

Fitness, Class and Culture: Social Inequality in Fitness

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The gym culture and fitness frenzy have literally exploded here in Malmö. Commercial fitness centers are popping up like mushrooms from fertile soil, and they are open around the clock – unmanned at night, in all likelihood, but even in the early hours exercise diehards can be seen jogging on the treadmill, or lift heavy weights on machines that look like modern instruments of torture. And this is not a Malmö phenomena, far from it; in major cities throughout the Western world, and in much of the rest of the world as well, a mostly new-found awareness of the links between health and welfare on the one hand, and the need for a sober lifestyle in terms of diet and physical activity on the other, has created a lucrative and growing market for fitness entrepreneurs. So, not only is participation voluntary, but the gym-goers are actually prepared to pay dearly for access to the fitness equipment and exercise positive environment of the fitness centers. As a commercial venture the gym is close to ideal, as its *raison d'être* is a sorely needed change of lifestyle, from the point of view of public health, moving from the sedentary life that has followed from the development of working life and media consumption cultures of the past half century, leading to an obesity explosion of unimaginable dimensions, on to a more active, healthy lifestyle which in practice means that a considerable part of traditional leisure time must be devoted to different forms of exercise – most conveniently, these days, performed in commercial gyms.

Just as poor health and, for example, obesity is strongly class-related, participation in physical activity is traditionally dependent on social background factors such as well above average income and education. Is this also true of everyday exercise at the gym? This particular topic is central to a Norwegian study of class- and culture-related determinants of fitness activities, in light of the tendency in post-industrial society of the traditional class markers to weaken, in favor of factors such as culture and lifestyle. Anne-Lene Bakken Ulseth and Ørnulf Seippel wondered how the fitness culture and activities in gyms reflect these new social dividing lines, and they chose to investigate participants in four ideal typical fitness activities, aerobics (collective, less strenuous), weight training (individual, more strenuous), spinning (collective, more strenuous) and stretching (individual, less strenuous), by means of a survey. Results of the statistical analysis of responses show, in summary, that both individual characteristics and social background variables affect the choice of fitness activity.

Introduction

We are living in a post-industrial society meaning that more people than ever are working in service, communication, education and the like, and fewer people are occupied in primary and secondary industries (Amin, 1994; Bell, 1976, 1978; Lash & Urry, 1987, 1994; Touraine, 1971). One of the consequences of these shifts in occupational structures is that many people today are less physically active during their working day than former generations. Knowing that physical activity is among the most decisive predictors for physical health, mental health and living a good life in general, physical activity has become increasingly important as a political issue in post-industrial societies. What is interesting to note, however, is that the emergence of post-industrial societies does not only alter the way people are physically active, but also implies a shift in the ways social inequalities are generated (Esping-Andersen, 1993; Smith Maguire, 2007; Therborn, 1995). Whereas industrial societies were marked by social inequalities to a large extent related to class, gender and age, post-industrial societies are also supposed to generate social inequalities more closely related to culture, lifestyle, leisure and consumption. Thus, moving from an industrial to a post-industrial society, we should expect to find both new patterns of physical activity and new modes of producing social inequalities related to physical activity and health. Among the social arenas emerging as increasingly important for physical activity in post-industrial societies – and thereby also for the question of social inequality – are the fitness centres. From previous research we know (i) that physical activity and health is often related to social class, and hence is an important arena for social inequality (Dahl & Birkelund, 1999; Rognerud & Stensvold, 1998; Wilkinson & Pickett, 2010), (ii) how traditional sports activities reflect social class (Bennett, 2009; Bourdieu, 1978, 1984; Cachay & Hartmann-Tews, 1998; Gruneau, 1999; Morgan, 1994; Sugden & Tomlinson, 2000; Thrane, 2001; Turner, 1992; Warde, 2006), (iii) that there are societal differences between those active in voluntary sports clubs and at fitness centres (Steen-Johnsen, 2004), and (iv) some of the qualitative characteristics of activities at fitness centres (Crossley, 2004, 2006; Sassatelli, 1999; Smith Maguire, 2007; Spielvogel, 2002; Steen-Johnsen, 2001). We are, however, still short on knowledge on how activities at these increasingly more popular fitness centres themselves are embedded in the structures and/or cultures of our post-industrial societies, and in this article, the leading question will be whether and how social background, class differences and cultures will turn out as significant factors for an understanding of how people are active at such fitness centres. In the empirical part of this study, based on a Norwegian survey of customers at fitness centres, we will both describe how people are active at these centres, and explain how different groups of people tend to use these centres differently. To achieve the aim of the article, we want both to discuss the theoretical understanding of physical activity as an arena for social inequality in post-industrial societies, and to contribute with empirical analyses of how these activities take place and why they take different forms in various social groups.

We will open the article with a general discussion of recent theoretical contributions to the debate of social inequality in post-industrial societies. Following that, we will look closer at the way people are active at the fitness centres, and outline ideal types of fitness activities using two dimensions as point of departure: “collective” versus “individual” exercise and “hard” versus “controlled” effort. In the next section we will link the discussion

on social inequality to the various ideal typical ways to be active at the fitness centres and present a set of assumptions on how social characteristics might matter for activity at fitness centres in a post-industrial society. Next we present our data and the empirical analysis linking the various activities to social factors: social background, class and culture. We conclude the article with a discussion on how social factors carry importance for the question of health and social inequality in post-industrial societies.

Social Inequality in Post-Industrial Societies

The most common way to study social inequalities in industrial societies has been class analyses. In conventional class analysis, the point is that social relations within the sphere of production and economical power somehow implies domination, exploitation and differences in power and influence, and that these working-life experiences have repercussions also for social life outside the system of productions. So, position within class structures implies different opportunities for action, various ways to frame and interpret the world, and thereby for life chances in general. Whereas these kinds of class analyses are often associated with a Marxist tradition, we also find a Weberian perspective more concerned with “social status”. The distinction between class as “exploitation and domination” and class as “social status” has become more prominent in the last decades, partly because of Bourdieu’s (1984) explicit interest in culture, art and sport as class phenomena, but is also a topic in other pivotal discussions on class (Erikson & Goldthorpe, 1992; Goldthorpe, 2000; Wright, 2005).

Among more recent attempts to renew class analysis, there are three positions we will refer to in the subsequent analyses.¹ The first is the more traditional class approach concerned with positions within the sphere of production and advantages gained through income. Here, several more recent discussions aim at better operationalizations than hitherto (Erikson & Goldthorpe, 1992; Goldthorpe, 2000; Wright, 2005), or with a somewhat different accentuation, to move class analysis more in the direction of differences between professions than divergent forms of exploitation and domination (Grusky & Weeden, 2001; Weeden & Grusky, 2005). Next, a set of current social inequality frameworks pay more attention to cultural factors which are then, in turn, more directly linked to the idea of a shift towards post-industrial societies. The focus is on knowledge, cognitive and cultural skills as more important than social inequalities stemming from the productive sphere. This is partly related to the shifts in occupational structures alluded to in the introduction, but this is also very much a question of education (Bell, 1976, 1978; Inglehart, 1990; Manza & Brooks, 1999; Touraine, 1971). Third, there is also an approach closer to what is promoted in post-modern sociology: culture, leisure and consumption are seen as new arenas for production of new «structures of feeling» resulting in new identities and forms of social inequality (Eder, 1993; Featherstone, 1991; Gibbins & Reimer, 1999; Hechter, 2004; Jameson, 1991; Maffesoli, 1996; Reimer, 1989).

¹ Since we assume that fitness activities in one way or another is embedded in social structures and/or cultures, we do not pay much attention to the claim that class analyses are of no use to understand post-industrial inequalities (Clark & Lipset, 1991; Kingston, 2000; Pakulski & Waters, 1996).

What happens in general terms is that shifts in occupational structures open up, at least for large proportions of the population, a wider and less pre-determined spectre of opportunities with respect to how people might choose to live their lives – for what is possible, expected and accepted. Living in post-industrial societies implies new opportunities for how to be physically active and new beliefs and desires open the way for new understandings of how to apply and approach these new opportunities. Having described three general ways that social inequality might be (re)produced in post-industrial societies, we will go on to describe different kinds of activities taking place at the fitness centres.

Types of Fitness Activities and their Characteristics

The first Norwegian fitness centre was established in 1957 (Reigstad, 1998), and until the 1980s, fitness centres were primarily exercise arenas for bodybuilders. The 1990s, however, saw a formidable growth in terms of both quantity and type of fitness centres. Among the qualitative innovations was an increase in the diversity of forms of fitness activities – from individual machine-like exercise to collective togetherness like aerobics classes. At the time of the study, 11 per cent of the Norwegian population (IHRSA, 2005a) exercised at one of the more than 270 fitness centres (treningsnett.no).² More recent statistics show that 73 per cent of the Norwegian adult population is physically active at least once a week (Statistics, 2007). Among physically active adults, 18 per cent exercise primarily in voluntary sports clubs, 75 per cent in their local environment – either alone, or with family or friends – while 14 per cent use the increasingly available commercial fitness centres.³ We are concerned with the latter group in this study, and we want to find out what kinds of activities our respondents choose at the fitness centres, and how these activities are popular among different segments of the population.

On the background of the current differentiation within the fitness sector, it seems reasonable to distinguish between four main types of fitness centres:

- (1) small *health studios* offering weightlifting activities, and where the typical customers are bodybuilders and weight lifters;
- (2) *luxury clubs* emphasizing personal well-being with spa and similar offers in addition to exercise facilities;
- (3) *physiotherapy institutes*, which are exercise facilities connected to physiotherapy and rehabilitation; and
- (4) *commercial fitness centres* under chain ownership, offering both individual and collective exercise possibilities.

2 IHRSA is short for International Health, Racquet and Sports club Association. In Norway's neighboring countries, the corresponding numbers are as follows: Denmark 3.7 per cent, Finland 1.9 per cent and Sweden 10 per cent, while 14 per cent of the American population exercises at fitness centres (IHRSA, 2005b). These numbers illustrate that the fitness sector in Norway is well developed.

3 The remaining 4 per cent exercise most often in other commercial contexts, such as in squash centres or at various kinds of private courses. Data received from Gunnar Breivik, professor at the Norwegian School of Sport Sciences, based on the survey "Norsk Monitor 2005".

The last type of fitness centre is included in this study, and the great majority of the individuals exercising in the fitness sector are active in these kinds of fitness centres.⁴ The majority of the centres in our study are located in larger urban areas (75 per cent), and these centres had at average 2148 customers, while the less urban centres had 1515 customers. Many of the centres have reduced prices for local companies (92 per cent) and public institution (86 per cent), while 87 per cent also had some type of collaboration and agreement with local sport associations. Due to differences in types of activities and forms of membership, it is difficult to give exact prices but at the time of the study the prices varied from 340 and 600 € (2800 and 4800 Nkr) per year. The fitness chains included in our data were present in all the Nordic countries at the time of study, and they seem to share central characteristics with centres in other parts of the world as well (Smith Maguire, 2007). There are more women (70 per cent) than men at these centres, and the mean age is 37 years. The participants are not bodybuilders, but more “ordinary” individuals aiming primarily for mainstream ideals of health and body. The majority of the fitness centre customers are working (77 per cent), while 14 per cent are students/pupils.⁵ Comparing the people exercising at the centres in the study to people exercising in voluntary sport clubs, the fitness-group has the highest education: 56 per cent of those exercising at the centres have university level education, compared to 48 per cent of the members of sports clubs. In part, this probably reflects the fact that most of the fitness centres are located in and near the larger cities where the educational level is highest. The most widespread motivations for exercising at the centers are to be in good shape, mental recreation and pleasure (Ulseth, 2008).

In the survey on which this study is based, customers at fitness centres were asked about the kinds of activities in which they engaged when they attended fitness centres (Table 1). The most popular activity clearly was fitness machines, which almost 60 per cent of the customers had utilized. Next follows two exercise forms in which approximately 40 per cent of the respondents have participated: aerobics and ergometer bikes. Roughly one third of the customers have either attended spinning classes or utilized treadmills or step machines. Several more activities are also utilized by substantial groups.

Based on previous studies of sport, physical activity and fitness, we have chosen two ideal typical characteristics to describe the activities offered at fitness centres, which we also think important for differences in participation in fitness activities. In sport, it is common to distinguish between individual sports and team sports. The activities offered at fitness centres could also usefully be described as varying along a dimension of “individual” versus “collective” exercise. On the one hand, there are “individual” exercises that make use of equipment such as the treadmill, step machine and rowing machine, in addition to workouts using weights. Here, the participants perform the same bodily movements as others – yet independent of them. On the other hand “collective” exercise can be exemplified by activities such as aerobics and step aerobics, which are mostly performed to music. In more collective settings, the fulfilment of exercise will, to a larger extent, be dependent on the participation of others, even though the exercise movements themselves can be performed independent of their participation. Compared to team sports where the outcome of

4 Data on the centres stem from the Fitness Center study 2001 having a smaller part focusing on organizational aspects. The directors of the centres answered a questionnaire with questions on the customers and the administration of the centres. All other analysis in this article is based on the individual survey part of the study. For more information on the organizational part, see Ulseth (2003).

5 The respondents are over 18 years.

an activity is fully dependent on other participants, “collective” exercise at fitness centres represents a different and weaker kind of collectiveness. Even though fitness activities do not strive towards common goals and do not represent very strong collectivity, “collective” activities nevertheless involve cooperation and interdependence between instructor and practitioner, and between practitioners themselves, since the achievements of those exercising together matters for the experience of the activity. These kinds of activities provide the basis for a certain feeling of group belonging (Johansson, 1996; Steen-Johnsen, 2001) or collective exercising moral (Skårderud, 1991, p. 108) and “collectively based standard solutions” (Steen-Johnsen, 2001, p. 9) could be a suitable description of the collective activities carried out in the fitness centres.

Table 1 *Percentage of respondents who have attended the activities at the fitness centres.⁶ N=1585*

Type of Activity	Attendance	N
Fitness machines	59	935
Aerobic	44	690
Ergometer bike	41	639
Spinning	36	572
Treadmill	34	532
Step machine	30	479
Weights	28	448
Step-aerobics	23	368
Weight-training in groups	23	370
Rowing machines	17	261
Aero kickboxing	9	143
Stretching	9	146
Skametix	3	51
Groups with special needs (pregnant women, people with injuries or disabilities)	3	54
Yoga	2	31

As a second dimension, we expect to find variations in *how* individuals carry out their physical activity with either “hard” or “controlled” effort. “Hard” effort often involves a certain level of pain, suffering and endurance, and the aim is to strengthen the body and to increase its endurance. The activity is immediate, direct and does not involve very sophisticated or aesthetic movements. Examples of activities in this category are weights, fitness machines and treadmills. “Controlled” efforts might include both strength and endurance, but they do also reflect other and more expressive intentions. For “controlled” effort, some “managerial” abilities are seen as necessary or desirable. Though “controlled” effort does not necessarily imply a lack of energy and willpower, it requires an ability to control impulses and thereby to appear to be a controlled and disciplined individual. “Controlled” exercise might imply a kind of style, elegance, ease and sophistication, but also a certain distance to hardness for hardness’ sake. There is something more to this type of exercise than pure physicality, and the hardness is less mechanical. Aerobic, stretching and yoga could be examples of such activities.

⁶ Table 1 does not include activities with less than 20 participants, which was the case for 8 activities.

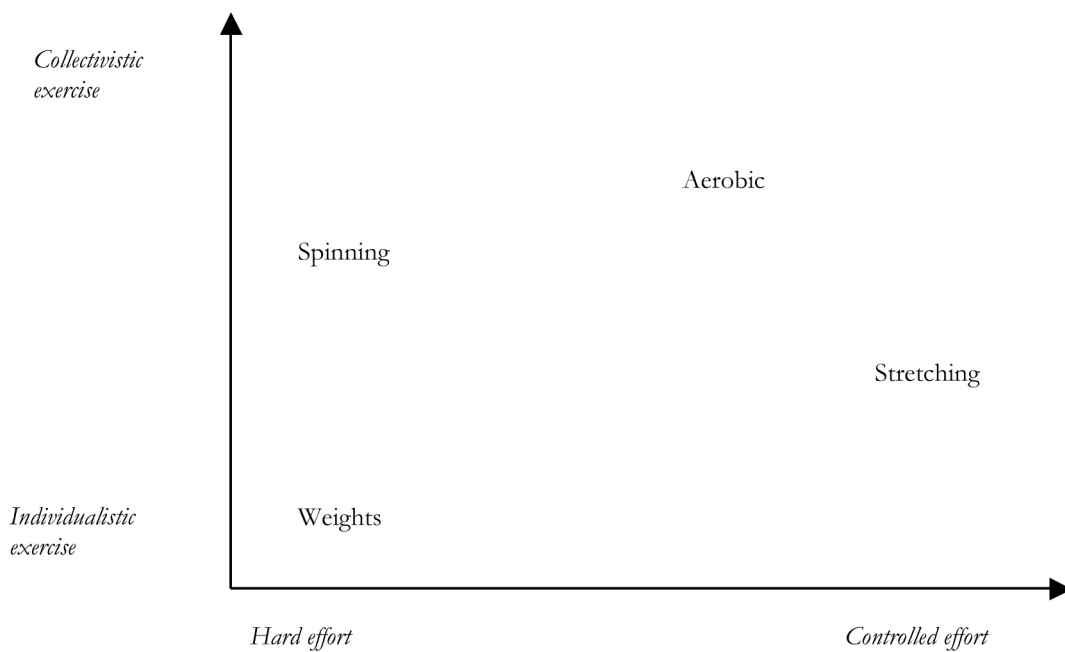


Figure 1 *Types of fitness activities according to theoretical typology.*

To see whether these characteristics of fitness activities impact on who participates in which activities, we focus on a set of fitness activities that vary with respect to their position in the ideal typical two-dimensional space produced by our two dimensions (see Figure 1). These four types of activities are chosen because they are prevalent among the exercisers (see Table 1), and because they represent our ideal types of fitness activities. First, *weight training* represents an activity that is based on “hard” effort and conducted in an “individualistic” manner. Second, *aerobics* is a collectively performed exercise where the activities are as technical as they are physically demanding. Thus, the effort in this type of exercise might be classified as “controlled” rather than “hard”, and the performance “collective” more than “individual”. *Stretching* – meaning group sessions where an instructor tells what kind of muscle to stretch and how to stretch it – is the third activity included in this study. This activity is definitely performed in a “controlled” manner, and can be said to be a type of relaxation activity. *Stretching*, like *aerobics*, is also practiced in groups, but the focus of the participants is directed more inward in order to seek out inner harmony. Thus, this activity is more “controlled” than *aerobic*, but to a lesser degree “collective”. Combining the two dimensions “collective” versus “individual” exercise and “hard” versus “controlled” effort, the only type of activities not yet mentioned are those practiced “collectively” with “hard” effort. *Spinning* – indoor cycling in groups with an instructor – is the only activity of this kind in our study. Thus, *weight training*, *aerobics*, *stretching* and *spinning* are the activities chosen to represent ideal types of fitness activities, and these will function as dependent variables in the analyses to follow.

Social Inequality at Fitness Centres

Whereas Bourdieu (1984) has shown how different class segments tend to value different kinds of sports, there are no corresponding studies of how the various activities at fitness centres are related to social class. Accordingly, we will suggest how social characteristics such as gender and age, social class (defined by income and education) and cultural consumption impact on which type of activities people take part in within fitness centres.

Gender, Age and Social Inequality

Gender and age are two important factors for understanding people's participation in and experience of both sport (Lamprecht & Stamm, 1996; Rudman, 1989; Vaage, 2004) and fitness (Lloyd, 1996; Markula, 1995; Spielvogel, 2002).⁷ In terms of gender, there is one important difference besides the main focus of this article that should be mentioned: the obvious gender difference in participation in sport and activity at fitness centres.⁸ Based on the assumption that prevailing norms and expectations guide the choices, desires and motivations of individuals in relation to their involvement in physical activity, gender differences are also expected to be found inside the fitness centre. We expect "individualistic" exercise with "hard" effort to best characterize men's traditional way of working out, while "collective" exercise with "controlled" effort better characterises women's conventional exercising performance. Further, the struggle toward gender equality may have resulted in a generational shift, where young women and men are more similar in their preferences for fitness activities than older women and men.

The number of individuals over the age of 60 increased by 25 per cent in Norway's largest fitness centre chain S.A.T.S. from 2004 to 2006 (VG 30.01.2006), so even though older adults in the past less frequently attended fitness centres, this seems to be changing. Yet, older adults do not constitute a homogeneous group when it comes to how they like to engage in physical activity (Biggs, 1996; Shepard, 1994). First, they differ according to their present work status; whether they are still working or retired influences both their leisure time and personal finances, and thus their opportunities to make use of a fitness centre. Second, their level of physical ability will vary, which leads to the expectation that the activity preferences for this group of people is far from uniform. With respect to this diversity among elders, we expect the effect of age in our analyses to be rather small. If there actually are differences with regard to what kind of activities people choose to participate in based on age, it might be assumed that mechanisms similar to those operating for gender also apply to age – for example that certain kinds of "age-stereotypes" imply that it is not suitable for older adults to carry out activities with "hard" effort. If so, it seems reasonable to assume that older adults should "take care" and thus prefer *aerobic* and *stretching* to *spinning* and *weights*.

7 The concept of "sport" refers here to physical activity carried out in voluntary sports clubs, while "fitness" refers to activity taking place in commercial fitness centres.

8 Previous publications based on the same data material as used in this study (Seippel, 2002; Ulseth, 2003) demonstrated that 70 per cent of the members of the fitness centres included were women, while the corresponding number for sports clubs were 37 per cent.

Class: Income, Education and Culture

Previous research has shown that the level of physical activity depend on social class (Breivik & Vaagbø, 1998; Kurtze, Gundersen, & Nystad, 2001; Sjøgaard, Bø, Klungland, & Koster Jacobsen, 2000; Vaage, 2004). However, social class can be operationalized in various ways, opening for different empirical results. Economic opportunities reflecting *income* can be more decisive for motivating physical activity than a mere willingness to work out. From a structural-constraint perspective (Elstad, 2000), one would expect people with low incomes to have less opportunity to partake in fitness centres. When people with low incomes first join the centres however, these financial differences should be less important and the opportunities to work out should be close to identical. This is an argument in favour of minor class-effects for explaining variation in fitness action when it comes to class measured as income.

Recent research has moved from mainly emphasizing aspects attached to power and economy in class analysis, to also looking at culture as a means of generating social inequality (Birkelund, 2000). There are different ways of using the concept of culture. Culture can be taken to mean cognitive knowledge, which is often related to *education*. Knowledge of potential consequences of exercise is one of the factors believed to influence an individual's health behaviour (Elstad, 2000, p. 56). In accordance with this perspective, it seems reasonable to assume a positive correlation between this type of cognitive culture and the level of physical activity in general. We could also expect that in addition to having knowledge about the importance of physical activity for maintaining good health, knowledge about *how* to be physically active is important for how fitness activity is performed. One possibility could be that those with higher education are more oriented towards "controlled" rather than "hard" effort, "individual" rather than "collective" exercise, but we have chosen to keep this as an open question. Cognitive knowledge is in our analysis operationalized through level of education.

The second meaning of culture addresses the question of *cultural consumption*. The assumption in our study is that cultural experiences embody different worldviews and identities and thus various beliefs and desires – and hence matters for whether physical activity takes place and how it is conducted (Bennett, 2009; Bourdieu, 1984; Cockerham, Rütten, & Abel, 1997; Hechter, 2004; Hughson, Inglis, & Free, 2005; Schuessler, 2000; Tomlinson, 2004; Warde, 2006). More recent studies of the relation between class and culture have introduced the concept of "omnivores" to indicate how certain segments of the population opt for broad palettes of cultural activities instead of narrow class-specific cultures (Chan & Goldthorpe, 2007; Richard A. Peterson & Kern, 1996; Roger A. Peterson & Simkus, 1992; Sullivan & Katz-Gerro, 2006; Van Eijck & Knulst, 2005; Van Rees, Vermunt, & Verboord, 1999). Preferences for music are chosen to represent the cultural-consumption dimension in our analysis, because it often has been assigned to have a special relevance for grouping people's cultural tastes. Bourdieu (1984: 18), for example, maintains that "... nothing more clearly affirms one's "class", nothing more infallibly classifies, than tastes in music" (see also Chan and Goldthorpe, 2007). With the help of a latent class analysis we found a set of cultural consumption patterns reminiscent of the result from other studies (see appendix for more information on latent class analysis). First, there are "music omnivores" preferring most types of music: classical, opera, rock and jazz. Second there are two groups preferring "rock" and "pop". "Rock" includes more modern forms of popular

music (rap and techno) whereas “pop” tend towards more easy-listening music. As was the case for education, we would tentatively suggest that those who have broader and thereby also more refined and elaborated patterns of cultural consumption – “omnivores” and to a certain extent those preferring “rock” – would prefer “controlled” and “individualist” exercises, whereas those preferring “pop” and who have a more popular cultural taste might tend towards “hard” and “collectivist” exercise.

Data and Methods

All data analysed in this study was collected in a postal survey – *The Fitness Centre Study 2001*. 4099 persons were chosen randomly from customer lists at three chains of commercial fitness centres in Norway, and the response rate was 41 per cent (N=1585). The respondents are 18 years or older. It is not possible to gather general characteristics of the fitness sector as a whole, and this makes it difficult to compare our data with the population to expose eventual biases in the sample. The main analyses included in this study are four logistic regressions – because the dependent variables are dichotomous – and one latent class analysis. The regression analyses provide information about the probability of our chosen social groups taking part in each of the four fitness activities included in our study. As already indicated, we have applied latent class analysis to produce a variable on musical taste which in turn represents cultural practice.

Empirical Analyses

In the previous sections, we have discussed theoretically two ways that social inequalities might emerge within fitness centres: first, through social characteristics operationalized by gender and age; and second, through social class, measured by household income and education and cultural taste (music).⁹ Three kinds of musical taste were found by the use of latent class analysis: Music Omnivore, Rock and Pop (see appendix). Four different activities offered at fitness centres constitute the dependent variables (*aerobics*, *spinning*, *stretching* and *weight training*) included in the logistic regressions presented in Table 3. Information on variables applied in the subsequent analyses is summarized in Table 2.

In Table 3 we have regressed the four types of fitness-activities on social characteristics, income, education and culture. To ease the interpretation of the results, we have included one figure for each activity included in the analysis, where probabilities for partaking for the most interesting social groups (given the results) are presented. For *aerobics* (see figure 2a), a “controlled” and “collective” fitness activity, a relatively large proportion of the variance is explained (33%), and what seem to matter are social characteristics: Aerobics is primarily a female activity for the younger segments of our population. There is an interaction effect for gender and age, indicating a tendency for older men to partake in *aerobic* activi-

9 We have chosen to include household income instead of personal income because a large section of our sample is too young to have an income really reflecting their social status in society.

ties to a larger extent than younger men, and older women to a lesser extent than younger women. Those taking part in aerobics also have a higher than average education (among those “already” at fitness centres). This indicates that our assumptions are confirmed for social characteristics, and partly for culture: gender and age matter, there is an education effect but no cultural differences between those participating in *aerobics* and the rest of our sample.

Table 2 *Descriptive information on variables. Percentages, means and standard deviations (SD). N=1585*

Variable	Value	
Activity	Aerobic	44%
	Spinning	36%
	Weight training	28%
	Stretching	9%
Gender	1 = Men	30%
	0 = Women	70%
Age	Continuous (18-78 years)	Mean: 37, SD: 13.3
Household income	Continuous	Mean: 725', SD: 3015'
Education	1 = Primary school	1%
	2 = Junior high school, secondary school	8%
	3 = Secondary education/high school (vocational subjects)	17%
	4 = Secondary education/high school (general subjects)	19%
	5 = Other forms of secondary education	37%
	6 = University	19%
Music	Pop	58%
	Omnivore Music	21%
	Rock	21%

Weights (a “hard” and “individual” fitness activity) are expected, first and foremost, to be a male activity for the younger part of the sample (see figure 2b). Like aerobics, it seems embedded in the cultural variables included in the analyses, but unlike aerobics it is not education but cultural taste that is important: those with a “rock” music taste are more inclined to exercise with weights than others. This point towards weights as a fitness activity embedded in late modern society: as a kind of youth, masculinity with a cultural blend. Again, a considerable proportion of the variance is explained.

Spinning (see figure 2c) is interesting because it combines two of our theoretical dimensions in a way that somehow crosses the more stereotypical understanding of sports and physical activities, since it is a “hard” and “collective” fitness activity. First of all, for spinning less of the variance is explained compared to the two previous activities. This is a female activity that is composed mostly of younger women and for those with higher levels of education, but beyond that, without any special cultural taste. There is an interaction effect where older adults tend to participate less in spinning than younger adults, but where this negative effect is more obvious for women than for men.

Stretching (see figure 2d) is the fitness activity that is considered to be least traditional among the sports and physical activities mentioned here, and we assumed, accordingly, that this would be an activity perhaps more embedded in late modern cultures than other fitness activities. This assumption is confirmed: besides being a female activity, *stretching* is

an activity for individuals with particular cultural tastes – music omnivores – which is the closest one comes to a high-brow taste in our data (see figure 2d).

Table 3 *Logistic regression: Types of fitness activities as dependent variables.*
* $p < 0.05$; ** $p < 0.01$

	Aerobic			Weights		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
<i>Male</i>	-5.03**	0.59	0.01	1.74**	0.14	5.72
<i>Age</i>	-0.08**	0.02	0.92	-0.05**	0.01	0.96
<i>High education</i>	0.21**	0.05	1.24	-0.09	0.06	0.91
<i>Income</i>	0.00	0.00	1.00	0.00	0.00	1.00
<i>Music:</i>						
<i>Pop (reference)</i>						
<i>Omnivore</i>	0.02	0.16	1.02	0.04	0.19	1.05
<i>Rock</i>	-0.07	0.18	0.93	0.46**	0.17	1.58
<i>Gender × age</i>	0.06**	0.01	1.06			
<i>Constant</i>	5.22**	0.75	185.285	-1.48**	0.38	0.23
<i>-2 loglikelihood</i>		1492.7			1392.9	
<i>Nagelkerke R2</i>		0.33			0.24	
<i>N</i>		1373			1373	
	Spinning			Stretching		
	B	S.E.	Exp(B)	B	S.E.	Exp(B)
<i>Male</i>	-0.91*	0.39	0.40	-0.87**	0.25	0.42
<i>Age</i>	-0.07**	0.02	0.93	-0.01	0.01	1.01
<i>High education</i>	0.10*	0.05	1.11	0.06	0.08	1.06
<i>Income</i>	0.00	0.00	1.00	0.00	0.00	1.00
<i>Music:</i>						
<i>Pop (reference)</i>						
<i>Omnivore</i>	-0.14	0.16	0.87	0.48*	0.24	1.62
<i>Rock</i>	-0.10	0.15	0.91	0.41	0.25	1.51
<i>Gender × age</i>	-0.03**	0.01	1.03			
<i>Constant</i>	0.16**	0.61	5.28	-1.70	0.58	0.18
<i>-2 loglikelihood</i>		1753.4			819.8	
<i>Nagelkerke R2</i>		0.07			0.04	
<i>N</i>		1373			1373	

Summary and Discussion

Post-industrial societies are supposed to have developed both new patterns of physical activity and new types of social-inequality-generating mechanisms. Whereas there are several studies showing how sport and physical activities traditionally are related to social characteristics and class, there are few studies focusing on these new aspects of post-industrial societies: how culture and life-style might matter for social inequality in the fitness centres. In this article, we have looked at how activities taking place in the increasingly more prevalent fitness centres reflect such broader scopes of social-inequality-generating mechanisms. Since there are few studies distinguishing explicitly between the substantial idea and practice of different fitness activities, we have developed an ideal type consisting of four kinds of fitness activities – *aerobics*, *weights*, *spinning* and *stretching* – with different scores on two characteristics of physical activity: “hard” and “controlled” activities and “individualistic” and “collectivistic” activities. Based on this ideal type, the purpose has

then been to see how these qualitatively different types of fitness activities are embedded in different segments of the population.

Figure 2a. Participation in Aerobic by Age

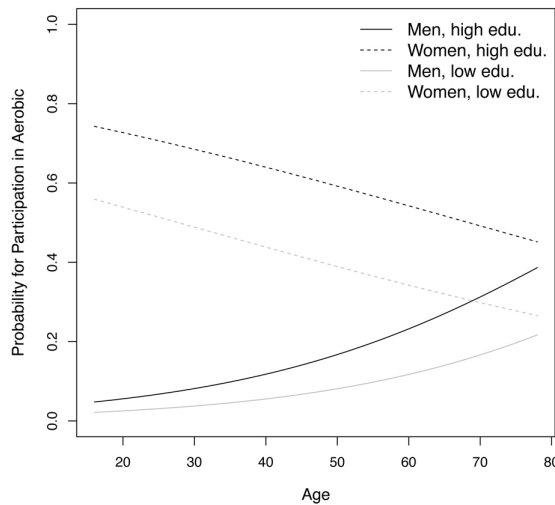


Figure 2b. Participation Weights by Age

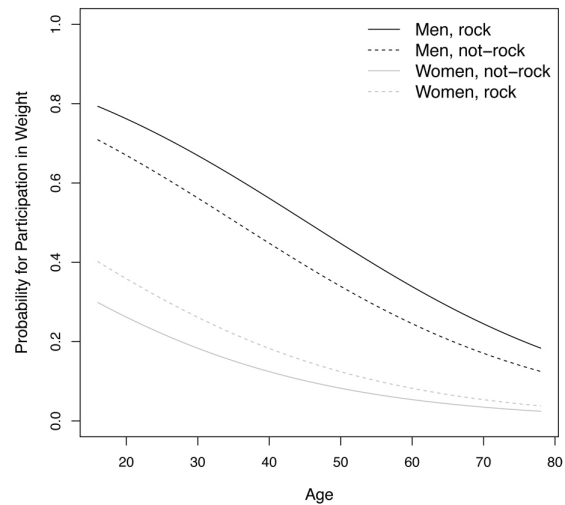


Figure 2c. Participation in Spinning by Age

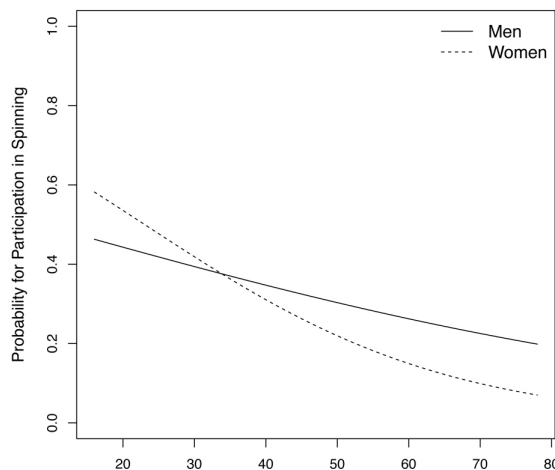
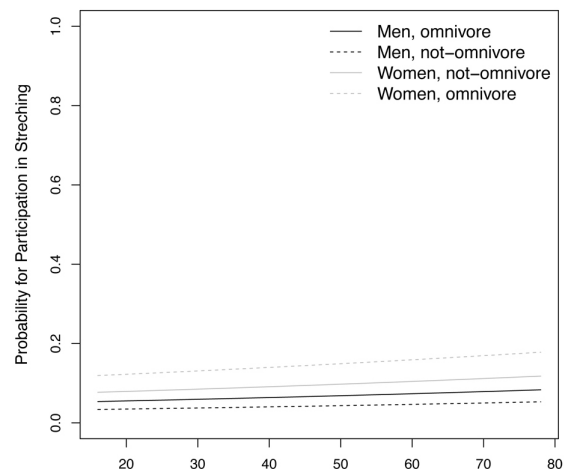


Figure 2d. Participation in Stretching by Age



Even though our study is not concerned with the differences between various arenas for physical activity, we find significant social variation between social groups participating in the different activities available in the fitness centres. We have demonstrated how gender matters for all four kinds of fitness activities, with *weights* being the only predominantly male activity. Age is less important, but matters for *aerobic* and *spinning* and is included in two interaction effects. As expected, income as a class factor was of minor significance when an individual first has joined a fitness centre. With respect to educational level, all the activities we have chosen to look at are more popular among highly educated individuals than those with less education. Cultural consumption was included to see if there are links between factors pertaining to lifestyle and fitness activity, and two of our fitness activities were clearly associated with culture: *stretching* was more of a music-omnivore activity, and thus closer to “traditional” high brow culture, and *weights* was more of a “rock and roll” male culture.

Interpreting our findings in light of the more general questions posed in the introduction, it seems, firstly, reasonable to say that activities at fitness centres are about to differentiate in a way that attracts larger and more differentiated social groups than previously. Second,

we find that different mechanisms of social inequality are operative in the fitness-field. First, traditional social background variables as gender and age are still important. Second, in this study income as a measure of traditional economic class has only marginal effect, probably due to the fact that the effect of income is more important when choosing which arena to exercise at. Third and most interesting in this context, both measures of class as culture (education and cultural taste) carry importance, indicating that fitness activities reflect both matters of social status and lifestyle. Finally, it is interesting to note that characteristics of fitness activities embodied in our ideal types seem to impact on how fitness activities are related to the social variables included in this study.

Even though we have found interesting examples of social inequalities among those active in different types of fitness activities, there are still many things we do not know about the phenomenon of fitness as an arena for social inequality. First, we have focused on only one, albeit large, category of fitness centres. However, there are probably bigger differences between the people active in different types of fitness centres than among those active within the most common type studied here. Second, we have only examined four types of activities at these fitness centres, and there are obviously more categories of activities worth investigating – even if the activities we examined here had high participation rates. Third, even though fitness centres are increasingly common in most Western nations, they are still going through a developmental phase, and there are reasons to assume that there will be shifts in the social characteristics of those attending these centres as they become more familiar to people. Fourth, based on previous research, we have applied a rather simple theoretical distinction, but there should be possibilities for more theoretical refinement related both to fitness activities in particular and sports and physical activities in general. This last challenge is also related to the need for more systematic qualitative research in the area, both for theoretical development and for a more thorough understanding of what fitness activities actually involve.

Appendix

Latent class analysis (LCA) is often presented as the categorical counterpart to factor analysis which is normally used for continuous variables (Hagenaars & McCutcheon, 2002; McCutcheon, 1987).¹⁰ LCA is based on the premise that the covariation between a set of observed (manifest) variables results from the relationship of each of these variables to a latent variable, which then ascribes the cases in data into classes. When conducting LCA, the first practical question to be answered is how many classes it is reasonable to include in the latent variable. Table A1 gives the results from the LCA used to decide on the number of classes. As we can see, there is a substantial decrease in G^2 comparing two classes to one class, and three classes to two, but the decrease in G^2 is much smaller adding a fourth class. This gives arguments for settling on three classes of musical types.

¹⁰ The latent class analysis in this study was conducted with the package *polka* (Linzer & Lewis, 2007), part of the R program (R, 2006).

Table A1 *Latent Class Analysis. Musical Consumption.*

# of classes	G ²	df	p
1	3949.58	1564	p=0.00
2	1165.68	1002	p=0.00
3	891.86	991	p=0.98
4	747.97	969	p=0.99

Table A2 gives the frequencies and scores on each of the manifest variables for the three latent classes. We have labelled two of the musical groups emerging from LCA “Rock” and “Pop”. While the “Rock” group (21 per cent of the sample) consists of rock, pop and the more modern house-, rap and techno music, “Pop” (58 per cent) consists of “lighter” music such as pop and rock in addition to easy listening music. The third group (21 per cent) is a “Music Omnivore” group. The omnivore group enjoys the whole spectre of genres – classical music, opera, blues, rock, easy listening, pop and jazz – with exception of house-, rap and techno music included in the “Rock” group.

Table A2 *Estimated relative size of the three classes in the model and estimated class probabilities. Musical consumption.*

	1 MusicOmnivore	2 Pop	3 Rock
<i>Relative size</i>	0.21	0.58	0.21
Classical	0.94	0.24	0.22
Opera	0.51	0.04	0.04
House	0.05	0.00	0.45
Rap	0.04	0.04	0.34
Techno	0.07	0.00	0.75
Blues	0.38	0.28	0.17
Rock	0.41	0.53	0.56
EasyListening	0.34	0.42	0.20
Pop	0.52	0.74	0.81
Jazz	0.45	0.12	0.07

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