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Special issue:
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editorial

The present issue includes a broad selection of current research and thinking about gambling in the Nordic countries—Denmark, Finland, Iceland, Norway, and Sweden. The issue is based on presentations at a seminar on gambling issues organized by the Nordic Council for Alcohol and Drug Research (NAD) in 2005 and sponsored by the Swedish National Institute of Public Health. A paper by Cisneros Örnberg sets the framework for the papers, discussing both the general nature and organization of the Nordic gambling markets and the pending efforts by European Union institutions to transform them. Jonsson reviews Nordic studies of the prevalence of problem gambling, and Ólason et al. discuss the literature on teenage gambling in the course of their report on a large survey in Reykjavík, Iceland. Rossow and Molde offer a psychometric contribution to the epidemiological work, discussing the relation between different measures in a study of Norwegian adolescents. Lalander gives a vivid view of the world of gambling machine betting in Sweden and of the types of players that inhabit it. Hansen offers an overview of the treatment response to problem gambling in the Nordic countries in a report that draws on a series of visits to different treatment agencies across the Nordic region. Last, a physician and researcher who has been active in gambling policy discussion in Norway, Hans Olav Fekjær, offers a perspective on difficulties experienced in putting gambling problems on the social agenda. The diversity of work represented means that the reader will come away from this issue with a good overview of current work and thinking about gambling problems in the Nordic region.

Finland was the last of the Nordic countries that Marianne Hansen visited when she wrote her report on the treatment of problem gamblers in the Nordic countries. The study required visits to and interviews at a number of Nordic institutes, and by the time she came to Finland she had already visited dozens of institutions and met several Nordic experts in the field. As Marianne Hansen's host, I was curious about what would happen while in Finland. Gambling in Finland is quite often associated with pensioners standing at supermarkets playing slot machines. To my great surprise, one of the experts interviewed, who worked at a big addiction institute in Finland, didn't think this was a problem at all: 'But isn't it good there is something that keeps the pensioners busy?' he asked, leaving me and Marianne Hansen absolutely dumbfounded.

In March 2005, as a project secretary at the Nordic Council for Alcohol and Drug Research, I organized a seminar in Helsinki about problem gambling. At that time, I was glad to find out that even though not much is known about problem gambling in general, a broad range of literature and research exists in the area. However, relatively little of the empirical knowledge seems to have leaked from academic circles to the public. Many devoted people are involved in treating problem gamblers, but their knowledge is seldom based on empirical studies. Most of the interviewees who were treating problem gamblers in Finland had got their education in the early 1990s, with some occasional further training, if any, after that. A Swedish report states that the majority of the staff in the outpatient institutions in Sweden primarily received their knowledge about gambling from television documentaries. Only 5% had had any education in gambling issues, according to a study from the Swedish National Institute of Public Health. Problem gamblers in Finland are generally offered the same care as all other addicts, since not much else is available.

The Nordic countries vary when it comes to the public's awareness and acceptance of gambling as a serious problem, and this seems to be true among the gamblers themselves as well. Since the issue of gambling is seldom on the public agenda and often isn't taken seriously at all, people having problems with it might not know where to turn. They might

even doubt that there is any reason to look for help in the first place, since gambling generally isn't considered as a real problem in Nordic societies. The general view of gambling is still, to a great extent, that it is mostly a harmless hobby. Public opinion is important to how the gambler understands his/her situation. 'A gambler is even more ashamed of himself than an alcoholic, since alcoholism is an accepted diagnosis', said one of the interviewees in Finland. This might be why relatively few people seek help for their gambling problems in any of the Nordic countries, as stated at the seminar in Helsinki.

The importance of reliable prevalence studies was often mentioned in Helsinki in March 2005. The question was raised whether the existing methods and tools are good enough to measure such a heterogeneous phenomenon as problem gambling. The methods often fail to classify the different types of gamblers or the level and extent of the problem for the individual. There is, for the time being, no consensus about how to measure problem gambling. Several methods are available, but they all have their weaknesses. The most used test until now has been the South Oaks Gambling Screen Revised (SOGS-R), which might give useful information about large populations but tells very little about individual gambling habits. 'All the people who walk in through my door score at least 13 points in SOGS, so I don't even use that test any more', said one interviewee in Finland. In the different surveys made in the Nordic countries, 0.3% to 6% of the population has been identified as problem gamblers, depending on the test and the country. The tests at hand seem to be able to tell whether a person has problems with gambling, but not much more. Jakob Jonsson believes that even the present methods could give better information if more attention was paid to the implementation of the surveys and also to their comparability.

Today there are telephone helplines for problem gamblers in all Nordic countries, including Iceland. One might wonder about the relatively low numbers of calls to the helplines, but, as noted at the seminar in Helsinki, very few know about these help lines and about the support they provide. Still, the thousands of calls are a useful source of information on the negative sides of gambling—and they also verify that the problem is real. The results from both Finland and Sweden show that gambling is first of all a problem for young and middle-aged men. The gambling pensioners might indeed be a Finnish speciality, but for the callers in both Finland and Sweden the biggest source of problems are indeed those innocent slot machines. Slot machines are easily available and the response comes quickly—something that is central to all addictions.

The big question for all the Nordic countries concerning gambling is, of course, the EU and the changes EU legislation and court decisions might bring in the near future. There is a fear that the liberal market policies of the EU will ruin the possibilities for Nordic countries to control, limit, or prevent the negative effects of gambling while cynics might say, that not much has been done to prevent the negative sides of gambling anyhow—which is only partly true. Preventive work is being done at several levels and in several ways in all the Nordic countries, although these actions seem almost non-existent when compared with the size of the gambling business. At the same time the society in whole is already involved in the gambling market as long as our states regulate it. This means that, first of all, we all have a responsibility to be aware of the impacts of gambling—even if these phenomena seem remote to us Secondly, we need to take action when needed.

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Statement of purpose

The *Journal of Gambling Issues (JGI)* offers an Internet-based forum for developments in gambling-related research, policy and treatment as well as personal accounts about gambling and gambling behaviour. Through publishing peer-reviewed articles about gambling as a social phenomenon and the prevention and treatment of gambling problems, it is our aim is to help make sense of how gambling affects us all.

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Nordic gambling markets and the possibilities for state-level control[1]

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Abstract

Gambling has gone through considerable changes during recent decades with new forms of gambling, increased turnover, and increasingly extensive marketing of different modes of gambling. At the same time, the monopolistic structure of state-controlled gambling has been questioned by media and private actors on national and European Union (EU) levels. The focus has increasingly ended up on legal interpretations of the possibilities of and the obstacles for state regulation, which has recently placed Nordic gambling monopolies under scrutiny.

The purpose of this article is to clarify the legal arrangements for gambling in the Nordic countries and also how the different countries have chosen to react to increased pressure for deregulation of this area. The article describes how gambling is regulated in the five different countries and analyses what parts of the legal framework of the EU are a threat to the existing gambling systems in these countries.
Key words: gambling markets, EU, Nordic countries, regulation, policy development

Introduction

Gambling has gone through considerable changes during recent decades: it has gone from being regarded as a phenomenon on the outskirts of society to a phenomenon that is totally accepted and well integrated in social life (Dixon, 1991). The recent growth of the gambling market is manifested in new forms of gambling, an increased turnover, and increasingly extensive marketing of different modes of gambling. The ever-expanding accessibility to the Internet has led to increasing opportunities for gambling and, in particular, cross-border gambling, facilitating the development of a global gambling market beyond state control.

As in many other unharmonised areas within the European Union (EU), there exist different views about how the market should be regulated. Great Britain and Austria have a fairly open gambling market with many operators, and both countries are showing an interest in extending this market structure in the future. The Nordic countries, among others, on the other hand, want to preserve a state-controlled market with one, or a few, state-controlled gambling companies. In comparison to the case with alcohol, for example, there are far more countries that have some kind of regulated gambling market with the stated purpose of protecting citizens from harm, restricting criminal behaviour, and collecting money for charity. Furthermore, independent of where a state stands on controlling the market, different types of gambling are offered by the state in many countries. This means that, in many countries, the same hand that is supplying gambling is the one regulating it.

At the same time, the monopolistic structure of state-controlled gambling is being questioned on both the national and the international level, due to the increased pressure of general deregulation and harmonisation in the EU and a decrease in state interference in what is increasingly regarded as citizens' personal business. The focus has increasingly ended up on legal interpretations of the possibilities of and the obstacles for state regulation,

which has recently placed Nordic gambling monopolies under scrutiny. Most of the Nordic countries are indeed under pressure, as private operators have objected to the state monopolies in several jurisdictions.

The purpose of this article is to clarify the legal arrangements for gambling in the Nordic countries and also how the different countries have chosen to react to increased pressure for deregulation of this area. The article will describe how gambling is regulated in the five different countries and analyse what parts of the legal framework of the EU are a threat to the existing gambling system in these countries. I will also give a brief explanation of the main relevant principles of European Community law and the gambling jurisprudence of the European Court of Justice (ECJ). The article will highlight the crucial role played not only by the European Commission but also by European Community law and the ECJ as well as European gambling operators.

EU and legal considerations

European law is to a great extent directly applicable in the member countries and is supposed to be used in a direct manner by national courts and authorities. European Community law has, furthermore, a general precedence over national law in the case of a conflict between the legal systems. International agreements that the EU has made, for example, the European Economic Agreement (EEA), are also tied to European Community law (Bernitz & Kjellgren, 2002).[2]

The common market is defined as an area without inner borders, where free movement of goods, people, services, and capital is guaranteed. These are usually referred to as the four freedoms, with the right to establishment often described as a fifth freedom. To be able to decide if European Communityt law can be applied, one has to determine which one of the freedoms there is a conflict with. Gambling can in some cases be related to the free movement of goods, but it is mainly the freedom of services that applies. Services, in the meaning of the Treaty of Rome, are considered to be work normally performed in exchange for compensation that does not fall within the regulations for goods, capital, or people. According to the Treaty, a person or company supplying a service temporarily can do so according to the same conditions that a country has set up for its own citizens.

The judgements of the ECJ are based on a few important legal principles. The main principles concern subsidiarity, discrimination, proportionality, and necessity (Bernitz & Kjellgren, 2002). The subsidiarity principle was first introduced in the Treaty of Maastricht as a general principle applicable to all areas where both the European Court and the member states have legislative competence: so-called shared competence. According to Article 3b (2) in the Treaty on the European Communities, the subsidiarity principle means that the Community shall take action only 'if and insofar as the objectives of the proposed action cannot be sufficiently achieved by the member states and can therefore, by reason of the scale or effect of the proposed action, be better achieved by the Community'. In short, the EU should only have responsibility for what it can do better than the member state acting separately. The Edinburgh European Council of 1992 decided not to regulate gambling at the EU level, since it found that, according to the principle of subsidiarity, it was better dealt with at a national level (European Lotteries, 2004).

A fundamental principle of almost constitutional nature and with special meaning for the realisation of the common market is the equality of rights principle, also called the nondiscrimination principle, forbidding every form of discrimination based on nationality

within the European Union. The prohibition against discrimination means that a natural or juridical person from another member state should be treated in the same way as the citizens and companies of the country. The principle prohibits not only open, direct discrimination but also indirect discrimination, such as unjustified residence or language demands. There is, however, nothing in European Community law that prevents a member country from having less advantageous rules and conditions for its own citizens than for other EU citizens, a so-called reverse discrimination (Bernitz & Kjellgren, 2002).

The proportionality principle means that the measures used for a certain purpose cannot be more burdensome or far-reaching than the minimum necessary for the desired purpose with the measure. 'Appropriate' and 'necessary' are terms frequently used by the court. If you are choosing between several effective measures, you have to choose the least burdensome one. There are in principle three different points that have to be fulfilled in order for a measure to be considered proportional. Firstly, the measure must be suited to the purpose. Secondly, the measure must be necessary to attain its objective without there being any less burdensome alternative. Finally, the benefit of the measure must be in reasonable proportion to the harm that can occur to the concerned parties (Bernitz & Kjellgren, 2002). From the ECJ's judgements, it can be concluded that this principle is also used to establish if a ban is too far-reaching. It is important to note that a measure is also not allowed to be ineffective. The ECJ has often recently left the proportionality judgement to the national courts, which has resulted in the same measure being judged differently in different member states. However, one of the purposes of the proportionality principle is to allow room for national solutions (Allroth, 2005).

The service directive

The draft directive from the European Commission to create a true internal market in services is probably one of the most controversial pieces of legislation before the European Parliament (COM, 2004). The proposal is part of the so-called Lisbon agenda, aiming at making the EU the most competitive economy in the world by 2010. The Commission has pointed out that the services affected by the proposal account for half of all economic activity in the EU and could provide a significant boost to economic growth (Vallières, 2004). The services directive proposal has, however, been so wide ranging in its earlier versions that it has disturbed many interest groups and opponents, leading to a temporary withdrawal of the proposition in February 2005.

After extensive changes to the Commission's original proposal, the country-of origin principle, meaning that once a service provider is operating legally in one member state, it can market its service in other countries without having to comply with further rules of the host member state, has been substituted by a principle about freedom to provide services. This principle states that the member states are obliged to guarantee the right to exercise services within their territory but are at the same time able to apply national regulations if they are motivated by public order, safety, health or environmental protection reasons.

In the revised proposal, the Commission makes it clear that the directive is not dealing with either the liberalization of services of public economical interest or the abolishment of national monopolies. Furthermore, the Commission has limited the areas applicable in the directive, opting out for example financial, electronic communication, transport, public and private health care, and gambling services. Gambling services, including lotteries, casinos and betting, are opted out in the proposal because they are considered to be activities with

such distinctive features, that the member states have developed policies based on puplic order and consumer protection (www.eu-upplysningen.se).

The Directive on Electronic Commerce

In June 2000, the European Parliament adopted a Directive on Electronic Commerce (2000/31/EC). This directive has as its purpose harmonising EU member state legislation on the establishment of e-commerce business and commercial communication with on-line users. The country-of-origin principle is also applicable in this directive. However, the E-Commerce Directive does not currently cover on-line gambling services. The Commission has announced that it will launch a study to determine the need for and scope of a possible new EU initiative to harmonise on-line gambling and betting law (EU Services Directive, 2004). This is in view of recent European Court judgements and an increasing number of complaints from operators wishing to undertake cross-border activities (http://www.cr-law.co.uk). Legal experts are of the opinion that an initiative by the European Commission to establish an EU regulatory framework for on-line gambling services is becoming more and more inevitable, considering the borderless nature of e-gambling services (Keuleers, 2003a; Verbiest & Keuleers, 2004)

Gambling-related court decisions

During the 1990s, the gambling market both grew and went through considerable change. Different national restrictions and gambling monopolies were questioned in the name of a free market, and the legal possibilities to prevent foreign actors entering the market were of great interest for many member states. Lotteries and gambling are in principle prohibited in the legal system of all EU member states. The main reason for this is that lotteries and gambling involve a high risk of fraud and abuse for criminal activities. At the same time, most member countries permit exceptions to this prohibition to a varying extent (European Lotteries, 2004). Within the EU, gambling is regulated, in the absence of European Community legislation, at the national level. All member states have imposed strict limitations on gambling activities in order to control and limit the supply of gambling in their territory and to ensure that the revenue of gambling to a certain extent is used for public benefit. This section will summarise the gambling jurisprudence of the ECJ. The legitimacy of restrictions in the area of gambling has been examined by the ECJ in a number of cases. In its gambling jurisprudence, it has examined to what extent national authorities can impose restrictions on the cross-border provision of gambling services and whether these restrictions are compatible with the Treaties of the European Community.

The ECJ has so far tried six cases involving gambling in which the freedom of establishment (article 43) and the freedom of services (article 49) were adjudicated. These cases are the Schindler case concerning U.K. legislation on lotteries, the Läärä case concerning Finnish legislation on gambling machines, the Zenatti case concerning Italian legislation on sports betting, the Anomar case regarding Portuguese legislation on casino games, the Gambelli case concerning Italian law on sports betting, and the Lindman case regarding national taxation on winnings in foreign lotteries.

The Schindler verdict (C-275/92) from 1992 was the first case concerning gambling on which the ECJ announced a decision. The background of the case was a mailed invitation to British citizens from the Schindler brothers to take part in a German lottery. The invitations were stopped at British customs. The case dealt with whether lotteries were considered to fall within the scope of the free movement of services, and if that service could be restricted

when it comes to games and lotteries. The ECJ found that the restriction on the cross-border provision of lottery services was compatible with the European CommunityTreaty. In the verdict, the ECJ considered the particular nature of lotteries, including moral, religious, and cultural aspects. The ECJ acknowledged the general trend within the member states to regulate and even forbid gambling with the purpose of controlling private profit; the fact that lotteries in many cases increase the risk for different kinds of criminality, including fraud; and the fact that lotteries give incentives to spend money with possible negative individual and social consequences. Finally, although it was not considered to be an objective justification as such, lotteries are an important contributor to the financing of good causes and public interest activities. The ECJ concluded that when a member state forbids advertisement in its territory for big lotteries organised in another member state, it does not constitute an illegitimate restriction of the principle of free movement of services. The ECJ emphasised that the legislation in Great Britain was in accordance with European Community law in light of social considerations and to prevent fraud. The ECJ was of the opinion that these special circumstances justify national authorities being given discretionary scope when it comes to deciding what measures are needed and proportional.

A Finnish court requested in 1997 a preliminary ruling in the Läärä case (C-124/97), which concerned slot machines. According to Finnish law, only one actor can be offered a licence for operating games on slot machines. The background of the case was that a private person, Läärä, acting on behalf of a British citizen, offered gambling on slot machines, but without a licence. The Finnish court wanted to know if the ruling of the Schindler case could be applied to this case as well. Even if there were some differences between the cases—the Schindler case was about an international lottery with high prizes, while the Läärä case was about an entertainment game with small prizes—the ECJ ruled in this case as well that the Finnish law was consistent with European Community law, under the condition that the regulation has the purpose of limiting citizens' disposition for gambling and keeping gambling development under control (Holmberg, 2004; C-124/97). The ECJ accepted that a 'closed' licensing system, with only one or a limited number of state-owned and state-controlled licensees, fulfils all the requirements necessary in order to obtain an exception to the Community freedoms. The ECJ also pointed out that 'given the risk of crime and fraud', there are no alternatives (such as taxation) to a non–profit-making approach that are equally effective to ensure 'that strict limits are set to the lucrative nature of such activities'. The ECJ added that the mere fact that a member state has opted for a system of protection that differs from one adopted by another member state cannot affect the assessment of the need for, and proportionality of, the provisions enacted to that end. Those provisions must be assessed solely by reference to the objectives pursued by the national authorities of the member state concerned and the level of protection which they want to provide.

The ECJ established in the Schindler case that the national authorities were to be given a sufficient discretionary scope when it comes to deciding how far-reaching the protection within the national territory regarding lotteries and other games needs to be. It is up to the national court to assess, in proportion to the objective, if reasons exist to totally or partly forbid certain activities or only regulate and limit them, and for this purpose to prescribe more or less strict measures of control. The court concluded in the Läärä case that there were no disproportional regulations with respect to the objective, nor was there any discrimination.

In January 1998, the court of Verona in Italy directed a question for preruling to the ECJ. The Zenatti case (C-67/98) also applied the free movement of services, in this case the possibility of accepting betting on sports events. In Italy, the organisations CONI (sports

events) and UNIRE (horses) have a monopoly on gambling within their markets. The revenue goes to secure support for sports in the country and to support the continued development of horse-breeding and horse-racing in Italy. The background of the case was that Zenatti in Italy acted on behalf of the British-licensed company SSP. Zenatti mediated the bets via fax and Internet. Zenatti proposed that the Schindler case should not apply in this case since it dealt with competence and skilfulness in predicting outcomes. By referring to skilfulness, Zenatti assumed that betting could be interpreted as a contest rather than gambling. Furthermore, the justifications in terms of social considerations and preventing fraud were, according to Zenatti, not considered to be enough to restrict the free movement of services. The Italian court, however, wanted a confirmation of the possibility of drawing an analogy to the Schindler case. The ECJ was of the opinion that there existed two differences between the cases. In the Schindler case, Great Britain had a total prohibition against large-scale lotteries, while in the Italian case there was no total ban. Instead, the government let certain selected organisations handle gambling with special regulations. Furthermore, in the Zenatti case, the right to establishment could apply since SSP had the right to run a gambling business in another member state and wanted the same right in another country. The appeal for a preruling from the Italian court consisted, however, only of a question about free movement of services, which prevented the court from examining the case on the basis of establishment. The court verdict concluded that the free movement of services may be restricted, as in Italian law, if the restriction is motivated by social considerations and has the aim to prevent the harmful effects that can be caused by gambling (Holmberg, 2004).

The Anomar case (C-6/01) on gambling confirmed the right of the Portuguese government to establish a gambling monopoly for casinos. Anomar is the Portuguese national association of operators in the gambling machine sector. The association took action against the Portuguese government to obtain the right to develop gambling services outside the legally permissible areas in Portugal, i.e., casinos, and therefore put an end to the monopoly, which they saw as being in conflict with European Community law. The ECJ confirmed that national rules establishing a monopoly were a barrier, but this was justified by social policy and the prevention of fraud. The fact that other member states have less restrictive laws has no effect on the compatibility with European Community law of the stricter Portuguese law. Finally, the ECJ noted that if the national law was compatible with the Treaty, the organisation and control of gambling was a purely national issue.

In all four of the cases mentioned above, the regulations were not considered discriminatory since all actors were influenced to the same extent, independent of nationality, in spite of the fact that the restrictions undoubtedly constituted an obstacle to the right to supply services according to Article 49 in the European Community Treaty. A closer study of the national regulations showed that all the countries had the purpose of preventing crime and obstructing addictive gambling and that the surplus from the activity went to charity or to promote culture. The ECJ made an overall judgement of all the factors and came to the conclusion that the mentioned purposes gave the national authorities a large scope for discretionary judgement about the level of consumer protection and preservation of public order.

However, the Gambelli verdict (C-243/01) in 2003 signalled a new, more severe view on gambling monopolies, where the purpose of the monopoly had to be sincere and honest. The judgement emphasised that the economic interest of a member state does not constitute an acceptable reason (C-243/01; see also Bernitz, 2004; Allroth, 2005). As before, the ECJ held that restrictions may not exceed what could be considered as necessary and had to be applied in a nondiscriminatory way. Furthermore, the court noted

that a member state that encourages gambling with the purpose of gaining revenues cannot refer to public order in society to motivate restrictive measures. The ECJ ruled that the restrictions 'must serve to limit betting activities in a consistent and systematic manner' and 'In so far as the authorities of a member state incite and encourage consumers to participate in lotteries, games of chance and betting to the financial benefit of the public purse, the authorities of that State cannot invoke public order concerns relating to the need to reduce opportunities for betting in order to justify measures such as those at issue in the main proceedings' (C-243/01, §67-69).

The background of the Gambelli case was that the British betting company Stanleybet International was stopped from advertising in Italy since this was in conflict with the Italian gambling monopoly. The Italian court consequently asked in 2001 for a preruling about the interpretation of the principle of free movement of services. The Italian court also asked if the Italian regulation was in conflict with the right to free establishment, a question that the ECJ had not been able to consider in the Zenatti case. In November 2003, the court confirmed that, in general, exclusive rights granted by national laws to certain companies providing gambling services do not necessarily breach the European Community Treaty, provided, however, that this is justified by objectives of social policy and consumer protection aimed at limiting the harmful effects of gambling activities. To be justifiable, a restriction should be genuine and should not be such as to exploit the social policy or consumer protection issues only to conceal real reasons that have nothing to do with such policies. The state-owned gambling company had been marketing their games aggressively and had further plans to introduce new types of games. The purpose of the policies pursued could then not be to limit gambling, and hence they did not have any right to limit the free movement of services. Purely economic motives can thus never serve as grounds for restrictions on free movement and can never restrict other member states' offers of gambling. The ECJ stressed that the financing of social activities may only constitute a secondary positive consequence and not the main justification for the regulation. Post-Gambelli case law has shown the decision to be hard to construe, which has been reflected in different views in various European jurisdictions.

The different ECJ rulings have been interpreted by some lawyers as a sign that the ECJ, especially in the area of services, seems to prefer to delegate sensitive judgements to the national courts. As long as the protective measures that the regulations refer to appear to be genuine, appropriate, and necessary, and the regulation is proportionate for the purpose, and as long as less far-reaching measures could not obtain the same goal, it is for the national courts to make the judgement (Bernitz & Kjellgren, 2002; see also Keuleers, 2003b). The Gambelli verdict can, however, express a new turn in the relatively accepting attitude vis-à-vis national regulations and claims of public interest (Hettne, 2005).

In November 2003, the ECJ returned to the issues with a verdict in the Lindman case (C-42/02). The case concerned where gambling winnings should be taxed. A Finnish woman named Lindman had, during a stay in Sweden, bought a lottery ticket on which she later won one million Swedish crowns. The Finnish government wanted Lindman to pay income tax on her winnings, although all prizes in Finnish lotteries are tax free since the organiser of the lottery pays the taxes. The ECJ came to the following conclusion:

> Article 49 EC prohibits winnings from games of chance organised in other member states being treated as income of the winner chargeable to income tax, whereas winnings from games of chance conducted in the member state in question are not taxable.

This indicates that, in the area of taxation, the development goes towards a European homogeneous regulated gambling market (Holmberg, 2004), and EU and EFTA countries are now forced to change their tax legislation in accordance with the ruling. A problem with future harmonisation among the member states in the gambling area is the lack of political will among the member states to establish a borderless gambling market with free competition. One of the main reasons for this is that gambling monopolies are frequent among the member states and bring in considerable tax revenues (Hettne, 2005).

Gambling in the Nordic countries

The Nordic countries have a lot of similarities when it comes to gambling and gambling regulations. All the Nordic countries are strong advocates of a nationally regulated market based on a licensing system, strong control, and social protection considerations (Nordiska Rådet, 2005). All Nordic countries have furthermore received formal letters from the Commission or the EFTA Surveillance Authority (ESA) questioning different parts of their national legislation. At the same time, the Nordic countries have chosen somewhat different solutions to these new circumstances.

Sweden

Lotteries in Sweden fall under two acts of parliament: the Lotteries Act (1994:1000) and the Casinos Act (1999:335). The Lotteries Act is prohibitive legislation which makes it possible only for those with a licence to arrange lotteries within the country, and all such permits are subject to governmental scrutiny (http://www.lotteriinspektionen.se). It is also prohibited, in commercial activity or with the purposes of making money, to promote a lottery arranged outside the country. The ban on promotion has resulted in lawsuits against several big Swedish newspapers that have admitted ads from foreign betting companies. TV commercials for foreign betting companies are only shown on channels that broadcast in Swedish from Great Britain. These commercials have been considered to fall under British law, according to European Community law (the TV directive 89/552/EEG), and therefore Swedish law is not applicable. The ECJ has come to the conclusion in other court decisions that a member state can intervene against misleading advertisements, but whether the TV directive allows other protective measures has not yet been tried by the ECJ. The prohibition on promotion in Swedish law has been considered by several lawyers as ineffective since the TV broadcasts in many cases come from other countries (Hettne, 2005; Allroth, 2005). The Inspection Board for Radio and TV decided in January 2005 that the Swedish part of the TV company should be held responsible for the broadcasting and therefore be subject to Swedish law (SOU 2005:21). However, this decision will hardly have an effect on the possibilities for Swedish authorities to intervene against broadcasting outside Swedish jurisdictions.

The biggest actor on the Swedish market is the state-owned company Svenska Spel. Svenska Spel has a monopoly on arranging lotteries and number games, betting on sport events and dog racing, and slot machine gambling. The company also has the licence to operate the four established international casinos in Stockholm, Gothenburg, Malmö, and Sundsvall. The surplus from Svenska Spel's activities goes to the state via the Treasury department, except when it comes to the slot machines, called Jack Vegas and Miss Vegas, whose profit is earmarked for children and youth and distributed by the Swedish Sports Confederation and the Swedish National Board for Youth. Gambling on slot machines is the form of gambling in Sweden with the highest turnover at the moment. The total turnover for the Swedish gambling market during 2005 was approximately 35.6 billion SEK (3.84 billion

Euro). Quite half of the total turnover was connected to the activity of Svenska Spel (Lotteriinspektionen, 2005).

The second-largest actor in the Swedish market is Aktiebolaget Trav och Galopp (ATG). ATG arranges betting on horse racing. ATG is a state-controlled company owned by the horse-racing associations. An agreement between the state and the owners regulates the activities, and four board members are selected by the government. ATG gives its profit to the promotion of research, education, and development in equestrian sports (Loor, n.d.).

Various public benefit organisations (in Swedish: Folkrörelserna) arrange lotteries through their company Folkspel. Folkspel was founded in 1989 and consists of approximately 70 voluntary organisations that carry out work for the public benefit. The profit is directly transferred to the member organisations. In addition, it is possible for bars and restaurants to arrange so-called restaurant casinos—gambling tables in restaurants.

The political responsibility for gambling is divided between two departments: the Ministry of Health and Social Affairs and the Ministry of Finance. The Ministry of Health and Social Affairs is responsible for public health aspects of gambling with the Public Health Institute as the responsible authority. The Ministry of Finance is responsible for overseeing gambling and lotteries and the processing of permits. The Gaming Board (in Swedish: Lotteriinspektionen) operates under the Ministry of Finance and is the central supervisory authority for lotteries in Sweden. County administrative boards and the municipalities have some responsibility for some permits and supervision.

For several years, international gambling companies like Ladbrokes, Unibet, and Expekt, together with national newspapers, have been challenging the Swedish gambling monopoly. These betting companies interpreted the ECJ ruling in the Gambelli case as the end for Svenska Spel and its monopolistic position. In October 2004, the Swedish Supreme Administrative Court came to the conclusion that the Swedish gambling monopoly was not in conflict with European Community law, a verdict that concurred with all the previous decisions. The court judged that the Swedish regulations were necessary, proportional, and nondiscriminatory. The prohibition in the Lotteries Act on promoting foreign gambling—as well as the Lottery Act as a whole—is not consistent with European Community law on free movement of services and establishment, but the court followed previous ECJ judgements that allow exceptions if the reasons are to protect the public and prevent crime (Regeringsrätten mål 5819-01). The Swedish Supreme Administrative Court did not ask for advice from the ECJ, since it lacked a reason to ask for a preruling in the question. It is incumbent upon the national court to apply the criteria that the ECJ has already specified. The ECJ has made it clear that further clarifications in this area are not needed at the community level.

Even though the Supreme Administrative Court established that the main purpose of the regulation was not to benefit the public treasury and that the system as a whole fulfils the demands of European Court law, they indicated that the Swedish system needs a review. It was concluded that while gambling enterprises must be allowed to market themselves, the marketing by Svenska Spel has been aggressive and extensive, especially on TV. The criticism against marketing led to a decision that Svenska Spel must cut down their ads on TV and billboards by up to 20% during 2005. A contradictory development is Svenska Spel's advertising campaign for their new game Drömvinsten ('The Dream Prize'), which has been criticised by both politicians and the national organisation for compulsive gamblers. Drömvinsten is a new form of lottery but with considerably higher prizes. In addition, the

application from Svenska Spel to the government for permission to arrange poker games on the Internet was accepted in November 2005, with a start in March 2006 and a governmental evaluation after 1 year. This decision was made in spite of the fact that the application was not approved by the National Gaming Board in April 2005, based on concerns about increased gambling problems and possible discrepancy with European Community law and against the recommendations of the Public Health Institute and the National Board of Health and Welfare.

Gambling over the Internet, interactive games, and the increased interest of foreign companies in Sweden have changed the gambling market drastically and put pressure on the monopolistic structure in the country. Swedish residents are not prevented from taking part in foreign lotteries, but the Gaming Board takes measures against gambling on the Internet if it is arranged from Sweden by someone other than the approved actors. Swedish law only permits a refund of a maximum of 50%, while foreign companies usually give better odds and a higher refund to the player. The government appointed an investigation group in May 2004 to make a general overhaul of the legislation in the gambling and lottery area. In March 2005, an interim report was presented, with the recommendation that the refund level be kept at the present level (SOU 2005:21). The final report (SOU 2006:11), presented in January 2006, came to the conclusion that there were reasons to question the compatibility of Swedish gambling regulation with European Community law, since economic considerations had had unproportional importance. The investigators feared that Sweden crossed the line for what was acceptable when the government allowed Svenska Spel to organize Internet poker games.

On 1 January 1995, it became legal to offer gambling on slot machines. Slot machines that pay out money directly are still forbidden in Sweden. Since 1997, permission for slot machines has only been given to companies owned by the state. In mid-October 2004, the government received a letter of formal notice from the Commission questioning the Swedish regulations on slot machines. In the letter the Commission asserts that the Swedish regulations constitute an obstacle to the free movement of goods, freedom of establishment, and free movement of services, contravening Articles 28, 43, and 49. According to the Commission, gambling has increased in Sweden during recent years, with Svenska Spel as the main provider of gambling. Svenska Spel is furthermore moving to expand gambling possibilities in general, for example, on the Internet and on mobile phones, and has made extensive marketing efforts. The Commission also found the Lotteries Act on gambling machines to be discriminatory in two cases and that the punishments in the Act are disproportional. The Commission is questioning parts of the Lotteries Act that they consider to be an obstacle that cannot be justified by reference to the public good, and argues that the main purpose of the Swedish regulations is economic. The Swedish government replied to this letter in December 2004 and argued that the regulations on gambling machines cannot be evaluated separately but must be considered in light of how the whole Swedish system of gambling and lotteries is designed and what its purposes are. The government concurs with the judgement of the Swedish Supreme Administrative Court that the Swedish restrictions are compatible with European Community law. If the Commission does not accept the assurance from the Swedish government that, in spite of marketing and considerable income from gambling, the regulations are based on public health reasons, it will lead to the next step in the procedure, a reasoned opinion (Formell underrättelse, case nr 2001/4826).

In April 2006, following complaints from a number of gambling firms, the European Commission decided to send an official request for information on national legislation

restricting the supply of sport betting service to seven member states (Denmark, Finland, Germany, Hungary, Italy, the Netherlands, and Sweden) (Press release, 2006).

Finland

Finland has a regulated gambling market with state actors that obtain a government licence for 5 years at a time. Only one licence is valid at the same time for each type of money gambling. In Finland, private companies are not allowed to conduct lottery activities, including slot machine and casino activities, even if the proceeds are to be used for charitable purposes. The National Lottery of Finland, Oy Veikkaus Ab, which is totally owned by the state, has a monopoly on the lottery and betting business. Gambling on horses may only be operated by the state-regulated company Fintoto. Both Veikkaus and Fintoto offer gambling via the Internet. Profits from Fintoto go to equestrian sports and profits from Veikkaus go to culture, sports, and youth work. Penningautomat föreningen (PAF) has a monopoly on casino activity and producing, selling, and promoting gambling on slot machines in Helsinki. RAY is a consortium of 96 organisations in the area of health care and social activities. In 2005, the total turnover for Finland was 2.16 billion Euros[3] (www.veikkaus.fi). The Ministry of the Interior is responsible for regulating national lottery activity. County administrative boards and the police supervise lotteries that are arranged in their territory.

The Finnish monopoly on lotteries and its compatibility with European Community law were questioned in the Läärä case. In particular, the proportionality of an exclusive licence in relation to the social and economic benefits was discussed. The court case was described as a crucial question for interest organisations, since to a large extent they depend on the subsidy that RAY distributes. The Advocate General of the European Court proposed that the state monopoly should be replaced by a system with permissions, without sole rights, that all private actors within the community had access to. This system would include strong state control. The Advocate General indicated that the vigorous marketing campaign, the interest of organisations with licences in an increase in the amount of gambling, and the deficient control of gambling by youths were all in conflict with the claimed purposes of the monopoly. The ECJ, however, went against the recommendation of the Advocate General and concluded, as mentioned earlier, that the Finnish legislation was consistent with the principle of free movement of services and goods, on condition that the restrictions aim at limiting the possible harms of gambling (Case C-124/97). The Läärä case led to increased national attention being paid to age limits and gambling responsibility.

The Finnish gambling agencies have been exposed to competition from abroad since the 1980s. During the late 1990s, the state-owned companies experienced even further competition from Internet and gambling companies such as Centrebet, Expekt, and Unibet. Today a dozen actors are offering Internet games via Internet pages in Finnish. In 2004, the Finnish state-owned company Veikkaus was allowed to raise the returns to winners to 88% to be able to better compete against foreign gambling interests. Another means of competition is to develop new and faster games. Penningautomatföreningen (PAF) has recently announced that it has launched the first interactive cellphone gambling game in the world. The company also aims to provide all its Internet games in a cellphone version. Finland's Slot Machine Association (RAY) is investigating the possibility of introducing new slot machines that accept electronic payments. The test period was to start in the autumn of 2005.

Finland has a special situation in the form of the Åland Islands gambling company, (PAF, licensed by the Government of Åland to arrange games with money prizes in Åland, on board ships, and on the Internet (http://www.paf.fi). Since 2001, there has been conflict between PAF and the Finnish state, since PAF have been marketing their Internet games in newspapers and direct mail advertising on the Finnish mainland. Their Web page has furthermore been translated into Finnish to better attract the Finnish population.[4] The Finnish Supreme Court of Justice announced their verdict in February 2005, rescinding the judgement of the Court of Civil and Criminal Appeal, and fining the CEO, the marketing manager, and the chairman of the board of PAF for violation of the lottery law (HD:2005:27). The conflict has continued, and in mid-December 2005 PAF handed in an application for a summons against the Finnish state, since the government demands that PAF prevent persons from the Finnish mainland registering as gamblers with accounts on Åland. The legal dispute has its origins in different legal interpretations of the verdict from the Supreme Court of Justice (http://www.paf.fi).

Denmark

The biggest actor on the Danish market is the Dansk Tipstjeneste. Shareholders in the company are the Danish State (80%), the Danish Sports Federation (DIF) (10%), and the Danish Gymnastics and Sports Association (DGI) (10%). Dansk Tipstjeneste's profits are distributed according to rules laid down by the Danish Parliament for sporting, cultural, and other nonprofit purposes. DanToto was formed in 1991 and became part of Dansk Tipstjeneste in July 2000, dealing with horse and greyhound gambling. Dansk Automatspil was formed in 2001, as a daughter company of Dansk Tipstjeneste. The Tipstjeneste Group has a monopoly on most of the gambling within the country, except slot machines and the six private casinos. Gambling reached new heights in Denmark with a boom in turnover when the national lottery 'Lotto' was introduced in 1989. The approximate total gambling turnover, casino business not included, in the country in 2005 was estimated to be 26.8 billion DKK, (3.59 billion Euros) (http://www.tips.dk).

The National Supervisory Authority for games and lotteries is part of the Gaming Authority under the Ministry of Taxation. The Gaming Authority supervises games and monitors the gambling market. The gambling law, Spilleloven, prohibits Danish companies from acting on behalf of foreign gambling. However, Denmark has for a long time had a more liberal attitude towards the marketing of foreign gambling companies, and for a long time these were able to advertise in the evening papers. During 2001, the Danish authorities started to notice that a considerable amount of money disappeared through foreign companies in gambling on the Internet. The Ministry of Taxation then repeatedly reported to the police Internet pages with so-called banners with advertising for foreign gambling companies. While regulations of marketing of foreign lotteries traditionally have been more liberal in Denmark than in Sweden, for example, regulations in other areas have been more restrictive. Dansk Tipstjeneste has, for example, such influence on the boards of Danish banks that it has been next to impossible for a foreign gambling company to open an account (Holmberg, 2004).

According to the Ministry of Taxation, the Danish model for regulation of the gambling market has come under pressure and the trend towards deregulation of the Danish gambling market is already apparent. In December 1999, the government therefore established a working group given the task of preparing for the modernisation and unification of the existing gambling legislation in the country. In addition, the group was to assess the possibilities for maintaining national control of the Danish gambling market on

the Internet. The working group published its report 'The future of gaming in Denmark—The need for unified gaming legislation' in 2001 (Ministry of Taxation, 2001). The report proposed that a new Danish gambling law should require issuing banks to block Internet credit card payments coming from illegal gambling providers. Close cooperation with the bank was considered vital for the future control of the Danish gambling market. However, the proposition received a lot of criticism from various state agencies and the government. In March 2003, less than 2 weeks after the preruling in the Gambelli case, Denmark introduced a new gambling law. The new law meant, among many other things, that it became illegal to work for a foreign gambling company in Denmark. The law also contained a prohibition on foreign companies marketing themselves in Danish media and a ban on foreign gambling companies directing their main enterprise at Denmark, for example, through Internet pages only in Danish. Together with the Gambelli verdict, the law resulted in a new debate about the future of Danish gambling regulation and how well fitted Dansk Tipstjeneste is to compete with international gambling interests (Holmberg, 2004). One way for Dansk Tipstjeneste to meet the competition from abroad has been to increase the percentage of proceeds redistributed to players from 80% to 88% per game. At the beginning of 2005, Dansk Tipstjeneste received their licence renewal. The licence explicitly says that marketing may not be too extensive and that the development of gambling options by the organisation has to be carried through with great responsibility. At the same time it stated the importance of meeting foreign competition (Nordiska Rådet, 2005).

Just like Sweden and Finland, Denmark has faced demands by the Commission for more competition on the gambling market, with more private actors and less state control. Besides the letter of formal notice in April 2006, Denmark received in March 2004 an official request from the Commission for information on its legislation, which prohibits the supply or advertisement of, and the facilitation of participation in, gambling services offered by providers licensed in other member states (Press release, 2004). The Commission intends to verify the compatibility of the ban in question with the provisions of the European Community Treaty on the free movement of services and on the freedom of establishment.

Norway

In Norway, new types of games and technology and more aggressive marketing have also resulted in an increase in gambling (Lund & Nordlund, 2003). Norwegian law forbids gambling with money within the country, but provides the possibility to receive permission if the purpose is to gather money for humanitarian or for socially important causes. Lotteries and gambling are regulated with three laws: Lotteriloven regulates private lotteries, Pengespilloven regulates state gambling, and Totalisatorspilloven regulates gambling on horses. Norsk Tipping and Norsk Rikstoto are the two state actors with a right to operate in the gambling market. Foreign gambling companies are not allowed to market themselves in the country and there is at the moment a prohibition against casinos. The Norska Lotteritillsynet supervises the system (http://www.lotteritillsynet.no).

In Norway, gambling machines are currently run by private operators and charitable organisations under a licence system, and gaining control of the slot machine market has been an important aim of the government. For some time, the authorities had no control over the number of gambling machines in use in Norway. During 2005, the gambling market in Norway had a turnover of approximately 45.7 billion NOK (5.39 billion Euro) (Norsk tipping, 2005). During 2004, gambling machines had approximately 60% of the market share. On 17 June 2003, the Norwegian Parliament adopted legislation granting the state-owned gambling company Norsk Tipping a monopoly on the operation of gambling

machines with a planned start date of 1 January 2006. According to the government, the new system was motivated by the wish to prevent compulsive gambling and crime, and a model with a state-owned company holding exclusive rights was considered to better secure the gambling machine market. This led to a letter of formal notice from ESA in April 2004 (Reasoned Opinion, 2004). In ESA's view, the Norwegian government had not shown that its gambling policy was systematic and consistent enough to justify restrictions of the basic freedoms provided for by the EEA (ESA, 2004). Here, ESA comments on the fact that consumers are encouraged to play different games and that the Norwegian state, through Norsk Tipping, has lately increased the number of available games and varieties of gambling. Moreover, the ESA regards the legislation to be contrary to the principle of proportionality, as the objectives pursued by the enactment of the legislation could have been reached by less restrictive means within the boundaries of a licence system. On the basis of these considerations, the ESA concluded that Norway had infringed Articles 31 and 36 of the EEA (Reasoned Opinion, 2004). In the wait for a final decision, the situation is uncertain.

In March 2001, the Norwegian Ministry of Cultural Affairs set up a Specialist Committee to report on a number of aspects relating to the current and future market for money games in Norway. Among other things, the committee was asked to consider how Norway should respond to technological developments and foreign competition in the gambling market. In December the same year, the report 'Norske pengespel i ei digital framtid' was presented (Kulturdepartementet, 2001). In the report, the government was requested to consider if Internet gambling with foreign companies could be limited through strict control of economic transactions following a model presented by the Danish report on the subject. The report came to the conclusion that the international money gambling market will increasingly become a threat to national money games unless the national games are equipped with competitive conditions. Norwegian operators must therefore be allowed to fully exploit digital distribution channels and to make appropriate changes to their products. The national games should furthermore be regulated to ensure that they operate under conditions that make it possible for them to compete with foreign games.

Following these recommendations, the Gaming Board has recently given a 1-year temporary licence to arrange lottery on mobile telephones. The licence is given for 1 year to a volunteer organisation. Three temporary licences to arrange Internet gambling in Norway were also given. The licences were given to Norsk Tipping and Norsk Rikstoto and a volunteer organisation (http://www.lotteritilsynet.no).

Iceland

The University of Iceland Lottery (Happdrætti Háskóla Íslands) is state owned and the oldest statutory lottery in Iceland, established in 1933. The University had, until June 2006 (Act no. 530/2006), an exclusive licence to run different kinds of lotteries and coin-operated gambling machines. Coin-operated gambling machines appear to be the most popular of these forms at present. The University pays 20% of the net profits of these lotteries as a licence fee to the Treasury, but not more than 150 million ISK (1.75 million euro). Two other central actors are Islensk Getspá (Lotto Iceland) and Islenskar Getraunir (Icelandic sports pools), and their surpluses go to sports and programmes for the disabled. Getraunir has a monopoly on sports games and Getspá operates games of chance with different charity organisations.

Under legislation passed in 1994, the company Íslenskir Söfnunarkassar (Icelandic Betting Machines) is owned by the Icelandic Red Cross, the Landsbjörg Life-Saving Association,

and the association Alcohol Concern and is licensed to run coin-operated betting machines ('fruit machines' or 'one-armed bandits') for fundraising purposes. Before that date, the individual organisations had each operated similar machines under licences from the Ministry of Justice since 1972. The machines involved are very similar to those operated by the University of Iceland, the main difference being that the university's gambling machines are interconnected to accumulate large jackpot prizes, while the betting machines may not be interconnected and the prizes are far smaller, the maximum being ISK 100,000 (1170 Euro). These betting machines are generally located in refreshment shops and small restaurants, while the University's gambling machines are located in special gambling saloons and restaurants. Iceland has at the moment a prohibition on casinos. The total turnover during 2004 was 4.5 billion ISK (53 million Euro) (Ministry of Justice and Ecclesiastical Affairs, mail correspondence, 2005).

The Lotteries and Tombolas Act No. 6/1926 was until recently the general existing law on lotteries in Iceland. In March 2004, the Icelandic government received a letter of formal notice from ESA (No. 36/04/COL) about an alleged violation of article 31-36 of the EEA on lotteries and tombolas. According to ESA, it is a violation of the EEA that lotteries are limited to Icelandic companies only. During an ESA package meeting in May 2004, the Ministry presented a draft bill to the ESA representatives with a complete revision of rules for granting licences for operating general lotteries. The bill states that a licence can only be granted to a company, association, or institution that is established in the EEA for the purpose of obtaining funds for public benefit in Iceland. Furthermore, the bill provides that the Minister be authorised to subject a lottery licence to the condition that advertising expenses do not exceed a given limit and also that a licence holder provide funds for research and measures aimed at fighting problem gambling and its consequences. The bill was put before the parliament in April 2005 and was taken into effect on 1 July 2005. The Government sent a reply, dated 12 August 2004, to the letter of formal notice. The issues that Icelandic authorities stressed were mainly moral points, such as being able to combat illegal gambling and monitoring gambling addiction, and also that the proceeds of the lotteries shall not be for personal gain but go to some good public cause, such as charities. Iceland is at the moment following what the actions of the EU against a number of countries will result in and whether further changes are necessary.

Iceland has so far not received any applications from foreign game operators like the other Nordic countries have, probably because the market is considered to be too small. Foreign operators on the Internet have not, according to the Justice Department, attracted Icelandic gamblers to any great extent. There are, however, preparations for future cooperation between the Department and the two major credit card companies in Iceland in connection with Internet gambling (e-mail exchange with Icelandic Justice Department, April 2005).

Conclusions

One of the EU's main goals is to create a common market with free movement of goods, people, services, and capital. Membership in the EU implies that a member state give up parts of its self-determination in certain areas. There is an obvious conflict between the establishment of a common market and the different member states' interests in maintaining state-owned monopolies. The work of the commission and the rulings of the ECJ have so far mostly focussed on deregulation and harmonisation. Exemptions in many areas have disappeared for the benefit of central standardisation within the union. So far, however, gambling has not been the object of any harmonisation initiatives within the EU. In brief, the rulings in the gambling cases have shown us that the national monopolies are indeed

infringing on European law. However, such infringement is admissible under certain circumstances.

The ECJ has consistently accepted that national legislation that confers exclusive rights to certain undertakings to offer gambling services does not, as such, constitute a violation of the European Community law, as long as this legislation is justified by objectives of social policy and consumer protection aimed at limiting the harmful effects of gambling activities, and if the restrictions are nondiscriminatory and proportionate to the objectives. However, the raising of money for good causes cannot in itself justify a restrictive policy. The Gambelli case also points out that national gambling restrictions are only acceptable according to the Treaty if they reflect a concern to bring about a genuine diminution in gambling opportunities and if the financing of good causes or the state is only an incidental beneficial consequence, rather than the main purpose. In light of the specific social and cultural features of each member state, national authorities must determine what is required to protect players, and the member states have so far enjoyed large discretionary power in regulating games. This discretionary power is not limited by the fact that other member states have regulated games of chance in a more liberal way. Since it is for the national court to determine whether legislation serves aims which might justify it and if it is proportional, different national courts have made different interpretations. This shows the difficulties with proportionality tests, especially when it comes to questions related to public health. Furthermore, courts throughout Europe have to decide whether state lotteries are giving sales and profits priority over the control of gambling. If they are, they are not entitled to claim monopoly status. Many gambling monopolies today appear more like private businesses than companies with a public health mandate. In order to avoid risking dissolution of monopolistic structures, state-authorised companies may have to modify or perhaps withdraw from certain areas, products, or marketing campaigns. In light of recent cases in the national courts of, for example, Holland and Germany, it would seem that a state which actively seeks to stimulate demand for gambling products, whether through the development of new gambling games, the opening up of new channels of distribution, or the roll-out of aggressive marketing campaigns, could have some difficulty justifying its national gambling restrictions.

Even if gambling is a national question, considering the subsidiarity principle, the Commission has recently on several occasions questioned national gambling regulations. In October 2004, the Commission decided that it would report Greece to the ECJ for infringing community regulation of the free movement of goods and services because the country explicitly forbids electronic games with electronic mechanisms and software. Furthermore, all of the Nordic countries have received letters of formal notification from either the Commission or the ESA questioning different parts of their gambling regulations. Some of the recently published Nordic reports on gambling indicate a concern with both the rising number of people with gambling problems and the implications of ECJ court decisions on national legislation, but above all with the growth of the Internet and technical innovations. The growth of the Internet has resulted in more gambling with the help of computers both at home and in gambling cafés. This development is also a real threat to the existence of the state-run gambling companies. In the future, one of the challenges for politics around gambling is to adjust national laws to the new techniques.

With the recent changes in the service directive, it is unlikely that the proposal will affect gambling, however, other types of common European regulations can change the possibilities for national regulation in the future. In January 2005, the European Commission signalled their intention to reform the EU gambling market when they appointed the Swiss

Institute of Comparative Law to conduct a study to evaluate how the differing laws regulating on-line and off-line gambling services, as well as games in the editorial content of the media and certain types of promotional games, affect the smooth functioning of the common market for these and associated (e.g., media, sports, charity, tourism) services and thus could restrict the economic and employment growth associated with such services. The efforts of the EU to promote the development of the Internet make future changes in the regulations of the European gambling market very likely. Those changes will, furthermore, most likely be in a more liberal and deregulated direction.

Finally, gambling is a relatively new research area, and it is therefore important that researchers and politicians see the common ground with such areas as alcohol, tobacco, and pharmaceutical research, rather than focussing on the differences between different areas in the public health field. In connection with increased globalisation and international commerce, it has been more difficult to maintain effective national regulations in the public health area. A changed view of the State's role in society, increased mobility and availability, market liberalisation and private interests' more prominent role, deregulation, and fast technical developments are all things that challenge such areas as gambling policy right now.

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[1] Some aspects of this article have been published in Swedish (Cisneros Örnberg, J. (2005). Ökat tryck på nordiska spelmonopol. *Socialt Perspektiv, 1*, pp. 85–97).

[2] The EEA was signed in 1993 between the European Community and the then European Free Trade Area (EFTA) countries, with the exception of Switzerland. The basic idea in the EEA agreement is that the EFTA countries are a part of the European Community inner market, but outside the institutional system and decision-making process. With a few exceptions, the set of rules and regulations for free movement of goods, services, people, and capital, along with rules on competition and the main part of the harmonising legislation, also apply for the EFTA countries. The regulations in the EEA agreement are therefore very similar to the Treaties of the European Community, and the EFTA countries are continuously adapting to the changes in legislation that are made through new EU directives. The common rules are administered by the European Community institutions and the EFTA Surveillance Authority (ESA).

[3] Unlike in Sweden, the figure for slot machines is not the net turnover, but turnover minus wins to players.

[4] The main language in Åland is Swedish.

An overview of prevalence surveys of problem and pathological gambling in the Nordic countries

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Abstract

Estimates of the prevalence of gambling problems among adults by sampling from whole population registries have been made in Finland, Iceland, Norway, and Sweden. The studies in Norway and Sweden are fairly similar, showing a higher prevalence in Sweden according to the South Oaks Gambling Screen Revised (SOGS-R), and similar prevalence according to the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition (DSM-IV) screens. The difference is unexpected because Norway has relatively more gambling machines and Norwegian citizens spend more money on gambling. However, the low response rates in Norway may explain the result. Preliminary results from Iceland (2005) with a DSM-IV screen do not differ from those from Norway and Sweden concerning prevalences of pathological gambling, but differ from Norway concerning problem gamblers. However, different DSM-IV screens were used in the three countries, and response rates differed. With these reservations, the past-year prevalence of pathological gambling in Iceland, Norway, and Sweden is about 0.3%, as estimated from DSM-IV screens. Studies of gambling problems among young people have only been performed in Norway.
Key words: prevalence, problem gambling, pathological gambling, Nordic countries

Introduction

The Nordic countries are Denmark, Finland, Iceland, Norway, and Sweden. Iceland is the smallest country, with 0.3 million inhabitants, and Sweden the largest, with 9 million, while the other countries each have about 5 million inhabitants. They have a similar cultural background and similar (except for Finland) language, their political systems are similar, and they are all known as welfare states.

All Nordic countries have broad access to gambling on lotteries, instant win tickets, gambling machines, sports, horse racing, and bingo. From about the turn of the century, the availability of the games has steadily increased through Internet access. However, international casinos are only found in Denmark, Finland, and Sweden, and dog racing has only been available in Sweden for a few years. The gambling market is regulated and most of it is owned by the public sector, although there has been an increase in on-line gambling from international operators.

A large percentage of the adult population in the Nordic countries participates in gambling. For example, prevalence studies have estimated the past-year participation in gambling activities (gambling at least once last year) at 74% in Finland (Ilkas & Turja, 2003), 81% in Norway (Lund & Nordlund, 2003), and 89% in Sweden (Rönnberg et al., 1999). The most popular forms of gambling (according to past-year participation measured in prevalence studies) in Finland are lotteries (66% gambled past year), scratch tickets (40%), and slot machines (38%) (Ilkas & Turja, 2003). In Iceland, the top three are Lotto (56%), slot machines (38%), and scratch tickets (30%) (Ólason, Finnbogadottir, Hauksdottir, & Barudottir, 2003). In Norway, 74% participated in lotteries last year, 21% played slot machines, and 21% played bingo (Lund & Nordlund, 2003). In Sweden, the most popular

forms of gambling are fast lotteries (scratch tickets and Keno) (57%), televised bingo (54%), and national lotteries (46%) (Rönnberg et al., 1999). Lund and Nordlund (2003) mention slot machines, pools, and lotteries as the most popular gambling activities in Denmark.

Prevalence studies of gambling problems with adults have been performed in Finland, Iceland, Norway, and Sweden. In Denmark, a study was performed in 2005, but the results have not yet been published. Furthermore, studies of gambling among young people (between 12 and 19 years of age) have been carried out in Norway (for Iceland, see Ólason, Skarphedinsson, Jonsdottir, Mikaelsson, & Gretarsson in this issue). The studies to be reported here have, with one exception, used internationally known screening instruments.

For research, the Nordic countries have an advantage over most other nations in the availability of comprehensive national registers with data that also facilitate access to telephone numbers. These registers can be used in sampling and in nonresponse analyses. An example is the Swedish study by Rönnberg et al. (1999), where the register of the total population was used for sampling. Of the sample, 89.2% could be reached by telephone and less than 0.5% did not have a correct address. The number of unlisted phone numbers is around 5% in the Nordic countries and these cannot be reached using the national registers.

The aim of this report is to give an overview of these prevalence studies. Many were reported in a Nordic language, and they might also be difficult to access for other reasons.

In the present report, the results of the studies are expressed as relative frequencies of problem gamblers and pathological gamblers. The guiding principles of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV, American Psychiatric Association, 1994) are followed for pathological gambling. In this report, and in accordance with Nordic usage, problem gamblers must meet three or four criteria. Sometimes the term *disordered gambler* is used, comprising problem and pathological gamblers together (Weinstock, Whelan, & Meyers, 2004), and the concept of *at-risk gamblers* is used by Götestam and Johansson (2003). However, the two DSM-IV concepts are not used everywhere outside the Nordic countries, and even in these countries other terms often occur. The transfer of the results from these studies to the present report implies some use of a 'straitjacket'. Therefore, at the end of the overview of the results, terms of some studies that do not coincide with DSM-IV are commented on in Table 1. Another problem is that the comparability of the studies is reduced by the variation in response rates. Furthermore, response rates are calculated in different ways, and so it is necessary to specify how this was done in the different studies.

Estimates of prevalence in the whole adult population

Finland

In 2003, 5,013 randomly selected people aged 15 years and older were interviewed by telephone (Ilkas & Turja, 2003). The researchers administered the South Oaks Gambling Screen, Revised (SOGS-R, Lesieur & Blume, 1987) to 2,485 people who had said that they had taken part in a game at least twice a month during the past year. With a lifetime perspective, 4% and 1.5% of the sample were problem and probable pathological gamblers, respectively. The sample was randomly drawn from telephone registers, stratified by age group, gender, and place of residence to represent the Finnish people over 15 years of age. The response rate was not reported.

Iceland

In 2000, Gallup (IMG-Gallup 2000, in Ólason, Barudottir, & Gretarsson, 2005) conducted a telephone survey using a lifetime version of the NORC DSM-IV screen for gambling problems (NODS) (Gerstein et al., 1999). The sample size was 1,500 people in the age range between 16 and 75 years, randomly drawn from the national register. The response rate was 70.5% (1,057/1,500). The total lifetime prevalence rate for problem gambling was 0.7% (score 3–4), with 0.6% in the pathological group. Pathological gambling was only found among men (1.2%).

Preliminary results from a study conducted in 2005 (Ólason et al., 2005) suggest a higher prevalence. The sample was drawn randomly from the national register and included 5,000 adults with ages ranging from 18 to 70 years. Of the original sample, 192 were considered not eligible respondents (due to death, illness, or residence overseas), resulting in a total sample of 4808. Of eligible respondents, 10.9% could not be reached, 17.6% refused participation, and a further 0.4% terminated the interview; 3,358 respondents completed the interview. The response rate was 69.8% (3,358/4,808). Data collection was mostly performed by phone, although about a hundred people replied by post. Two scales were used to estimate pathological gambling during the last 12 months, the Problem Gambling Severity Index (PGSI) from the Canadian Problem Gambling Index (Ferris & Wynne, 2001), and the 19-item version of the DSM-IV criteria questions (DIGS) (Stinchfield, 2003). The prevalence rate of current problem gamblers according to the PGSI was 1.1% (±0.4%), and of pathological gamblers was 0.5% (±0.2%) according to both instruments. Men were three times more likely to be pathological gamblers than women, and people with low education and young age were more at risk than other groups.

Norway

In 1997, Götestam and Johansson (2003) selected 4,820 telephone numbers using random-digit dialling. The authors consider 607 of these as not being real noncompleters (wrong or unused number, or failing the inclusion criteria), thus giving a sample of 4,213 (4,820 – 607), and real dropouts to be 2,199 (2,806 – 607). That yielded a response rate of 47.8% (2,014/4,213). The telephone interviews were based on the DSM-IV criteria for pathological gambling. The questions concerned current problems, required yes or no responses, and resulted in 0.45% at-risk gamblers and 0.15% pathological gamblers.

Five years later, Lund and Nordlund (2003) used telephone interviews, or postal enquiries if the person was not reachable by phone. They randomly selected 9,529 people from the national register and answers were obtained from 5,235, giving a response rate of 54.9% (5,235/9,529). According to SOGS-R (past-year perspective) 0.4% were problem gamblers and 0.2% probable pathological gamblers (confidence interval for problem and pathological gamblers combined ±0.2%), while with the lifetime perspective the corresponding numbers were 0.7% and 0.3% (combined confidence interval ±0.3%), respectively. With the NODS, 0.4% were problem gamblers and 0.3% pathological gamblers over the past year (combined confidence interval ±0.2%), while the corresponding numbers were 0.8% and 0.6% using the lifetime perspective (combined confidence interval ±0.3%). Disordered gamblers played more games, used more gambling machines, and bet on more sports than people with no gambling problems, and were four times more numerous among males than among females.

Sweden

Kühlhorn et al. (1995) made use of a representative postal enquiry in 1990 with a response rate of around 80%. (The exact response rate and method for calculating it were not reported.) They reached 13,861 people to enquire about the amount of stakes played in the most common games available at that time. After interviews concerning the size of stakes with people who identified themselves as pathological gamblers, the authors found that stakes of 50,000 SEK (approximately 5,500 €) and higher were characteristic for pathological gamblers, while stakes of lower size down to 30,000 SEK (3,300 €) characterised problem gamblers. Using these economic criteria when analysing a representative sub-sample of 5,042 people, 0.4% were problem gamblers and 0.2% probable pathological gamblers after correction for estimated bias in their reports of gambling stakes.

Rönnberg et al. (1999) in 1997–1998 used a total sample of 9,917 randomly selected people, aged 15 to 74. Three separate random samples were drawn from the national register. The first consisted of a sample of 8,500 people aged 15 to 74, stratified by age, gender, and education. The second was a sample of 1,000 people aged 15 to 17, and the third sample was of 500 non-Swedish-born people. Of the original samples, 83 were considered not eligible respondents (due to death or emigration). With telephone interviews, or postal enquiries if the person was not reachable by phone, 7,139 out of 9,917 participated in the study, for a response rate of 71.9% (7,139/9,917). Of the sample, 89% were contacted by phone and 11% by postal questionnaire. The response rates for the methods were 77% and 31%, respectively. The authors found that 1.4% (±0.3%) were problem gamblers and 0.6% (±0.2%) probable pathological gamblers with reference to the past year according to SOGS-R. In the lifetime perspective, the corresponding figures were 2.7% (±0.4%) and 1.2% (±0.25%). According to the Fischer DSM-IV screen (Fisher, 1996), 0.6% (±0.2%) were problem gamblers and 0.3% (±0.1%) severe problem gamblers in the past year. Disordered gambling (pathological and problem gambling) was four times more prevalent among men than among women. Disordered gamblers were generally less than 45 years old, and they were more often born abroad than were people with no gambling problems. They most commonly gambled at casinos, gambling machines, card games, bingo, sports events, horse racing, and fast lotteries, in descending order.

In a follow-up in 1999–2001 of the Rönnberg et al. (1999) material, Jonsson et al. (2003) found that the DSM-IV Fisher screen in 1997 predicted the corresponding score in the year 2000 (r = .52); it also had predictive power concerning comorbidity, but in this case the correlations were only low or moderate. For SOGS-R, the predictions were low or moderate throughout.

Estimates of gambling prevalence among young people

Norway

In 1999, Johansson & Götestam (2003) approached 7,162 randomly selected young people, 12 to 18 years old. It was a two-sample design—of the 3,237 participating in the study, 1,913 were interviewed by phone and 1,324 answered a postal questionnaire. The telephone sample was of 10,000 household phone numbers with adults 37 to 52 years old, for whom a high proportion of children aged 12 to 18 was expected. Of these, 1,913 completed the interview, 2,915 were considered real dropouts, and 5,172 were considered nonreal dropouts (telephone number wrong or out of use, or outside inclusion criteria).

Furthermore, the number of dropouts was also reduced by 632 for people assumed to be 'outside the inclusion criteria'. The response rate was calculated (1,913/(1,913 + 2,915 – 632)) at 46%. The postal sample had wrong addresses for 34 of their representative register sample of 3,000 individuals. This response rate was calculated (1,324/(3,000 – 34)) at 45%. A DSM-IV screen with a past-year perspective using yes and no responses was administered to 805 youth who said that they gambled at least once a week. Of the total sample of 3,237 people, 3.5% were estimated to be problem gamblers and 1.8% pathological gamblers.

Rossow and Hansen (2003) analysed a nationwide questionnaire given to Norwegian students aged 13 to 19 years. Of 12,923 students in the selected schools, 11,928 participated, giving a response rate of 92% (11,928/12,923). They used the Lie/Bet questionnaire (Johnson, Hamer, Nora, Eisenstein, & Engelhart, 1997) with two questions with a lifetime perspective, combined with a chasing question (if they gambled in order to win back their losses). It was estimated that 3.2% of the young people were problem gamblers.

Table 1.

Measures equivalent to problem gambler *and* pathological gambler *in four studies*

Country	*Authors*	*Method*	***'Problem gambler'***	**'Pathological gambler'**
Finland	Ilkas & Turja	SOGS-R	3–4 points	≥ 5 points
Iceland	Ólason, Barudottir, & Gretarsson	PGSI	3–7 points	≥ 8 points
Norway	Rossow & Hansen	Lie/Bet questionnaire and chasing	2 points on Lie/Bet and the answer 'Every time I bet' on chasing	---
Sweden	Kühlhorn et al.	Size of stakes	Stakes of 30,000–49,999 SEK	Stakes of ≥ 50,000 SEK

Note. The table gives the rules used in the present report for transforming the study's concepts to the two standard concepts.

Discussion

First, a comment on the results of studies of adults. The prevalence of gambling was naturally higher using a lifetime perspective (*did you ever…*) than with a past-year perspective (*in the last 12 months…*).

Furthermore, when the results of SOGS-R, which only includes about 40% of the DSM-IV criteria, are compared with the results from screens that include all criteria (Fisher's DSM-IV-based screen, and a screen with questions directly derived from DSM-IV (Götestam & Johansson, 2003)), the prevalence was as a rule twice as high according to SOGS-R than according to the other screens. One exception is NODS, which gave similar results as SOGS-R in Norway (Lund & Nordlund, 2003).

The prevalence of both problem and pathological gambling in Finland, where the SOGS-R with a lifetime perspective was used, was much higher than in the other countries. The difference may be partly due to the screening method and the lifetime perspective. However, the decision to interview people further only if they reported having taken part in a game at least twice a month during the past year excluded those abstaining at the time even though they had gambled earlier. Taking this factor into consideration, the prevalence should be even higher. It is important to check the Finnish results using other methods.

The Norwegian and Swedish studies are fairly similar; the SOGS-R and DSM-IV screens were administered in both countries. According to SOGS-R, the prevalence was lower in Norway than in Sweden, while there was no difference according to the DSM-IV screens. Considering the accessibility of gambling and what is known about expenditures for gambling—e.g., Norway has four times more gambling machines per 1,000 inhabitants than Sweden (Hansen, 2005)—the difference according to the SOGS-R is surprising. The results may be explained by the broader gambling market in Sweden, but of greater importance is probably the higher noncompletion rate with randomly selected cases in Norway; i.e., the response rate there was only 48% to 55%, compared to a response rate of 72% in Sweden. It seems probable that people with gambling problems tend to be lost in studies with poor response rates.

Iceland (2005) can also be compared with Norway (2003) and Sweden (1997–1998) concerning prevalence of gambling as estimated by DSM-IV screens. The preliminary results from Iceland show no significant differences from Norway and Sweden in the current prevalence of adult pathological gambling. The current prevalence of problem gamblers is significantly higher in Iceland than in Norway, but is within the confidence interval compared with Sweden. However, different DSM-IV screens were used in the three countries, and the Swedish study is at the time of this comparison already 7 years old, which makes a comparison with more recent studies problematic.

In summary, it has proved difficult to compare the results of prevalence studies in the different Nordic countries. These problems were discussed at a research symposium in Helsinki in March 2005, and ideas were put forward for improving strategies to render gambling research results more reliable and comparable.

Concerning gambling among young people, prevalence studies have been performed in Norway, but they differed in using different instruments and none were adapted for young people. Fairly high prevalences of problem gamblers and pathological gamblers were reported in these studies; these results should be verified. (For Iceland, see Ólason et al. in this issue)

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Prevalence estimates of gambling and problem gambling among 13- to 15-year-old adolescents in Reykjavík: An examination of correlates of problem gambling and different accessibility to electronic gambling machines in Iceland

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Abstract

This paper reports the main findings from a prevalence study of adolescent gambling and problem gambling among Icelandic adolescents. The final sample consisted of 3,511 pupils aged 13 to 15 in 25 primary schools in Reykjavík. The results indicated that 93% of adolescents had gambled some time in their life and 70% at least once in the preceding year. Problem gambling prevalence rates were evaluated with two gambling screens, *American Psychological Association Diagnostic and Statistical Manual*, 4th edition, Multiple-Response-Junior (DSM-IV-MR-J) and the South Oaks Gambling Screen Revised for Adolescents (SOGS-RA). The DSM-IV-MR-J identified 1.9% as problem gamblers, while SOGS-RA identified 2.8% as problem gamblers. The results also showed that problem gamblers reported more difficulties in school and used alcohol and other drugs more frequently than adolescents who gambled socially or not at all. Finally, evaluation of electronic gambling machine (EGM) accessibility revealed that gambling on low-stakes EGMs in public places was more common than on EGMs in arcades or bars and restaurants. The potential implications of these findings are discussed.

Key words: adolescent, gambling, problem gambling, electronic gambling machines, EGMs

Introduction

Studies in North America, the United Kingdom, and Australia show that gambling is a common pastime among adolescents, which has led to growing concerns about increased underage gambling in these countries (Delfabbro, Lahn, & Grabosky, 2005; Fisher, 1999; Griffiths, 1995; Hardoon & Derevensky, 2002; Jacobs, 2000, 2004). A recent review of long-term trends in adolescent gambling in North America from 1984 to 2002 suggests a substantial increase in adolescent gambling. For the period from 1984 to 1988, the median level of gambling participation was 45%, but it had risen to a median level of 65% for the period from 1989 to 2002 (Jacobs, 2004). Further, the accumulating evidence for the past 10 years shows that adolescent problem gambling estimates in North America are relatively high, ranging from 2% to 7.4% (Derevensky & Gupta, 2000; Gupta & Derevensky, 1998; Ladouceur, Boudreault, Jacques, & Vitaro, 1999; National Research Council, 1999; Poulin, 2000; Shaffer & Hall, 1996; Westphal, Rush, Stevens, & Johnson, 2000). Studies in other countries such as England, Spain, and Australia show similar prevalence rates, ranging from 2% to 6% (e.g., Becoña, 1997; Delfabbro et al., 2005; Fisher, 1999; Moore & Ohtsuka, 1999; Wood & Griffiths, 1998). A common finding in all these countries is that adolescent boys gamble more widely and more frequently than girls—problem gambling rates are as

much as two to three times higher among boys than girls (e.g., Delfabbro et al., 2005; Fisher, 1999; Gupta & Derevensky, 1998; Jacobs, 2000; Stinchfield, 2002).

Studies in the Nordic countries

There is a paucity of research on the prevalence of gambling and problem gambling among adolescents in the Nordic countries. In fact, only three such studies are known to the authors—two from Norway and one from Iceland.

The first Norwegian study included two samples with different data collection formats—telephone interviews and a postal questionnaire. After excluding nonreal dropouts in both samples (see Johansson & Götestam, 2003, for further information), the total response rate in the study was 45.2%. The final combined sample thus consisted of 3,237 adolescents aged 12 to 18 (Johansson & Götestam, 2003). Pathological gambling prevalence was estimated with a 10-item questionnaire based on the *American Psychological Association Diagnostic and Statistical Manual*, 4th edition (DSM-IV). Only those who reported weekly gambling were administered the DSM-IV criteria items. The main finding was that gambling participation was widespread among Norwegian adolescents; about 82% admitted to gambling during the past 12 months and 25% gambled on a weekly basis. Of the total sample, 1.76% were identified as probable pathological gamblers (positive answer to five or more items), with an additional 3.46% as 'at-risk' gamblers (positive answer to three or four items). There were clear gender differences, as weekly gambling was about 2.5 times more likely among boys than among girls. Furthermore, boys (2.79%) were more likely to be classified as probable pathological gamblers than girls were (0.69%).

The second Norwegian study was conducted in 2002 as part of a comprehensive study on the health and lifestyles of almost 13,000 adolescents aged 13 to 19 in 72 primary and secondary schools in Norway (Rossow & Hansen, 2003). The questionnaire was administered during class, and from the 12,923 eligible respondents 11,928 completed the survey (response rate = 92.3%). However, since it was not possible to include a comprehensive instrument on problem gambling in the study, problematic gambling was estimated with the two-item Lie/Bet instrument (Johnson, Hamer, Nora, Eisenstein, & Engelhart, 1997) and an additional item on chasing losses. Lifetime problematic gambling in the study was thus defined as a positive answer to all three items. In terms of gambling participation, the findings from the earlier study were replicated, as 78.5% of the total sample had gambled during the past 12 months. Problematic gambling rates for the total sample were 3.2%, and boys (5.4%) were more likely than girls (1%) to be classified as problematic gamblers (Rossow & Hansen, 2003).

The latest Nordic study was conducted in Iceland in 2003 (Olason, Sigurdardóttir, & Smári, 2006). The study included a convenience sample of 750 students aged 16 to 18 from 12 comprehensive schools. To evaluate problem gambling, the Icelandic versions of two instruments were used, the DSM-IV-Multiple Response-Junior (DSM-IV-MR-J, Fisher, 2000) and the South Oaks Gambling Screen Revised for Adolescents (SOGS-RA) (Winters, Stinchfield, & Fulkerson, 1993). Similarly to the findings in Norway, gambling was common among adolescents, with about 80% gambling during the last 12 months and 10% gambling weekly. There were differences in problem gambling rates between the two instruments. The DSM-IV-MR-J identified 2.0% of the sample as problem gamblers, with a further 3.2% at risk for gambling problems. On the SOGS-RA scale, 2.7% were identified as problem gamblers, with a further 4.4% at risk for gambling problems. Gender differences were observed for

both instruments, as boys were four to five times more likely to be classified as problem gamblers than girls were (Olason et al., 2006).

Comparison between the three Nordic studies suggests that gambling is widespread among adolescents in Norway and Iceland. Similar gender differences in gambling were also reported in all three studies, with boys gambling more widely and more frequently than girls.

However, it is difficult to compare problem gambling rates between the three studies, as they differ in choice of instruments, timeframes, and samples. In Norway, the different definitions of problem gambling as well as low response rate in the first study (Johansson & Götestam, 2003) may explain the different problem gambling rates between the two Norwegian studies (1.76% vs. 3.2%). The prevalence rate in the Icelandic study falls between the Norwegian ones, but unlike the Norwegian measures the Icelandic instruments were specifically devised for the adolescent population (Fisher, 2000; Winters et al., 1993). This makes the results from the Icelandic study more easily comparable to other adolescent prevalence studies in a number of different countries (e.g., Becoña, 1997; Delfabbro et al., 2005; Derevensky & Gupta, 2000; Fisher, 1999; Gupta & Derevensky, 1998; Poulin, 2000; Westphal et al., 2000; Volberg, 2002; Wood & Griffiths, 1998). However, it should be noted that the prevalence figures from the Icelandic study are only estimates, as the sample was a rather small convenience sample drawn from a limited number of schools (Olason et al., 2006).

It should also be noted that although the psychometric properties of both DSM-IV-MR-J and SOGS-RA are considered adequate by some researchers (Fisher, 2000; Olason et al., 2006; Poulin, 2002; Winters et al., 1993), questions have been raised regarding the validity of both instruments (e.g., Derevensky & Gupta, 2000; Derevensky, Gupta, & Winters, 2003; Jacques & Ladouceur, 2003; Ladouceur et al., 2000; Langhinrichsen-Rohling, Rohling, Rohde, & Seeley, 2004; Pelletier, Ladouceur, Fortin, & Ferland, 2004; Poulin, 2002). For example, results from some of these studies suggest that SOGS-RA overestimates the prevalence rates among adolescents, possibly because adolescents misunderstand some of the items (e.g., Derevensky & Gupta, 2000; Ladouceur et al., 2000). Interestingly, similar arguments were recently made against the DSM-IV-MR-J (Pelletier et al., 2004). Pending a better-validated problem gambling instrument for adolescents, these two instruments can be regarded as the best approximation available at the moment. However, in light of the controversy regarding the instruments' validity, it is advisable to include both of them in prevalence studies of adolescents. The results from a recent study on problem gambling among Icelandic adolescents also revealed that although the prevalence figures were higher for SOGS-RA than for DSM-IV-MR-J in the study, the concordance between the scales was acceptable (Olason et al., 2006).

Electronic gambling machine participation among Nordic youth

Interestingly, electronic gambling machines (EGMs) are more popular among adolescents in Norway and Iceland than they are in the United States, Canada, and Australia (Delfabbro et al., 2005; Jacobs, 2000; Johansson & Götestam, 2003; Rossow & Hansen, 2003; Olason et al., 2006). In Norway, it was reported to be the most popular gambling game in both studies, and it came second to scratch tickets in Iceland. These results are similar to reports from the U.K., where low-stakes fruit machines are very popular among British adolescents (e.g., Fisher, 1999; Fisher & Griffiths, 1995; Griffiths, 1995; Griffiths & Wood, 2000, 2004). Unlike in the U.K., where low-stakes fruit machines are legal for adolescents, there is an 18-year-old age limit on all EGMs in both Norway and Iceland. Still, as in the U.K., low-stakes EGMs

are widely distributed in public places in both countries. It is plausible that the easy access to EGMs in public places, where enforcement of age limits is more difficult than in other venues, explains the popularity of EGMs among adolescents in Norway and Iceland. Supporting this is the observation that although private games (e.g., cards, board games) are often more popular than commercial games among adolescents, wherever commercial games (such as lotteries) are widely available, youths increase their participation, even though they are not legally permitted to buy these products (Felsher, Derevensky, & Gupta, 2004; Griffiths & Wood, 2000; Jacobs, 2000; Stinchfield, 2002). In Australia, EGMs are restricted to casinos, hotel gaming floors, and clubs that enforce strict 18-year-old age limits to the premises (Delfabbro et al., 2005; Dowling, Smith, & Thomas, 2005), which means that EGMs are less accessible to adolescents in Australia than they are in the U.K., Norway, and Iceland. A recent study on adolescent gambling in the Australian Capital Territory also showed that EGM participation was less common among adolescents than most other gambling activities (Delfabbro et al., 2005).

The current study reports the prevalence rates of gambling and problem gambling among a comprehensive sample of 13- to 15-year-old adolescents in Reykjavík. The relationships between problem gambling and academic achievement, parental and peer gambling, and substance use were also examined. Finally, the question of accessibility of EGMs was examined by comparing the frequency of EGM participation among adolescents in three different locations with differential access.

Method

Participants

In the school year of 2003–2004, approximately 4,659 adolescents in grades 8 to 10 (13- to 15-year-olds) were registered in 30 schools in Reykjavík.[1] Of these 30 schools, 26 can be classified as regular state schools and 4 as private schools. Initially, five schools were excluded from the study as they had very few students in the appropriate age range, and two schools declined to participate.

A total of 3,573 adolescents from 23 schools participated in the study, constituting 77% (3.573/4,659) of all adolescents in this age range in Reykjavík. From the total of 4,199 adolescents registered in the participating schools, 3,511 valid returns were received (62 questionnaires were incomplete). The response rate in the participating schools was 84% (3,511/4,199), varying from 75% to 94% for individual schools. To evaluate the reasons for attrition rates, teachers filled out an attendance form for their students. About 6.1% of the students reported ill on the day of data collection, 2% were absent with permission, and 2% were absent without permission. About 0.5% did not participate because their parents refused their participation. No information exists for only 4.4% of the sample.

Valid returns were received from 1,711 boys and 1,791 girls (9 did not report their gender). The number of participants from each grade level was 1,184 in grade 8, 1,144 in grade 9, and 1,169 in grade 10 (14 did not report their grade level).

Instruments

1. SOGS-RA (Winters et al., 1993). The SOGS-RA is a 12-item modified version of the South Oaks Gambling Screen (SOGS; Lesieur & Blume, 1987). The SOGS-RA also includes questions on gambling participation and parental gambling. The questions for

gambling participation were adjusted to reflect the gambling situation in Iceland. Although there has been some variation between studies in the interpretation of scores from the SOGS-RA (see, e.g., Winters et al., 1993; Winters, Stinchfield, & Kim, 1995; Langhinrichsen-Rohling et al., 2004), generally a score of 4 or more is labelled 'problem' gambling, a score of 2 or 3 as 'at-risk' gambling, and a score of 0 or 1 as 'no problem' gambling (Wiebe, Cox, & Mehmel, 2000). This method was also adopted in the present study. In prior use, the scale yielded adequate internal consistency measures (α = .80), and the items load on one common factor (Winters et al., 1993). A recent psychometric evaluation of the Icelandic version of SOGS-RA showed an adequate reliability (α = .81), and all items loaded on one common factor (Olason et al., 2006).

2. DSM-IV-MR-J (Fisher, 2000). This is a revised version of the earlier DSM-IV-J gambling screen for adolescents (Fisher, 1992, 1993). The DSM-IV-MR-J includes 12 items that measure 9 out of 10 criteria for DSM-IV diagnosis of adult pathological gambling: (1) preoccupation with gambling, (2) tolerance, (3) loss of control, (4) withdrawal, (5) escape, (6) chasing, (7) lies, (8) illegal and unsocial acts, and (9) risked job, education, or relationship. Most items are given four response options: 'never', 'once or twice', 'sometimes', or 'often.' Generally, a score of 4 or more from the nine DSM criteria items suggests 'problem' gambling, a score of 2 or 3 suggests 'at-risk' gambling, and a score of 0 or 1 suggests 'no problem' gambling. The internal consistency reliability for this scale is satisfactory (α = .75), and the items load on one common factor (Fisher, 2000). Further, a recent psychometric evaluation of the Icelandic version of DSM-IV-MR-J confirmed that the scale has adequate reliability (α = .78), and all items loaded on one common factor (Olason et al., 2006).

3. Substance use. Eight questions were used to evaluate the frequency of smoking and alcohol and drug use during the past 12 months before the study. Respondents replied to all substance use questions on the same 7-point frequency scale ranging from 1 ('never') to 7 ('about daily'), except smoking, which was answered on a 3-point scale, 1 ('never'), 2 ('yes but less than daily'), and 3 ('about daily').

Procedure

After consent was obtained from the Icelandic Data Protection Authority and from the relevant school authorities, parents were sent a letter in which the research objectives were described and an opportunity to reject children's participation was given. Data collection was subsequently arranged in cooperation with each school's authorities and teachers. The questionnaire was always administered to students during lessons, and a trained researcher was present in most instances. In a few instances where this was not possible, teachers were given guidelines on how to present the questionnaire in the classroom.

All students attending lessons on the day of data collection received the same general information before they answered the questionnaire and were instructed to answer individually. Participation was voluntary and the students were ensured confidentiality and were specifically asked not to provide their names or other personal identification information. They were also told that they could terminate their participation at any time without any consequences.

Results

Gambling participation

From the total adolescent sample, 93% reported having gambled at least once in their lifetime, almost 70% had gambled during the previous 12 months, and 8% had gambled at least once a week for the preceding 12 months. Boys (79.4%) were more likely than girls (60.2%) to have gambled during the previous year (χ^2 (1, N = 3502) = 150.30, $p \leq .001$), and students in grade 10 (73.6%) were more likely to have gambled than students in grades 8 (67.4%) and 9 (67.7%) (χ^2 (2, N = 3497) = 13.43, $p \leq .01$).

The most popular gambling activities among the entire adolescent sample in the 12 months prior to the study were scratch tickets (48.2%), followed by EGMs (32.0%) and Lotto (28.1%). Interestingly, playing gambling games on the Internet without betting real money (25%) was surprisingly common among the adolescents. Table 1 presents the frequency figures for different types of gambling classified by gender and grade.

Table 1.

Frequency of gambling during the previous 12 months by gender and school grade

	Gender		Grade		
Gambling activity	**Boys** (n = 1,711)	**Girls** (n = 1,791)	**Grade 8** (n = 1,184)	**Grade 9** (n = 1,144)	**Grade 10** (n = 1,169)
Scratch tickets	54.7	42.0**	47.3	48.8	48.4
Gambling machines	46.0	18.7**	25.9	28.2	41.5**
Lotto	31.9	24.2**	27.0	26.6	30.4
Games of skill	35.4	16.7**	24.0	26.2	27.2
Card games	36.9	14.2**	21.9	25.0	29.1**
Internet gambling without betting money	36.4	13.9**	22.5	24.8	27.3*
Football pools	30.7	4.6**	16.2	17.6	18.1
Sport betting	23.4	2.3**	10.5	13.0	14.3*
Bingo	15.2	10.3**	14.2	11.1	12.6
Internet gambling with money	3.1	0.8**	2.6	1.5	1.5

Note. All table values are percentages. ** $p \leq .01$; * $p \leq .05$

Boys were more likely than girls to play all types of gambling. The difference was greatest for sports betting, as boys were about 7 to 10 times more likely to bet on the outcome of sporting events than girls were. There was little difference between grades for most types of gambling activity except the EGMs and card games, where participation was higher in grade 10 than in grades 8 and 9 (see Table 1).

Problem gambling

To examine possible order effects for the rates of problem gambling as measured either by SOGS-RA or DSM-IV-MR-J, the order of administration of the two instruments was counterbalanced. No significant differences between orders were found for SOGS-RA (t (3478) = .636, p = .525) or for DSM-IV-MR-J (t (3480) = .045, p = .964). This shows that the

order of the two measurement instruments for problem gambling in the questionnaire did not influence the problem gambling rates.

Subsequently, the problem gambling estimates were calculated. There were differences in problem gambling rates between the two instruments. The DSM-IV-MR-J identified 1.9% of the sample as problem gamblers with a further 3.7% at risk for gambling problems, and the SOGS-RA identified 2.8% as problem gamblers with a further 4.1% at risk for gambling problems (see Table 2).

Table 2.

Problem gambling by gender and grade: Comparison between SOGS-RA and DSM-IV-J-MR

Instrument	Nongambler % (*n*)	Social gambler % (*n*)	At-risk gambler % (*n*)	Problem gambler % (*n*)
SOGS-RA				
Gender				
Boys	20.8 (353)	67.5 (1144)	6.4 (108)	5.3 (90)
Girls	39.8 (711)	57.8 (1031)	2.0 (35)	0.4 (8)
Grade				
8	32.9 (385)	60.7 (709)	3.8 (45)	2.6 (30)
9	32.4 (370)	61.0 (697)	4.2 (48)	2.4 (27)
10	26.5 (309)	65.7 (765)	4.3 (50)	3.4 (40)
Total	**30.6 (1,064)**	**62.5 (2,175)**	**4.1 (143)**	**2.8 (98)**
DSM-IV-MR-J				
Gender				
Boys	20.8 (353)	68.8 (1168)	7.0 (118)	3.4 (58)
Girls	39.9 (711)	59.1 (1054)	0.6 (11)	0.4 (7)
Grade				
8	32.9 (385)	62.6 (732)	2.7 (32)	1.8 (21)
9	32.5 (370)	62.1 (708)	4.1 (47)	1.3 (15)
10	26.5 (309)	66.7 (777)	4.3 (50)	2.5 (29)
Total	**30.6 (1,064)**	**63.9 (2,222)**	**3.7 (129)**	**1.9 (65)**

Boys had more gambling problems overall than girls (SOGS-RA (χ^2 (3, N = 3480) = 230.03, $p \leq .001$), DSM-IV-MR-J (χ^2 (3, N = 3480) = 253.10, $p \leq .001$)) and were about 8.5 (DSM-IV-MR-J) to 13 (SOGS-RA) times more likely to be classified as problem gamblers than girls were. For both measures, similar findings were observed for grades, where the rate of problem gambling was similar in grades 8 and 9 but jumped considerably in grade 10 (SOGS-RA (χ^2 (6, N = 3475) = 15.51, $p \leq .05$) and DSM-IV-MR-J (χ^2 (6, N = 3475) = 20.84, $p \leq .01$)).

Overall, these results indicate that although DSM-IV-MR-J is a more conservative measure of problem gambling than SOGS-RA, both show the same gender and developmental differences.

It is worth noting that the concordance between the two measures seems to be better for girls than for boys, as both DSM-IV-MR-J and SOGS-RA identify 0.4% of girls as problem gamblers (see Table 2). The overlap between the two scales was further examined by

cross-tabulating them for boys and girls separately. As expected, there was considerable incongruence between instruments for boys. Of the total number of individuals classified as problem gamblers by either measure (n = 103), only 44 (42.7%) were classified as problem gamblers by both instruments. However, from the total number of problem gamblers for girls (n = 9), six (67%) were classified as problem gamblers by both instruments. Consequently, the Kappa statistic was considerably higher for girls (κ = .80) than for boys (κ = .58).

Correlates of problem gambling

In the following analyses including problem gambling, the DSM-IV-MR-J was used to classify the problem gambling groups.[2] Adolescents who gambled were asked about the age at which they first started gambling. Overall, the mean age of gambling onset was 9.5 years and there were no differences found for gender ($t(2117) = 1.287$, $p = .119$). Surprisingly, analysis for problem gambling revealed that there were no differences in age of gambling onset for gambling severity ($F(2, 1776) = 1.699$, $p = .183$). However, adolescents with gambling problems were more likely to remember a big win from the time they started to gamble ($\chi^2(2, N = 2391) = 160.40$, $p \leq .001$) than adolescents who gambled without problems.

The adolescents were also asked if their parents and peers gambled and if they thought that their parents or peers gambled too much. Notably, many adolescents reported that they did not know if their parents (17%) or peers (29%) gambled, and these were not included in the following analysis. Adolescents with gambling problems were more likely than other gambling groups to report that their parents ($\chi^2(2, N = 2003) = 16.11$, $p \leq .001$) and peers ($\chi^2(2, N = 1707) = 126.37$, $p \leq .001$) gambled. Further, about 10% of the problem gambling group and 5% of the at-risk group reported that their parents gambled too much, whereas only 2% of the social gamblers did so ($\chi^2(2, N = 2211) = 15.57$, $p \leq .001$). These differences between gambling groups were substantially greater for peer gambling ($\chi^2(2, N = 1890) = 77.82$, $p \leq .001$), where about 41% of the problem gamblers and 22% of those who are at risk for problem gambling reported that their peers gambled too much, but only 8% among the social gamblers.

Students were also asked three questions related to their academic performance. First, the students were asked about the average grades from their last exams. Second, the students were asked to evaluate how well they were doing at school, and finally they reported the average number of times they skipped classes every week. The results revealed that the problem gambling group reported lower grades ($F(3, 3057) = 32.87$, $p \leq .001$), were unhappier with their overall school performance ($F(3, 3473) = 35.77$, $p \leq .001$), and played truant more often ($F(3, 3459) = 113.32$, $p \leq .001$) than other gambling groups.

Finally, the students also responded to eight questions regarding their use of drugs and alcohol. About 4.9% of the adolescents smoke daily, 12.2% drink wine or beer and 5.8% strong alcohol once a month or more, 7.4% get drunk once a month or more, and 5.3% reported that they had smoked cannabis at least once in the previous year. Table 3 presents the frequency of substance use for each problem gambling group.

Table 3.

Frequency of substance use classified by problem gambling groups according to the DSM-IV-MR-J

Substance	Nongambler (*n* = 1,064)	Social gambler (*n* = 2,222)	At-risk gambler (*n* = 129)	Problem gambler (*n* = 65)
Smoking**				
Never	93.9	89.0	73.6	53.8
Less than daily	3.8	6.3	13.2	7.7
Daily	2.3	4.7	13.2	38.5
Beer/Wine**				
Never	71.9	48.9	20.9	15.6
Few times a year	22.8	37.7	51.9	26.6
Monthly or more	5.3	13.4	27.1	57.8
Strong alcohol**				
Never	87.1	72.5	43.8	32.3
Few times a year	11.1	21.5	37.5	29.2
Monthly or more	1.8	6.0	18.8	38.5
Getting drunk**				
Never	87.9	75.1	47.3	41.5
Few times a year	9.2	17.3	31.8	12.3
Monthly or more	2.9	7.6	20.9	46.2
Cannabis**				
Never	98.2	94.5	86.0	64.5
At least once	1.8	5.5	14.0	35.5
Hard drugs[a]**				
Never	99.2	95.8	85.3	63.1
At least once	> 1	4.2	14.7	36.9

Note. All table values are percentages. ** $p \leq .01$; [a]Hard drugs is a combined variable for the use of amphetamines or Ecstasy, and inhalation of gas or glue.

Not surprisingly, a linear relationship between severity of problem gambling and substance use emerges. Problem gambling youths are more likely to smoke daily, drink alcohol, and get drunk on a regular basis than those who do not gamble or gamble without problems. Further, about a third of the problem gambling group had used cannabis or hard drugs at least once during the 12 months before the study, but this activity was infrequent among adolescents that gamble socially or not at all. There is also a substantial difference between the problem gambling group and the at-risk gambling group, as adolescents who are problem gamblers use all substances two to three times more often than the group that is at risk for problem gambling (see Table 3).

Accessibility to EGMs

Examining regular (weekly or more) gambling participation for different gambling activities revealed that problem gamblers were more likely to gamble regularly on all activities than other problem gambling groups ($p \leq .001$). Further analysis also showed that problem gamblers play an average of two games on a regular basis (weekly or more), which is significantly more than is found among the at-risk (M = 1.4 games) or the social gambling (M = 0.12 games) groups ($F(2, 2420) = 361.24$, $p \leq .001$). Interestingly, EGMs were the most popular regular game among the problem gamblers (41%), followed by card playing (28%),

scratch cards (25%), sports betting (22%), and gambling on the Internet without betting money (21%).

EGMs can be found in different types of locations in Iceland. Low-stakes machines are in many public places, such as kiosks, fast-food restaurants, and video rental stores. Secondly, arcades and bars and restaurants (with an alcohol licence) have both low- and higher-stakes machines. Although alcohol is not sold in the arcades, both arcades and bars have an entrance age limit of 18 years. It should be stressed that all EGMs, independent of location, have an age limit of 18 years in Iceland.

To investigate if EGM participation differs between locations and types of machines, those adolescents who reported EGM participation during the 12 months before the study were asked how frequently (5-point frequency scale ranging from 1 ('never') to 5 ('very often')) they played the EGMs in these three different locations. The results are presented in Table 4.

Table 4.

Frequency of EGM participation classified by problem gambling groups according to the DSM-IV-MR-J

	Gambling frequency		
Location	**Never**	**Seldom**	**Frequently**
EGM in public locations			
Social gambler	6.9	77.7	15.5
At-risk gambler	–	58.9	41.1
Problem gambler	1.8	35.7	62.5
Total	**5.9**	**73.5**	**20.7**
EGM in arcades			
Social gambler	60.0	37.3	2.7
At-risk gambler	33.3	56.5	10.2
Problem gambler	9.3	51.9	38.9
Total	**54.6**	**40.1**	**5.3**
EGM in restaurants/bars			
Social gambler	78.7	19.7	1.6
At-risk gambler	44.4	48.1	7.4
Problem gambler	28.6	46.4	25.0
Total	**72.6**	**24.0**	**3.4**

Note. All table values are percentages.

Overall, adolescents gamble more frequently on low-stakes EGMs in public locations (94.2%) than they do in arcades (45.4%) or restaurants and bars (27.4%). Frequent participation was also considerably higher in public locations than other locations (see totals in Table 4). Examining the relationship between problem gambling and gambling frequency revealed that problem gamblers gamble more frequently than other groups on EGMs in public locations ($\chi^2(4, N = 1036) = 105.95$, $p \leq .001$), in arcades ($\chi^2(4, N = 1051) = 175.17$, $p \leq .001$), and in restaurants/bars ($\chi^2(4, N = 1058) = 167.02$, $p \leq .001$). The adolescents were also asked if their parents knew that they were betting on EGMs. Interestingly, about 57% of

the adolescents who replied to the question acknowledged that their parents knew about their EGM participation, and there was no difference between the problem gambling groups ($\chi^2(2, N = 888) = 1.03$, $p = .598$).

Discussion

The overall pattern of gambling participation among 13- to 15-year-old adolescents in Reykjavík shares many similarities with results obtained elsewhere (Delfabbro et al., 2005; Fisher, 1999; Hardoon & Derevensky, 2002; Jacobs, 2000, 2004; Johansson & Götestam, 2003; Olason et al., 2006; Rossow & Hansen, 2003). The majority of youth in Reykjavík have gambled some time in their lives, and about 70% have done so during the past 12 months. Similarly to the findings in Norway, boys gamble more widely and more frequently than girls, and the types of games that are most popular among Icelandic adolescents are commercial games such as scratch cards, EGMs, and the national lottery. Gambling participation is slightly less than reported in the earlier studies in Norway and Iceland (Johansson & Götestam, 2003; Olason, Sigurdardottir, & Smari, 2006; Rossow & Hansen, 2003), but the present sample is considerably younger and it is likely that gambling participation will increase with age. In fact, some evidence for this can be seen in the present study, where gambling involvement jumped considerably from grades 8 and 9 to grade 10.

Prevalence of problem gambling in the Nordic countries

The prevalence estimates for problem gambling obtained in this study are similar to prevalence figures reported in the earlier studies in Norway and Iceland, but somewhat lower than is typically reported in studies from North America, Britain, and Australia (e.g., Delfabbro et al., 2005; Fisher, 1999; Derevensky & Gupta, 2000; Gupta & Derevensky, 1998; Johansson & Götestam, 2003; NRC, 1999; Olason et al., 2006; Rossow & Hansen, 2003; Shaffer & Hall, 1996). Studies on the adult populations in Sweden, Norway, and Iceland also report slightly lower prevalence figures (0.15%–0.6%) of pathological gambling than is commonly reported in North America, Britain, Spain, or Australia (Becoña, 1996; Götestam & Johansson, 2001; Olason, Finnbogadóttir, Hauksdóttir, & Bárudóttir, 2003; Olason, Bárudóttir, & Gretarsson, 2005; Orford, Sproston, Erens, White, & Mitchell, 2003; Productivity Commission, 1999; Shaffer, Hall, & Vander Bilt, 1999; Volberg, Abbott, Rönnberg, & Munck, 2001). This suggests that the prevalence of problem gambling among adolescents and adults is less widespread in the Nordic countries than elsewhere. However, more research on both adult and adolescent problem gambling prevalence must be conducted within the Nordic countries to confirm the present results, particularly in Denmark, Finland, and Sweden, where no published studies on the prevalence of adolescent problem gambling exist.

The findings of this study reveal that Icelandic adolescents begin to gamble early (M = 9.5 years), a worrisome finding since early onset of gambling has been shown to be a risk factor for problem gambling (Jacobs, 2004). The comparison between problem gambling groups did not show a significant difference in age of onset in this study, but the likely reason for this is the delay between onset of gambling and problem gambling. The participants in this study were only 13 to 15 years old and therefore had a relatively short gambling history.

The results also show that problem gamblers report more difficulties in school (lower grades and truancy) and use alcohol and other drugs more frequently than adolescents who gamble socially or not at all. Further, problem gamblers more often reported that their parents and

peers gamble excessively than did other problem gambling groups. Such findings are commonly reported in the gambling literature and show that problem gambling is an indicator of broader difficulties in social and psychological adjustment of adolescents in different cultures (Delfabbro et al., 2005; Fisher, 1999; Griffiths & Sutherland, 1998; Gupta & Derevensky, 1998; Ladouceur et al., 1999; Vachon, Vitaro, Wanner, & Tremblay, 2004; Westphal et al., 2000; Winters, Arthur, Leitten, & Botzet, 2004).

Accessibility to EGMs

The popularity of EGMs among Icelandic adolescents is of concern. Almost one third of the 13- to 15-year-olds reported that they had played on EGMs during the past year. Boys were more involved than girls, and there was also a considerable increase in EGM participation from grades 8 (26%) and 9 (28%) to grade 10 (41%). EGM involvement also seems to continue to rise in older age groups, as about 48% of 16- to 18-year-olds reported that they had played on EGMs (Olason et al., 2006).

The findings of this study also revealed that low-stakes EGMs located in public places (kiosks, fast-food restaurants, video rental stores) are the predominant venues for adolescent EGM gambling. This indicates that the 18-year-old age limit on EGM gambling is particularly difficult to maintain in public places, even though the staff at such venues are equipped with remote controls to turn off the EGMs if they suspect the players to be under the legal age.

In venues such as arcades, bars, and licensed restaurants, where adolescents are usually not allowed (except when accompanied by adults), the enforcement of the age restrictions is easier. The findings of this study support this, as fewer adolescents report frequent EGM play in these venues than in the public places. However, adolescents do play gambling machines, even though the gambling machines are in venues such as arcades and bars and restaurants. In this study, about 45% reported that they had played in arcades and about 28% in bars or restaurants. Further, almost 60% of the adolescents that play gambling machines reported that their parents knew about their EGM gambling. These findings show that the enforcement of age restrictions in these venues is not satisfactory and that parents must be educated on the risks of EGM gambling for adolescents.

The popularity of EGMs among adolescents in Norway and Iceland is worrying. Although no conclusive evidence exists for the claim that EGMs are more addictive than other gambling games, there is general acceptance that EGMs are strongly associated with problem gambling (Dowling et al., 2005). For example, research on adolescent gambling in the U.K. shows that problem gambling among EGM players is relatively high (5%–6%), and EGMs seem to be the most predominant form of gambling reported in self-help groups and treatment centres in the world (Becoña, 1996; Dowling et al., 2005; Fisher, 1999; Griffiths, 1995, 1999; Griffiths & Wood, 2000, 2004). The results of this study support the link between EGMs and problem gambling, as EGM gambling was the most common regular (once a week or more) game played by adolescent problem gamblers (41%) in Reykjavík.

In conclusion, this study shows that most Icelandic adolescents gamble, and an estimated 1.9% to 2.8% are in trouble due to their gambling participation. The availability of gambling machines in public places is a matter of concern for the Icelandic community and must be addressed with stricter enforcement of the 18-year-old age limits. Further, the apparent success of the Australians in restricting adolescent gambling on EGMs suggests that the authorities in Iceland and Norway should seriously consider prohibiting the distribution of

gambling machines in public places.[3] Of course such measures are not likely to significantly reduce the prevalence of problem gambling in these countries, as adolescents would find other outlets for their gambling activities. Neither would it stop all adolescents from playing the gambling machines, but it would very likely decrease the number of adolescents being introduced to serious forms of commercial gambling too early in their lives.

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[1] This amounts to 33% of all 13 to 15 year old adolescents living in Iceland in December 2003.

[2] The results for SOGS-RA were in general very similar to the findings from the DSM-IV-MR-J.

[3] This statement is based on the results from one study in Australia (Delfabbro et al., 2005). Further evidence for the success of restricted adolescent access to EGMs in Australia is needed.

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Chasing the criteria: Comparing SOGS-RA and the Lie/Bet screen to assess prevalence of problem gambling and 'at-risk' gambling among adolescents

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Abstract

Most instruments assessing gambling problems are relatively extensive and therefore not suitable for comprehensive youth surveys. An exception is the two-item Lie/Bet questionnaire. This study addresses to what extent two instruments (Lie/Bet and South Oaks Gambling Screen Revised for Adolescents (SOGS-RA)) (1) overlap in classifying problem gambling and at-risk gambling, (2) reflect different underlying dimensions of problem gambling, and (3) differ in distinguishing between young gamblers with respect to intensity and frequency of gambling in gender-specific analyses. Data stemmed from a school survey among teenagers in Norway (net sample = 20,700). The congruence in classification of problem gamblers was moderate. Both instruments discriminated sensibly between youths with high versus medium and low gambling frequency and gambling expenditures, although more so for boys than for girls. Both Lie/Bet items loaded on one 'loss of control' dimension. The results suggest that the Lie/Bet screen may be useful to assess at-risk gambling for both genders in comprehensive youth surveys.
Key words: problem gambling, at-risk gambling, comparing instruments, adolescents, gender-specific analyses

Introduction

The prevalence of gambling problems seems to be significantly higher among young people compared to the adult population (see, for instance, Shaffer, Hall, & Vander Bilt, 1999, for a review). There is, however, no 'gold standard' for the assessment of problem gambling in surveys among youth, and the various surveys that have been conducted have applied a wide range of instruments (see, for instance, the South Australian Centre for Economic Studies, 2003) such as the South Oaks Gambling Screen (SOGS) and South Oaks Gambling Screen Revised for Adolescents (SOGS-RA), National Opinion Research Center Diagnostic Screen (NODS), DSM-IV and DSM-IV-J, Lie/Bet, Gamblers Anonymous (GA) 20 Questions, Massachusetts Gambling Screen (MAGS), The Canadian Problem Gambling Index, and the Victorian Gambling Screen (see, for instance, Lesieur, 2004; Schaffer et al., 1999; Shaffer & Hall, 2001; and Shaffer, LaBrie, LaPlante, Nelson, & Stanton, 2004, for reviews). The method of scoring 'at-risk' problem gamblers differs between studies and researchers (applying different scorings of 'subclinical' levels) (Lesieur, 2004). This implies that it is difficult to compare the prevalence rates of different studies. And the SOGS-RA, MAGS, and DSM-IV-J have not been validated with a criterion group of adolescent problem gamblers (Lesieur, 2004).

Several gambling researchers have pointed out the need to develop one international gold standard for the assessment of problem gambling in surveys (Derevensky & Gupta, 2000; Fisher, 2000; Langhinrichsen-Rohling, Rohling, Rohde, & Seeley, 2004). Although this has not yet been accomplished, it seems that many researchers consider DSM-IV (or DSM-IV-J)

as a standard and several studies have applied DSM-IV and DSM-IV-J as the standard when comparing various instruments (see, for instance, Derevensky & Gupta, 2000; Götestam, Johansson, Wenzel, & Simonsen, 2004). On the other hand, SOGS-RA still appears to be the most widely used screening instrument for gambling problems among adolescents (Langhinrichsen-Rohling et al., 2004).

From a public health perspective, one concern is that disordered gambling may be not only a problem in itself but also a gateway to substance use, anxiety, and other mental health disorders (Korn & Shaffer, 1999; Shaffer & Korn, 2002; Winters, Arthur, Leitten, & Botzet, 2004). The emerging health concern around youth gambling is related to the fact that not only do young gamblers seem to represent the highest-risk group for gambling problems but also problem gambling among youth to a large extent is associated with significant mental health problems, use of intoxicants, and criminal behaviour. It is therefore highly relevant to include questions on gambling behaviour and problem gambling in comprehensive youth surveys covering a wide range of topics, including health and problem behaviour. Furthermore, the expansion of gambling in many countries has also generated concern about problem gambling and a need to more accurately monitor gambling and gambling problems (Wiebe, Cox, & Mehmel, 2000), and a feasible way of monitoring gambling behaviour and gambling problems over time may be to include gambling questions in comprehensive surveys that are repeated periodically.

In comprehensive surveys where many topics are covered, it may, however, be difficult to include a full instrument like SOGS-RA or DSM-IV-J, and consequently a few-item instrument is more attractive to save space. The Lie/Bet questionnaire is such an instrument, containing two items. Although it may not be considered a diagnostic instrument, it is assumed that it may be useful to indicate possible problem gambling or at-risk gambling. It has been validated in two studies: one by Johnson et al. (1997) and one by Götestam et al. (2004). Johnson et al. (1997) applied a case-control design comprising 191 pathological gamblers and 171 controls, finding a very high sensitivity (.99) as well as specificity (.91). In two population surveys (adult population and youth population), comprising 1,383 and 894 respondents, respectively, when Götestam et al. (2004) applied DSM-IV criteria for pathological or at-risk gambling, they also found a very high sensitivity (.92 and .93) and high specificity (.96 and .85) for the adult and youth samples, respectively.

Orford (2003, p. 53) pointed out that 'no single existing screening questionnaire adequately reflects the multi-dimensional nature of problem gambling'. It has been suggested (South Australian Centre for Economic Studies, 2003) that the DSM-IV instrument principally measures dependence, whereas SOGS measures gambling-related problems such as financial stress and preoccupation with gambling. Petry (2004) also noted that the various instruments capture various domains: SOGS-RA comprises items on family and friends, GA 20 Questions on money, and DSM-IV-J on clinical and behavioural correlates. On the other hand, one may argue that although the scoring procedures for the instruments seem to imply unidimensionality, results from factor analyses have been interpreted as bidimensional. Wiebe et al. (2000) extracted two factors from SOGS-RA: 'control over gambling' and 'gambling consequences'. Correspondingly, Fisher (2000) extracted two factors from DSM-IV-MR-J: 'negative psychological dimensions' and 'withdrawal symptoms and antisocial and illegal behaviours'. As the two items in the Lie/Bet screen are derived from the DSM-IV criteria, they are fairly similar to two of the DSM-IV-J items. In Fisher's study (2000), the two Lie/Bet items split between the two factors extracted; the 'Lie' item belonged to 'withdrawal symptoms and antisocial and illegal behaviours' and the 'Bet' item

belonged to 'negative psychological dimensions'. It is, however, not evident that this two-item screen actually reflects different dimensions of problem gambling.

Gender is the most salient risk factor for problem gambling and pathological gambling. A consistent finding is that males are more likely to gamble and/or to gamble more frequently than females (Griffiths, 1995; Lesieur, 2004), and population-based studies have reported a three to five times higher proportion of male problem gamblers than female problem gamblers (Jacobs, 2000). Most studies comparing screening instruments for youth problem gambling and addressing aspects of instrument validity are, however, based on samples of relatively modest size given the low prevalence of problem gambling, particularly among females, and consequently gender-specific analyses have rarely been carried out.

Among the few exceptions is Fisher's study (2000), comprising almost 10,000 respondents and presenting some gender-specific analyses. Nevertheless, the results reported from studies addressing screening instruments are by and large based on male respondents, and it is possible that the validity of screening instruments is male biased and that the validity may differ for boys and girls.

Given the above-mentioned arguments, the aim of this study was therefore to assess for each gender separately whether—or to what extent—the Lie/Bet questionnaire and SOGS-RA (1) overlap in classifying problem gambling or at-risk gambling among youth, (2) reflect different underlying dimensions of problem gambling, and (3) differ in capturing intensive or high-frequency gambling.

Data and methods

The study was based on a recent school survey among pupils in grades 8 through 13 (junior and senior high school) in Norway. The study was part of the baseline study in an evaluation of alcohol and drug prevention programmes in Norway conducted by the Norwegian Institute for Alcohol and Drug Research (Pape, Rossow, & Storvoll, 2005), but it also served as a baseline survey for a planned evaluation of a government proposal to reduce the availability of slot machines in Norway.

Participants

In September 2004, all students in all junior and senior high schools (ages 13 to 19 years) in 16 municipalities from all geographical regions in Norway were invited to participate in the study. In Norway, 98.5% of the age cohorts between 12 and 16 attend the ordinary public junior high schools. After graduating from these, 97% begin senior high school. Due to dropout and courses which take less than 3 years to complete, about 80% of the 18-year-olds are still in high school. The only exclusion criterion was a severe lack of reading capability.

Procedures

Consent from the local school authorities was obtained. At each school, one of the teachers was appointed as 'liaison officer', serving as the research team's link to the school, the students, and the parents. Every student gave his or her consent in writing based on both an oral and a written description of the project formulated according to the standards prescribed by the Norwegian Data Inspectorate. Written informed consent was also obtained from the parents of students below the age of 18. The questionnaire took one regular school class of 45 minutes to complete. The students put the completed questionnaires in envelopes and sealed them

themselves. A teacher trained by the liaison officer monitored the students in the class during completion. In order to avoid students influencing each other's responses, all eligible students at each school completed the questionnaire at the same time. Students who had consented to participate but who were not present in class on the day of data collection were asked to complete the questionnaire on a later occasion.

The response rate was 80.2%: 85.5% in junior high school and 75.7% in senior high school. Twenty-four subjects were excluded because they had obviously given incorrect or humorous responses. In grade 8, some of the students were not yet 13 years old at the time of the data collection (2.8% of the total sample), and for various reasons some of the students in senior high school were above 19 years old (mostly 20 years old) (2.5% of the total sample). The net sample comprised 20,703 students.

Instruments

The Lie/Bet questionnaire: This comprised the two items 'Have you ever lied to family and friends about how much money you have spent on gambling?' and 'Have you ever felt that you needed to gamble for more and more money?' both with the response categories 'Yes' and 'No'. Responses were given the value 1 for 'Yes' and 0 for 'No', and the Lie/Bet sum-score thus ranged from 0 to 2. We have applied two cut-off points: between 0 and 1 (as suggested by Johnson et al., 1997, and Götestam et al., 2004) and between 1 and 2 (which gives a lower prevalence estimate).

SOGS-RA: This instrument comprises 12 scored items mostly relating to perceived problems from gambling during the past 12 months and with the response categories 'Yes' and 'No' for 11 of the items; responses were given the value 1 for 'Yes' and 0 for 'No'. The response categories for the question on 'chasing losses' ('How often during the past 12 months have you returned another day to win back the money you had lost?') were 'Every time', 'Almost every time', 'Sometimes', and 'Never', and responses on any of the former two categories were given the value 1, and 0 otherwise. Hence a sum-score on SOGS-RA was constructed, ranging from 0 to 12. Students who scored 0 or 1 were considered to have no gambling problems, students with scores 2 to 3 were considered to be at-risk gamblers, and students who scored 4 or more were considered to be problem gamblers.

Gambling frequency: The students were asked how often they had gambled on various games for money during the past 12 months; these games comprised slot machines, scratch card lottery, lottery tickets, Internet gambling, horse races, and other (unspecified) kinds of games. The response categories were 'Daily or almost daily', 'Several times a week', 'Once a week', 'Several times a month', 'Less than once a month', and 'Have not gambled during the past 12 months'. The responses were recoded into semicontinuous variables on annual gambling frequency for each type of game, and these were added into a sum-score on annual total gambling frequency.

Gambling expenditures: The students were asked how much was the largest amount they had ever spent on gambling, and the midpoints of the six response categories were used to construct a semicontinuous variable. The students who reported having gambled during the past 12 months were also given an open-ended question on how much money they had spent on slot machines during the past week (past 7 days).

Demographic characteristics: The students were categorised into junior high school students (grades 8 through 10) and senior high school students (grades 11 through 13). Family

composition was assessed by a question on whom the students were living with, and the responses were collapsed into a three-category variable: those living with both parents, those living with one parent (or sharing time equally between the two), and those not living together with their parents (e.g., living alone, with friends, etc.). A question on religious affiliation was applied as a proxy for non-Western immigrant background; those who stated an Islamic or other non-Christian religious affiliation were assumed to have a non-Western immigrant background.

Results

A total of 74.4% of the students (81.6% of the boys and 67.3% of the girls) reported that they had gambled at least once during the preceding year. Scratch lottery tickets and slot machines were the most frequently reported games (55.5% and 50.2% of the students, respectively, had gambled on these games during the past year), whereas gambling on lottery tickets (31.4%), horse races (7.3%), Internet (6.9%), and other games (15.9%) was less frequently reported. One of ten (10.9%) reported gambling on slot machines once a week or more often, and a somewhat smaller proportion had gambled once a week or more often on lottery tickets (8.9%), whereas the proportions who had gambled at least weekly on any other games were significantly lower.

One out of seven students (14.1%) answered affirmatively on at least one of the two Lie/Bet items, and 3.5% answered affirmatively on both items. A total of 8.5% scored 2 or more on the SOGS-RA, whereas 2.5% scored 4 or more. When applying the three category variables on Lie/Bet and SOGS-RA (non-problem, at-risk, and problem gamblers), these were positively and moderately correlated (r = 0.53 for all students: r = 0.54 for boys and r = 0.48 for girls). Applying the whole range of values on SOGS-RA did not alter the correlation coefficient for the two variables (r = 0.55). A more detailed picture of the classification agreement between scores on Lie/Bet and SOGS-RA for students who reported gambling in the past 12 months is given in Table 1.

Table 1.

Contingency table of classification agreement between Lie/Bet and SOGS-RA subsamples: Students who reported gambling in the preceding year

	Lie/Bet categories			
SOGS-RA Categories	0	1	2	Total
No problem (0–1)	12,122	493	213	13,700
At-risk (2–3)	493	477	153	1,209
Problem (≥ 4)	77	153	258	488
Mean score SOGS-RA	0.18	1.17	3.37	15,397
SD	0.62	1.63	3.06	15,397
Range	12	12	12	15,397
Total for sample	12,692	1,995	710	15,397

Table 2 shows the proportion of students within each problem gambling category who fulfilled the criteria for another category of problem gamblers. The agreement rates varied significantly, as could be expected, but they did not vary significantly between boys and girls.

Table 2.

Classification congruence between scores on Lie/Bet and SOGS-RA for total sample and by gender

	All students (*n* = 15,382)		Boys (*n* = 8,328)		Girls (*n* = 7,054)	
	Within Lie/Bet 1+ 17.6% (*n* = 2,705)	Within Lie/Bet 2 4.6% (*n* = 710)	Within Lie/Bet 1+ 21.7% (*n* = 1,810)	Within Lie/Bet 2 6.7% (*n* = 557)	Within Lie/Bet 1+ 12.7% (*n* = 893)	Within Lie/Bet 2 2.2% (*n* = 152)
SOGS-RA 2+	41.7%	70.0%	47.2 %	70.9%	30.3 %	66.4%
SOGS-RA 4+	15.2%	36.3%	18.6%	37.9 %	8.3%	30.3 %
	Within SOGS-RA 2+ 11.0% (*n* = 1,697)	Within SOGS-RA 4+ 3.2% (*n* = 488)	Within SOGS-RA 2+ 15.4% (*n* = 1,282)	Within SOGS-RA 4+ 4.8% (*n* = 398)	Within SOGS-RA 2+ 5.9% (*n* = 414)	Within SOGS-RA 4+ 1.3% (*n* = 89)
Lie/Bet 1+	66.4%	84.2%	66.7 %	84.4%	65.5 %	83.1%
Lie/Bet 2	29.3%	52.9%	30.8%	53.0%	24.4%	52%

Note. This subsample comprises students who reported gambling in the preceding year.

Demographic characteristics of the various categories of problem gamblers are given in Table 3. For all categories of problem gamblers, the proportion was higher among boys than among girls, higher among those not living with both parents, and higher among those with an Islamic or other non-Christian religious affiliation. It may be noted that the stricter the criteria for problem gambling and the smaller the proportion of students fulfilling them, the more prominent were the demographic characteristics—that is, the higher the proportion of boys, of students living without both parents, and of students with non-Western immigrant background.

Table 3.

Proportions of students who fulfil criteria for at-risk gambling or problem gambling

All students	Lie/Bet 1+ 17.6% 'at-risk'	Lie/Bet 2 4.6% 'problem gambling'	SOGS-RA 2+ 11.0 % 'at-risk'	SOGS-RA 4+ 3.2 % 'problem gambling'
Gender				
Girls	12.7%	2.2%	5.9%	1.3%
Boys	21.7%	6.7%	15.4%	4.8%
Grades in school				
8–10	16.1%	3.8%	10.2%	3.1%
11–13	19.0%	5.3%	11.7%	3.2%
Family composition				
Both parents	16.1%	4.0%	9.8%	2.7%
One parent	19.0%	4.7%	12.0%	3.2%
No parents	22.9%	7.8%	15.7%	6.1%
Religious affiliation				
Christianity/none	17.3%	4.4%	10.7%	3.0%
Islam/other	27.0%	10.8%	21.6%	10.0%

Note. This subsample comprises students who reported gambling in the preceding year.

Table 4 shows the results of the principal components analyses of SOGS-RA and Lie/Bet when both instruments were included. Kaiser's criterion (eigenvalue > 1.0) suggested a two-factor solution, accounting for 49.7% of the variance, and a varimax rotation was used. Eight items from SOGS-RA loaded on the first factor, whereas the remaining four items from SOGS-RA and the two Lie/Bet items loaded on the second factor. There were no significant differences in factor solutions and factor loadings when comparing the gender-specific analyses (Table 4).

Table 4.

Rotated factor loadings for SOGS-RA items and Lie/Bet items (n = 15,260)

	All students		Boys		Girls	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
SOGS-RA items:						
Gone back to win back the money you lost	.46		.47		.41	
Told others you were winning when you weren't	.50		.52		.40	
Caused any problems	.60		.61		.56	
Gambled more than you planned to		.74		.74		.72
Anyone criticized you or told you you had a gambling problem		.50		.50		.50

	All students		Boys		Girls	
	Factor 1	Factor 2	Factor 1	Factor 2	Factor 1	Factor 2
Felt bad about the amount bet		.72		.72		.70
Wanted to stop but didn't think you could		.43	.43			.46
Hidden betting slips, lottery tickets, etc.	.66		.65		.69	
Money arguments centred on gambling	.67		.67		.69	
Borrowed money to bet and not paid back	.71		.71		.70	
Skipped school or work due to gambling	.76		.76		.80	
Borrowed or stole money to cover gambling debts	.75		.74		.78	
Lie/Bet items:						
Felt the need to bet for more and more money		.69		.69		.68
Lied to significant others about your gambling		.64		.67		.57

The variables on gambling frequency and gambling expenditures were dichotomized, the cut-off being the 90th percentile on the total gambling frequency and expenditures on slot machines in the past week and the 85th percentile on maximum amount ever spent on gambling. Hence, we could compare to what extent those who scored on SOGS-RA or on Lie/Bet were among the most frequent gamblers and among those who reported the highest expenditures on gambling. Table 5 shows the proportions of frequent gamblers and high-expenditure gamblers among the various categories of problem gamblers and at-risk gamblers according to SOGS-RA and Lie/Bet criteria. For both instruments, we found that the proportion of frequent gamblers and gamblers with high expenditures was lower among female problem gamblers and at-risk gamblers than among their male counterparts (Table 5). Mean scores on gambling frequency and gambling expenditures were also significantly lower among female problem gamblers than among male problem gamblers.

Table 5.
Proportions of adolescents who reported the highest amounts of money ever spent on gambling, on slot machines in the past week, and the highest total frequency of gambling in the past 12 months

	Lie/Bet score 1+ Deceiving about gambling and/or chasing losses: Lifetime		Lie/Bet score 2 Deceiving about gambling and chasing losses: Lifetime		SOGS-RA score 2+ Past year		SOGS-RA score 4+ Past year	
	Yes	No	Yes	No	Yes	No	Yes	No
All students								
Maximum amount of money spent, 85th percentile (%)	42.5	11.4	66.7	14.4	52.3	12.5	70.6	15.5
Money on slot machines last week, 90th percentile (%)	23.5	3.8	44.1	5.5	34.0	4.0	54.5	5.7
Annual gambling frequency, 90th percentile (%)	34.0	9.4	55.5	11.7	48.8	9.4	74.6	11.7
Boys								
Maximum amount of money spent, 85th percentile (%)	53.0	18.9	73.6	23.0	58.9	20.5	72.9	24.1
Money on slot machines last week, 90th percentile (%)	30.0	6.7	48.7	9.1	38.9	6.8	56.8	9.5
Annual gambling frequency, 90th percentile (%)	42.9	15.4	61.0	18.5	54.8	15.3	76.9	18.6
Girls								
Maximum amount of money spent, 85th percentile (%)	21.3	3.3	41.4	4.8	32.0	3.9	60.7	4.9
Money on slot machines last week, 90th percentile (%)	10.4	0.8	27.6	1.4	18.8	1.0	44.9	1.5
Annual gambling frequency, 90th percentile (%)	16.0	3.1	34.9	4.0	30.0	3.1	64.0	3.9

Note. This subsample comprises students who reported gambling in the preceding year.

Discussion

The present study found a prevalence rate of problem gambling at 2.5% among all students by applying a cut-off at 4+ on SOGS-RA and a prevalence rate of 3.5% when both items on Lie/Bet were endorsed. The prevalence rates were higher among boys than among girls, higher among those who did not live with both parents, and higher among youth with a religious affiliation indicating a non-Western immigrant background. The congruence in classification of problem gamblers was moderate; half of those classified by SOGS-RA were also classified by Lie/Bet, and one third of those classified by Lie/Bet were also classified by SOGS-RA, and there were no significant gender differences in congruence of classification of problem gamblers. Both instruments discriminated sensibly between youths with high versus medium and low gambling frequency and gambling expenditures, but more so for boys than for girls.

The high proportion of teenagers reporting gambling and the demographic distribution of gambling problems found in the present study are in line with numerous previous studies (see for instance Lesieur, 2004; Schaffer et al., 1999; Shaffer & Hall, 2001; Shaffer et al., 2004, for reviews). The proportion of at-risk or problem gamblers as classified by the Lie/Bet questionnaire (applying a cut-off between 0 and 1) was significantly higher in the present study (14.1%) than in Götestam et al.'s study (2004), where a prevalence rate of 5.2% was reported, the difference most probably being due to differences in data collection methods and response rates. The proportion of respondents classified with gambling problems by SOGS-RA (scoring 4+) was lower in the present study (2.5%) than in several North American studies, where prevalence rates around 4% to 8% have been reported (see, for instance, Fisher's review (2000) and Derevensky & Gupta, 2000; Derevensky, Gupta, & Winters, 2003; Langhinrichsen-Rohling et al., 2004).

In the present study, we found a moderate congruence in classification of problem gamblers when applying two different screening instruments. This was lower than what was reported on the Lie/Bet screen and DSM-IV in Götestam et al.'s study (2004) and lower than on SOGS-RA and DSM-IV-J in Derevensky and Gupta's study (2000), but higher than what was reported on SOGS-RA and MAGS by Langhinrichsen-Rohling et al. (2004).

The results from the factor analysis suggested a two-factor solution and resembled the solution reported by Wiebe et al. (2000). The first factor extracted comprised eight SOGS-RA items, including items on arguments, borrowing money, skipping school or work due to gambling, stealing or borrowing money, and chasing losses. Wiebe et al. (2000) suggested that this factor may be interpreted as (negative) 'Gambling Consequences'. The second factor extracted six items (four SOGS-RA items and the two Lie/Bet items): gambled more than planned; been criticized or told you had a gambling problem; felt bad about the amount bet; wanted to stop, but couldn't; felt the need to bet for more and more money; and lied to significant others about gambling. It may be interpreted as 'loss of control' (or 'control over gambling' as suggested by Wiebe et al., 2000). While the DSM-IV criteria are one-dimensional in scoring, different authors have noted the need for a multidimensional understanding of the gambling concept. Chiarrochi (2002) proposed three main dimensions: (1) damage/disruption, (2) dependence, and (3) loss of control. Shaffer (2003) claimed that dependence behaviour has three components: 'some elements of craving', 'loss of control', and 'continuance of the behaviour in question in spite of the negative consequences associated with the behaviour'. The factor solution found in this study comprised only two

dimensions but may still be considered to be in line with this more theoretically multidimensional understanding of the gambling addiction concept.

Strengths and limitations

The present study is based on a very large sample. Most studies addressing validity aspects of gambling screening instruments among adolescents have been based on significantly smaller samples, often in the neighbourhood of around 500 to 3000 respondents (see Fisher, 2000), implying that analyses of problem gamblers are based on relatively few observations. The very large sample size in the present study also allowed for gender-specific analyses, which have rarely been conducted in previous studies of screening instruments for youth gambling. Despite the fact that written informed parental consent was a prerequisite for study participation among those under the age of 18, the response rate was rather high, particularly among junior high school students. The overall response rate was higher than in many school surveys where response rates have been reported (for instance, Fisher, 2000) and much higher than in other youth surveys (for instance, Götestam et al., 2004), but it may be noted that several studies on youth problem gambling have not reported the overall response rate (for instance, Derevensky & Gupta, 2000; Langhinrichsen-Rohling et al., 2004). It is likely that a high overall response rate increases the likelihood of including a higher percentage of problem gamblers, whereas a low response rate may increase the likelihood of obtaining a lower prevalence rate of problem gambling.

Although large samples and high response rates may be more easily obtained in school surveys compared to other forms of youth surveys, one may argue that school students are not representative of all teenagers, and particularly with respect to problem gambling youth it is more likely that these are underrepresented in school survey samples. As noted previously, virtually all adolescents in the age cohort 12 to 16 years in Norway attend the ordinary public junior high schools, and 80% of the 18-year-olds are still in senior high school. This implies that the present study sample was fairly representative among junior high school students, whereas the respondents in senior high school to a somewhat lesser extent could be considered representative of their age cohorts. The data presented here were collected as part of a comprehensive study primarily undertaken for other purposes, and consequently the available information on various gambling issues was limited.

The reliability and content validity of various instruments used for assessment of problem gambling has been discussed to some extent. Poulin (2002) reported from a study among Canadian adolescents that SOGS-RA was found to have adequate stability and internal consistency reliability. On the other hand, Ladouceur, Ferland, Poulin, Vitaro, & Wiebe (2005) found in a study of 15- to 17-year-olds that only a small fraction (8%) of those screened as problem gamblers according to SOGS-RA could be clinically confirmed as pathological gamblers when applying DSM-IV criteria. Correspondingly, Stinchfield's study (2002), based on an adult population sample and a gambling treatment sample, also concluded that SOGS overestimated the number of pathological gamblers in the general population as compared to DSM-IV diagnostic criteria. Also, with respect to validity assessment of the Lie/Bet screen, comparisons have been made with DSM-IV criteria. Götestam et al. (2004) found that in both an adolescent sample and an adult population sample the Lie/Bet screen came very close to the full DSM-IV instrument in assessment of pathological gambling plus at-risk gambling. However, it is not obvious that DSM-IV can be considered a 'gold standard' for comparisons with other instruments for assessment of gambling problems. Studies by Cox, Enns, & Michaud (2004) and Stinchfield, Govoni, & Frisch (2005) suggest that the accuracy of

classification of gambling problems by DSM-IV diagnostic criteria can be improved upon by lowering the cut score. Thus, it is possible that assessment of problem gambling by use of Lie/Bet and SOGS-RA yields inflated estimates, whereas use of DSM-IV may yield deflated estimates. Furthermore, the comparability of assessments based on SOGS-RA and Lie/Bet may be hampered by different time frames (i.e., past 12 months vs. lifetime, respectively). This may imply that Lie/Bet may yield a higher prevalence estimate of gambling problems compared to SOGS-RA.

Implications

By applying endorsement on both items on Lie/Bet as scoring criteria, it seems that the prevalence rate obtained is somewhat higher than the prevalence rate for problem gambling based on SOGS-RA. Moreover, the present study found a moderate overlap between problem gamblers as classified by the Lie/Bet screen and by SOGS-RA and that the Lie/Bet screen items belonged to a 'loss of control' dimension when SOGS-RA and Lie/Bet items were factor-analysed. Wiebe et al. (2000) suggested that such a 'control over gambling' dimension reflects areas indicative of struggling with gambling behaviour and an early (as opposed to more problematic) level of gambling involvement and could be more indicative of at-risk gambling. The present results may therefore suggest that the Lie/Bet screen may be a useful tool to assess at-risk gambling in comprehensive youth surveys. Especially in surveys covering a broad range of topics, the use of a small screening tool like the Lie/Bet questionnaire might be a good alternative to a full instrument, if not the only possibility to assess problem gambling or at-risk gambling. Furthermore, applying the Lie/Bet questionnaire in a series of youth surveys that monitor behaviour and behaviour correlates may provide a feasible way of monitoring gambling behaviour and gambling problems in youth populations over time.

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Swedish machine gamblers from an ethnographic perspective

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Abstract

This article presents an ethnographic analysis of the biggest money-maker in Swedish gambling, namely, the state-owned electronic gambling machines, called Jack Vegas machines. The focus is on (1) social dimensions of the game and (2) various gambler types that develop in the Jack Vegas environment. In the section about social dimensions, there is a discussion about social interaction between gamblers and between gamblers and staff/owners of restaurants with the machines. There is a kind of sociality in Jack Vegas environments, but also feelings of irritation and frustration among the players. The text discusses the gambling types developed by Sue Fisher and, to some degree, Robert Custer and relates them to the Swedish ethnographic findings. But the article develops new gambler types as well. The gambler types developed by previous researchers in academic and empirical contexts need to be revitalized and further developed in new gaming environments.
Key words: ethnography, gambling machines, social dimensions, gambler types

Purpose of the study

Swedish gambling research has a relatively limited scope. One gambling research group led by Sten Rönnberg carried out quantitative studies measuring the extent of gaming and pathological gambling in Sweden (Rönnberg et al., 1999). The research of Rönnberg and others is limited in that they focus heavily on addiction and not much on the social environment in which the gaming is carried out. Dow Schull (2002), Svensson (2005), and Volberg (2001) have criticised gambling research because it has individualised gambling problems at the expense of this social environment. My ambition has been to rectify this by studying gambling (with a focus on regular gamblers) in relation to the social and cultural environment. I have chosen this perspective to try to fill a vacuum in Scandinavian gambling research. I have pursued my research in the same spirit as Sue Fisher (1993) when she carried out her ethnographic studies on gambling machines. Fisher worked part time in an amusement park arcade in which there were fruit machines and other games. While she worked, she made contact with and interviewed a range of young gamers she observed in action.

The object of investigation in this article is the interaction around and interaction with the state-owned gambling machines, called Jack Vegas, the biggest form of gambling in Sweden with regard to both turnover and revenue. During 2003–2004, I spent a lot of time observing participants in Jack Vegas settings and interviewing gamblers. What type of sociality does the Jack Vegas environment create? What types of gamblers develop in these environments? These are the core questions in the article. Before discussing these questions, I need to give some crucial information about the Jack Vegas machines and the methodological design of my ethnographical investigation.

Jack Vegas machines

Electronic gambling machines, called Jack Vegas (or video lottery terminals or VLTs), are the game form with the highest net revenue in Sweden. These machines are organized and run as a stated-owned industry. In 2004, the games had a turnover of (the equivalent of) almost $1 billion US, thereby establishing this form of gambling as the most lucrative in Sweden.

In 1979, Jack Vegas's predecessor, the classic slot machine, was outlawed in Sweden. Critics had argued that it caused compulsive gambling and social disadvantage and that 'gamblers are afflicted with financial destitution' (Månsson & Larsson, 1976, p. 22). However, the government's public investigation, entitled *Vinna eller försvinna* (SOU, 1992) (approximately 'Win or be gone'), prepared the way for the reinstitution of gambling machines in Swedish gaming rooms. This time they were to be monitored by the government-owned and controlled company AB Svenska Spel, whose principal owner was the Swedish Ministry of Finance. The government was deemed better able to guarantee security and monitoring responsibilities than other parties. In 1995, a parliamentary decision made the government-owned gambling machines possible, and Svenska Spel immediately began marketing the machines to Swedish restaurants with liquor licences.[1] Since a liquor licence implies an age limit of 18 years, underage gamblers would not be allowed entry, so these restaurants would be allowed to host the Jack Vegas machines. The parliamentary decision established a national distribution ceiling of 7,000 machines and a per-restaurant limit of 5 machines. Early on, to kick-start the project, cooperation had been initiated with North American gaming terminal producers (including the Canadian global game provider Spielo and the American IGT) in an effort to generate income for public service organizations and the government. Once the terminals were distributed, players quickly latched on, and success was declared.

The Jack Vegas terminals differ from slot machines, which have a coin slot to receive change and a handle that makes the wheels spin, in that bills or coins are inserted, and a game is selected from the terminal's touch screen. Inserting 100 Swedish kronor, or about $14 US, lets you play 20 games for a maximum bet of 5 kronor, or about 70¢, and 100 games for a minimum bet of about 1 krona, or 14¢, per reinitiated game. The most you can win per game is about 500 kronor, or $70, and when this amount is reached, the machine automatically prints out a pink cheque indicating winnings to be paid by the restaurant's cashier.[2] Each game takes 2 to 4 seconds, depending on how eager the player is.

It is a matter of a computerized machine that presents the player with many possibilities—a mini-casino including many types of games.

Poker. After an icon on the screen or the start button is touched, the screen shows five cards. If the player is lucky, the machine will show a winning combination, such as, for example, two pairs, at two times the stake, or a full house, at six times the stake. In the Jack Vegas version of poker (and in some other games), the gambler may decide to bet with the win and double the amount. This is described more fully later in the article. Almost all of the players I've talked to have told me that they started their Jack Vegas careers with poker, since it is a game they were familiar with.

The Frog Chase. This is a wheel game in which three frogs adjacent to each other on the screen give you possibilities for bigger money (but not above 500 kronor, or $70) on a bonus track. On this track, the player, through touching the screen, assumes the identity of the frog

jumping from one leaf of water lilies to another. Under the leaves there may be rewards, amounts of money, or the jaws of a crocodile, which makes you lose. Other games use the same logic—wheel games with bonus tracks if the “wished-for” combinations of icons are presented on the screen.

These two games, Poker and Frog Chase, were highly popular during 2003–2004 when I carried out this ethnographic study. I describe them here so the reader will be in a better position to understand what I write in later parts of this article.

The main office of the government-owned and controlled company AB Svenska Spel is located in the suburb Sundbyberg in the northern parts of Stockholm. The office holds the main computer system controlling the 7,000 Jack Vegas machines in different parts of Sweden. This central computer system makes it impossible for restaurant owners to manipulate the machines, as well as making the game random. The payout is programmed to a maximum rate based on all the machines. This means that the players don’t know which machines will be extra lucrative to play on since there are so many machines. A restaurant in one part of Sweden may one day have a very high payout rate, while a restaurant in another part of Sweden has a very low rate. According to an interview I did with the technical director of the Jack Vegas section of Svenska Spel, the game doesn’t have anything to do with skill. It is a matter of pure chance. This information is also provided in brochures produced by Svenska Spel.

The beneficiaries of the Jack Vegas machines are the restaurants owners, who get 35% of the net profit on the machines in their restaurants (what is inserted in the machine minus payout), and the Swedish state, which uses the money for the public treasury.

The Jack Vegas machines have been criticised more extensively than other gaming forms by the media, as well as by researchers and support associations for compulsive gamblers, since the latter half of the 1990s and into the 2000s, and have been correlated with social disadvantage and pathological gambling (Lalander, 2004). The state-owned company Svenska Spel has argued in its marketing and in public documents that the game has its drawbacks, but that on the whole its effects are more positive than negative.

Methodology and sample

My goal was to make contact with the gamblers in the gaming locations. My selection criterion was that they should be experienced gamers who visited the location on a regular basis. For this reason, I always made preparatory observations before I asked the gamblers if they would consider being interviewed. However, as Parke and Griffiths (2002) have observed, it is not easy to recruit informants on site. They are focussed on the game, and they often feel the researcher is branding them as 'gambling addicts' and thus failures as individuals. Another reason may be that they do not understand how their thoughts might be of importance to research.

However, with approximately a 50-50 success rate, I managed to recruit nine informants at gaming locations. In addition, I recruited another six people via personal contacts and three through associations for compulsive gamblers. In all, I carried out 18 interviews, and I repeated some of them , especially those that were made with my two key informants, Salle, 29 years of age, and Janne, 30.

The people interviewed who were recruited on site must be presumed to be more social than many other Jack Vegas players. In the interviews, I asked questions both about their gambling habits/styles and experiences in Jack Vegas settings and about their lives in general. Sometimes I asked them questions about what I had witnessed in the Jack Vegas settings. With some I got a good contact, while others were less forthcoming.

In my analysis, all of the interviewees are treated with respect to confidentiality criteria. I give no names and no information about them from which they can be recognised. The quotes from interviews presented in this article are translated from Swedish (with a local accent) into English. An effort has been made to keep some of the linguistic patterns from the verbal speech, but of course this is a complicated task.

In addition to the interviews, I made 130 participatory observations, where I played the game alongside other players. I tried to fit in with the environment. If I saw that players were betting with maximum stakes, I followed their example, and if the players were more modest, I tried to adapt to that. I was quite sparse in my comments to the other players. I didn't want to intrude on their personal spheres. In the beginning of the research period, I could, however, ask them questions about how to act with regard to different aspects of the game. Some of the players were quite polite and helpful, while others saw me as a disturbing object.

I played with my own money and lost about 5,000 kronor, or $700, during the years 2003–2004. Now and then I won, but most often I went home with less money in my pocket than when I left. Sometimes the machines were mean to me and swallowed maybe 200 kronor, or $28, within 10 minutes. By participating in the gambling activities I could gather information about how the players talk to each other and to the machine, but also I could get an understanding of what it is like to be there.

In some situations, when all the machines were occupied, or when I ran out of money, I searched for another observation site from which I could get a view of the dynamic around the machines, for example, from a nearby table or a bar chair. In those situations, I had a newspaper with me, often the sports news. I didn't stare at the players but rather glanced at them every now and then. In a literal sense, it was a matter of genuine participant observation, observing without them knowing it. I see this as ethically acceptable since I didn't collect any information about, for example, their names or social security numbers. In a few cases in this article, I use real names of restaurants. This is only done when I deal with Jack Vegas settings with a big flow of players. When I'm dealing with restaurants with relatively small amounts of locals, I have changed the names.

Two cities have been of special importance with regard to my selection of Jack Vegas settings for this project:

- The medium-sized city of Norrköping (over 120,000 inhabitants), 160 km south of Stockholm, has a history as a working-class city producing textiles, which gave it the nickname 'Little Manchester'. The industrial workers here currently suffer heavily from layoffs.
- The small city of Kalmar (40,000 inhabitants), 300 km north of Sweden's southern coast, is most known for its proximity to one of Sweden's tourist Meccas, the large island of Öland. Kalmar can be characterised as a trading centre.

I focussed on five locations/restaurants (two in Norrköping and three in Kalmar) and made random observations of others, mainly to see how the different places varied. I selected the locations strategically to capture a range of categories of gamblers and gaming environments. Two of the settings were located in restaurants in big department stores and two in local pubs/restaurants. The fifth setting was a restaurant/café in a low-status suburb on the outskirts of Norrköping. Through these different settings, in addition to the random observations, I developed knowledge about different gaming styles, thus trying to capture some of the social and cultural rhythms typifying the various gaming locations (cf. Fisher, 1993).

In the remainder of this article, I will introduce the environments and some of the gamblers, then thematically analyse the social dimensions of the gambling machine environments. At the end of the article, I will describe various gambling types and relate them to the types described in the research of Fisher and to some extent to those in Custer's (1985) work.

Jack Vegas settings

One hot summer day in 2002, I agreed to meet Salle outside the Domino department store in Norrköping, first to eat lunch and then to play the machines. Salle, 29 years old, is one of my two key informants. We agreed to play a bit before having lunch at the restaurant, which was located in the middle of the department store. One terminal was available, and Salle wanted to test it for 50 kronor, about $7, 'to get a feel for the machine'. He bet the maximum of 5 kronor, about 70¢, each time. This was his gaming style, even when he played the horses or bet on soccer—always a high bet, so he wouldn't be vexed if he had played low but got high odds.[3] Salle touched the start button, the results were displayed in 2 seconds, and he touched the start button again. When we had played for a while, a woman in her fifties appeared at the machine to our right. The weather was hot, so she wore a pink tank top and skirt. The woman tried repeatedly to insert a bill in the terminal but failed. Salle was aware of her but was focussed on his game.

The lady in the pink top turned to me and asked in the local dialect, 'Got change?' I answered that I only had the change I intended to play with myself. She asked, 'Can you hold the machine for me while I get change?' 'Of course', I answered. She returned shortly after, and it worked this time; the terminal accepted her bill. She directed comments to me about her game, and I responded in 'mm-hms'. Without a doubt, a social relationship had been established, which is more common at the Jack Vegas locations than, for example, in the state-owned and run casinos (Lalander & Andreasson, 2003), where it is difficult to make contact with other players. She turned to me later when I won a small amount, which caused the machine to make a winning jingle; 'Luck is with you!' she said.

Salle and I left to eat lunch and returned later to the Domino restaurant. The same woman was still there, but she had moved to another machine and said to me, 'Couldn't stay away, huh?' 'No, it was tough', I said, and she nodded slightly in agreement. I inserted a bill and started playing. What happened at this point in our acquaintance is most likely that our positions become equalised. I was not an associate professor of sociology meeting a person with a gambling problem, but rather someone in the same boat. In that sense, neither one could reproach the other. This example introduces some of the sociality that develops around the terminals. It also suggests the different gambler types. In the following, I will treat this more systematically.

Meeting grounds

The walls of the Sports Bar pub in the centre of Kalmar feature sports heroes and equipment. The dominant symbolic design is of icons of masculinity. Giant screens regularly display sports scenes. At the rear of the pub is the gaming room. In addition to a small 'restaurant casino', featuring roulette and blackjack, there are three Jack Vegas machines. Young men between 18 and 22 years of age often gather here and play. These are men who often go out to bars and feel at home in this specific pub. The pub, as a result of its historic identity as a meeting place for men, is the perfect arena for these young men to process their identity and masculinity. Downstairs, in a short corridor, there are two more machines, but these usually attract middle-aged immigrants. The décor is not nearly as dominated by symbols of masculinity; instead, the machines are placed in a passageway for large numbers of pedestrians.

At the Domino restaurant in Norrköping, retirees of Swedish background and a few young Swedish men tend to frequent three of the machines, while the two other machines are usually frequented by immigrant men. This segregated use of the five machines becomes possible because there is a wide pillar separating the space with two machines on one side and three on the other. Based on my observations, different groups often seem to colonize different locations or parts of locations. However, the mixture of people with different characteristics is more salient at some locations, such as the Café Plaza in the suburb Hageby, which is visited by people with backgrounds such as Finnish, Kosovo-Albanian, Swedish, Turkish, and Chilean. But even at a place like this, intercommunicating cliques arise. That there are many immigrants at the Café Plaza results from the fact that not only do people of similar backgrounds tend to seek each other out, but the neighbourhood is located in a low-status suburb of Norrköping and is populated almost 50% by people from other countries.

On Kungsgatan in downtown Norrköping, there are several Jack Vegas locations, and at one of them there are five machines that you have to pass if you want to order or pick up a pizza. This location seems to be more heterogeneous in terms of those who frequent it. However, one gets the impression that the majority of people are not those who follow the traditional Swedish life pattern of staying sober during the day and on weekdays.[4] Often, by three in the afternoon, one can see gamers sitting with a pint bottle of beer, sometimes with 7.2% alcohol, typically the economical choice of the customer who puts alcohol content first. It is difficult to imagine so-called respectable folk sitting there and playing. In that sense, the regulars are a collection of outcasts who sit at a machine for a while and perhaps order a beer. The environment here also corresponded to an outsider lifestyle. The ashtrays were rarely emptied, the décor was shabby, chair stuffing poked out, and a light didn't work.

The gamblers and the staff/owners of the restaurants

Several of the informants reported that they knew the owners and/or the staff at the places they frequented most often. In order to better understand the text below, the reader must recall that the owners of the restaurants with Jack Vegas machines get 35% from the net profit, and that the machines don’t cost anything to get or to support. The company Svenska Spel takes care of that. But the gamblers very seldom knew about this deal between the government-controlled company and the owners of the restaurants. The gamblers most often had a very positive view of the staff and the owners of the restaurants. Linus, 19 years old, said this about his favourite location:

> Well, yeah, you usually become really good friends with the people owning the machines. You have your favourite spots, and you usually get to be really good friends with them. They are like really nice people. You could be standing there like just before closing, and they didn't care, 'Oh, wow, look, that's great', standing there and seeing if you won.

For Linus, it was a matter of getting confirmation from his circle of acquaintances. Hassan, 20 years old, of Iranian background, was encouraged by the restaurant owner, who called him a 'brave' guy, a man who wasn't afraid to take risks. He also said he knew the owners and they were glad when he won and sometimes told him to leave if he lost too much money. He was also sometimes treated to a beer by the owners (other players have reported similar treatment). His favourite spot, Bud's, is located in central Norrköping. He says the pub has become a home to him, and he often goes there when he has nothing else to do to see who is there and to play. At Bud's he is reaffirmed as a brave gamer, while he feels like an outsider in other settings. Thomas, 21 years old, reports that he sometimes borrows money from the owners:

> Philip: Do they ever lend you money?
>
> Thomas: Yeah, sure. We work on the same street, so sometimes when I get there I might borrow a hundred or two ($14 or $28).

Manucher, 45 years old, is from Iraq. He worked illegally at a restaurant with gaming terminals, and after the restaurant closed at night, he and the owner often stayed and played together. Manucher's black-market paycheque was often spent there. It was ironic that the restaurant owner was refunded 35% of the salary he had paid. Manucher reports that the owner would sometimes order him to go home with his money before he lost it all. At the same time, the owner couldn't really enforce his order, since he also stood there and gambled. Iris, 57 years old, described the owners by saying they were 'so happy' when she won and that they sometimes treated her to a cup of coffee. She said the people working there were 'wonderful' and that was why she went there so often.

> Yes, they are so nice, so pleasant, sweet, they come in, 'Oh, would you like a cup of coffee?' and 'there's my sweetheart', as they say. Yes, I come here, have a beer, and play a bit [laughs]. It happens.

I told most of them that they didn't need to feel grateful for a beer or a cup of coffee when the owner was taking 35% of the proceeds. They were surprised by the high percentage and agreed they had earned that extra beer. The owners probably did not announce how much they earned off their regulars because it would have soured customer relations.

The reinforcement that gamers get from the owners often revolves around the fact that they are there as gamblers. They are not included in the owner's or personnel's mental sociogram of friends. If Iris were to be absent from the Jack Vegas locale for several weeks, it is unlikely that the owner would call her home and ask if she was all right. For that reason, one cannot say that the problem of loneliness or the experience of faulty social integration is solved in a permanent or stable way. Rather, it may be that the terminal is a substitute friend who steals time from the gambler that could have been used to meet others.

Interaction between gamblers

> Philip: When you're there playing, do you have any contact with them [other gamblers]?
>
> Janne, age 30: Well, sure, there are people you say hi to, and who say hi to you when you see them out and about, but what you talk about is mainly the game. You don't ask like, how are you, but, how's the game going, have the machines … have they been good to you? Are they guzzling, or what?

To ask how the day's been would be to overstep the boundaries of the conversational rules that apply to gamblers who are not relatives or who have not been included in a close relationship. Nonetheless, on a surface level there is communication among gamblers. This takes many different forms of expression, while, at the same time, and like other social institutions, it has its limits and rules. The conversational rules may vary greatly in different gambling settings. In the Swedish state-owned casinos, it is viewed as strange to address another gambler if you are not at the bar or not pointing out to another player that the staff or bank has counted wrong (Lalander & Andreasson, 2003). At the casino, one doesn't normally say 'Bye!' when one leaves the table. At the racetrack, social mores are usually more relaxed and it is not considered very strange to address someone one doesn't know. But even at the racetrack, there is a barrier to talking about one's private affairs (Hansson, 2005).

The Jack Vegas environments can be characterized by the regulars greeting one another, perhaps in a noncommittal way, but still a greeting. Many times during the observations I heard phrases similar to the ones Janne expressed above: 'How's it going?' 'Has the machine been good to you today?' or 'Is it just guzzling?' Young men sometimes arrive in groups and egg each other on to double up, or to put their winnings on the line by drawing the right card (this will be described in more detail later). Then you can hear things like, 'Come on, don't chicken out!' It is also typical for players to ask each other to hold the machine if they need to go to the restroom or make a telephone call.

A doomsday philosophy, or dystopia, can be created among players, such as with Iris, who said she would live on hardtack and water after losing. It's also typical to create an atmosphere of being held prisoner by the terminal, and thus to lose great amounts of money. There is no need to feel any great shame about gambling when sitting among other regulars, since everyone's in the same boat.

Logging out of life in general

Even if there is some sociality among people at the Jack Vegas locations, it isn't especially selective or supportive away from the gaming locations. If Janne or Iris didn't show up for weeks, it is highly doubtful that anyone would ask where they were. In this sense, the gamblers are expendable, since it is not as individuals that they are interesting, but as customers. Not only are there different types of sociality, but there is also asociality (cf. Custer, 1985); in other words, the players focus on the terminals rather than on other gamblers. Human interaction is important to some people, such as Iris, who was treated to coffee, and Hassan, who felt the pub was like his living room, a place where he could feel at home. For others, this is less critical, even though it is a physical shift in environments to

leave home and visit the gaming room. The link between the gamblers is the terminal, as described above, and most of them say as well that they are there to visit the terminal. Some even view the machine as a friend. Manucher, age 45, says,

> I think of nothing, and I think that's why I play, to forget, to not think. I was single, the terminal was my wife. I didn't have any real friends; the terminal was everything for me. I have fun when I play, too, and that … it's fun, I mean like, for me, that's all it is, I get a rush from it … away from …

Manucher gets the feeling that he disappears from something when he plays, and I believe he feels temporarily released from the anxiety that otherwise torments him. In this sense, the gaming functions like a drug. The past and the future are pushed aside, and only the present is meaningful. In the interaction with the terminal, a relationship arises from which everything else is excluded. It is only about pushing buttons for possible winnings. Leifos, aged around 30, of Greek origin, describes the difference between Jack Vegas and blackjack and roulette:

> It was, like, a lot, like, faster, somehow … like, on the machine. It was like, if you sit in on blackjack or roulette, there's so many people crowding around, they have to collect their tokens, they have to give the money to the winners and stuff … it was more like that kind of stuff …

The pace and continuity of the game contribute to creating a feeling of being disconnected from the surrounding world and one's own troubles (see Griffiths, 1995; Breen & Zimmerman, 2002; Breen, 2004). But that is probably not the whole picture. Your own movements get the machine to react. When you press start, the wheels start to spin, or cards are dealt. The gambler focusses on the screen and reflexively decides whether to continue or not. The pace keeps downtime to a minimum; there is no real opportunity for contact with the outside world. Roulette, otherwise considered to be a fast game, is slow in comparison with Jack Vegas and can't compete for the restless and often socially isolated people who are looking to fill their time by pushing buttons and spinning wheels: a moment free from existential anxiety and fear, a moment in which being alone is no longer a problem, a moment of being temporarily logged out of life in general.[5]

Strong frustrations

The social tensions and conflicts that arise in person-person and person-machine interaction are yet another component to be included in the description of the Jack Vegas locale as a social environment. The following account provides one such description.

I met Sahib, a 20-year-old from Iran, outside the Domino restaurant in central Norrköping. He was standing and watching the Jack Vegas players who had gathered around the terminals, three men of immigrant background and two retired people of Swedish background, one man and one woman. Sahib would occasionally make a comment to them, but they did not seem to listen. Sahib appeared to be influenced by hip-hop culture, which was confirmed in our interview. He had the cap and jeans of the style, jeans that hung low between his legs. I made eye contact with him while standing by myself watching the game, and I said 'hi' to him. He returned my greeting and I thought, 'All right, this may turn into an interview'. Unfortunately, I was just about to leave for another interview, so I asked if he could meet me at four o'clock at the same place. He really wanted to be interviewed, yet at the same time he behaved strangely in the way he answered. Sahib spoke with a louder

voice than the others, repeated his words often, and used hand gestures imitative of a rapper.

When I returned to the meeting place, he was already there. We sat at a table about 10 metres from the gaming terminals. The interview mainly centred on how angry he was at everything and everybody, at society in general, at everyday people (especially women who had 'betrayed' him), and at Svenska Spel. He spoke with his mouth very close to the microphone, as if to make sure that everything he said would be retained by the minidisk recorder. He also told me he had played the machines since he was 16 years old. After about a half hour the owner of the restaurant came over and said something like: 'Remember what I said: you're not allowed in here!' Sahib looked at him and said, 'We'll only be a moment longer'. I had no idea what to say and chose to remain silent. After the interview I asked him what it was about, and he answered that on one occasion when he lost a large amount of money he hit the terminal screen so hard that the machine was broken. He lost several thousand kronor on that occasion, so he had actually already paid for its repair, but that is not how the reasoning dominating today's society works, and the owner decided to ban him from the premises.[6]

Hitting the gaming terminals is by no means unusual, and it is a result of the frustration felt by people, mostly men, who are so wrapped up in the game and in the 'clever' finesses the game contains that they lose their self-control. They think 'in just a couple of spins, my luck will change', but it doesn't. Their entire monthly budget may be spent, their rent money, perhaps more. Their money is inside the terminal, which has been transformed from being a machine of opportunity into a safe with no code. To Sahib, and others like him, while he still has money the terminal looks like a safe with the door ajar. The money inside it, if Sahib is lucky, can become his to spend. But once his money is gone, the safe is locked. He has no chance of getting back money that is locked inside the terminal, later to be split between the Swedish government and the restaurant owner. Of course, there are other frustrations in the Jack Vegas environment. For example, women often come there to collect their men from the terminals.[7] In that sense, the settings cannot be described as a harmonious social paradise.

The gambler types of Custer and Fisher

Constructing different types from empirical data is an analytical strategy that has been tested in sociology since the days of Max Weber in the beginning of the 1900s. In gambling research, these typologies are used to nuance the picture of the gambler and demonstrate the different motivations and qualities. Robert Custer (1985) constructed a typology that included Professional Gamblers, Asocial Gamblers, Social Gamblers, Escape Gamblers, and Addicted Gamblers. The typology is based on several different variables and derives from Custer's experiences meeting with problem players in a psychiatric clinic. Another typology that somewhat corresponds to Custer's is that of Sue Fisher (1993). In ethnographic studies of a gambling hall on the west coast of England, she found and labelled the following gambling types:

- Arcade Kings are usually young men who achieve a certain kind of status by gambling. For these young men, the money was not the goal; rather, they strove to be skilful players in order to gain respect in the gambling environment. This gambling type can be described as social in the sense that they often had younger and less experienced gamblers surrounding them when they played.

- Machine Beaters are obsessed with conquering the machine. Unlike the Arcade Kings, they are not especially interested in social interaction. Rather, they relate strongly to the machines.
- Rent-a-Spacers are teenaged women who prefer to watch others play. They have no real interest in the game itself (see also Griffiths, 1995).
- Action Seekers are similar to both Arcade Kings and Machine Beaters and look for excitement at the gaming terminals. They are also highly similar to the gambler type described in Goffman's (1967) classic essay, 'Where the Action Is', in which the gambling is a way to obtain excitement and confirmation of status in an insecure environment. Action Seekers is a more general concept than Arcade Kings or Machine Beaters since it doesn't say anything about the gambling setting (the arcade) or about the machine. The Action Seeker, therefore, doesn't have to be a gambler in a literal sense, but can also relate to, for example, a criminal who likes to live a risky life.
- Escape Artists gamble to forget the social world they live in.

Fisher's (1993) categories derive from her experiences in the field. I don't think it is a problem that the categories are not mutually exclusive. Of this Fisher is also aware:

> The types describe the dominating motivation to gamble. However, they are by no means mutually exclusive, and elements of each type were perceived in the orientation of all fruit machine gamblers. The search for excitement; the 'buzz' experienced by a win in front of 'the gang', on 'the gang's turf'; the wish to outwit the machine and temporarily escape from reality, were all present in varying degrees. (p. 471)

I have also found it difficult to keep separate the gambling types that I devised, and I don't believe it is necessary to do so, as long as one is clear about intentions. A gambler type is not a person but a quality or a collection of qualities that are used to conceptualize motives and qualities seen among gamblers. We also have to remember that Fisher's study was done in one setting and mine in another. Fisher focussed on young people, while I had a broader sample. Much of what she describes reflects teenage culture. Nonetheless, I benefited greatly from Fisher's typology, and to some degree Custer's as well, in terms of understanding the gamblers I played with and interviewed.

Gambler types in Jack Vegas settings

When I entered the little pizzeria in Kalmar, Iris, 57 years of age, and a younger man of Asian background were at the gaming terminals. Iris made a comment about the young man's game, seeking contact. The man didn't understand her language and muttered something back.[8] My colleague and I sat down at a table near the terminals and ordered beers in order to merge with the environment. Iris was highly conscious of our presence and made a joking comment about the game, as if to make contact. We responded that we hadn't played much and asked her a little about the game. She answered in a light-hearted and joking way, and the contact we made led later to an interview. Iris is what Custer (1985) would call a Social Gambler type in the sense that she truly reaches out to others when she is playing. She doesn't cut people off, as many other players do, with one-word answers or by muttering. It was easy to get her to agree to an interview, and she was just as social towards the restaurant personnel as she was towards us. I met several people who could be called Social Gamblers.

Other gamblers seem to get so completely involved in their game that they become highly asocial (cf. Custer, 1985). They are easily irritated by people who watch over their shoulders or who seek contact. The young man Linus, aged 19 years, provides some indications why when he describes the feelings he has about his regular spot:

> I felt at home. It was like being at home. If someone showed up, it was like, 'Oh, no, an intruder. Why the hell is that person coming here and bothering my game?' you know? It felt like … you get so used to it, to being there … so it was really like being at home.

Linus developed a feeling of being at home at the gaming terminal. Other people who weren't regulars and didn't know how to behave were seen as a disturbance in his 'home'. Gambling had developed into something manic for him, and when he played he didn't want any interference but rather a perfect situation between himself and the terminal. I called Linus a Terminal-Fixated Gambler, which Custer calls Asocial, and Fisher calls Escape Artist, i.e., one who plays not primarily to experience social interaction, but solely to disassociate, in other words, to disconnect oneself and the terminal from the surrounding world. The reason I am not completely sold on Custer's concept is that I feel it is too coarse. Yes, Linus is asocial, but he is primarily fixated on the terminal, and that is what renders the asociality possible. I don't adopt Fisher's concept because, although it is about escape, it is also about intimacy with something, a search for a simpler existence, characterized by human-machine interaction. The Terminal-Fixated Gambler can be contrasted with Custer's Social Gambler, who not only focuses his or her attention on the terminal but also, in terms of speech and behaviour, seeks interaction and contact with people in the surrounding environment.

Young men often played more offensively and aggressively than women and older men. With this I mean that they raised their voices towards the machine in an aggressive way, saying, for example, 'fuck it, give it to me', or hit the buttons of the machine harder. I heard several stories about young men who had broken the glass of the touch screen. I never heard this about women. This way of interacting with the machine was especially obvious in relation to the terminal's doubling-up function. If, for example, you had a full house in poker, you could choose to receive five times your bet and cash out or you could bet the winnings by doubling up. For example, if you play 5 kronor, or 70¢, a full house will give you six times your bet, or 30 kronor, or about $4. If you choose to double up, you touch the screen and eight cards appear, three in the top half of the screen and five in the bottom half. If you touch one of the three cards in the upper half and it turns out to be a jack, to retain your accumulated credits you must choose a card from the bottom row that is equal to (returns your credits) or more valuable than the jack. If you get a king, your credits will be doubled to 60 kronor, or $8. If you wish, you can continue to double up until you have lost or reached the ceiling, which is 500 kronor, or $70. Many young men egg each other on to double up. These young men represent a type of gambler that is similar to both the Machine Beaters, in that they are attempting to conquer the machine, and the Arcade Kings, in that their gambling is usually confirmed by others standing around them. However, another one of Fisher's (1993) types also describes them very well, in fact, namely the Action Seekers, reflecting Goffman's (1967) archetype of the gambler as a person who prefers a risky to a safe life, at least during the game.

Fisher's Machine Beater type is present in my material. Initially I called this gambling quality the 'cheque-chaser', but I think Fisher's concept is better and more general. The cheque-chaser label is based on the fact that when the terminal's credit display reaches 500 kronor, or $70, it automatically prints out a pink cheque to be submitted for cash from the

restaurant's cashier. Several players have told me that the main point of playing was to get the terminal to print out this cheque, like a trophy, a sign that the machine had been beaten. If this is the goal, the gambler stays at the terminal until it has admitted defeat, at least in the mind of the gambler. It is a demonstration of power. Janne, 30 years old, is a pronounced Machine Beater and describes his gambling in these terms:

> If you hand in a 400 kronor ($56) cheque, then it feels like the terminal beat you, even though you are taking out cash. If you get out a cheque for 500 kronor ($70), then you've beat the machine; that's how it is, really. You can't win more on that cheque. It's all for that 'Ha! [distinctly triumphant laughter] I got you!' you know.

To get the machine to print a cheque creates an illusion of forcing the machine into submission. Janne is an outcast and had been in prison for several years. He also has a broad history of drug abuse. But at the gambling machines he can sometimes feel like a success, like a winner, a person with power. Many people spoke of forcing the machine to print out.

Besides the type of gambler described earlier as the Terminal-Fixated Gambler, I have developed two other types of gamblers that are not included in the typologies of Custer or Fisher. Gun-Britt, a 50-year-old gambler, told about players who disturb other players by standing at the terminals without playing them:

> When people stand behind their backs, they [the gamblers] get irritated. But some people enjoy standing back and watching just as much. If you've noticed, out there in Hageby, there are these two guys. They don't play, not for more than a ten or something. But they love to stand behind someone's back and watch while other gamblers lose money.

These gamblers come across as voyeurs who get a kick out of watching others lose money. This is not an unusual occurrence in gambling and is what problem gamblers in Sweden call 'playing dry.'[9] It could also be that the gambler in question is out of money, but still wants a moment of entertainment at the gaming terminals. In their casino report, Lalander and Andreasson (2003) denoted this gambler type as the Dry-Playing Voyeur. In the casino environment, these voyeurs aren't experienced as being particularly irritating, probably because it is easier to be a voyeur when lots of people are milling around. An observer in that case does not attract attention. For Jack Vegas gamblers, these observers become disturbing if a lot of money is being lost. Dry-Playing Voyeurs are irritating to the Terminal-Fixated Gambler, whose goal is to withdraw from the surrounding world, but they are also irritating for other reasons, which are developed below. There is some correspondence to Fisher's Rent-a-Spacers, but only a vague one, since the latter participate in the gambling environment as an identity-confirming complement to teenaged men, such as Fisher's Arcade Kings. People who are just watching, however, influence the situation for the gamblers.

The interview excerpt below introduces yet another gambling type. It reveals opinions about having someone's eyes on your back:

> Philip: Were there lots of people there playing? Can you remember anything about that? Were there people standing beside you or not?

> Manucher, age 45 years: Yes, sometimes, yes, sometimes people arrive who wait, because most people know I play a lot, but they wait until there's no money left, and that, I tell you, damn! [laughs] is it irritating.
>
> Philip: Oh you mean like, it's annoying to have their eyes on your back?
>
> Manucher: Yes [emphasis]. My god, I hate it when someone stands beside me there.

The ones who 'wait until there's no money left' are the Vulture gambler types, who have a strong influence on the environments of regular gamblers. The Vulture waits for a 'hot' terminal, one that can give high winnings for a small sum of money. The Vulture preys on terminals that have been 'fed' with money for a long period of time without producing large winnings. The existence of the Vulture is based on the idea that big jackpots are periodic. If over a period of playing time a machine hasn't given out a big jackpot, then the longer that time is the closer it is to a big win. But in order to approach the winning mood of the machine you have to feed the terminal. If the machine has been fed with bills for a long period of time without having produced anything but small, occasional jackpots, most gamblers believe the moment is near when it will pay out a big jackpot. According to information from Svenska Spel, as I noted earlier, this thought doesn't have any correspondence with reality and one can't apply that kind of thinking on one machine, but a lot of gamblers believe they have penetrated the logic of the machines, and this penetration, and the thoughts related to it, guides their actions.

The Vulture waits for gamblers to use up their money so he or she can make large profits with one or two dollars. If the above thought principles didn't exist, either in the mind of the person circling and waiting for the right moment at the terminals or in the minds of the other players, the Vulture would not exist either. The existence of the Vulture in the mental worlds of gamblers means that you don't want to leave your machine before it starts paying out. Awareness of this gambler type extends the probable time that a player spends at the terminal. The observers that Fisher (1993) calls Rent-a-Spacers are not a threat; rather they support the self-confirmation of the Arcade Kings who are working on their identities when they play. The Vulture, however, is a strong source of frustration, raising the spectre of the cold logic of 'your loss is my gain'.

Vultures don't lift the mood at the Jack Vegas terminals, but of course this is based on the fact that people gamble away large amounts of money playing the machines, and the Vultures try to take advantage of this spent money. They try to open the safe. But the Vultures' strategy for getting money out of the machines is far from a sure way to get rich.

Discussion

It would be wrong to say social intercourse is lacking at the Jack Vegas sites. Sometimes relationships develop among gamblers, who most often approach the terminals alone. The social interaction is, however, limited to 'holding' the machine for someone else or asking if the machine is giving or taking. Sometimes the feeling of sitting in the same boat is created, a common we'll-all-go-down-together philosophy. Different categories of people stake out claims at their own special meeting places. Young men meet at some pubs, outsiders meet at others, retired people at others, and immigrants at yet others.

The gamblers often engaged in social relations with the owner or personnel. However, these social relations were based on the length of time that the customer was in the pub or restaurant. For the customer, who might otherwise have felt lonely, this social contact nonetheless had great importance.

Despite some sociality, most gambling was about the human-machine relationship. In this sense, it is relevant to speak of asociality or machine fixation. The gambler is absorbed by the rhythm and continuity of gambling at the terminal. Using computer terminology, the gambler logs in and out from the everyday world he or she otherwise inhabits. In this sense, the surroundings, even the social surroundings, become relatively uninteresting. Their heavy focus on the game, and on the financial losses they incur, can also cause great frustration.

It is important when drawing up a typology to be aware of two contexts that determine the outcome of the typology. First, whatever may be the researcher's academic discipline or profession is a critical factor, and second, the typologies reflect the empirical environment in which they have been created. Custer's (1985) typology clearly reveals an extensive psychiatric and treatment-centred perspective. Fisher (1993), however, based her types on ethnographic study and took inspiration from sociological theory, such as Goffman (1967). Her concepts are nonetheless strongly tied to the specific environment of the arcades on the English coast. Furthermore, her types are limited to teenaged men and women. Nonetheless, fruitful categories can be found in both Custer's and Fisher's typologies that can be used to further develop gambling types. In my study of Swedish gambling machine settings, I could justify using some of the already presented types, but I have also discovered a couple of new types that play a large role in developments in these environments. The types documented in the literature which were useful in this analysis are as follows:

- Social Gamblers (Custer) seek social contact and do not allow the game to be too dominant.
- Action Seekers (Fisher, from Goffman) prefer a risky to a safe life, at least during the game.
- Arcade Kings (Fisher) feel that their identity is confirmed while other people admire their gambling skills.
- Machine Beaters (Fisher) are usually men who long to master the machine to prove their worth to themselves and others.

Apart from the types above, I extracted three more types which I could observe in my empirical material:

- Terminal-Fixated Gamblers want to log out from the problems and worries of everyday life.
- Dry-Playing Voyeurs are there only to watch, but they irritate other players in the gambling environment.
- Vultures heighten frustration at the gambling sites, but are logical outcomes of the gamblers' reasoning on how the terminals work.

I believe the above typology represents a fruitful way to work by starting with the typologies that already exist, but not by locking oneself into them. If I had done so, categories such as the Vulture would not have been given attention in my analysis, despite the fact that their existence makes people frustrated and causes them to remain at the terminals as long as they can, waiting for the magic moment when the safe opens and the money pours out.

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[1] Bingo halls organized by Swedish grassroots associations are the exception. They host a type of electronic gambling machine called Miss Vegas, manufactured in the same way as Jack Vegas and with similar software. The name reflects that women tend to prefer bingo more than men do.

[2] Monetary amounts will be expressed in Swedish kronor in the remainder of the article. The exchange rate I have used is 1 Swedish krona equals 14¢ US; thus, SEK 100 equals $14 US.

[3] If a winning combination occurs, the profits are greater the more one bets up front. In poker, for example, a full house gives a return of six times the bet; in other words, one krona gives six kronor and five kronor gives thirty kronor.

[4] Cf. Frykman and Löfgren (1987), who describe the influence of middle-class propriety on Swedish culture and the drive for respectability and order which these influences encouraged. See also Ambjörnsson (1988), who describes the sense of order which was involved in the organisation of the working class movement, including expectations of sobriety during the work week.

[5] In addition, roulette is in no way as accessible as Jack Vegas.

6 Approximately the same logic can be found in some pubs, in which customers can order a long string of drinks, upon which they become drunk and are then thrown out, sometimes violently.

[7] In a statistical survey by Westfelt covering more than 600 Jack Vegas players, 71% were men. See Supplement in Lalander (2004).

[8] I later asked him for an interview, since he was one of the regulars at the place. He did not understand my question. I tried English, German, and Spanish, but failed to make myself understood.

[9] I heard the term for the first time when I gave a talk at a treatment clinic for gambling addicts. Gambling dry was like filling in a soccer betting slip without submitting it.

Treatment of problem & pathological gambling in the Nordic countries: Where we are now and where do we go next?

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Abstract

Treatment services specifically for pathological gambling are relatively recent in the Nordic countries. Availability and type of treatment offered varies. A common feature of most of the treatment services is that pathological gambling is treated in the same way as other types of addiction. This article is based on a survey on treatment facilities carried out during the fall of 2004. There were differences in the theoretical perspective that treatment services were based on. The most common theoretical basis was cognitive-behavioural therapy with a focus on correction of cognitive fallacies and magical thinking associated with gambling. There were clear ideological differences between the types of treatment in the different countries. There is limited knowledge about the effect of treatment over time. In the future, focus should be directed towards increased cooperation and professional development between the countries and evaluation of the effects of treatment.
Key words: Problem gambling, pathological gambling, therapy, treatment, development of treatment services, Nordic countries.

Introduction

The availability of different forms of slot machine gambling has increased during the last few years in the Nordic countries. Several factors indicate that the prevalence of problem gambling has also increased. One indication of this is that the amount of money spent on gambling and especially slot machine gambling has increased in all the Nordic countries (Lottertilsynet, 2005; Lotteriinspeksjonen, 2005; Peräkylä, 2005; Madsen, 2005). Another indication is that demand for treatment for pathological gambling has also increased. The initiative to provide treatment and professional development in this field varies in the different countries. Treatment of pathological gambling is a relatively new field in the Nordic countries. Assessment of treatment need, counselling for pathological gambling, and development of treatment services are relevant areas for investigation. Many of the professionals who work in this field have a great commitment to gambling dependency, in relation to development of treatment services and stimulation of public debate.

This article is based on a survey of Nordic treatment services, carried out in November and December 2004, and a report written for the Nordic Council for Alcohol and Drug Research (NAD) and the Swedish National Institute of Public Health (SNIPH). Information was collected from treatment institutes in Sweden, Denmark, and Finland, mainly during study visits. Additional information was collected by e-mail and telephone interviews. Publicly available information about the different treatment services was also used.

Availability of slot machines and the prevalence of gambling problems

Regulation and availability of gambling is very different among the Nordic countries. Sports betting and other types of betting are regulated in all the countries and are partly sold by government-controlled companies. In Finland and Sweden, the slot machine market is a

monopoly, while in Norway and Denmark the slot machine market is also open to private companies. Sweden, Denmark, and Finland also allow casinos. As shown in Table 1, most of the people who seek treatment, or who contact a helpline in the four countries, report that they have problems with slot machines (Hjelpelinjen 2004; Stödlinjen, 2004; Peluuri, 2004). Next come games such as odds betting, casino gambling, and Internet gambling. The availability of slot machines and the regulation of slot machine speed and size of winnings vary in the Nordic countries. In Norway and Finland, slot machines are widely available in public places, such as shops, convenience stores, petrol stations, and shopping centres. In Sweden and Denmark, availability is restricted to gaming halls and licensed premises with an age limit of 18 years. The age limit for slot machine gambling is 18 years in all the countries, with the exception of Finland, where the age limit is 15 years. Other types of gambling, such as lotto, sports gambling, and horse gambling, are sold through commission agents in shops and convenience stores. The countries vary with respect to whether there is an age limit of 18 years for sports betting and horse betting. For example, in Finland there is no general age limit of 18 years for these types of gambling. In Norway, an age limit of 18 years was introduced in 2004 for odds betting, but there is no age limit for ordinary football betting.

Table 1.
Comparison of the slot machine market and trade (2003) in Nordic countries

	Denmark	Norway	Sweden	Finland
Number of slot machines	17,250	17,500	7,500	18,415
Slot machine:population ratio	3:1,000	4:1,000	1:1,000	3.2:1,000
Number of calls to gambling helpline reporting slot machine gambling as major problem	*	90%	53.8%	70%
Playing speed	2 s per game	1.5 s per game	3 s per game	5 s per game
Payout rate	74%	78%	85%	88%
Payout	cash	cash	money order	cash
Maximum amount per game	0.1 €	2.45 €	0.70 €	1 €
Maximum winnings	38 €	244 €	55 €	20 €**
Machine accepts notes	no	yes	yes	no
Trade/consumption:				
Amount of trade, all gambling	2.3 billion €	4.6 billion €	4.2 billion €	1.3 billion €***
Amount of trade, slot machines	1.2 billion €	2.9 billion €	800 million €	581 million € ***
Amount per person, all gambling per year	440 €	1000 €	439 €	254 € ***

* Information not available.

** Applies to 'open places' such as shops, convenience stores, etc. The maximum winnings in a casino is 40 €.

***Net trade (not including winnings).

Interest in gambling and gambling problems is increasing. Recently, the damage caused by pathological gambling has become more evident. This may be connected with the fact that the media have focussed on the problems caused by slot machine gambling, and more and more individuals have come forward and told their stories. Pathological gambling as a serious health and social problem is becoming more and more recognised, and in several of the Nordic countries we see an increasing demand for treatment and for knowledge about pathological gambling.

International studies have shown that the prevalence of pathological gambling lies between 1% and 3% in most countries (Volberg, 1994). In the Nordic countries, population studies have been carried out in Norway, Sweden, and Finland. The Swedish study showed that 2% of the population between 15 and 74 years of age in Sweden had some form of gambling problem (Rönnberg et al., 1999). The prevalence of gambling problems and pathological gambling was highest among adolescents and people born outside Sweden. The Norwegian population survey showed that 1.4% of the population had or have had gambling problems, and that 0.7% of the population have a gambling problem in one form or another (Lund & Nordlund, 2003). A Finnish study has shown that 1.5% of the study participants scored 5 or more on the South Oaks Gambling Screen (SOGS) (Ilkas & Turja, 2003). A large national prevalence study is currently being planned and carried out in Demark. It is expected to be completed in 2007.

During the last few years, there has been an increasing focus on children and adolescents and slot machine gambling. Studies in this field have consistently shown that gambling with money is common among this age group (Griffiths, 1995; Derevensky & Gupta, 2000a, 2000b; Shaffer & Hall, 2001; Derevensky, Gupta, & Winters, 2003). A meta-analysis of studies carried out in North America has shown a low but increasing level of pathological gambling from 1997 to 1999 among adults and a high but stable lifetime prevalence among adolescents and treatment populations (Shaffer & Hall, 2001). A Norwegian study of children and adolescents between the ages of 13 and 19 has shown that 3.2% showed clear signs of gambling problems. This is equivalent to 11,000 young Norwegians (Rossow & Hansen, 2003). No prevalence studies of adolescents have yet been carried out in the other Nordic countries.

Treatment ideology, theoretical perspectives, and treatment of pathological gambling

Pathological gambling has many causes, and development from gambling to pathological gambling can vary from person to person. It is reasonable to suppose that there is a need for different types of treatment. From a clinical perspective, one may assume that there are still not very many therapists who know enough about pathological gambling to be able to offer a specially adapted treatment service. There is no doubt that pathological gambling has many similarities to other types of addiction, but pathological gambling is also very different, demanding specific knowledge of treatment. Currently, there are three dominant models discussed in relation to choice of intervention method: the 'medical' model, the 'behavioural' model, and the 'cognitive' model (Petry, 2002; Petry & Armentano, 1999). Most treatment services in the Nordic countries fall within the spectrum of cognitive-behavioural therapy, often supplemented with elements from solution-focussed therapy (Berg & Briggs, 2002), family therapy, and change-focussed counselling (Miller & Rollnick, 2002).

On the basis of available scientific data, types of treatment within the spectrum of cognitive-behavioural therapy have so far been shown to be effective (Echeburúa, Baez, & Fernandez-Montalvo, 1996; Echeburúa, Fernandez-Montalvo, & Baez, 2000; Sylvain, Ladouceur, & Boisvert, 1997). However, it is not possible to say which types of cognitive-behavioural therapy are the most effective, or whether such interventions are more effective than types of treatment based on other approaches (Toneatto & Ladouceur, 2003).

Today, a relatively broad spectrum of treatment programmes for pathological gambling is available, both in the Nordic countries and internationally. Very few of these programmes are evidence based. The practice in the different countries has been to start treatment without really knowing whether it works and how it works. It seems as though it is not possible to avoid a period of trying and failing in the introductory phase. The main impression gained from talking to therapists was that most of them did not have a developed treatment programme to begin with, but that the programme was developed as they went along.

Therapeutic themes in the treatment of pathological gambling

Pathological gambling causes problems on different levels. The gambler him- or herself can be affected by reduced physical and mental health and ruined economy. The gambler's family and friends often suffer broken relationships. Society as a whole is affected by reduced participation in employment and the cost of treatment and social assistance.

The therapists who were interviewed told about how pathological gambling affected the family and friends of the gambler because of borrowing money, lies, and broken relationships. The damage to third parties could be considerable and not unlike the damage one often finds in the families of alcohol and drug abusers. Pathological gambling leads to reduced productivity in employment, poorer health, and increased sick leave. Many therapists had to deal with crime associated with pathological gambling. The damage caused by pathological gambling over many years could be considerable, and many people sought treatment while they were going through a crisis. Therapists who had experience with treatment of alcohol and drug addicts pointed out the similarity between alcohol and drug addiction and pathological gambling. This similarity is also reflected in the treatment. Therapeutic themes are often related to traditional addiction themes, such as experience of shame, feelings of guilt, and taboos about gambling. Therapists who also worked with the relatives of pathological gamblers described important themes such as communication, trust/mistrust, and role displacement in families. Important issues related to treatment were motivation, ambivalence, risk situations, and relapse. These therapeutic themes were common for all the therapists, independent of their theoretical and professional background. Despite the fact that there is little knowledge about whether treatment is effective and about how it works, therapists were very optimistic about treatment. The general impression was that treatment works and that it is possible to do something about pathological gambling. The definition of successful treatment varied from total abstinence from all gambling to increased control over gambling problems and increased quality of life.

The background for initiating and organizing treatment in Norway, Sweden, Denmark, and Finland

Despite the fact that the Nordic countries are similar in several ways, treatment traditions and demand for treatment for pathological gambling were very different. There were

differences in the extent to which pathological gambling was recognised as a problem that can be treated. There is a lot of shame and many taboos associated with pathological gambling, and this has probably prevented many people from contacting treatment services. Another important factor is the availability of adequate treatment services. In the countries where there has been an increase in treatment supply, there has also been an increase in the number of people seeking treatment. Yet another factor is whether pathological gamblers can afford treatment. An investigation of the different treatment services revealed that private institutions that charge for treatment have more difficulty recruiting patients than public institutions. In other words, access to treatment determines the extent to which people seek treatment.

In Norway and Denmark, demand for treatment has been increasing since the first treatment services were initiated. There were no publicly financed treatment services for this group in Sweden until 2003–2004. As a result, demand for treatment has increased slightly, though there are still several institutions that have problems recruiting patients. In Finland, it is surprising that so few people talk about their gambling problems and that there is so little demand for treatment. Finland is different from the other Nordic countries in that gambling problems are not part of the public debate.

In many ways, Denmark can be regarded as an innovator of treatment in the Nordic countries. The established treatment services in Denmark are different from in the other Nordic countries in that special care for pathological gamblers has been established. However, there are no treatment services for pathological gamblers within the public health services. All treatment services and competence in this field are to be found in the private sector. These services have developed from the initiatives and commitment of individuals. At the same time, all treatment is fully funded by the Danish state from the profits from slot machines (1% of gross sales). At present, this is unique in the Nordic countries. A similar scheme is being planned in Norway. Treatment of pathological gambling in Denmark is particularly associated with the Centre for Ludomani in Odense, which was the first place that offered treatment for this group of people. The Centre has provided treatment since the beginning of the 1990s, and it now has clinics in Copenhagen and Aarhus. The Centre for Ludomani currently offers different treatment services, such as individual and group outpatient treatment, and an intensive inpatient treatment programme lasting 12 days. Until 2 years ago, the Centre for Ludomani was the only place that offered this type of treatment in Denmark. The Frederiksberg Centre was granted funding 2 years ago to provide treatment in the Copenhagen area. This centre is a private institution for the treatment of alcohol and drug problems based on the Minnesota model. Outpatient treatment in which patients are given training and group and individual counselling is offered. The Danish treatment institutions have to apply for funding each year. This means that they are uncertain whether they will be granted funding each year, and they do not know in advance how much funding they will receive.

In Norway, treatment services for pathological gambling have developed in a similar way to in Denmark. The first treatment services were provided at Renåvangen, an institution for the treatment of people with alcohol and drug problems. The service began as a 3-year project (1997–2000). Treatment was based on experience from alcohol and drug treatment at the therapeutic Community at Renåvangen, and from a therapeutic community institution treating pathological gambling in the Netherlands. Treatment was based on a model in which patients were admitted for two 1-week (7 days) periods, with a break of about 3 to 4 months in the middle. The project provided a lot of useful experience for the outpatient treatment services that were started later. The outpatient treatment services that exist today

were established as a result of the commitment and enthusiasm of professionals working in the field of alcohol and drug addiction. In 2000, the Blue Cross Centre in Oslo began an outpatient group therapy service for pathological gamblers. Several professionals have become interested in this area as the number of people seeking treatment has increased. With a few exceptions, most of the clinics that provide treatment for pathological gamblers are clinics for people with alcohol and drug problems. Most people have acquired skills and knowledge in this area partly by visiting, taking courses, or contacting the Blue Cross Centre, and partly from participating in national and Nordic seminars and conferences on pathological gambling. In 2002, the Bergen Clinics were allocated funding from Health and Rehabilitation Foundation for a project. The aim of the project was to develop a form of treatment based on manuals. The project was carried out with 40 people who received treatment. Unfortunately, the project was discontinued, but two manuals were developed, one for clients and one for therapists. Several institutions in Norway use these manuals as the basis for the treatment they provide. A common feature of the existing treatment services currently available in Norway is that they are based on outpatient group treatment, with an emphasis on cognitive-behavioural therapy and correction of cognitive fallacies and prevention of relapse. The specialists in the field of treatment of pathological gambling are a close group who have contact with each other. At present, there are no day-treatment services for pathological gambling in Norway. There are great regional differences in the availability of treatment services. With a few exceptions, there are virtually no treatment services for pathological gamblers in western and northern Norway.

Sweden differs from both Norway and Denmark in that up until now the availability of treatment services for pathological gambling has been very limited. Pathological gambling has been a topic of public debate for several years in Sweden, and research on the prevalence of pathological gambling was carried out at an early stage. However, it has proved to be difficult to develop public treatment services. In Sweden, there is a strong tradition for long-term treatment institutions, providing treatment lasting from several weeks to several months. The Swedish environment consists of many individuals who have a strong commitment to this field, but they appear to be fragmented and it is difficult to obtain an overview of them. However, the commitment of private individuals has been strong, and this has led to the establishment of special interest organizations. In 2001, SNIPH was commissioned by the Swedish government to develop a plan of action and to assess the need for treatment. As a result of the plan of action, SNIPH has been allocated the following tasks: to function as a national resource centre for pathological gambling, to stimulate research and development of knowledge in the field, to disseminate information about pathological gambling, and to work with preventive measures. SNIPH is currently working on developing treatment services to be established in the municipalities. At present, people can apply to social services to have the cost of treatment covered, but in practice such applications are often rejected. SNIPH has established treatment centres in Stockholm, Gothenburg, and Malmö. These centres provide outpatient group therapy, family therapy, courses for relatives, and short-term individual treatment. Experience from these treatment services shall be continuously evaluated during the project period, which lasts until the end of 2006.

In Finland, pathological gambling has so far received little attention in the public arena. There are a few individuals who encounter this problem in their work with dependency problems, and who have a good understanding of pathological gambling, but the public authorities have shown little commitment to the problem. A project was initiated in Finland as early as the beginning of the 1990s. This project was financed by the gambling industry. In particular, professionals from the A-clinics (clinics providing treatment for people with alcohol

and drug problems) took part in courses on pathological gambling and treatment. The project was discontinued and little knowledge remains today from that time. While professionals in the field in Norway, Sweden, and Denmark to a certain degree have established contact with each other, this has not happened in Finland. None of the therapists I interviewed during the study had contact with people in the other Nordic countries, or had participated in Nordic seminars or conferences on pathological gambling. Pathological gambling seems to have been given little attention by people in the treatment services, and the availability of treatment is limited because there is so little knowledge about the problem. Consequently, very little specialized treatment is available in Finland today.

Before any other treatment service for pathological gambling was established in the Nordic countries, Gamblers Anonymous offered self-help groups for pathological gamblers. Gamblers Anonymous has meetings in Norway, Sweden, Denmark, and Finland. It varies how geographically accessible the groups are. In Sweden, another kind of self-help group has developed over the last 20 years. Gamblers Foundation (Spelberoendes Riksforbund) has support groups for pathological gamblers over almost all of the country.

Two treatment manuals have been developed in the Nordic countries—one in Norway and one in Sweden (Skjerve & Prescott, 2003; Prescott & Skjerve, 2002; Ortiz, 2004). The Norwegian manual is partly based on the treatment programme of Ladouceur, Sylvain, Boutin, and Doucets (2002). The manual has a slightly extended focus, based on the idea that for some pathological gamblers there are important determining factors other than fallacies. The manual includes interventions directed at strengthening motivation, decision-making, and practical mastering strategies. The Swedish manual has a section on psycho education for gambling and pathological gambling, and a section on behavioural therapy with a focus on factors that trigger and maintain pathological gambling, problem solving, and prevention of relapse. Both manuals are intended to be used as practical aids in the treatment of pathological gambling. The manuals have not yet been evaluated.

Two different types of self-help manuals are available in the Nordic countries. The first type is available for participants in a Swedish Internet-based self-help programme, based on cognitive-behavioural therapy (http://www.slutaspela.nu/). Treatment is divided into eight modules with homework after each module. The second self-help manual (Hansen & Skjerve, 2005) is available at http://www.rus-ost.no/. This manual is intended to be a tool for solving the problem oneself or as a source of motivation to seek treatment.

So far, we know little about the effectiveness of treatment manuals and self-help manuals. However, they provide a theoretically based starting point for the further development of treatment services.

Table 2.
An overview of treatment services in the Nordic countries

	Sweden	Norway	Finland	Denmark
Starting date	• 1990s: private organizations started to provide treatment • 2003: public treatment services were established	• 1997: a 3-year pilot project • from 2000: permanent treatment services	• 1990: treatment services that were not continued • but treatment services still exist	• 1993: a pilot project • 1997: permanent treatment services

	Sweden	Norway	Finland	Denmark
Number of clinics	• about 20–25 clinics on the list of treatment centres • about 10–12 specialized clinics	• about 30 clinics, mainly clinics for the treatment of people with alcohol and drug problems	• several clinics that provide services for this group of people • in addition 2–4 specialized clinics	• 4 clinics
Type of treatment	• treatment centre • outpatient group therapy • counselling	• outpatient treatment • between 1 and 5 counselling sessions, then short-term group therapy	• generally inpatient treatment • one clinic has outpatient group therapy	• outpatient counselling and group therapy • treatment programme • day treatment
Method of treatment	• cognitive-behavioural therapy • psychoeducation • 12-stage treatment • family therapy	• cognitive-behavioural therapy • psychoeducation • solution-focussed therapy • family therapy	• cognitive-behavioural therapy • psychoeducation • family therapy	• cognitive-behavioural therapy with a focus on prevention of relapse • Minnesota treatment adapted to pathological gambling
Specialist treatment	• yes, but also nonspecialized treatment services	• yes	• yes and no	• yes
Economic counselling	• a few clinics offer this • usually patients are referred elsewhere	• a few clinics offer this • usually patients are referred elsewhere	• no, but some clinics offer economic counselling as a part of follow-up treatment	• no—patients are referred elsewhere
Family/ relatives	• several clinics include families • one clinic has a special course for relatives • one clinic provides family therapy	• relatives are included in the treatment, but are not normally offered separate treatment • 6 of the clinics in the study provide treatment especially for relatives	• relatives are included in the treatment in some clinics, but do not receive separate treatment	• yes—a separate course for relatives
Length of treatment	• from 4–5 consultations to inpatient treatment lasting 6–8 months	• from 6–7 weeks until 'according to need' • usually short-term treatment	• inpatient treatment: 2 weeks plus outpatient follow-up • group therapy: once a week for 30 weeks • family therapy: once a week for 1 year	• outpatient treatment for 3–10 months • treatment programme: 12 days with follow-up • day treatment: 6 weeks with follow-up for 12 months
Follow-up treatment	• yes, for most people in one form or another	• very few people are offered follow-up treatment (< 5 clinics)	• yes—most clinics offer follow-up treatment	• yes, for all types of treatment
Dropout	• varies—the highest dropout rates are with outpatient treatment	• 30% to 50%	• no	• yes, but varies according to the type of treatment: – lowest dropout rates: a treatment programme – highest dropout rates: outpatient treatment

	Sweden	Norway	Finland	Denmark
Payment for treatment	• yes, at the private treatment centres	• yes—30 € per consultation up to a maximum of 200 €	• varies from free to 26 € per day	• no—all treatment is free
Number of people treated each year**	• about 160 people	• about 700 people	• about 30 people	• 631 people in total (565 at the Centre for Ludomani, 66 at the Frederiksberg Centre)
Funding	• public • private	• public	• public • private • funded by industry	• fully public funding
Age	• 18+	• usually 18+ • one clinic for children and adolescents • plus 4–5 clinics that provide treatment for people from the age of 15	• usually 18+ (with the exception of Helsingfors clinic for adolescents (Helsingfors ungdomsstation/Helsingin nourisoasema))	• 18+
Possibilities for inpatient treatment	• yes, at private treatment centres	• no	• yes, together with patients with alcohol and drug problems	• yes, a 12-day treatment programme

** The estimates are based on information from the institutions where interviews were carried out and provide an indication of the number of people who have received treatment.

Experience gained from providing treatment for pathological gambling

What kinds of people seek treatment?

The gender distribution of people who seek treatment was skewed. The majority of people who had contacted treatment services were men, mainly between 30 and 40 years old. This was the case in all the Nordic countries. Several of the institutions reported that the proportion of men was between 70% and 90%. Despite the predominance of men, some of the therapists reported that the proportion of women was increasing, and that more and more women were seeking treatment, compared to the situation 2 or 3 years ago. Women who seek treatment tend to be older than men—between 50 and 60 years old. There were very few women in the younger age groups. The age range of people who had sought treatment was 14 to 80 years. Treatment services for adolescents are almost nonexistent in the Nordic countries. Several therapists reported that there were quite a few boys under 18 years old and their parents among those seeking treatment. Some of the treatment centres have accepted adolescents for treatment, as an exception, but other centres have not been able to do so. The few centres that offer treatment to adolescents reported that they always involve parents in the treatment. Adolescents who seek treatment often have other problems, such as learning difficulties, behavioural problems, and criminal behaviour.

Both the Swedish and the Norwegian population surveys (Lund & Nordlund, 2003; Rönnberg et. al., 1997) have shown that there is a higher proportion of pathological gamblers among immigrants with a non-western background than among ethnic Swedes and Norwegians. This was reflected in the people who seek treatment. Several challenges related to this were mentioned. More people in this group had multiple problems. Therefore,

they needed a more comprehensive treatment programme that also included treatment of other types of mental illness. Language differences often created problems for group therapy. The dropout rate was higher in this group. Currently, there is no specific experience in designing treatment programmes that are specially adapted for immigrants, but this is an area that several therapists were concerned about and wished to work with.

Most of the people who received treatment were in debt. The size of the debt varied from several thousand to several million kroner. The treatment institutions had slightly different strategies for dealing with financial problems and different attitudes towards the problem. All the institutions agreed that dealing with financial problems in some way or another was important, as well as decisive for attaining an existence free from gambling. Some of the institutions provided financial counselling as part of the treatment programme. They had separate members of staff to help pathological gamblers obtain an overview of their debts and contact their creditors to organize a debt settlement. Other institutions helped by referring clients to a financial adviser outside the institution. On the other hand, some of the therapists I interviewed were concerned about not getting involved in financial problems as part of the treatment, because the practical issues related to money and debt could easily dominate the treatment programme.

Dropouts

Most of the therapists reported that the dropout rate from treatment was high, especially at the beginning of treatment. It was pointed out that many of the people who sought treatment were in a crisis situation when they contacted the institution, and that this was a contributing factor to the high dropout rate. Several of the therapists reported dropout rates of between 30% and 50%. In all the Nordic countries, the dropout rate was highest between the first contact and the first appointment. The dropout rate also seems to be higher for outpatient treatment than for inpatient treatment. The Centre for Ludomani in Denmark provides both types of treatment, and here there was a difference between inpatient and outpatient treatment programmes. The treatment institutions in Norway that had fewer places had lower dropout rates. The dropout rate was also lower in Finland, where it was difficult to get a place for treatment.

People who complete treatment

Not surprisingly, the people who completed treatment and managed best afterwards were the people with the least complex problems. A good network, employment, and high motivation were factors that increased the probability that treatment would be successful. All the therapists had this experience.

Feedback from the participants

Feedback was collected from the participants in a nonsystematic way. Some institutions obtained a written evaluation from participants at the end of treatment. Other institutions obtained no feedback from participants. Participants reported that it was important for them to be treated with understanding and not condemnation. Several participants reported that they had gained much from receiving treatment and that taking part in group therapy had been educational and had given them a greater understanding of their problem. One of the most frequent responses was that it had been very useful to meet other people in the same

situation. Recognizing that others were in the same situation was very important. This is probably because pathological gambling is a problem that has found little acceptance in society, and many people experience a great sense of relief when they become part of a group where they can 'be themselves' and 'avoid having to explain themselves all the time'. Some of the participants also stressed how important it was to include their family in the treatment. Some of them expressed the wish for a longer-lasting and more comprehensive treatment programme. There is little information from the people who drop out of treatment or from those who do not find the treatment useful. Thus, the feedback presented here is only from the people who completed treatment.

The desire to expand treatment services in the Nordic countries

The need to increase the level of competence

Most therapists expressed a clear desire to have contact with other people who work in this field. Several of them said that they felt that they were alone in the field and that they wanted to have contact with colleagues and to receive guidance from them. They also wished that there were more courses on pathological gambling. Several of them wished that they could participate in national and Nordic seminars on this topic. There was large variation in the level of participation in courses and seminars. Therapists from Norway and Denmark had participated more than others in national and Nordic seminars. The situation was more variable for the Swedish therapists. Some of them had close contact with professionals in Norway and Denmark. But many of the therapists from private treatment services in particular had little or no contact with colleagues. The Finnish therapists were in a similar situation. The therapists in Finland had little contact with each other, they had no contact with others in the Nordic countries, and they did not participate in Nordic seminars.

A greater variety of treatment services

At present, several of the treatment institutions offer a limited range of treatment services, either short-term group therapy lasting from 6 to 12 weeks, or a course of individual counselling sessions. All the institutions wished to be able to offer a greater variety of treatment services, better adapted to each individual. The institutions also varied in the follow-up treatment they offered. Follow-up varied from two to three follow-up consultations to weekly follow-up, according to need. The institutions that had no resources to follow up clients regretted this and expressed the view that a course of treatment lasting from 6 to 8 weeks was too short to bring about lasting change. Other institutions had experienced that a short course of treatment was adequate for some people. This highlights the need for a greater variety of treatment services.

A focus on relatives

The majority of therapists regarded relatives as an important resource in treatment. Several of them had established programmes for the relatives of pathological gamblers, in the same way as clinics for people with alcohol and drug problems have programmes for relatives. This provides the possibility for individual treatment on the relatives' own terms. Several of the therapists wished to be able to offer a programme that is better adapted to relatives, including support groups, courses, and treatment.

The economic framework for maintaining and developing treatment services

Funding of treatment services varies. All the institutions, independent of how they were funded, wished to have more resources to extend and develop the services they offered. The Danish treatment institutions receive funding for 1 year at a time. Even though the treatment services in Denmark are well established, this provides a challenge with regard to long-term planning. Staff is appointed for 1 year at a time and each year the institutions have to apply for funding for the next year. The economic situation for the Norwegian institutions is somewhat different. Some of them described treatment of pathological gambling as a service that is separate from the regular services. Some of them had a limited number of places each year allocated for treatment of pathological gambling. Others could offer treatment of pathological gambling as part of their regular service. Several of the clinics had a waiting list for treatment. The private institutions in Sweden depended on patients who pay for their treatment in order to continue to offer treatment services.

Assessment of patients and evaluation of the effect of treatment

Few of the treatment institutions carried out systematic assessments of patients and evaluation of treatment. If patients were assessed, this was done during the preparatory consultation or on admittance before treatment was started. Some of the institutions use the SOGS as a diagnostic tool (Lesieur & Blume, 1987). The institutions that assessed their patients more systematically did this partly in order to evaluate their own practice and partly in order to collect data for planned research projects. Several of the therapists who were interviewed expressed a wish to be able to set aside more time to carry out a more thorough assessment of their patients, in order to be able to improve their evaluation of the effect of treatment. Some of the therapists believe that it is problematic that treatment services are now being developed when no evidence-based knowledge about the effect of treatment is available. Evidence-based knowledge is also needed in order to improve the quality control of treatment.

Summary

Treatment of pathological gambling is a new and rapidly developing professional field in the Nordic countries. The existing treatment services are inadequate to cover the need for treatment of pathological gambling. The established clinics have many applicants and several of them have waiting lists. Newly established clinics often experience that it takes time before their services are known and patients apply for treatment. Recruitment can go slowly to begin with. Whether people seek treatment or not seems to depend on existing norms in society in relation to pathological gambling. During the last few years, in both Norway and Denmark, pathological gambling has been put on the agenda, and to a greater extent it has been recognised as a problem in society. Norway and Denmark are also the countries with the most people seeking treatment. Finland is the country with the least treatment services and the least number of people seeking treatment. In Sweden, public treatment services have only been available during the last 2 to 3 years, but the private sector has a long tradition of offering treatment. Whether treatment is free or not also seems to influence recruitment. It is difficult to recruit patients if they have to pay for treatment themselves

Probably only a small proportion of people with gambling problems seek treatment. It is reasonable to assume that some pathological gamblers manage to stop gambling by

themselves, that some of them join self-help groups, and that some get help from available information and self-help material.

The availability of treatment varied. It was easier to obtain treatment in large towns than in small places. Services are most easily available in Denmark, which has to do with geographical factors. In the other three countries, there are large regional differences in availability of treatment, particularly in the northern areas. If outpatient treatment is the main type of treatment offered, it is appropriate for services to be available close to where people live and work. There are large differences between the countries in availability of treatment and the type of treatment offered, but there are also some common features in the way treatment is organised. Cognitive therapy, often in groups, with a focus on prevention of relapse and correction of cognitive fallacies, was often used, sometimes in combination with a relational focus. This study can contribute to closer cooperation between treatment institutions in the Nordic countries. Contact between professionals is useful for developing methods of treatment and for assessing clients and evaluating treatment. Even though this study of treatment services in the Nordic countries does not include all the treatment services, there is reason to believe that it provides a good overview of the situation in this area.

Up until now, very little evaluation has been carried out of treatment services for pathological gambling. This is not just in the Nordic countries, but also internationally. In order to evaluate treatment, treatment services must be established. An aim for the future should be to develop treatment services and increase the number of treatment institutions. Therapists and researchers in the field should be given the opportunity to document and systematize their work and their experience, so that knowledge about pathological gambling can be made available for everyone. It can also be useful to try out different treatment methods for pathological gambling and to find out which treatment methods are more effective.

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Putting gambling problems on the agenda—Some Norwegian experiences

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Although tragedies from gambling are an old phenomenon, gambling problems are often not acknowledged as an appropriate subject for publicly funded treatment and research. This is not difficult to comprehend. Without having met pathological gamblers, one might easily think that people who gamble much more than they can afford must be irresponsible, stupid, and reckless individuals who just need to pull themselves together.

In contrast, the first meeting with pathological gamblers is often an amazing experience, for three reasons. Firstly, the majority of pathological gamblers are remarkably normal individuals who have not faced or caused peculiar problems in other areas of life. Secondly, the consequences are often dramatic beyond imagination. Pathological gamblers experience not only severe economic problems but also crushed self-images, destroyed relationships, severe depressions, suicidal contemplation, and reduced capacity for work. Thirdly, the gambling often has the distinctive characteristics of a compulsion, with a strong contrast between attitudes and actions. Pathological gamblers may feel the need to employ extreme strategies to quit gambling.

In Norway, organised treatment of pathological gamblers started at the end of the 1990s. The problems were rapidly increasing due to our extremely liberal slot machine policy. Only in exceptional cases do Norwegians have the opportunity to buy a loaf of bread or a newspaper without being confronted by greedy slot machines, where you may lose more than $60 US (equivalent) each minute.

In 1999, the government proposed directives for less aggressive and accessible slot machines. But after extensive lobbying by the gambling industry, the proposals were unanimously turned down by the parliament. The representatives of the parliamentary committee of the two large conservative parties referred to gambling problems as 'this so-called problem'. The chief lawyer of the slot machine companies' association estimated the number of gambling addicts at 'some tens or some hundreds', so there was no need for regulation.

Thus, gambling problems were hardly regarded as a problem. Practically no financial resources had been allocated to treatment, prevention, or research. Therefore, we, the few therapists who met gambling addicts, strongly felt the need to put gambling problems on the agenda. We wanted to make a systematic effort to make the public, especially the health workers and the politicians, understand that pathological gambling is a large problem which is not just a moral issue, but a challenge for our society, especially for politicians, health workers, and researchers.

The first step was taken in 1999, when a few Nordic pioneers in gambling treatment and research founded a committee for education on pathological gambling. The committee arranges conferences for therapists, researchers, and state regulators. The next year, we started a national association for gambling problems. Its aim is to provide information on gambling problems, establish adequate treatment, initiate independent (not industry-sponsored) research, be a meeting place for professionals, and influence the political framework regulating gambling. The organisation has an active mailing list of which

practically all therapists and some researchers and regulators are members. There are seminars every year.

But how could we exert more influence? In a discussion at the Nordic School of Public Health, leading health bureaucrats and politicians discussed which factors decide the priorities within the health services. They concluded that the priorities are not much influenced by the severity of the problems, nor by the opinions of professionals or by cost-benefit studies of the effects of treatment. The two main factors determining priorities are lobby groups and mass media.

The gambling industry is, of course, a mighty lobby group. Robert Goodman (1995) studied the processes behind the liberalisation of gambling during the last decades. He concluded that there had never been a popular demand for liberalisation of gambling policies. The only groups pushing for liberalisation have been the two groups profiting economically, namely the authorities and the gambling industry.

Their classical arguments have been summed up by Brian Castellani (2000, pp. 30–31) in his book *Pathological Gambling*:

> If you legalize gambling, jobs will be created, money will be given to the schools, your town's economic recession will be lifted, the standard of living will increase, people from out of the state will come to gamble, the restaurants, hotels, malls, bars, and stores in your area will make money, and everyone will be happy.

In altering the impression that gambling is largely a win-win situation for society, the role of the mass media is probably essential. When media present a problem as large and serious, they invariably turn to the politicians, asking what they are going to do. The politicians feel obliged to declare that they are planning to take initiatives to reduce the problem. That is how the system works. It may even be maintained that the media govern the country, with politicians as intermediaries. How, then, can we influence the media?

Our experience has been that the media are interested in gambling problems if they are given the opportunity to present personal narratives, or political conflicts, or numbers indicating the size of the problem.

Journalists often ask therapists for access to pathological gamblers. Although many patients feel there is an urgent need to tell the public what gambling problems are really like, most of them do not want to reveal their identity in public. Thus, there have been many anonymous interviews. But an important minority, mainly gambling addicts in stable, long-term remission, are willing to face the mass media with picture and name.

The personal narrative of the career of a pathological gambler, from being a well-functioning individual to experiencing tragedy for him- or herself and family, often makes a strong impression on readers or viewers. We believe such contributions have been very valuable for putting gambling problems on our society's agenda.

As mass media always focus on political conflicts, they will focus on gambling problems if some politicians propose controversial changes in gambling policy. Therefore, such proposals may be helpful even if they are not approved.

The mass media also like to present the number of pathological gamblers, the number being treated, or the number of suicides related to gambling. Numbers tend to accelerate public debate on any social policy issue, even though the numbers are not always accurate.

Therefore, it is probably crucial to perform a population study and collect other quantitative measures of gambling problems. When awareness of gambling problems reaches a certain level, it is possible to get funding for a population study on gambling and gambling problems. This seems to be an important step in the process of increasing awareness of the problems.

Another important strategy for putting gambling problems on the agenda has been to write articles in newspapers and journals and to publish books on the topic. In Norway, the first book on problem gambling was published in 2002 (Fekjær, 2002) and the second in 2005 (Skaug, 2005).

A major change in awareness has taken place during the last 5 years. Gambling problems are clearly on the public agenda, as reflected in the news and in radio and TV debates.

Of course, tragedies from gambling still take place. But nobody may now talk in public of gambling addiction as a 'so-called problem'. Treatment is being offered in most of the country and resources are available for research and prevention. The political climate has changed. The national organisation has good access to key politicians and so the board has meetings with ministers every year. Our parliament has passed a new law aimed at reducing gambling, especially a very strong reduction in slot machine gambling.

Nobody can for sure analyse the reasons behind the changes in public and political attitudes. Attitudes have, of course, also changed in other countries, but the changes over a few years seem to have progressed more strongly and rapidly in Norway than in most other countries. Therefore, we believe a good deal of the progress is due to the systematic efforts by therapists and pathological gamblers. By and large, we are satisfied with the development and looking forward to pushing the development further in the same direction.

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