

# Predicting the future of Internet sex: online sexual activities in Sweden

AL COOPER<sup>1</sup>, SVEN-AXEL MÅNSSON<sup>2</sup>,  
KRISTIAN DANEBACK<sup>2</sup>, RONNY TIKKANEN<sup>2</sup> &  
MICHAEL W. ROSS<sup>3</sup>

<sup>1</sup>San Jose Marital and Sexuality Centre, Pacific Graduate School of Psychology, USA,  
<sup>2</sup>Department of Social Work, Göteborg University, Sweden & <sup>3</sup>School of Public Health,  
University of Texas, USA

**ABSTRACT** *This is the first large-scale study of Internet sexuality conducted outside the USA. The questionnaire was administered in the Swedish language and utilized responses from one of the most popular portals (Passagen) in Sweden. Responses from 3,614 people were analysed, with a gender distribution of 55% males and 45% females. This is exactly the same percentages as found in the overall use of the Internet in Sweden (Nielsen/Net Ratings, January, 2002) and participation by females allowed for a more detailed examination of their involvement in online sexual activities. A factor analysis found that there were two major and coherent factors that accounted for over one-third of the variance for all participants. These were called 'Seeking partners', and 'Accessing erotica'. The article details several ways these factors were influenced by gender and age. These results also provided corroboration for several important patterns of OSA reported in earlier studies. Sweden might be an especially fortuitous place to do this type of research as the pervasiveness and acceptance of Internet usage is higher than in the USA, and among the highest in the world. It was postulated that these findings might provide an indication of how OSA might evolve in other societies as their populations increasingly spend time online.*

## Introduction

In the first year of the new millennium it was estimated that 20–33% of Internet users were engaging in online sexual activity (OSA) (Egan, 2000). Some have postulated that OSA may be part and parcel of a new sexual revolution (Cooper *et al.*, 1999). Five factors that have been identified as essential in making the Internet such a powerful medium for OSA include *access*, *affordability*, *anonymity* (oftentimes called the 'Triple A engine'; Cooper, 1998), *acceptability* (King, 1999) and *approximation* (Ross & Kauth, 2002). Yet despite increasing acknowledgement of the importance of better understanding of what impact the Internet is having on sexuality, and vice versa, (Cooper & Griffin-Shelley, 2002; Ellis, 2002), there have been relatively few studies on OSA and almost none conducted outside the USA.

Correspondence to: Al Cooper PhD, San Jose Marital and Sexuality Centre, Suite 275, 100 N. Winchester Blvd., Santa Clara, CA 95050, USA. E-mail: [alcooper@myinternetcity.com](mailto:alcooper@myinternetcity.com)

The prevalence of Internet use in Sweden is among the highest in the world with 6.02 million (68%) of the Swedish people using the Internet in 2002 (Nua, September, 2002). Thus with such a high level of 'connectivity' Sweden may hold some clues as to what the future of Internet sexuality might look like.

Cooper and Griffin-Shelley (2002) have emphasized the importance of having an agreed upon nosology and operational definitions if progress is going to be made in quantifying, studying, and understanding OSA. They offer that OSA can refer to any online activity involving sexuality. These activities can range from looking for a partner, shopping for sexual products, chatting, viewing erotic or pornographic pictures or movies, seeking sexual support, having cybersex, seeking real life partners to have sexual relations with, and so on. These activities may be engaged in for a variety of personal reasons such as relaxing, having fun, staying in contact with a love and/or sex partner, reaching orgasm, or seeking a cyber- or real-time affair.

Online Sexual Problems (OSP) are an outcome for some people Cooper *et al.* (2001) and include the full range of difficulties that people can have due to engaging in OSA. Such difficulties include negative financial, legal, occupational, relationship, as well as personal repercussions from OSA. The 'problem' may range from a single incident to a pattern of excessive involvement. The consequences may involve feelings of guilt, loss of a job/relationship, higher risk of sexually transmitted infections, among others.

Both positive and negative aspects of OSA have been documented and it has been said that the vast majority of those who engage in OSA do not experience adverse consequences from their behaviour (Barak *et al.*, 1999; Cooper *et al.*, 1999). However, at the same time there are a significant minority of people who do find their OSA to be problematic, and thus they would fall into the category of those with an OSP (Cooper, 2000; Cooper *et al.*, 2001, 2002; Rietmeijer *et al.*, 2001). Recent research (Cooper *et al.*, 2002) has attempted to better understand the profiles and demographics of those who participate in OSA in order to serve as a first step in better understanding what leads some individuals to have significant problems with their OSA, while others do not.

Past research has tended to be more focused on OSA among males (Cooper *et al.*, 2001; Ross *et al.*, 2000) and thus less is known about females who use the Internet for OSA. Cooper *et al.* (1999) found that while many women do indeed engage in OSA, they differ somewhat from males in what they do, and where they go, while online. The interactive part of OSA seems to suit women better (e.g., chatting about sexual issues and seeking support in sexual issues). Males seem to prefer visits to adult entertainment sites and erotic news groups (King, 1999). Although men appear to be the majority of those engaging in OSA, there are more and more women finding their way into using the Internet for OSA.

This study provided new data from a recent sample of Swedish Internet users. One of our primary goals was to further expand the understanding of the reasons people engage in OSA. As we believe these reasons to be greatly influenced by the gender and age of the participant, those variables received particular attention in this study. In addition, as opposed to almost any past study in this area, the gender distribution in this sample was almost equal, therefore we used this data to attempt to obtain a better understanding of women's involvement and patterns of OSA. Finally, considering the

multitude of reasons that people engage in Internet sexuality, it is essential that research begin to identify common factors to help us be more able to co-vary these and conduct more complex statistical analysis.

## Methods

### *Procedure*

The questionnaire, which was administered in the Swedish language, was launched through a Swedish portal site called Passagen ([www.passagen.se](http://www.passagen.se)), that is part of the Eniro Corporation. Passagen is ranked one of the top four domains in Sweden considering the number of unique visitors. A banner was placed on the website for two weeks from June 10 to June 23, 2002 and appeared randomly on the portal as well as on its sub-sites. There was no way to control where the banner would appear, neither was it possible to predict for whom the banner would show, thus for all practical purposes its appearance was random. During the two weeks Passagen.se had 818 422 and 893 599 unique visitors respectively, and the total number of visits was approximately 2 million with approximately 14 million pages viewed.

When clicking on the banner the viewer was linked to an introduction site located on a server within the Göteborg University web. The intro site also had the University logo and described the project, the nature and number of the questions, the funding source and material relating to ethics and confidentiality, including the fact that the questionnaire was anonymous. The introduction site also informed participants that this survey was limited to those who were 18 years or older. By clicking on an 'accept' button, the viewer was linked to the questionnaire, which was also placed on the University server. Below the questionnaire and visible at all times was a set of boxes numbered 1–75 and corresponding to each question. Different colours indicated whether a question had been answered or not and it was possible up to completion for respondents to return to a particular question to revise an answer. The system was running on an Intel based  $2 \times 450$  Mhz server, placed within the Göteborg University web with a 10 giga-bite connection both ways.

Each respondent opened a session with the server and this session was active until the questionnaire was finished or quit. All responses and changes of responses were logged and saved continually. The specific format used made it possible to get exact information on when the respondent started to answer the questionnaire and when and on what question the respondent stopped. It was presented in year-month-day-hour-minute-second format for both starts and stops. This format makes it possible to analyse missing values, when and where respondents drop out, along with other variables, which might be related to their discontinuing participation, such as gender and age.

### *Portal data*

Of those who visited the Passagen.se portal site, 54% were women and 46% were men. The two largest groups were 25–34 (22%) and 35–49 years (27%). The other age cohorts were 50–64 years (18%), under 17 (17%), 18–24 years old (12%), and 65

years or older (4%). More than half of the portal population consisted of the following occupations; full time students (17%), within service occupation (13%) educational work (10%), administrative work (8%) and technical work (7%). Ten percent reported not currently having an occupation.

### *Instrument*

The questionnaire was based on two earlier instruments. The first was used in an earlier study done in conjunction with MSNBC, one of the largest American portals (Cooper *et al.*, 2001), the second was used in the Sex in Sweden Survey (Lewin *et al.*, 1998).

The instrument in this study consisted of 75 questions, broken down into seven sections<sup>1</sup>, Section one had 24 demographic questions including items on Internet access and experience of relationships and sexuality. Section two consisted of 13 questions focusing on perceptions of on-line love and sexual behaviour. Section three had seven questions on OSA in the workplace and relevant policies and regulations on such behaviour. The fourth section consisted of 17 questions dealing with both on-line and off-line sexual experiences. In section five respondents were to answer four questions including 12 statements about Internet and sexuality to help make clearer their attitudes about this phenomena. For example if cybersex is cheating, if sex on the Internet is better suited for men, if the Internet fosters equality between gender and similar questions. Items were rated on a three point Likert scale (i.e., whether they fully agreed, agreed somewhat, did not agree, or if they could not answer the question). Section six had eight questions around issues of online sexual problems and STDs. The last section contained a 10-item Kalichman scale on sexual compulsivity (SCS). The final item of the instrument provided respondents with an opportunity to comment on the questionnaire.

### *Missing values, drop outs, and different N's*

Due to the format and technique used in this survey different N's were obtained for items throughout the questionnaire. The first question (age) was answered by 3,614 persons and the last question (10-item Kalichman scale) by 1,851 persons. This detailed accountability provides a unique possibility for special analyses of those who did not complete the entire questionnaire. For example, males have dropped out earlier than females in the questionnaire. There are plans to focus a separate article on better understanding peoples' participation and how Internet questionnaires about sexuality may influence this.

### *Sample*

As a result of the ethical and legal complications of involving minors in a survey related to sexuality, it was decided to restrict participation to adults (over the age of 18). If a respondent filled out the questionnaire and claimed to be under the age of 18, that case was removed from the database. An upper age limit was set at 75 years, due to the small numbers claiming to be older and also in order to be able to facilitate comparison with

earlier related research (Cooper, 2000; Lewin *et al.*, 1998). The mean age of the total sample ( $n = 3,614$ ) was 32.5 years for females ( $SD = 10.5$ ) and 29.2 years for males ( $SD = 11.3$ ). For those who reported engaging in OSA ( $n = 2,035$ ) the mean age was, for females 29.7 ( $SD = 10.6$ ) and for males 32.0 ( $SD = 10.5$ ).

The gender distribution of those who engage in OSA in this study were 55% males and 45% females, which is exactly the same percentages as found in the overall use of the Internet in Sweden (Nielsen Netratings, 2002, January), and statistically identical to the percentages of those who visited the portal site where the questionnaire was launched (54% males and 46% females). Less than 3% claimed to be from a country outside Sweden.

### *Analysis*

The 15 items relating to what people do online in relation to love and sex were subject to factor analysis (principal components analysis followed by varimax rotation to simple structure) for the total sample. Based on Scree tests, four factors were extracted. For demographic comparisons, the first two major factors for the total sample were scored, where 1 = checking a category. There were five and three categories for each of the first two factors for the total sample, and thus the possible score range for the two factors was 0–5 and 0–3.

Mean scores for the two major factors based on total sample analysis (factor scores based on simple addition of scores) were compared by *t*-test (unequal variance assumed) on gender, and on one-way analysis of variance with post-hoc Scheffé tests for the five age groups. Based on factor content, the first factor was labelled the OSA Partner-seeking scale, the second the OSA Accessing erotica scale.

### **Results**

A total of 2,723 persons answered the question ‘What do you do online that is related to love and sex?’ Three quarters of the respondents checked different activities, whereas one quarter said that they did not do anything on line related to love and sexuality. There was a clear gender difference among those who reported they do not engage in OSA, with one third of the women and approximately one fifth of the men (17%) reporting that they did not use the Internet for online sexual and/or love-related purposes. However, looking at the total number of OSA respondents ( $n = 2,041$ ), the gender distribution becomes more equal with 45% women and 55% men. In a similar American study, the female population accounted for only 16% (Cooper *et al.*, 2002b). Without hesitation, one can say that the gender distribution among the OSA respondents is one of the most striking findings in this study as past research has not been able to successfully get females to participate in meaningful numbers. In Table I the respondents’ OSA are presented in relation to gender. Particularly noteworthy is this first look at women’s OSA.

As mentioned before, the respondents were asked about what kind of sexual activities they engage in online. The results from this question are presented in the first and third column of the Table I. In the next question they were asked to specify

TABLE I. Gender differences on individual OSA and preferred OSA

Activity	% Male <sup>a</sup>		% Female <sup>a</sup>	
Looking for love contacts	38	4	37	2
Flirt	47	11	46	10
Looking for a partner	29	10	21**	8
Staying in contact with love/sex partner	25	8	35**	21
Reading erotica (text)	33	6	30	9
Viewing erotica (pictures/movies)	69	37	20**	6
Visiting contact sites	37	8	27**	8
Replying to sex ads	10	1	2**	0
Chat with people with same interest	29	10	32	17
Educating myself about sex/getting professional help	15	2	24**	9
Buying sex products	13	1	15	3
Contacting prostitutes	2	0	0*	-
Other things	3	4	6**	7
	<i>n</i> = 1130	<i>n</i> = 1090	<i>n</i> = 911	<i>n</i> = 895

<sup>a</sup>The first column displays the percentage of respondents engaging in the specified activity ('What do you do online that is related to love and sex? Mark *all* appropriate.'). The second columns display the preferred activity of the respondents ('What do you *mostly* do online that is related to love and sex? Mark one only'). \*\**p* < 0.001 \* *p* < 0.005.

what activity they *most often* engage in. The answers to this question are presented in column two and four of the Table I. It is obvious, that there is a clear *gender difference* concerning what online sexual activities people engage in. By far, the most common activity among men is viewing erotica (69%), which also is the most preferred online sexual activity (37%). Women most frequently engage in online flirting (46%), but they mostly use the Internet to stay in contact with an already existing love or sex partner (21%). Apart from viewing erotica more men than women use the Internet to look for a partner, to visit contact sites (websites displaying contact ads) and to reply to sex ads; most of these differences show statistically significant differences in proportions of activity between men and women on Chi-square test. Women, on the other hand, use the Internet more often than men in order to stay in contact with a love or sex partner that they already have. They also report a higher percentage of Internet use for purposes of getting support or education in sexual matters. Looking at *gender similarities* we find that both men and women use the Internet to the same degree in looking for love contacts, flirting, reading erotica, chatting with people with the same interest, and buying sex products. As stated above, flirting is the most common activity among women; among men flirting holds the second position next to viewing erotica. Only a few respondents answered that they use the Internet to contact prostitutes, all of them men. The category 'other things', with a free text box attached, is not analysed at this point.

Table II indicates major differences in the pattern of OSA between men and women. These differences are confirmed by looking at the way the factor analysis in Table II clusters the activities into dimensions, suggesting that they can be usefully looked at as

scales rather than as discrete activities. The two major scales illustrate that the two most important dimensions of OSA are *Seeking partners* and *Accessing erotica*.

Table III illustrates that for these two major online sexual activity dimensions, there were significant differences between males and females with males higher for the OSA Partner seeking scale ( $t=8.38$ ,  $df=2,528$ ,  $p < 0.001$ ) and the same for the OSA Accessing erotica scale ( $t=-18.39$ ,  $df=2,530$ ,  $p < 0.001$ ). In relation to age, the youngest and oldest age groups (18–24 and 50–75) were significantly lower than the middle age groups (25–49) on the OSA Partner seeking scale ( $F=11.35$ ,  $df=4$ ,  $p=0.001$ ). On the OSA Accessing erotica scale ( $F=9.10$ ,  $df=4$ ,  $p < 0.001$ ), however, there was an almost linear relationship with age, with the OSA accessing erotica score decreasing with age.

As mentioned earlier, age *in relation to* gender, is important to consider in understanding OSA. The age groups used in the Tables III and IV are identical to the ones used in the aforementioned *Sex in Sweden* study (Lewin, 1998), a population-based study of Swedish people's sexual habits and attitudes, in which the distribution was based on how common it was for the age groups to have children in the household. Originally five age groups were used, however, in the next table, Table IV the two oldest

TABLE II. Factor analysis of Online Sexual Practices

Variable	Loading
<i>Factor 1—Seeking partners</i>	
Visiting contact sites	0.73
Looking for a partner	0.70
Replying to sex ads	0.61
Chat	0.46
Contacting prostitutes	0.37
	(21.60% of variance)
<i>Factor 2—Accessing erotica</i>	
Viewing erotic pictures/movies	0.76
Viewing pornographic pictures/movies	0.74
Other things	-0.45
Reading erotic texts	0.30
	(11.51% of variance)
<i>Factor 3—Searching for information</i>	
Educating myself about sex/getting professional help	0.87
Looking for love contacts	0.77
Buying sex products	0.56
	(10.81% of variance)
<i>Factor 4—Reading and flirting</i>	
Do not do anything online relating to love or sex	0.81
Flirt	0.72
Staying in contact with love/sex partner	-0.39
	(9.37% of variance)

TABLE III. Comparison between OSA scores and Demographic variables (Mean  $\pm$  SD)

Variable	OSA—Seeking partners <sup>1</sup>	OSA—Accessing erotica <sup>2</sup>
<i>Gender</i>		
Male	0.88 $\pm$ 1.14	1.35 $\pm$ 1.00
Female	0.56 $\pm$ 1.86*	0.73 $\pm$ 0.76*
<i>Age</i>		
18–24	0.54 $\pm$ 0.92	1.06 $\pm$ 0.98
25–34	0.83 $\pm$ 1.10	1.14 $\pm$ 0.97
35–49	0.74 $\pm$ 1.04	0.95 $\pm$ 0.89
50–65	0.95 $\pm$ 0.89	0.78 $\pm$ 0.74
66–75	0.45 $\pm$ 0.71*	0.67 $\pm$ 0.69*

<sup>1</sup>Mean score out of 5: Visiting contact sites, Looking for a partner, Replying to sex ads, Chat, contacting prostitutes.

<sup>2</sup>Mean score out of 3: Viewing pornographic pictures/movies, Viewing erotic pictures/movies, Reading erotic texts.

\* $p < 0.001$ .

have been merged into one because of the low proportion of respondents in those groups.

For men, viewing erotica is the most frequent OSA in all age groups although it seems to decrease with age. In the youngest age group 74% of the men view erotica online, in the oldest age group 58% of the men engage in this activity. Roughly, it is possible to identify two major patterns regarding men's sexual activities online in relation to age. One concerns partner-seeking activities, which seem to be peaking in the second (25–34) and the third (35–49) age groups. The percentages of men engaging in such activities are higher in the second and third age group. These activities include looking for love contacts, looking for a partner, visiting contact sites and, to a certain extent, replying to sex ads. Another distinguishable pattern concerns men's desire to access erotica, which seems to gradually decrease with age. However, the same decreasing tendency also applies to a range of other activities such as chatting, staying in contact with love and/or sex partner and seeking education and support; all these activities engage men less frequently as they get older.

For the women it is not as easy to identify any clear patterns. Some OSA peak in certain age groups, while others increase, decrease, or simply go up and down. However, one pattern to be identified is partner-seeking activities, where the percentages rise exponentially with age, from 10–48% from the youngest to the oldest age group when it comes to 'looking for a partner', and from 11–63% when it comes to 'visiting contact sites'. This pattern is not at all found among the male respondents. Another interesting observation concerns women's desire to access erotica. As we know, this is mainly a male behaviour, but when women engage in it, there seems to be a clear generational divide between younger and older women. It is also noteworthy that more young women than older men read erotica on the Internet. Interestingly enough, this observation also coincides with the *Sex in Sweden* study (Lewin, 1998), where it was found that a larger proportion of women in the age group 18–24 had watched pornographic films during the last 12 months compared to men in the age group 50–65.



TABLE IV. Age and gender differences on individual OSA (%)

	18–24		25–34		35–49		50–75	
	Male ( <i>n</i> = 305)	Female ( <i>n</i> = 387)	Male ( <i>n</i> = 452)	Female ( <i>n</i> = 277)	Male ( <i>n</i> = 280)	Female ( <i>n</i> = 181)	Male ( <i>n</i> = 88)	Female ( <i>n</i> = 65)
Looking for love contacts	35	41	43	34	37	37	28	25
Flirt	47	40	53	52	43	52	32	32
Looking for partner	19	10	32	21	33	34	28	48
Staying in contact	31	36	26	34	22	35	17	37
Reading erotica	42	33	31	33	30	22	24	11
Viewing erotica	74	25	71	25	64	15	58	5
Visiting contact sites	25	11	43	30	44	43	33	63
Replying to sex ads	10	1	12	4	6	2	3	2
Chat with people with same interest	37	32	28	31	24	34	17	34
Education/support	20	33	16	24	10	13	8	5
Buying sex products	12	13	16	21	13	16	3	3
Contacting prostitutes <sup>a</sup>	2	–	2	0	2	1	–	–
Other things	3		2		4		6	

<sup>a</sup> Sample contains 18 males and 2 females.

The purpose of this table has been to show the importance of age. However, it also shows that there is no simple accumulation of experience concerning OSA with age. In effect, what we have observed is something much more complex. For example, it is clear that in some aspects there are generational effects for both men and women, meaning that experiences of some activities are more common among younger than older people, for example accessing erotica on the Internet. This does not mean that age is more important than gender, but it means that earlier research stating that the interactive part of OSA seems to suit women better, has to be partly revised or at least qualified. To summarize, one could say that, on a general level, the old observation still holds true. On the other hand, as the findings of our study show, it is important to add that this is less true for one category of women (the younger), than another (the older).

## **Discussion**

As mentioned earlier males and females participated in almost equal numbers in this study and those percentages were equivalent to both the gender distribution on this portal, as well as to the general gender distribution of Internet users in the country. This clearly increases our confidence in the representativeness of our sample. Part of the explanation for the greater participation by women might be attributed to the inclusion of the word love in the banner text advertising the survey. This may have been more attractive to female surfers as it has been reported that men and women use the Internet for different purposes (Morahan-Martin, 1998) and online, like offline, women may be more interested in love than sex (Leiblum & Sachs, 2002). In addition cultural differences may have played a part in the increased involvement of women. The use of the Internet is positively highlighted in the Swedish media as an acceptable means of meeting a romantic partner. There have been numerous reviews (e.g. Janouch, 2002) of various sex/dating sites in the Swedish press as well as accounts of well-known people both participating in Internet dating, and even starting their own sites. This helps familiarize the population with these practices and makes them appear more mainstream and thus more of a viable option.

Related to this is the fact that Sweden is often cited as a country more accepting of sexuality in general, as well as newer and non-traditional sexual variations and practices (Lewin, 1998, Tikkanen & Ross, 2003). The Swedish population is also said to have a higher degree of 'sexual literacy' than most others, and it was the first country in the world to incorporate compulsory sexual education (Lottes, 2002). The aforementioned factors, along with a societal liberation and openness regarding sexual matters beginning at the end of the 1950s (Bergström-Walan, 1994), may all contribute to the Swedish people (particularly the women) being more comfortable with online sexuality. Also noteworthy is that, whatever the actual reasons, this study provides one of the first large data sets involving women's OSA.

By further explicating the primary variables that lead people to engage in OSA, the Swedish study is another step forward in understanding this increasingly prevalent phenomena. Our factor analyses found that there were two major and coherent factors that accounted for over one-third of the variance for all participants. These were called

'Seeking partners', and 'Accessing erotica' and both were greatly influenced by demographic variables such as gender and age. 'Accessing erotica' was the most highly endorsed general dimension described, followed by 'Seeking partners', and the data suggest that a substantial proportion of the variance of on-line behaviours can be accounted for by these two dimensions alone.

In looking at more specific types of OSA we found some interesting gender differences. Viewing erotica was the most preferred specific activity for men, more than three times higher than 'flirting', which was the second most preferred activity. For women, the category of 'flirting' was the most frequent activity, while staying in contact with a love or sex partner was the most preferred activity. It is noteworthy that almost as many men as women engage in online flirting, both when comparing frequency as well as their most preferred OSA. The Internet appears to be a place where both men and women can engage in flirtatious behaviour to affirm their sexuality and attractiveness. While for some flirting may be a primary motivation for going online, for others it might instead be something that they find themselves inadvertently engaging in while interacting with others around work or recreational tasks (e.g., telling a colleague that you will check on the status of a shared project next week but you are sure she will have a 'hot date' to help her relax on the weekend). This might explain how this venue might inadvertently foster relations quickly progressing from those that are neutral and task focused, to interactions with more of a flirtatious and sexually charged tone. This might be a finding particularly relevant to employers as their employees spend more of their workday navigating cyberspace (for a fuller discussion of the influence of online sexuality on the workplace see Cooper *et al.* (2002a).

Both men and women use the web to read and view erotica and again the percentages of participation vary by gender. Men are more likely to view seek out and view erotica (as they do in other offline venues), than do women. In terms of reading erotic texts there is no significant gender difference and women seem to be more interested in this form of erotica than in pictures or movies. One explanation could be that it might be easier for them to find text designed with women in mind than it is to find similar pictures or movies. However it is also clear that there is a significant age difference among women in relation to their desire to access erotica on the Internet (with younger women being more interested) and this may be related to generally higher sexual interest, curiosity, and/or general comfort with the Internet.

Significantly more women use the net to 'stay in contact with a love/sex partner'. Whether it is sending emails while travelling, or dropping brief notes to each other throughout the day, this is one way that the net can help couples 'stay connected' and support and bolster ongoing relationships (Cooper *et al.*, 2002c). To men this seems to be of less importance as it is ranked fifth in terms of their preferred activities. Women were found to be more likely to use the net to educate themselves about sex and to get professional help which corroborates similar findings in previous research (Cooper *et al.*, 2002c). However, in this study the percentage of women using the net for this purpose was not nearly as high. Contributors to this might include good sexual information being more easily obtainable in Sweden than in the USA and the vast differences in sexuality education between these two countries (Lottes, 2002) resulting in women in

Sweden to need to use the Internet less for this purpose. Another part of the difference from past research might be attributable to the greater response choices in the instrument used in this study which allowed the female respondents to make more specific and accurate choices as to the reasons for engaging in OSA (e.g., being to able to choose a category of 'erotic texts' which might be partially subsumed under an 'education' category, but clearly has other components).

The finding that 13–15% of both genders use the net to buy sexual products is also consistent with past research (although slightly higher). This is another way that the Internet can help people to enhance their sexuality and even make safer sex easier to comply with. The Triple A allows for those interested to both get very detailed information on a range of sexual products, as well as 'shop for' them when ready. This might be especially relevant in more sexually conservative environments where abstinence is put forth as the only sanctioned choice. For those who are choosing to make a different decision and still have sexual relations with a partner the Internet might make the difference between purchasing condoms or forgoing them all together. In addition using the Internet makes advertising for these same products easier, less costly, and facilitates targeting narrower and more receptive audiences (e.g., specific types of sexual lubricants designed for men who have sex with men).

As seen above, this study finds both gender similarities and differences on a number of important dimensions. When adding a second critical variable of age, more interesting results appear. Men seem to be more motivated to search for a partner when they fall in the two middle age groups (25–34 and 35–49). This is in contrast to their other OSAs, which seem to start much higher and then gradually decrease with age. For women on the other hand, using the Internet to search for a partner is something that they seem to do more of as they get older. This might be expected in that over time, the relative availability of men to women decreases, while at the same time women's self confidence and determination to actively pursue relations increases. Therefore as women get older they might be more likely to be involved in any number of activities that provides them with the opportunity to search for a partner and the Internet provides them with a forum to take a more active role in this rather than passively waiting for a man to approach them (Cooper & Sportolari, 1997).

There are other distinct generational differences, that in some instances, might even override the importance of gender as a differentiating factor. For example, younger people (18–24) use the Internet more to explore and obtain sexual gratification but not necessarily to seek partners. We have also pointed towards the relative frequency with which younger women, as opposed to older, use the Internet in order to access erotica. Over all, the oldest age group (49 and older) in our study tended to use the Internet less for OSA. This might be due to several factors including an overall decrease in sexual interest and involvement that typically accompanies aging (Bancroft, 2002), and also the fact that the Internet is still a relatively new phenomenon with which the vast majority of older adults have less knowledge and comfort, particularly when it comes to involving the computer in their sex life. We predict that there will be major changes in this trend as those people, for whom the Internet currently is a major venue for engaging in sexual activities, get older. (For a further exploration of the possibilities the Internet may hold for older adults see Tepper & Owens, 2002).

Additionally, from a sexual-theoretical perspective, it will be a major challenge for future researchers to try to understand and analyse if and how the socio-sexual interaction taking place on the Internet, in a more fundamental way will influence the sexual scripts in society. Scripts are essentially a metaphor for conceptualizing the production of behaviour within society. According to the *sexual* scripting theory, developed by Gagnon and Simon (1973), social actors are continually involved in shaping the materials of relevant cultural scenarios into scripts for sexual behaviour in different contexts. The Internet represents a context for ongoing sexual scripting and its evolution. At present the long-term implications of these activities on the Internet are difficult, if not impossible to predict. However, the results from this study provide us with some ideas that need to be developed and elaborated in further research. One example is the generation differences that we noted, especially concerning younger women's participation in sexual activities on the Internet, that conflict with established cultural norms directing women's sexual behaviour.

## Conclusions

Sweden has one of the highest percentages of Internet usage of any country and the ease of connectivity might be permeating the culture in a deeper way. 6.02 million (68%) of the Swedish people are estimated to use the Internet (Nua, September, 2002). Thus it might well be that examining the Swedish experience with OSA might give other countries a sense of what their future might hold in this respect.

One example of this can be seen in Internet usage across gender. As in the USA, women in Sweden go online almost as much as men. In the USA, 52% of the USA Internet users are estimated to be women (Nielsen/Netratings, December 2001), while in Sweden 45% of users are women (Nielsen/Netratings, January, 2002). Yet despite this, we found a much higher involvement in OSA by women in this study than in any other. Although the reasons for this remain unclear, they might include the fact that the study more broadly defined OSA to include concepts like love and flirting, Swedish society is more affirming of women's sexuality, and/or that as time progresses more and more women are finding the Internet to be an acceptable, and even preferable, venue in which to pursue their sexual interests.

In most respects this study found solid corroboration for earlier studies that outlined general patterns of Internet sexuality. As this study was done, with a different methodology, at a different time, with a different population, in a different country and in a different language, it greatly increases our confidence that the primary effects that the available body of research is finding are reliable, and significantly ameliorates concerns about sampling bias and error.

Finally, as we begin to get a baseline of common findings and patterns around OSA and to have increasing confidence in them, the next step is for researchers to begin to take a more sophisticated look at this complex phenomena. Towards that end we need to be able to conduct more complex multivariate analyses of the various dimensions of OSA, as well as to identify common factors to co-vary with other important demographic and related variables. We offer this study as an important step forward along that path.

**Note**

- [1] The complete questionnaire can be obtained from Professor Sven-Axel Månsson at University of Gothenburg, P.O. Box 720, 405 30 Göteborg, Sweden.

**References**

- BANCROFT, J. (2002). Biological factors in human sexuality. *The Journal of Sex Research*, 39, 15–21.
- BARAK, A., FISHER, W.A., BELFRY, S. & LASHAMBE, D.R. (1999). Sex, guys, and cyberspace: Effects of Internet pornography and individual differences on men's attitudes toward women. *Journal of Psychology and Human Sexuality*, 11, 63–92.
- BERGSTRÖM-WALAN, M. (1994). Sexualundervisning. In P.O. LUNDBERG, (Ed.), *Sexologi* (pp. 343–349). Stockholm: Liber.
- COOPER, A. (1998). Sexuality and the Internet: Surfing its way into the new millenium. *CyberPsychology and Behavior*, 1(2), 24–28.
- COOPER, A. (Ed.). (2000). *Cybersex and sexual compulsivity: The dark side of the force*. New York: Taylor and Francis.
- COOPER, A. & GRIFFIN-SHELLEY, E. (2002). The Internet: The next sexual revolution. In A. COOPER (Ed.), *Sex and the Internet: A guidebook for clinicians* (pp. 1–18). New York: Brunner-Routledge.
- COOPER, A. & SPOROLARI, L. (1997). Romance in cyberspace: understanding online attraction. *Journal of Sex Education and Therapy*, 22, 7–14.
- COOPER, A., SCHERER, C., BOIES, S. & GORDON, B. (1999). Sexuality and the Internet: From sexual exploration to pathological expression. *Professional Psychology*, 30, 154–164.
- COOPER, A., GRIFFIN-SHELLEY, E., DELMONICO, D.L. & MATHY, R. (2001). Online sexual problems: Assessment and predictive variables. *Sexual Addiction and Compulsivity: Journal of Treatment and Prevention*, 8, 265–283.
- COOPER, A., MCLOUGHLIN, I., REICH, P. & KENT-FERRARO, J. (2002a). Virtual sexuality in the workplace: A wake-up call for Clinicians, employers, and employees. In A. COOPER (Ed.), *Sex and the Internet: A guidebook for clinicians* (pp. 109–128). New York: Brunner-Routledge.
- COOPER, A., MORAHAN-MARTIN, J., MATHY, R. & MAHEU, M. (2002b). Toward an increased understanding of user demographics in online sexual activities. *Journal of Sex and Marital Therapy*, 28, 105–129.
- COOPER, A., SCHERER, C. & MARCUS, D. (2002c). Harnessing the power of the Internet to improve sexual relationships. In A. COOPER (Ed.), *Sex and the Internet: A guidebook for clinicians* (pp. 209–230). New York: Brunner-Routledge.
- EGAN, T. (2000, October 23). Wall Street Meets Pornography. *New York Times*.
- ELLIS, A. (2002). Preface. In A. COOPER (Ed.), *Sex and the Internet: A guidebook for clinicians* (p. vii). New York: Brunner-Routledge.
- GAGNON, J.H. & SIMON, W. (1973). *Sexual conduct – the social sources of human sexuality*. Chicago: Aldine.
- JANOUGH, K. (2002, October). 'Jag föredrar tecknade tuttar'. *Internetworld*, 8, 54–55.
- KING, S.A. (1999). Internet gambling and pornography: Illustrative examples of the psychological consequences of communication anarchy. *CyberPsychology & Behavior*, 2, 175–193.
- LEIBLUM, S. & SACHS, J. (2002). *Getting the sex you want: A woman's guide to becoming proud, passionate, and pleased in bed*. New York: Crown Publishing Group.
- LEWIN, B. (Ed). (1998). *Sex in Sweden: On sexual life in Sweden 1996*. Stockholm: Folkhälsoinstitutet.
- LOTTE, I.L. (2002). Sexual health policies in other industrialized countries: Are there lessons for the United States. *The Journal of Sex Research*, 39, 79–83.
- MORAHAN-MARTIN, J. (1998). Males, females, and the Internet. In J. GACKENBACK (Ed.), *Psychology of the Internet: Intrapersonal, interpersonal, and transpersonal* (pp. 169–197). San Diego: Academic Press.
- NIELSEN/NETRATINGS (2001, December). *Number of female web surfers grow faster than overall Internet population*, Retrieved November 6, 2002, from the World Wide Web: [http://www.nielsen-netratings.com/pr/pr\\_020118\\_monthly.pdf](http://www.nielsen-netratings.com/pr/pr_020118_monthly.pdf)
- NIELSEN/NETRATINGS (2002, January). *Antalet svenska internet surfare ökade med 23% under ett år*, Retrieved November 6, 2002, from the World Wide Web: [http://www.nielsen-netratings.com/pr/pr\\_020212\\_sweden.pdf](http://www.nielsen-netratings.com/pr/pr_020212_sweden.pdf)
- NUA (2002, September). *How many online?*, Retrieved February 25, 2003, from the World Wide Web: [http://www.nua.com/surveys/how\\_many\\_online/europe.html](http://www.nua.com/surveys/how_many_online/europe.html)
- RIETMEIJER, C.A., BULL, S.S. & MCFARLANE, M. (2001). Sex and the Internet. *AIDS*, 15, 1433–1434.

- ROSS, M.W. & KAUTH, M.R. (2002). Men who have sex with men, and the Internet: Emerging clinical issues and their management. In A. COOPER (Ed.), *Sex and the Internet: A guidebook for clinicians* (pp. 47–69). New York: Brunner-Routledge.
- ROSS, M.W., TIKKANEN, R. & MÅNSSON, S.A. (2000). Differences between Internet samples and conventional samples of men who have sex with men: Implications for research and HIV interventions. *Social Science & Medicine*, 51, 749–758.
- TEPPER, M.S. & OWENS, A. (2002). Access to Pleasure: Onramp to Specific Information on Disability, Illness, and Other Expected Changes throughout the Lifespan. In A. COOPER (Ed.), *Sex and the Internet: A guidebook for clinicians* (pp. 72–92). New York: Brunner-Routledge.
- TIKKANEN, R. & ROSS, M.W. (2003) Technological tearoom trade: Characteristics of Swedish men visiting Internet gay chat rooms. *AIDS Education and Prevention*, 15, 122–132.

## Contributors

AL COOPER, PhD

SVEN-AXEL MÅNSSON, PhD

KRISTIAN DANEBACK, MSW, PhD, Cand

RONNY TIKKANEN, MSW, PhD, Cand

MICHAEL W. ROSS, PhD, MPH