Changes in German sport participation: Historical trends in individual sports

Introduction

Sport has become a very differentiated social phenomenon in recent years. This is confirmed by the diversity in the types of sport and sport activity, by the variety of social groups practising sports, and by the increasing numbers of providers of sport facilities and sport organizations. Indeed, recent decades have seen a notable growth in the social significance of sport. This is particularly due to sport policy programmes aiming towards 'sport for all' and the growing significance of the health and body culture. The proportion of the population actively engaging in sport is increasing continuously, and nowadays, access to sport—it is widely supposed—is available to all social groups (Scheerder et al., 2011: 58). On the one hand, it has to be taken into account, that the phenomenon considered as sport has extended from traditional types of sport to cover the entire exercise, play, and body culture. Nowadays, what society understands as sport and how it is practised are subject to continuous change (Willimczik, 2010). The classic model of traditional competitive sport with a set of values based on competition and performance is being supplemented by individualistic and hedonistic sport forms. On the other hand, the extension and differing subjective understanding of the terms 'sport' and 'sport activity' result in problems of operationalization. These considerations, however, suggest that changing attitudes to societal values are also reflected in sport behaviour (Digel and Thiel, 2009: 21) and so current trends in sport are a consequence of changes in society.

From the perspective of civilization theory, the generative mechanisms for the growing social importance of sport are the attitudes in a body-suppressing society

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that express themselves through a simultaneous distancing and idealizing of the body (Elias, 2003: 80; Bette, 2005: 25-52). Systems and differentiation theory analyses of sport development (e.g. Cachay and Thiel, 2000; Stichweh, 1990) attribute the differentiation of the sport system to the increasing complexity of modern societies. The sport system as a sub-system of society is an outcome of the increasing detachment of forms of physical exercise from the context of medicine and education (Digel and Thiel, 2009: 25).

One major approach to explain the increasing diversity in modern sport is the individualization thesis (Beck, 1999, 2002; Simmel, 1890). The expansion of the welfare state and social services in the 20th-century reduced the authority of traditional social roles thereby broadening individual action opportunities (Bette, 1999: 154–180; Scheerder et al., 2011: 57–60). This grants the individual a diversity of choices that are each characterized by different regulatory and norm concepts. Hence, in comparison to the traditional sport model, numerous informal sport activities and trend sports focus particularly on the pleasure of movement or the thrill of a sport rather than on performance and competition. The at least partial breakdown in traditional gender-role-specific behaviours has also broadened the variety of choices in sport for both genders. Nonetheless, in line with the discussion on the individualization thesis, it also has to be pointed out that this variety of choices is embedded in societal framing conditions together with institutional rules and prescriptions (Bette, 1999: 155; Scheerder and Vos, 2011: 58).

Following the structural-individualistic approach (Esser, 1999), the developments in modern sport described on the macro level relate not only to developments in sport organizations (meso level) but also to individual sport participation (micro level) (e.g. Digel and Thiel, 2009; Scheerder et al., 2011: 58–60).[1] In light of the frequently postulated assumptions on the relation between

developmental trends in sport and the change in sport participation, the present article examines how far the postulated developments in sport (see above)[2] formulated on the macro level can be observed on the micro level of those engaging in sport by examining sport behaviour from a contemporary historical perspective.

State of research

Breuer and Wicker (2009) and Erlinghagen (2003) studied the change in sport participation from 1985 to 2005 and from 1986 to 1999 with secondary analyses of data from the German Socio-Economic Panel (SOEP). For these two periods, they confirmed a general increase in the time per week devoted to sport activities (Breuer and Wicker, 2009: 26–27; Erlinghagen, 2003: 9–10). By performing cohort-specific analyses, Breuer and Wicker (2009: 28) found indications that increasing sport participation in recent decades is due to both cohort and period effects, and thus to a general increase in the importance of sport in society.

Drawing on the individualization thesis, a Belgian research team (Scheerder, et al., 2002, 2005; Scheerder and Vos, 2011) used a time series analysis to assess the sport participation of children and adolescents (high school students) and their parents from 1969 to 2009. The assumptions on the de-structuring and individualization of sport activities and on the role of modernization are also being tested empirically in a current comparative study in the European Union (Scheerder et al., 2011). They confirmed that sport participation is subject to a process of differentiation, and that more different styles of sport could be differentiated at the end of the research period (Scheerder et al., 2002, 2005). Moreover, the analysis of the children and adolescents' parents showed that adult sport participation in Belgium increased to about 73% over the decades up to 2009. However, the majority of adults

actively engaged in sport in 2009 (ca. 56%) did not belong to a sport club. Although more highly educated persons continued to engage in sport more frequently in 2009, the influence of level of education decreased over time, and was no longer significant after 1999 (Scheerder and Vos, 2011: 35).

In summary, it can be seen that some first empirical work has been done on the relation between recent developments in sport and changes in sport participation. However, previous research has not performed a differentiated assessment of sport participation making it impossible to analyse postulated changes, for example, participation in competitions or in the way sport participation is organized.

Theoretical framework

The life-course approach was selected as the theoretical framework (Mayer, 2009; in sport science: Baur, 1989). This views individual life courses and processes in the whole of society in a standardized frame of reference by taking account of not only several levels of social organization (e.g. macro, meso, and micro levels) but also multiple time dimensions (e.g. age, length of stay in certain situations and positions, and historical time) (Mayer, 2009: 414). The life-course approach studies the relation between micro and macro levels by using person-related longitudinal data to reconstruct, ‘social structures and their changes partially from individual life courses’ (Mayer, 1990: 8, translated). In this sense, the change in sport participation is assessed on an individual level in order to test the repeatedly postulated assumptions on sport development. Individual life courses are described as careers and conceived as a sequence of activities and events in the various life domains as well as in institutions and organizations (Mayer, 1990: 9).

Specific assumptions

*S*port participation over the life course is correspondingly viewed as a sport career and conceived as being embedded in historical time as a sequence of activities (e.g. types of sport engaged in) and events (e.g. becoming a member of a sports club, taking part in a competition). Until the middle of the 20th-century, the dominant sport model was the classic model of performance- and competition-oriented sport practised mostly by young men. In light of the above-mentioned differentiation of modern sport, one can assume an increasing diversification of individual sport careers since the mid-20th century (Scheerder et al., 2002, 2005). The value structure of classic competitive sport based on hard work, delay of gratification and effort in both training and competition expanded to include individualistic and hedonistic values (e.g. creativity, autonomy; Digel and Thiel, 2009: 21). As a result of the individualization process, according to Gugutzer (2008), sport participation can no longer be characterized by a ‘life-long loyalty of the individual to 'his' club and 'his’ type of sport,’ (p. 94, translated). In sum, informal participation in sport outside of sport organizations has clearly become increasingly popular (Scheerder and Vos, 2011: 35). Although sport clubs remain the most important sport organization, they have lost ground compared with the increasingly informal way of practising sport, as membership numbers in sports clubs are barely rising or stagnating, despite the general increase in sport participation (Emrich et al., 2001: 205-206; Nagel, 2006: 50). It can therefore be assumed that competitive sport and club sport have declined in significance in recent decades.

The social opening up of sport has made it available to previously excluded social groups, for example, women, the elderly and persons with lower education. The number of women participating in sport has increased continuously in recent decades (Breuer and Wicker, 2009: 27; Scheerder and Vos, 2011: 36). It can be

assumed that the gender-specific differences in sport participation still to be found in the recent past are increasingly disappearing. The increasing sport participation of older persons in recent years could indicate that a combination of declining commitment to traditional social roles with a simultaneous differentiation of sport has produced period and cohort effects that have led to an alignment of the differences in sport participation between different birth cohorts (Breuer and Wicker, 2009: 27). Studies reveal that the level of education continues to have a significant influence on sport participation—the less well educated, the lower the participation in sport (e.g. Scheerder et al., 2011: 58–70; Kahma, 2012: 119). However, this influence may well have declined in recent years (Scheerder and Vos, 2011: 39).

Germany is unique in having had two different sport systems until reunification in 1990. The East German sport system focused on promoting elite sport for ideological and political reasons. The mass sport movement was a centrally installed political construct aiming to rear good socialists (e.g. Hinsching, 1998: 17). In contrast, leisure-time and mass sport in West Germany was able to develop on the basis of an autonomous sport system. After political reunification in 1990, the East German sport system was rapidly transformed into an all-German system. Against this background, individual sport careers in East and West Germany may well have differed before reunification and then have become more similar (Erlinghagen, 2003: 17). Because of the relatively strong orientation towards competition in the East German mass sport movement (Hinsching, 1998: 15-19), it can be assumed that those engaged actively in sport in East Germany would participate in more competitions than those in West Germany until reunification.

‘Life courses are always embedded in the sequence of birth cohorts’ (Mayer, 1990: 11, translated). Mayer (1990) focuses particularly on the associated ‘competition and selection mechanisms’ (p. 11) within and between cohorts (e.g.

baby boom cohorts). In Mannheim's (1928/1929) terms, however, this statement also implies that events in contemporary history impact on single birth cohorts at different times in the life course, and that these events in contemporary history can have specific effects on each of these birth cohorts. The theory of cohort replacement views the sequence of birth cohorts as one of the main mechanisms of social change. It posits that social change can also be due to the successive replacement of older birth cohorts by younger ones (Alwin and McCammon, 2003: 29). Accordingly, social change and changes in society occur because youth in particular, who are still searching for their own identity, are very receptive to changes and innovations compared to individuals in other life phases (the so-called impressionable youth assumption). In the domain of sport, this can be observed in trend sports that are practised predominantly by adolescents and young adults. Therefore, according to the theory of cohort replacement, the differentiation of sport should be particularly expressed in the youth phase of younger birth cohorts.

These theoretical considerations are summarized in the following specific assumptions, which are empirically tested in this study:

- In general, sport participation has increased in recent decades.
- The forms of individual sport careers have become more diversified over the last 30 years. Competitive sport and club sport have particularly declined in significance over recent decades in comparison to an increase in informal sport participation.
- Due to the social opening up of sport, sport careers for different social groups (men-women, different level of education) have evened out over recent decades.

- Individual sport careers in East and West Germany differed before reunification and then became more alike. Because of the different focus of the two sport systems, it can be assumed that, until reunification, those engaged actively in sport in East Germany participated more in competitive sport than those in West Germany.
- According to the theory of cohort replacement, the differentiation of sport should be particularly expressed in more diversified individual sport careers of younger birth cohorts, especially in the youth phase. However, due to the social opening up of sport, it can also be assumed that the sport careers of different birth cohorts have converged in recent decades.

Methods

Individual sport careers were assessed in a retrospective longitudinal study carried out in Germany in 2008. A total of 1739 persons aged 50 and older in Chemnitz / eastern Germany (*n* = 881; random sample) and Braunschweig / western Germany (*n* = 858; random sample) completed telephone interviews on their sport participation across the life course. Differences in sport development between West and East Germany were taken into account by selecting two cities in eastern and western Germany with a comparable population structure (e.g. number of inhabitants, proportion of over-50-year-olds in the total population, unemployment rate) (theory-based selection). Sport participation over the life course was assessed with a specially developed questionnaire based on several existing retrospective survey instruments (Côté et al., 2005; Klein, 2009; Nagel and Conzelmann, 2006).

Measures

Subjective understanding of the terms ‘sport’ and ‘sport activity’ varies historically and across cultures (Breedveld and Hoekman, 2011; Van Tuyckom et al., 2011). The

extension of the terms results in problems of operationalization. Moreover, retrospective data collections have their own specific methodological problems, particularly problems with memory. Therefore, this survey was based on the theoretical and methodological framework of life-course research (Brückner, 1990) and tapped only the objective facts on activities and events within the field of sport participation (type of organization, frequency, competitiveness).

The survey first recorded all types of sport that had been practised regularly during each life decade. Then the most frequent sport was chosen and addressed with more specific questions (type of organization, frequency, competitiveness). The following analyses are based only on the most frequently played types of sport. Sport participation was defined as practising sport regularly at least once a week over a 6-month period during one's leisure time. Hence, the assessment was based on a broad and subjective understanding of sport and sport activity. The emphasis on regular practise was designed to make response behaviour more reliable (Reimer and Matthes, 2007: 4). The type of organization was assessed with the following response categories: informal alone, informal with friends, sport club, commercial sport providers, company-facilitated sports activities and others. In the following, practising sport informally alone or with friends is taken as informal organizational form of sport activity. The frequency of the main sport activity was assessed with the following response categories: irregularly, less than one hour per week, one to three hours per week, more than three hours per week. The category ‘irregularly’ is one element of the questionnaire used to control the consistency of answers, with individuals reporting that they practise their sport activity irregularly assumed to be inactive in sport. The competitive orientation is assessed dichotomously for the most frequent type of sport in each life decade (competitive: yes or no).

Using a procedure analogue to the test–retest method, reliability was tested in a supplementary study of 18 women and 20 men aged 64 to 88 years. They completed the questionnaire developed to assess their current and earlier sport participation twice in separate telephone interviews approximately five months apart. Results showed a high stability ranging from $r = .7$ to $r = .9$ (Bortz and Döring, 2006: 196). In particular, reports on whether they had practised sport or not during a specific life decade showed a strong agreement across both measurement times. In contrast, reports on the most frequent type of sport in a specific life decade were less stable (70.4–91.7% agreement), particularly in the third life decade (20–29 years). However, when reports on the most frequent type of sport in a life decade were identical at both measurement times, recall of the age at which this type of sport was commenced and ended was very stable ($r = .7$ to $r = .9$). Even recall going back to earliest childhood was very stable.

Nevertheless, validity of data cannot be indicated by the test-retest-method. For this reason, the consistency of answers was tested extensively (e.g. by comparing the declaration about participation in competitions and the frequency of practising sport) before the data analyses were calculated.

The study is able not only to assess life-course changes in sport participation by surveying middle-aged and aged persons (Engel and Nagel, 2011; Klostermann and Nagel, 2011) but also to examine possible contemporary historical effects due to its cohort design (survey of persons born 1929–1958). It can be depicted as a cohort-sequence plan permitting the study of age, period, and cohort effects (Table 1). The single age groups in each of the three birth cohorts (1929–1938, 1939–1948, and 1949–1958) can be assigned to different periods in contemporary history.

Insert table 1 about here

However, it has to be pointed out that because of the retrospective longitudinal design, not all age groups could be surveyed in all historical periods. Nonetheless, the central research question addresses developments in sport participation in the last 30–40 years, and the present dataset can at last be used to study age, period, and cohort effects in the three birth cohorts. Although different statistical models of cohort analysis are available, it is nearly impossible to identify statistically age, period, and cohort effects, because of the linear link between the three independent variables. Glenn (2005) pointed out:

> Obviously, no statistical technique, by itself, can select among the different combinations of effects that could produce the same data. The selection has to be made by the researcher on the basis of theory and what he or she knows about the phenomenon or phenomena being studied from other sources other than the cohort data being analysed. (p. 7)

Because of the deficient state of research on the influence of age, period, and cohort effects on sport participation, the cohort-specific analysis in this article focuses particularly on descriptive analyses.

Statistical analysis

The sport participation rate was calculated as the relative amount of those engaging in sport in the years between 1978 and 2008. Due to the nominal and ordinal scales, differences between groups (e.g. gender, city, level of education) were analysed with cross tables and chi squared tests. Asymptotical distribution was expected as the expected values were at least for 80% of all cells greater than five and for the remaining 20% greater than one (Bortz and Lienert, 2008: 99). The level of significance for the tests on differences was set to $\alpha = .05$. Effect sizes for the

significant results were computed using Cramérs Index (CI) and were interpreted with the scale of Cohen (1988: 216ff.).

Sample

Differentiating the sample (*N* = 1,739) according to age, roughly one-third of the respondents were up to 59 years old (33.5%); one-third, between 60 and 69 (36.3%); and a final third, between 70 and 79 (30.2%) (Table 2). In total, more women (61.1%) than men took part in the survey, and due to their longer life expectation, the proportion of women in the 70–79 age cohort was somewhat higher at 63.3%. A total of 57.6% of respondents said that they practised a sport in 2008. The sport participation rate was higher than that reported in the SOEP dataset for 2001 (almost 30%). Nonetheless, it has to be recalled that the SOEP dataset was based on a telephone survey of the general life situation. The present sport participation rate did correspond roughly to that found in special surveys of sport participation (e.g. Hartmann-Tews, 2006).

Insert table 2 about here

Results

Sport participation rates from 1978 to 2008

Sport participation rose from almost 40% in 1978 to almost 60% in 2008 (Figure 1). The increase began in the 1990s and was strongest between 2004 and 2008.

A differentiation according to gender revealed that the sport participation of women was about 10% percentage points significantly lower than that of men until

the 1990s. However, it rose rapidly in the 1990s and attained roughly the same level as men in the year 2000. After 2004, more women than men practised sport.

Insert figure 1 about here

Sport careers in eastern and western Germany differed significantly before German reunification in 1990 with an approximately 10–15% higher sport participation rate in Braunschweig (western Germany) (Figure 2). Sport participation in Chemnitz (eastern Germany) grew slowly in the 1990s. However, a strong increase could be seen in the 2000s, reaching the same rate as Braunschweig (western Germany) in 2006.

Insert figure 2 about here

A differentiation of sport participation according to level of education[3] revealed that sport participation increased with higher education over the course of time (Figure 3). Those with a degree from a university or a university of applied sciences showed the highest sport participation across the entire 30 year period. Their sport participation rate increased continuously from about 42% in 1978 to about 67% in 2008. A strong increase could be observed particularly after the end of the 1990s. A similar increase in sport participation during this period could also be seen in the group with vocational training. Their rate of sport participation rose from about 36% in 1978 to about 54% in 2008. In contrast, the group with no school-leaving qualifications showed a smaller increase over the three decades (from about 22% in

1978 to about 36% in 2008), indicating that the difference compared to the other two groups even increased in later years.

Insert figure 3 about here

Frequency of practising sport from 1978 to 2008

In contrast to the sport participation rate, the frequency of practising the main type of sport changed only slightly over the 30-year period. In both 1978 and 2008, about 40% of those engaging in sport practised one to three hours per week (Table 3) and approximately one-fifth reported practising up to one hour per week. Although the gender-specific differences were significant at all four measuring times, the correlations were small and the differences evened out to some extent over the course of time. In 1978, for example, the proportion of men who practised their sport for more than three hours per week was, at about 54%, markedly higher than that of women (about 31%). Whereas this proportion dropped continuously in men to about 41% in 2008, it increased in women, particularly in the last decade, to about 37%.

Insert table 3 about here

Differentiating according to eastern or western Germany clearly revealed that the frequency of sport practise hardly changed in both locations. Nonetheless, there were significant differences between the two locations and the frequency of practising sport across the entire observation period. However, the correlation was low. The proportion practising their main sport for up to one hour per week was about 10% higher in Chemnitz (eastern Germany) than in Braunschweig (western Germany). In

contrast, the proportion practising for 1 to 3 hours or more than 3 hours per week was higher in Braunschweig (western Germany) than in Chemnitz (eastern Germany).

There were no significant differences between the three education levels and the frequency of practising sport between 1978 and 1998. Across this period, the three education levels hardly differed in the frequency of practising their main sport. However, a change over the 30 years could be observed particularly in the group with no school-leaving qualifications and the differences became significant in 2008. For example, the proportion practising the sport activity for one to three hours per week increased strongly in this group during the 1990s (from 40% in 1978 to 58% in 2008), whereas the proportion practising this sport for more than three hours per week sank by about 12% (from 40% in 1978 to 28% in 2008).

Organizational form of sport activity from 1978 to 2008

In 1978, almost equal proportions (circa 45%) practised their main sport either in a club or informally (Table 4). However, in the subsequent 30 years, the popularity of the sport club declined strongly, and in 2008, only almost 20% reported practising their main type of sport in a club. There was a simultaneous increase in informal sport activity. In 2008, more than one-half (circa 56%) engaged in their main type of sport informally. The significance of commercial sport providers was very low across the first 10 years (circa 4–5% in the years 1978 and 1988). However, it increased in the following 20 years to 17% in 2008.

Insert table 4 about here

Over the three decades, gender-specific differences persisted and were significant. However, the correlation was small. Men still continued to practise their

main type of sport more frequently in a sport club over all three decades. The proportion practising their main sport in a sport club was about 4-10% higher for men than for women. Women, in contrast, more frequently practised their sport informally or at commercial sport centres. In 1978, for example, the proportion of women who practised their sport informally was, at about 51%, markedly higher than that of men (about 38%). Whereas informal sport practise became increasingly important for men throughout the observation period, the proportion of women who practised their main type of sport informally stagnated after the 1990s. However, commercial sport centres became increasingly important for women after the 1990s (to 20% in 2008).

Over the course of time, the differences between eastern and western Germany in terms of the organizational form of sport retained their significance. Across all three decades, membership of sport clubs was consistently 10% lower in Chemnitz (eastern Germany; 15-41% between 1978 and 2008) than Braunschweig (western Germany; 25-47% between 1978 and 2008). Particularly those commercial sport centres that established themselves increasingly in eastern Germany through the 1990s seemed to profit from the increasing sport participation in Chemnitz (eastern Germany) in later years, whereas the sport clubs became relatively less important. In both Chemnitz (eastern Germany) and Braunschweig (western Germany), informal sport participation rose continuously over the 30 years to approximately 52–59% in 2008. Across the entire observation period, informal sport practise was slightly more popular in Chemnitz (eastern Germany) than in Braunschweig (western Germany). Over the three decades, the proportion practising their main sport informally was about 4-10% higher in Chemnitz (eastern Germany) than in Braunschweig (western Germany).

Over the course of time, the three education groups differed only slightly in how they organized their main type of sport. Notable changes could be observed only in the group with no school-leaving qualifications. In contrast to the two other education groups, the proportion practising their main type of sport in a club hardly dropped at all over the 30-year period (from 40% in 1978 to 38% in 2008). The proportions practising their main type of sport informally or in a commercial sport centre remained at a comparatively steady low level in this group (3% in 2008), whereas they rose continuously up to 17% in 2008 in the other two education groups.

Participation in competitions from 1978 to 2008

In all, participation in competitions declined from about 28% in 1978 to about 6% in 2008 (Table 5).

Insert table 5 about here

In both genders, the proportion who participated in competitions in their main type of sport declined continuously over the entire observation period (from about 28% in 1978 to about 6% in 2008). From 1978 to 2008, the proportion of male competitors was about 9–30% significantly higher than that of female competitors. Between 1978 and 1998, the correlations between the gender and the participation rate in competitions were in the middle range. However, the significance of competitive sport declined more strongly in men (from about 46% in 1978 to about 12% in 2008) than women (from about 14% in 1978 to about 3% in 2008). The proportion of competitive sport participants differed only slightly and not significantly

between Chemnitz (eastern Germany) and Braunschweig (western Germany). When differentiated according to level of education, there were also only slight changes in participation in competitions.

Results differentiated according to birth cohorts

Sport participation rose in all birth cohorts after the 1990s (Figure 4). Nonetheless, the strength of the increase in sport participation rates after the beginning of the 21st century varied across the three birth cohorts. There is a notably lower increase in sport participation in the oldest birth cohort in the third decade of the study.

Insert figure 4 about here

In contrast to the sport participation rate, there were only slight changes and differences between the three birth cohorts in the frequency in which they engaged in their main type of sport.

The birth cohorts revealed differences in the way their main type of sport was organized (Table 6). The decreasing role of the sport club can be observed by about 14-37% in all three birth cohorts. The sport club was most important in the youngest birth cohort until the 1990s, but it also declined most strongly by about 37% between 1978 and 2008 in this birth cohort. The proportion of those who practised their most frequent kind of sport at a commercial sport centre increased continuously in all three birth cohorts over the 30-year period from about 2-5% in 1978 to about 16-17% in 2008. Practising sport informally became increasingly popular in all three birth cohorts, with the largest proportion of informal sport participants to be found in the oldest birth cohort (54-56%) up to the year 1998.

Insert table 6 about here

The percentage of those participating in competitions in their main type of sport declined continuously in all birth cohorts over the 30-year period (Figure 5). However, the trajectories were on significant differently levels in the three birth cohorts. Participation in competitions across the entire observation period was highest in the youngest cohort and lowest in the oldest cohort. Differences between cohorts were strongest in 1978 (birth cohort 1949-1958: about 42%, birth cohort 1939-1948: about 29%, birth cohort 1929-1938: about 13%). Due to the strong decrease in the proportion of younger birth cohorts participating in competitions by about 32%, cohort differences decreased over time.

Insert figure 5 about here

Discussion

The present study tried to reconstruct the postulates of general sport development on the basis of individual sport careers. As assumed, because of the broadening of social access to sport, sport participation rose remarkable over the 30-year observation period. In view of the numerous initiatives to open up sport to broader social groups in Germany, such as the ‘sport for all‘ campaigns organized by the German Sports Confederation (DSB) in the 1970s and 1980s, this increase could have been expected to come into effect earlier. The increase grew rapidly in the late 1990s and early 2000s. This could be due to the increasing awareness of the

significance of sport on health. The increase was strongest between 2004 and 2008. Nonetheless, it has to be noted that this was a telephone survey, and the strong increase in recent years may have been overestimated due to social desirability effects.

Differentiation of individual sport careers

The increasing differentiation of sport was documented by the more diversified forms of individual sport careers. As anticipated, during the 30-year observation period the popularity of competitive sport decreased and the variety of ways in which sport was organized increased. The classic sport model was joined by further models, with the informal practise of sport growing particularly strongly. This is in line with findings in Belgium for the period 1969–2009 reported by Scheerder and Vos (2011: 35). However, it is necessary to consider that the birth cohorts in the present study aged over the time, and declining participation in competitions could also be attributed to an age effect. Despite the greater diversity of ways in which sport participation became organized over the course of time, the frequency with which the main type of sport was practised remained almost unchanged throughout the observation period. In both, 1978 and 2008, about 40% of people engaging in sport practised up to one hour a week. This seems to be a constant behaviour. Pitsch (2006) could also show that the differentiation of the kind of sport is generally overestimated.

Sport careers of different social groups (men-women, different level of education) have evened out in recent years

Opening sport up socially and the goal of ‘sport for all’ only came closer to being achieved in the last decade, even though such campaigns were already launched in the 1960s and 1970s. In the 30-year period, it was particularly the

number of women who participate actively in sport that rose. This finding confirms the results of the German Socio-Economic Panel (SOEP) (Breuer and Wicker, 2009: 27; Erlinghagen, 2003: 14). Nonetheless, comparisons across Europe show that men continue to be more active in sport than women in many countries (Hartmann-Tews, 2006: 114–115). However, there were gender-specific differences in the form of sport participation. Men tended to engage in sport in clubs and in competitively oriented sport; women tended to be active in non-competitive, informal forms of sport or to attend commercial sport centres.

In contrast to the variable gender, the sport careers of groups with different levels of education did not merge over the course of time. This result is in line with current studies that also confirm a lower sport participation in people with low education (e.g. Haut and Emrich, 2011: 320; Kahma, 2012: 119; Van Tuyckom and Scheerder, 2010: 503).

Sport careers in East and West Germany

In addition, the present study presents a good example of how events in contemporary history are reflected in individual sport careers. As assumed, sport careers in Chemnitz (eastern Germany) and Braunschweig (western Germany) differed before German reunification, and these differences evened out after the political change and the process of transformation (Erlinghagen, 2003: 23). Before the political reunification, the East German sport system focused on promoting elite sport for ideological and political reasons. The mass sport movement was a centrally installed political construct aiming to rear good socialists (e.g. Hinsching, 1998: 17) and it was more focused on the classic model of traditional competitive sport (Baur et al., 1996: 101-108). Mass sport in eastern Germany was mainly organized by

organisations and institutions loyal to the regime, e.g. by factories or special clubs offering company-facilitated sports activities (Hinsching, 1998: 18-19). In contrast, on the basis of an autonomous sport system leisure-time and mass sport in West Germany was able to develop in a more differentiated way. Triggered by several sport policy programmes aiming towards ‘sport for all’, the sport organizations (especially sport clubs) extended their sport offer and in particular integrated health-orientated sport (among others that were inspired by body and health cultures in America and Asia). Moreover, the sport infrastructure in West Germany was developed continuously appropriate to contemporary circumstances.

After the political reunification, however, the sport participation rate in Chemnitz (eastern Germany) did not immediately increase and did not rise until the 2000s. This is in line with Erlinghagen's (2003: 17) findings based on the SOEP dataset. There are plausible reasons for the slow rise after reunification. For people in eastern Germany, reunification was a political and social upheaval. Even though the transformation process was launched immediately—particularly in the field of sport—they were confronted with a completely differently organized sport system, and they needed time to reorient themselves. Moreover, some time was needed to modernize the sport infrastructure in eastern Germany and to improve the availability of sport facilities. It was particularly the commercial sport centres, which spread increasingly throughout eastern Germany in the 1990s, that seemed to profit from sport participation in Chemnitz (eastern Germany) in later years, whereas the sport clubs went into decline. Although Chemnitz (eastern Germany) and Braunschweig (western Germany) had different sport systems until the 1990s, the proportion of competitive sport participants differed only slightly between the two cities. Evidently, the focus on promoting top-ranking sport in the East German sport system had hardly any influence on the participation in competitions of the middle-aged and the aged.

Sport careers of different birth cohorts

A differentiated analysis based on the three birth cohorts showed that the reported change in sport participation in Germany can be attributed to age, cohort, and period effects (Breuer and Wicker, 2009: 28). The increase in sport participation in all birth cohorts after the 1990s would seem to be a period effect, as the general increase in the importance of sport and its increasing differentiation led to an increased participation in all birth cohorts. The extended provision of health-related sport and sport for the aged probably contributed to this increase particularly among the middle-aged and the aged. Nonetheless, the notably lower increase in sport participation in the oldest birth cohort in the third decade of the study could be due to cohort and age effects. Age effects could result from increasing health impairments with age that impeded a further increase in sport participation in the eighth decade of life in this birth cohort.

All three birth cohorts show a decreasing role of the sport club and an increase of sport practise informally or in commercial sport centres, which could be interpreted as a period effect arising through individualization processes. The commercial sport centres in particular seemed to profit from increased sport participation in recent years. The sport club was most important in the youngest birth cohort up to the 1990s, but this also declined most strongly in this birth cohort, compared to the other two (cohort effect). The youngest birth cohort is most likely to change the organisational form of their sport activity. The finding that the largest proportion of informal sport participants can be found in the oldest birth cohort up to the year 1998 indicates both age and period effects. However, the increasing individualization in modern societies argues more in favour of period effects. Furthermore, the trajectory

of participation in competitions in the three birth cohorts also reveals that age, period, and cohort effects were confounded. The decrease in participation in competitions with increasing age found in all three birth cohorts suggests an age effect. The steady decline in the rate of participation in competitions in all three birth cohorts can be interpreted as a period effect. In recent years, competitive sport participation has become of less interest in general as a result of individualization processes and changing values in sport.

Changes in sport participation could be observed that were in line with the theory of cohort replacement, particularly in the youngest birth cohort. They showed the strongest drop in the proportion belonging to a sport club and participating in competitions in the 30-year period.

Conclusion

Even though a detailed analysis of age, period, and cohort effects is only possible with a complete cohort-sequence plan, the analysis of just three birth cohorts in the present study indicates that the reason for the change in sport participation over this 30-year period is more a combination of all three effects (age, cohort, and period) rather than any single main effect. Therefore, there is still a need for further research to perform a more detailed analysis of age, cohort, and period effects based on complete cohort-sequence plans. This could also be supplemented by qualitative single case analyses that would lead to a more in-depth understanding of the variables involved and their interrelations.

The present empirical analysis was restricted to two cities in Germany that were used to illustrate the relations between the developmental trends in modern sport formulated on the macro level and the individual sport careers on the micro level. How far the present findings generalize to other (European) countries is hard to

answer on the basis of the current state of research, and could be a topic for international comparative studies.

In order to show the influence of specific events in contemporary history on individual sport careers, the present study referred to the event of German reunification. It would be interesting for future research to examine how far other events in society impact on individual sport careers.

Notes

[1] The present article focuses exclusively on the micro level, because of insufficient space to also consider the influence of sport organizations.

[2] The development concept is understood in a neutral way here in the sense of changes over time (Wojciechowksi, 2005).

[3] Because of the small number of the category ‘other vocational qualification‘, the following analyses are based only on the 3 categories ‘no vocational qualification‘, ‘vocational training‘ and ‘graduate degree‘.

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