendencies: *Globalization* rises all through the period, and *Player* constantly declines. Both *Football* and *Olympics* have increased their influence throughout the period, but those changes are smaller and less stable. Questions related to *Urban* are relatively constant, although forming a weak inverted U-shape.

The third (Figure 3(c)) contains two topics that are very visibly increasing their influence: *BodyPower* and *Interview*. *AthletesSchool* has a corresponding decrease, and *Race* and *Gender* share a pattern of higher influence at the end of the period than at the beginning, both peaking around the year 2000.
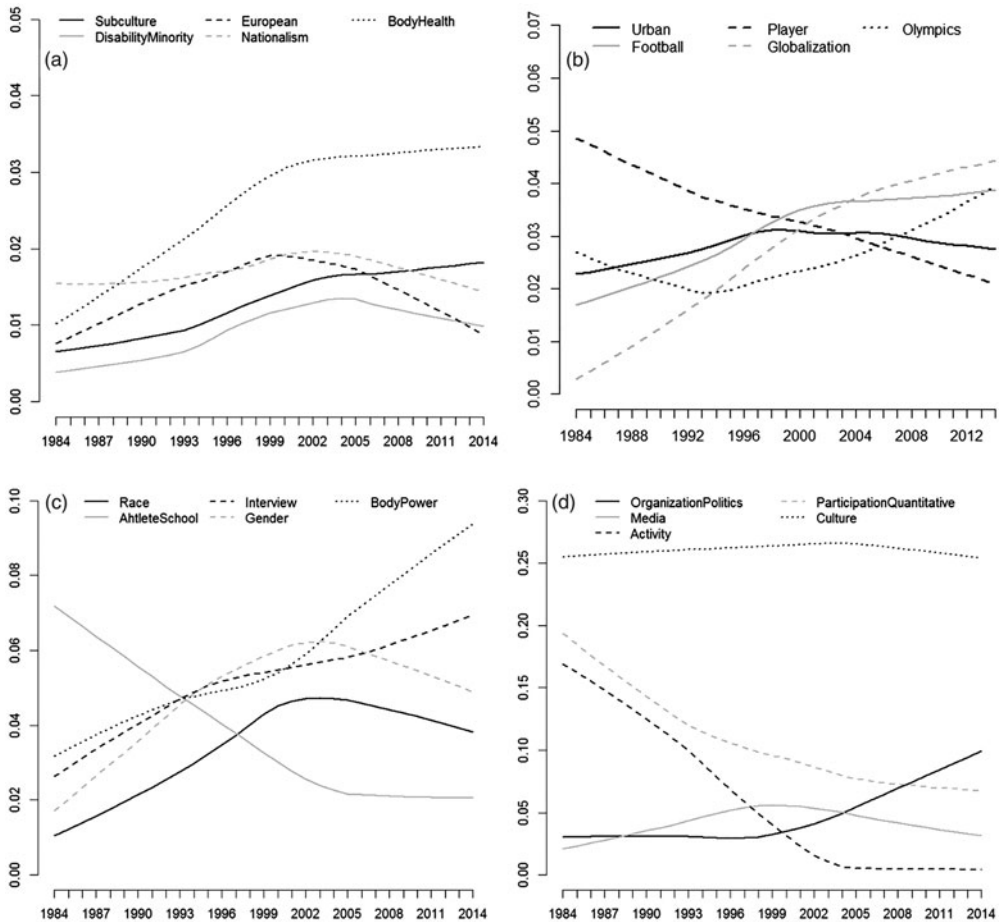
Culture (3d) is, without doubt, the topic dominating sociology of sports: It has the highest score among the topics, as it has throughout the period. Also, with a high, stable influence, is the topic *Media*. Among other popular topics are *ParticipationQuantitative,* which is steadily decreasing, and *Activity,* which declines

Figure 2. (a, b) Average influence of each topic in the three sociology of sport journals.

sharply towards year 2000, then flattens out at a very low level. In contrast, the trend for *OrganizationPolitics* is relatively flat, and then increases about year 2000; at the end of the period, *OrganizationPolitics* is the second most influential topic.

To illustrate variation in centrality of topics across journals over time (Figure 4(a–i)), I have chosen to include results based on three criteria. First, I look at the development of the three most influential topics (see Figure 1) in each journal (Figure 4(a–c)). Next, I pick one topic that seems to be especially dominant for each of the journals (Figure 4(d–f)): *OrganizationPolitics* (ISSR), *BodyPower* (SSJ), and *Race* (JSSI). Finally,
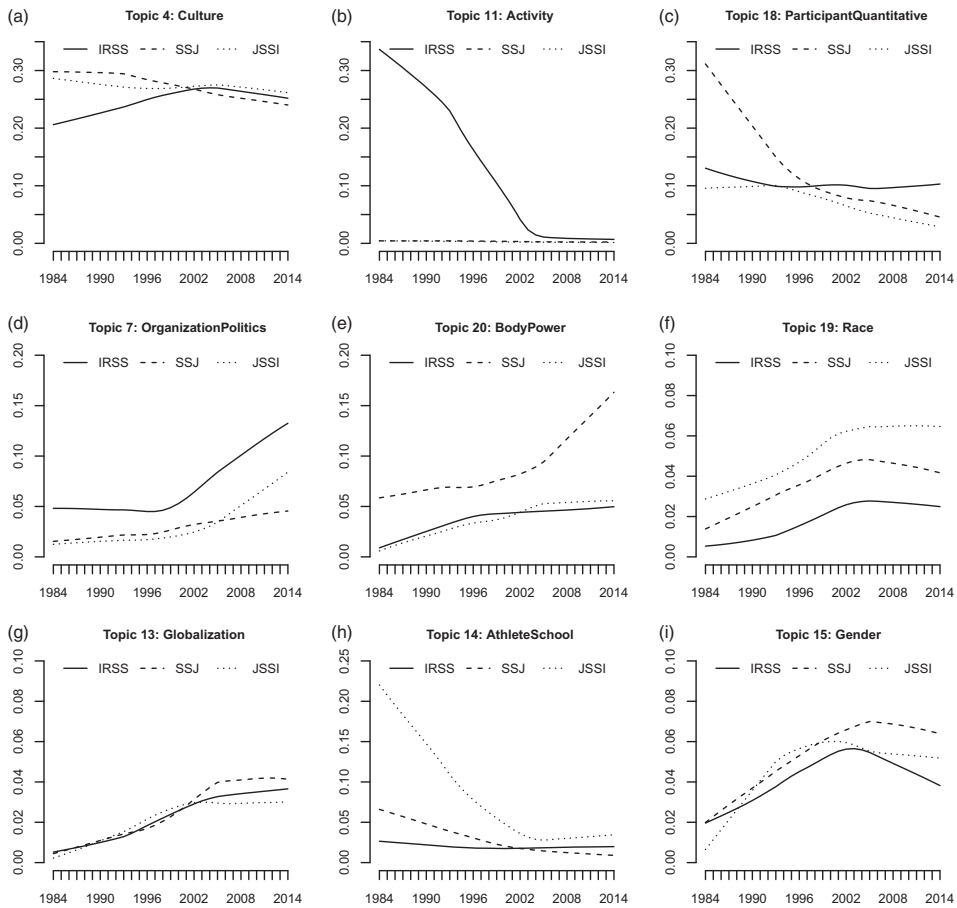
Figure 3. (a–d) Average influence of each topic over time.

I choose three cases where interesting shifts have occurred (Figure 4(g–i)): *Globalization* (increase), *AthleteSchool* (decrease) and *Gender* (inverted U-shape).

The three most influential topics exhibit three distinct journal-time patterns. For *Culture,* relatively similar trends occur: all journals at a high level through the 30 years, with *IRSS* catching up to the others (albeit with a small decline), making the overall pattern stable for this topic. *Activity* is special in total dominance by *IRSS*, and shows a very sharp decline in the first two decades under study. The most striking result related to the topic *ParticipationQuantitative* is the decreasing interest in *SSJ* and small decline in *JSSI*, whereas *IRSS* is more or less constant.

Based on the strengths of each journal, three similar patterns emerge: The journals have their themes, and they strengthen their ownership of those themes over time. For *OrganizationPolitics, IRSS* has been in the lead throughout the 30 years, yet has increased coverage of this topic during the last 20 years. *BodyPower* has a similar, but even more distinct pattern: *SSJ* has led for the whole period and even more so by

Figure 4. (a–i) Average influence of a selection of topics in journals over time. First row: the most influential topics (from Figure 1). Second row: topics where specific journals seem to dominate (from Figure 2). Third row: topics representing interesting (general) shifts (from Figure 3).

time. Finally, *Race* has been the topic with the highest influence in *JSSI*, and even though the centrality of this topic correlates across journals, there is a tendency for *JSSI* to strengthen its position when it comes to the race issue. We are witnessing a type of journal differentiation.

The third journal-time approach builds on overall interesting trends. Starting with a topic with a steady increase, we see that *Globalization* is a topic where there are minimal differences between the journals, both for level and trend. *AthleteSchool* tells a different story: One journal with a near-total dominance has given in on the topic; as a result, the journal is now at a very low level for the topic. For *Gender*, journal-time trends are relatively similar: they increase, then decrease and stabilize, leaving a larger gap between the journals (i.e. *SSJ* at the top, *IRSS* at the bottom) at the end of the period than at the start.

Conclusions and discussions

To the main question in this study – What is sociology of sports about? – the results gave an answer in 20 topics. An overview is given in Figure 1; there is one clearly dominant topic, *Culture*, followed by a set of other open and vague topics, including *Activity* and *ParticipationQuantitative*. Thereafter come more concrete topics as *Media*, *BodyPower*, *Gender*, *AthleteSchool,* and *Race*. An interesting general finding is that the topics are of two kinds. One type is built up around general, open concepts (e.g. *Culture*, *Activity*, *Participation*); the content of these topics, perhaps best described as approaches, depend on many of the terms making up the topic to make sense. Another set of topics are more distinct and concrete – single words that give immediate and seemingly reasonable indications of the topic (e.g. *Football*, *Gender*, *Body*, *Race* and *Olympics*).

Some topics such as *Culture*, *Nationalism*, *Subculture*, *Globalization,* and *Gender* are evenly distributed across journals. *IRSS* focuses the most on *Football*, *OrganizationPolitics*, *Olympics*, *Activity,* and *European*. *SSJ* leads on *Interview*, *BodyHealth*, *Disability*, *ParticipationQuantitative,* and *BodyPower,* whereas *JSSI* is strong on *Player*, *Urban*, *Media*, *AthleteSchool*, and *Race*. The sociology of sport is a dynamic field, yet also exhibits some stability, with *Culture* at the top and as the foremost example. Topics on the rise for the last 30 years have been *OrganizationPolitics*, *BodyPower*, *Interview*, *Globalization*, *Football,* and *BodyHealth*; declining topics have been *Player*, *AthleteSchool*, *Activity,* and *ParticipationQuantitative*. As a result, it seems as some of the more general and vague topics (apart from *Culture*) are becoming less popular. There are also indications of differentiation between the journals.

From the brief literature review above, it looked as if there was a difference between the central position ascribed to culture in some of the early reviews of the field and Malcolm (2012) and the less visible position in Dart's (2014) empirical study. The results from the present study fall very clearly on the side of Malcolm and the older reviews: Culture is the most central topic in the sociology of sports, an outcome that also reflects Malcolm's finding that many themes are given meaning within cultural studies. The sociological counterpoint to culture is often thought to be structure, which in turn points to a set of questions – almost invisible in the results from this study – regarding social class and inequality. In a world with increasing social inequalities (Piketty & Goldhammer, 2014; Wilkinson & Pickett, 2010), social class and inequality could be worthy themes, but they are not very evident in the sociology of sports. Power comes up as a term, but is related to topics of *Culture*, *Gender,* and *BodyPower,* and apparently not to more structural questions as might be expected.

Whereas Dart (2014) claims that politics and economics are prevalent, these analyses support the idea of organizations and politics as central and on the rise, but not as important as Dart's studies indicate. On the other hand, Lüschen (1980) stated long ago that politics was missing (correct at the time); this is not the case any longer. From the reviews, one gets the impression that social stratification related to sports is important in the sociology of sports; this is, as in Dart's studies, confirmed when both gender and race come up as important topics. What is less present in the more recent overviews of Dart (2014) and Malcolm (2012), is social class. So, social stratification is present, but with a clear deficiency.

Apart from a few hints, the topics tell us about methods and theoretical perspectives only to a limited extent. Lüschen (1980), Malcolm (2012) and Dart (2014) all indicates that there has been a shift from quantitative to qualitative studies, and – to the extent our measures (e.g. *Interview*, *ParticipationQuantitative*) are valid – we do find a very clear trend supporting this conclusion also in our data.

For future research, two sorts of challenges stand out. First, one could take the message of this study and contribute to the weaker parts of the present sociology of sports; less culture and more structure – e.g. conducting more quantitative studies of sports and social class. Second, following up on studies like this, it could be interesting to look into other scientific fields and compare the centrality of various topics. Four options are noticeable. First, one could investigate the neighbouring fields of sport management, philosophy of sports, sport history and sports economics. Second, an interesting endeavour would be to compare the sociology of sports and the general sociological discourse: What are the differences and similarities between these fields? Third, it could be intriguing to see how the sociology of sports compares to less scientific sports discourses. Finally, another option would be to go more into detail with respect to some aspects not covered optimally in this study. There are, for instance, still shortcomings when it comes to understanding which scientific approaches, theories, and methods have dominated the field. A better overview and understanding of these aspects could be useful in the future development of the sociology of sports.

Notes

1. The status of descriptions (e.g. 'mere descriptions') tends to be low in the social sciences; a thought-provoking interpretation, an elegant explanation, or a timely critical discussion is what counts (Gerring, 2012). Successful versions of all these 'real' social science achievements – the interpretation, the explanation, the critique – depend, however, on descriptions. So, even though this study first and foremost presents a description of a situation (and mostly avoids the larger questions of how we got here, strengths and weaknesses of the situation, and where to head from here), the hope is that it could be important as a premise for such 'larger' and consequential questions.
2. *Sociology of Sport Journal* is the official journal of the North American Society for the Sociology of Sport. The first volume appeared in 1984. *Journal for Sport and Social Issues* is the official journal of Northeastern University's Center for the Study of Sport in Society, and has been published since 1977. *International Review for the Sociology of Sport* is published in association with the International Sociology of Sport Association, and the first volume appeared in 1966.
3. Given that the influence of the latent dimensions (i.e. topics) is assumed to work through random samples from a set of distributions of words (i.e. topics), there is an element of randomness in the estimations: They have to start from somewhere. To be able to reproduce the results, a 'set seed' of 1234 were chosen.
4. To avoid confusion, I distinguish between *topics* (themes) in italics and 'concepts' (words, terms) hyphenated.

Disclosure statement

Notes on contributors

Ørnulf Seippel, is a Professor of Sociology of Sports at the Norwegian School of Sports Sciences. Seippel's research interests are sport and organizations, sport politics, social inequality, social capital/integration and social networks. Seippel's works are published in, among others, Acta Sociologica, European Journal of Sport and Society, European Sociological Review, International Journal of Sociology, International Journal of Sport Policy and Politics, International review for the Sociology of Sports, Soccer & Society, Journal of Civil Society, Journal of Youth Studies, Sport in Society and Voluntas.

References

Blei, D.M., & Lafferty, J.D. (2009). Topic models. In A. Srivastava & M. Sahami (Eds.), *Text mining: Classification, clustering, and applications*. London: Chapman & Hall/CRC.

Blumer, H. (1969). *Symbolic interactionism*. Berkeley: University of California Press.

Coakley, J. (1987). Sociology of Sport in the United States. *International Review for the Sociology of Sports*, 22, 67–77. DOI: 10.1177/101269028702200106.

Core Team, R. (2016). *R: A language and environment for statistical computing*. Vienna, Austria: R Foundation for Statistical Computing.

Dart, J. (2014). Sports review: A content analysis of the International Review for the Sociology of Sport, the Journal of Sport and Social Issues and the Sociology of Sport Journal across 25 years. *International Review for the Sociology of Sport*, 49, 645–668. doi:10.1177/1012690212465736

DiMaggio, P., & Powell, W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48, 147–160. doi:10.2307/2095101 doi:10.2307/2095101

DiMaggio, P., Nag, M., & Blei, D. (2013). Exploiting affinities between topic modeling and the sociological perspective on culture: Application to newspaper coverage of U.S. government arts funding. *Poetics*, 41, 570–606. doi:10.1016/j.poetic.2013.08.004

Emirbayer, M. (1997). Manifesto for a relational sociology. *American Journal of Sociology*, 103, 281–317. doi:10.1086/231209

Feinerer, I., & Hornik, K. (2017). *tm: Text Mining Package*. R package version 0.7-3. https://CRAN.R-project.org/package=tm.

Feinerer, I., Hornik, K., & Meyer, D. (2008). Text mining infrastructure in R. *Journal of Statistical Software*, 25, 1–54. doi:10.18637/jss.v025.i05

Frey, J.H., & Eitzen, D.S. (1991). Sport and society. *Annual Review of Sociology*, 17, 503–522. doi:10.1146/annurev.so.17.080191.002443

Gadamer, H.-G. (1996). *Truth and method* (2nd revised ed.). London: Sheed & Ward.

Gerring, J. (2012). Mere description. *British Journal of Political Science*, 42, 721–746. doi:10.1017/S0007123412000130

Gibbs, G. (2007). *Analyzing qualitative data*. London: Sage.

Grimmer, J., & Steward, B.M. (2013). Text as data: The promise and pitfalls of automatic content analysis methods for political texts. *Political Analysis*, 21, 1–31. doi:10.1093/pan/mps028

Grün, B., & Hornik, K. (2011). topicmodels: An R package for fitting topic models. *Journal of Statistical Software*, 40, 1–30. doi:10.18637/jss.v040.i13

Jockers, M.L. (2013). *Macroanalysis. Digital methods & literary history*. Urbana, Chicago: University of Illinois Press.

Kaufman, J., & Patterson, O. (2005). Cross-national cultural diffusion: The global spread of cricket. *American Sociological Review*, 70, 82–110. doi:10.1177/000312240507000105

Krippendorff, K. (2004). *Content analysis: An introduction to its methodology*. Thousand Oaks, CA: Sage.

Lüschen, G. (1980). Sociology of sport: Development, present state, and prospects. *Annual Review of Sociology*, *6*, 315–347. doi:10.1146/annurev.so.06.080180.001531

Malcolm, D. (2012). *Sport and sociology*. London: Taylor and Francis.

Neuendorf, K.A. (2002). *The content analysis guidebook*. Thousand Oaks, CA: Sage.

Pike, E., Jackson, S., & Wenner, L. (2015). Assessing the sociology of sport: On the trajectory, challenges and future of the field. *International Review for the Sociology of Sport*, *50*, 357–362. doi:10.1177/1012690215574127

Piketty, T., & Goldhammer, A. (2014). *Capital in the twenty-first century*. Cambridge, MA: Belknap Press.

Silk, M., & Andrews, D. (2011). Toward a physical cultural studies. *Sociology of Sport Journal*, *28*, 4–35. doi:10.1123/ssj.28.1.4

Steyvers, M., & Griffiths, T. (2014). Probabilistic topic models. In T. Landauer, D.S. McNamara, & W. Kintsch (Eds.), *Handbook of latent semantic analysis*. London: Routledge.

Washington, R.E., & Karen, D. (2001). Sport and society. *Annual Review of Sociology*, *27*, 187–212. doi:10.1146/annurev.soc.27.1.187

Weber, R.P. (1990). *Basic content analysis* (2nd ed.). London: Sage.

Wilkinson, R., & Pickett, K. (2010). *The spirit level: Why equality is better for everyone*. London: Penguin Books.