SEX OFFENDERS—
a Symposium

Edited by JOHN GUNN
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SPECIAL HOSPITALS RESEARCH REPORTS

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These Reports will also allow publication of research findings which, because of their inconclusive or negative results, their preliminary nature, specialised interest or lengthy detail, might not otherwise be considered for publication.

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1. Introduction

The Special Hospitals of Great Britain contain many people that society would rather forget about. People who offend public morality and raise great anxieties. The 'sex offender' illustrates the problems of this group of people particularly well. He presents society with social, moral, and medical dilemmas. He did not make himself; like the rest of us he is the prisoner of his genetic construction and his early learning experiences. Sometimes he may inflict his conflicts on other members of society who themselves have no particular responsibility for his problems. Usually he is not mentally ill in the formal sense and therefore he, and everybody else, knows that he won't change very rapidly and medical intervention is unlikely to produce dramatic results. How far should he be blamed? Should he be imprisoned? Should he be treated under compulsion? What 'treatment' is available anyway?

These questions and many others confront the forensic psychiatrist and the Special Hospitals day by day. It is heartening therefore to learn that some of the staff involved with these questions are examining the problems in a systematic and scientific manner, and it seemed particularly appropriate to devote the first Special Hospitals Research Unit symposium to this important topic which is a growth point in forensic psychiatry research and is involving a number of Special Hospital staff, and several different professions.

The papers presented at the symposium did not give definitive answers to the questions posed above but they indicated the directions which developments are taking. The first two speakers each give, from different standpoints, an account of the extent of the problem in the Special Hospitals. From Mrs Parker we learn that 22 per cent of all admissions to Special Hospitals have at one time or another been convicted of a sex offence. Dr Fowles indicates that the proportion of sex offenders at Rampton is even higher and raises questions in our minds about the effective treatability of such cases. Mr Roy Walmsley is a Home Office research worker and his paper almost seems out of place as it deals with the sentencing of sex offenders. However the criminology of sexual offending is absolutely central to any discussion about the role of psychiatry. Mr Walmsley not only tells us how courts react in general to the sex offender but he gives us a clear view of the total size of the problem most of which never comes anywhere near a medical facility. Only 1 per cent of convicted sex offenders are dealt with by means of hospital orders.

Treatment programmes need valid assessments. How can the treatment of sexual deviance be evaluated when there is no opportunity to carry out the deviance? The full answer of course is that it can't but some judgements are necessary before real life testing is allowed. John Hinton and his team in the SHRU laboratory at Broadmoor have developed an imaginative approach to this problem by examining a variety of physiological responses to a variety of pictures and films which might be expected to produce sexual arousal in some males. Clearly this is an important area to study for if accurate predictions about sexual behaviour could be made then new understandings of physical mechanisms of sexual deviance would arise. Mike Cliffe, who is the psychologist at Park Lane, takes a different approach to the problem of assessment and suggests that the best way to measure the strength of a particular sexual drive is to compare it with another. He believes that in this way some of the inherent tendency to 'fake good' which patients exhibit would be obviated. Whilst he was at Atascadero State Hospital Kevin Howells tried to understand the mind of the paedophile a little better by submitting a group to the well tried semantic technique known as the Repertory Grid to see how the patients constructed their perceptions of other people. It seems that paedophiles are more likely to view both men and women in terms of dominance and submission and to see their victims as less dominant. They also seem to be attracted by a small body.

Dr Bill Price from the MRC Cytogenetics unit in Edinburgh brought the now famous work on chromosome abnormalities in Special Hospitals up to date (it was the Edinburgh Unit that discovered the high prevalence of XYY disorder in Special Hospitals). He confirmed Dr Fowles view that sex offending and chromosome abnormality are largely unrelated, and he showed that chromosomal abnormalities are not related to violence convictions. However the hospitals are repositories for large numbers of patients with genetic problems, a finding which raises a host of social questions.

Our discussions on treatment were begun by Dr Malcolm MacCulloch, now Principle Medical Officer in the Department of Health, who described some of his Liverpool University work in which he had some encouraging results by treating male homosexuals with anticipatory avoidance

aversion therapy. In his paper here he discusses some of the possible reasons for the success of this treatment in his hands. David Crawford, a psychologist at Broadmoor, described the new methods of social skills training for the shy inhibited sex offender, which are being used at that hospital and the Rampton psychologist, Mike Lee-Evans, discussed the potential of self control training procedures. My predecessor as Director of SHRU, Dr Gavin Tennent, presented some interesting findings on the use of drugs, including hormones, cyproterone, and tranquilizers in the treatment of sex offenders.

One contribution that is omitted from this text is a videotaped case report I presented. It illustrated the difficulties of managing a dangerous paedophile, the possible place of oestrogen treatment and the ethical qualms we should all have about such drastic remedies. Most importantly it highlighted the central place of motivation in successful treatment.

We were especially grateful to Dr John Bancroft who attended our deliberations as our special outside expert guest and whose balanced overview of our work gave a great deal of extra meaning to the whole symposium.

JOHN GUNN
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2. The problem confronting the Special Hospitals

by Elizabeth Parker

When I first saw the title that I had been given for this paper I felt overwhelmed by choice. Even when my attention was directed to the fact that I was only concerned with sex offenders there still seemed to be plenty of scope. The central question when preparing to study so called sex offenders is how to ascertain exactly who falls within the definition. The usual approach to this problem is to select those persons convicted of a sex offence. In the Special Hospitals, this means those patients convicted of a sexual offence resulting in admission to a Special Hospital either directly from the courts or indirectly from other psychiatric hospitals or the penal system. The results of using this definition are shown in Table 1. All the tables refer to men admitted to the Special Hospitals during the three years 1972, 1973, and 1974, no patient has been counted twice so that re-admissions during that period have been omitted. The study was restricted to male patients as there was only one woman sex offender admitted during that period she having been convicted of indecent assault on a female. A total of 78 male sex offenders were admitted during the study period two fifths of them being convicted of indecent assault on a female. Just over one quarter were homosexual offenders and just under a quarter were convicted of rape or attempted rape. It is of interest to compare these proportions with the national figures for sexual convictions.

Considering only the indictable offences, that is omitting indecent exposure. The 1973 criminal statistics show that 44 per cent of sex offenders were convicted of indecent assault on a female, a figure comparable to our own admissions. However males convicted of buggery or rape seem to be considerably over represented among the Special Hospital admissions, particularly rape which nationally constitutes 5 per cent of the offences under consideration but nearly a quarter of Special Hospital sex offenders. The other three offences are under represented among the Special Hospitals admissions.

The definition used to produce the figures in Table 1, has limitations. In this particular study patients admitted after conviction for both a violence offence and a sexual offence are called violent offenders not sex offenders. In practice I do not think that many sex offenders are missed by this procedure as it is usual for the prosecution to proceed only with the most serious charge. A further limitation is that the definition is a legal one, furthermore it only encompasses those patients whose *present* offence is a sexual one whereas the definition might have included those patients who although not admitted as a result of a sex offence have at least one such conviction in their criminal history. Ten per cent of admissions to the Special Hospitals have a sex offence as a main offence and a further 12 per cent of admissions have a history of sex offending, making a total of 22 per cent of admissions who have at some time been convicted of a sex offence.

Breaking away from the legal definition the reason for the patient being admitted to a Special Hospital was also recorded. This was a subjective assessment based on accounts of the patient's behaviour which led to Special Hospital placement, the information being obtained from patients records. In 12 per cent of cases sexual behaviour or misbehaviour was recorded as the first reason for admission and in 4 per cent the second reason for admission. This makes a total of 16 per cent of patients for whom sexual behaviour was judged to result in admission. Finally a possible definition of sex offender is those patients who are thought to have had a sexual motive underlying their offences. All patients admitted to the Special Hospitals since 1972 have had a psychiatric and diagnostic form completed by the consultant who cares for them. Among other matters this form lists a variety of possible motives for the offences and the RMO's are invited to

Table 1: Male sex offenders admitted to the Special Hospitals 1972–74

	Broadmoor	*Rampton*	*Moss Side*	*Total*	*%*
Indecent assault on a female	8	18	6	32	41.0
Buggery or attempt	2	12	8	22	28.2
Rape or attempt	8	7	4	19	24.4
Unlawful sexual intercourse	1	1	0	2	2.5
Indecency between males	0	1	0	1	1.3
Gross indency with a child	0	1	0	1	1.3
Indecent exposure	1	0	0	1	1.3
Total sex offenders	20	40	18	78	100.0

tick those which apply in any particular case. Twenty-seven per cent of admissions were considered to have a sexual motive. This compares with 10 per cent of patients who were admitted after conviction for a sexual offence. This assessment by the RMO's is of interest. As a measurement of motivation it is unstandardised and subject to the RMO's own psychiatric orientation, it is also unquantified and an element of sexual motivation underlying the offence does not necessarily class the patient as a sex offender even from a clinical stand point. Nevertheless an assessment of sexual motivation is the considered opinion of the person directly responsible for the treatment of the patient and as such is of paramount clinical and therapeutic relevance. At this point I would like to thank all the doctors who have completed the medical history and diagnostic forms for us.

Let us now see how those sex offenders admitted to the Special Hospitals in the three years 1972–4 differ. I am going to stick to the legal definition in spite of its disadvantages because it is highly operational, virtually totally reliable, and facilitates comparisons with the findings of other studies. Table 3 shows the comparison between sex offenders and other offenders. Patients who have been admitted under civil procedures have been analysed separately as they are so very different from the offender patients. Slightly more of the sex offenders were admitted directly from the Courts but there is very little difference between the two groups with regard to legal category on admission. Significantly more of the sex offenders come in under the Mental Health Act classification 'psychopathically disordered' or 'sub-normal' and substantially fewer are classed as 'mentally ill'. The average age on admission of the sex offender is 27, about two and a half years younger than the non sex offenders. No real differences between the two offender groups are observed with regard to IQ, height, or weight. The criminal histories of the sex offenders are very similar to the other offenders when age at first conviction and number of previous convictions are considered. However, the sex offenders do have substantially more previous convictions for sexual offences, 17.9 per cent of sexual offenders having a conviction for buggery in their record compared with 1.6 per cent of the other offenders. The interesting point here is that once again the experience of sex offending among the non sex offender population is highlighted, 12½ per cent of them have previous convictions for indecent assault on a female and in absolute terms this is 71 men. The diagnosis by the RMO's complements the Mental Health Act classifications of the patients. More of the sex offenders are diagnosed as suffering from personality disorders or subnormality and fewer from schizophrenia. In summary more sex offenders are deemed to be subnormal or suffer from psychopathic or personality disorders, and fewer are schizophrenic or mentally ill. Walker in his study of the working of the 1959 Mental Health Act also found the subnormal males were over represented among the sexual offenders. Other differences between the two groups are that the sex offenders are somewhat younger than the average age of 27 years on admission and that they have significantly more convictions for buggery or attempted buggery, indecent assault on a female and indecent exposure. This finding that more of the sex offenders have a history of sexual offending than do the non sex offenders corresponds with the findings of Tennent in his study of Broadmoor male admissions, he showed that 61 per cent of the sex offenders in that study admitted to Broadmoor had a history of sex offending compared with 11 per cent of the other admissions.

Table 2: Proportion of male admissions 1972–74 who were sex offenders

Broadmoor	5.9%
Rampton	13.4%
Moss Side	16.5%
Park Lane	–
Total	10.2%

Table 3: A comparison of sex offenders, non-sex offenders and non-offenders admitted to the special Hospitals 1972–74

Sex Offenders n = 78	– patients admitted as a result of a conviction for a sexual offence
Non-sex Offenders n = 570	– patients admitted as a result of a conviction for an offence other than a sexual offence
Non-offenders n = 116	– patients admitted under Part IV of the Mental Health Act 1959 or under section six of the Mental Deficiency Act 1913.

	Offenders		Non-Offenders
	Sex	Non-Sex	
	%	%	%
Admission Source			
Court	80.8	68.6	0
Penal System	8.9	12.5	0
Psychiatric hospital	1.3	5.1	41.4
Subnormality hospital	1.3	2.8	44.8
Other	7.7	11.0	13.8
Legal Category on Admission			
MHA 1959 S.65	67.9	64.6	0
S.60	15.4	13.7	0
S.72	10.3	11.2	0
S.71	1.3	1.1	0
S.26	0	0	95.7
CP(I)A 1964	5.1	7.0	0
Other	0	2.4	4.3
MHA Classification			
PD	56.4	36.0	10.3
MI	16.7	47.9	37.9
S	21.8	11.6	12.1
SS	3.8	0.9	23.3
Multiple classification + not known	1.3	3.6	16.4
Average age on admission (years)	26.99	29.38	25.90
Average I.Q.	83.51	88.76	75.54
Average height (cms)	172.37	173.11	170.53
Average weight (kgs)	68.33	68.98	67.23
Average age at first conviction (years)	16.58	17.44	17.44
Total number of previous convictions:			
None	17.9	22.1	58.6
1–2	24.4	23.4	25.0
3–4	16.7	16.5	4.3
5–6	14.1	12.1	6.1
7–9	11.5	10.0	4.4
10+	15.4	15.9	1.6
Previous convictions for specific sex offences:			
Buggery or attempt	17.9	1.6	0.9
Rape or attempt	9.0	4.4	–
Indecent assault on a female	55.1	12.5	5.2
Indecent exposure	14.1	1.8	0.9
Diagnosis by RMO			
Personality disorder	76.9	54.7	38.8
Mental subnormality	38.5	22.1	56.9
Schizophrenia	14.1	37.4	31.0
Epilepsy	6.4	5.1	21.6
Organic disorder other than epilepsy	6.4	2.3	12.1
Paranoid state	2.6	10.0	6.0
Neurosis	5.1	3.9	3.4
Alcoholic	3.8	8.9	0.9
Number of diagnoses			
One	51.3	50.7	41.4
Two	32.1	32.1	31.9
Three or Four	15.4	15.3	23.3

I turn now to the sex offenders themselves comparing the patients convicted of buggery, rape and indecent assualt on a female with one another. The figures shown in Table 4 as percentages

as I thought that this would facilitate comparisons between the groups but due to the small total number in each group it must be remembered that a relatively large percentage difference may only refer to one or two patients. The main impression gleaned from these tables is that the patients admitted as a result of a conviction for rape may be rather different from the other sex offenders. Looking at legal category on admission 21 per cent of the rapists but none of the other offenders are admitted under section 71 of the Mental Health Act or under the Criminal

Table 4: A comparison of sex offenders admitted to the Special Hospitals 1972–74 as a result of a conviction for buggery, rape or indecent assault on a female

	Buggery or attempt $n = 22$ %	*Rape or attempt* $n = 19$ %	*Indecent Assault on a female* $n = 32$ %
Admission Source			
Court	81.8	84.2	78.1
Penal system	9.1	5.3	12.5
Psychiatric hospital	0	5.3	0
Subnormality hospital	0	0	3.1
Other	9.1	5.2	6.3
Legal Category on Admission			
MHA 1959 S.65	72.7	73.7	65.6
S.60	18.2	0	21.9
S.72	9.1	5.3	12.5
S.71	0	5.3	0
CP(I)A 1964	0	15.7	0
MHA Classification			
PD	63.7	47.4	59.4
MI	9.1	21.1	15.6
S	22.7	21.1	21.9
SS	4.5	5.3	3.1
Multiple classification + not known	0	5.1	0
Average age on admission (years)	29.41	25.26	25.78
Average I.Q.	80.50	86.80	85.21
Average height (cms)	171.01	175.68	171.06
Average weight (kgs)	67.27	73.90	66.23
Average age at first conviction (years)	18.60	18.0	14.36
Total number of previous convictions			
None	9.1	15.8	21.9
1–2	27.0	42.2	15.6
3–4	22.7	5.3	21.9
5–6	18.1	10.6	18.8
7–9	13.6	5.3	12.5
10+	9.5	20.8	9.4
Previous convictions for specific sex offences			
Buggery or attempt	50.0	15.8	0
Rape or attempt	4.5	26.3	3.1
Indecent assault on a female	63.6	57.9	56.3
Indecent exposure	4.5	5.3	28.1
Diagnosis by RMO			
Personality disorder	86.4	73.7	75.0
Mental subnormality	45.5	26.3	43.8
Schizophrenia	9.1	15.8	9.4
Epilepsy	0	15.8	6.3
Organic disorder other than epilepsy	4.5	5.3	9.4
Paranoid state	0	0	6.3
Neurosis	9.1	5.3	3.1
Alcoholic	4.5	10.5	0
Number of diagnoses			
One	45.5	57.9	50.0
Two	40.9	21.1	37.5
Three or Four	9.1	21.1	12.5

Procedures Insanity Act (1964). Section 71 refers to patients detained during Her Majesty's Pleasure, usually while on remand in custody, and is equivalent to insane on arraignment. Patients admitted under the Criminal Procedures Insanity Act are those found unfit to plead or not guilty by reason of insanity. The finding that 21 per cent of the rapists are admitted under these categories suggests that as a group they are more overtly mentally disturbed than the other sex offenders. Supporting this hypothesis is the finding that more of the rapists have a mental health act classification of 'mental illness' and, looking at diagnosis, a higher proportion of rapists are deemed to be schizophrenic and fewer 'mentally subnormal'. The table of previous convictions for specific sex offences shows that none of those convicted of indecent assault on a female have ever been previously convicted of buggery or attempted buggery. Half the homosexual offenders and over half of the indecent assaulters have been convicted previously of the offence with which they were admitted but this applies to only a quarter of the rapists. This finding supports the evidence from other studies that rapists have a much lower rate of recidivism than other types of sex offender, in particular a study by Soothill, Jack and Gibbens showed that out of 86 convicted rapists only two had a previous conviction for rape and in a long follow-up of the same group stretching over 22 years only five of them had subsequent reconvictions for rape.

What then are the problems confronting the Special Hospitals with regard to sex offenders. Firstly it would appear to be necessary to formulate criteria for identifying sex offenders which will be somewhat wider than the legal definition of patients admitted as the result of a conviction of a sexual offence. You will remember that a strictly legal definition accounts for 10 per cent of admissions but that a further 11 per cent have a history of sexual offending. Sexual misbehaviour is a reason for admission in 16 per cent of cases and 27 per cent of admissions were thought by their consultant to have had some degree of sexual motivation underlying their offence. Once the definition and identification of sexual offenders has been agreed then the implications for therapy and discharge can be fully assessed. The uniqueness of the Special Hospital population is also a problem, manifested in this study by the absence of other reference groups with which to compare the findings. There are very few descriptive studies of sex offenders, particularly in the United Kingdom, and generally speaking the bulk of the existing literature is concerned with rape, whereas the convictions for indecent assault on a female or buggery or attempted buggery are far more common occurrences. An example of the highly selective nature of the Special Hospital population is that 5 of the 19 rapists who had previously been convicted of rape on at least one occasion and as I have just mentioned in the Soothill, Jack and Gibbens study of 86 rapists only 7 cases had more than one conviction of rape over a period which covered their criminal histories and the very long follow-up. Another facet of the exclusiveness of the population is the prevalence of sex convictions in the criminal histories of the sex offenders. This may not be an unexpected finding to this audience but in general criminological circles there has been some controversy about whether offenders can be divided into offence types. The division of samples of convicted persons into violent offenders *etc* has been held to be meaningless as the next time round the violent offender may be the breaker and the sex offender the thief, and attempts to classify the offender into offence types have not been particularly successful. In contrast both this study and Tennent's study of Broadmoor admissions have shown that sex offenders have a greater proportion of sexual offences generally in their criminal history than do non-sex offenders, and this study also shows that the Special Hospital patients convicted of buggery or rape have more convictions for these specific offences than do other types of sex offender. This no doubt is part of the reason for them being selected for the Special Hospitals, but it does mean that the population is really quite different from other sex offender populations. The uniqueness of the population will of course affect clinical as well as research work and further studies are required in order to bring about a better understanding of the problem. The present investigation is to be extended into two further areas. Firstly victims of the sex offenders are to be studied with a view to providing some information on how the patients came to be considered not only as sex offenders but also as dangerous. I would suspect that the victims of the sex offenders in the Special Hospitals tend to be more vulnerable in terms of age than the victims of offenders outside the Special Hospitals, in other words they would be either somewhat younger or older but this is just a hypothesis that I shall test when I come to look at the victims. Secondly a control group is to be drawn up matched to the sex offenders with regard to age, hospital of admission, Mental Health Act classification, and year of admission. It is hoped that this will show how sex offenders compare with similar men who are not sex offenders and in particular if and how the legal appellation sex offender affects their discharge from hospital.

Finally a word about the Special Hospitals Case Register which supplied the information for this paper. The Register has been recording information for all admissions to the Special

Hospitals from the 1st January 1972 and information for the years 1972, 1973, and 1974 is now available. At the end of this year (1976) it is planned to hold a census for the Special Hospital population so that sometime, we hope next year, we will be in a position to give population figures as well as information relating to admissions. I shall be pleased to see anyone who wishes to make use of the data.

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3. Sexual offenders in Rampton

by Dr M. W. Fowles

The majority of medical evidence in criminal cases is usually given by the Prison Medical Service and the majority of such evidence is purely formal. After standing and solemnly repeating the oath the Doctor usually states that the accused is suffering from a mental disorder that warrants detention in a hospital for medical treatment and then goes on to say that a bed is available in such a hospital in the event of the court wishing to sentence the accused to a hospital order. Prior to coming to Rampton, I was in the Prison Medical Service as a whole-time Medical Officer and on one occasion when I was at Lincoln Assizes, the defence QC produced two medical recommendations from psychiatrists which recommended treatment in hospital for a dull-witted defendant accused of incest. He exhorted the Judge to sentence his client to a Hospital Order. 'Mr so and so' said the Judge, 'what can they do for him?' The Silk was considerably taken aback. 'My Lord' he said, 'my Lord, I do not know. We must trust the experts'.

The surprising fact is that the majority of medical evidence is accepted without question and indeed the courts do trust the experts. The enthusiasm for psychiatry in a court of law can be quite startling at times. This is particularly true of magistrates and some probation officers. It seems to me that enthusiasm for psychiatric treatment is directly proportional to the distance the proponent is from the treatment situation. One's colleagues are not exempt from this law for how often does one hear the recommendation, 'This defendent needs psychiatric treatment, but I have no suitable beds and am not in a position to admit him'. Those who have to do the treating, those who are faced at the grass roots with the problem of coping with such patients are far more cautious and far less anxious to rush into treatment. I did my fair share, during my years in the Prison Medical Service, of recommending patients for admission to Special Hospitals, indeed, quite a number of the patients who are in Rampton, are there largely as a result of my efforts. So when I took up my appointment with that hospital I found I had to provide the treatment I had been recommending to the Courts – I was hoist with my own petard. This situation was brought into sharp focus for me by my efforts to organise a therapeutic regime for a border-line subnormal, a young man with XXYY chromosome abnormality who got pleasure out of sexually assaulting and attemping to strangle little girls.

Shortly after I joined Rampton, other changes in the hospital organisation took place. The hospital was divided into multi-disciplinary teams and it was agreed that the management of the sex offender patients should be studied. A Working Party was set up with the following terms of reference: (1) to evaluate the size, seriousness and extent of the sex offender patients in Rampton; (2) to recommend procedures for assessing and classifying them; (3) to recommend methods of management, treatment and rehabilitation programmes for sex offender patients and to suggest ways in which their effectiveness could be monitored. I want to deal with the first of these terms of reference in this paper.

It was not possible at that time to obtain quickly reliable figures of our sex offender population from either the current hospital records or from the Special Hospitals Research Unit. It would have been necessary to comb the files of over eight-hundred male patients individually. Therefore it was decided to survey the hospital with a circularised proforma. This defined a sex offender very strictly, for the purposes of this survey, as 'a patient whose admission to Rampton Hospital was as a direct result of a conviction for a sexual crime'. In addition to this survey we had the opportunity of looking at information supplied by Rampton's Psychology Department who have tested all new admissions since 1st February, 1971. Thus we had two groups of figures – the admissions from 1st February, 1971 to October, 1974 and the survey we carried out in December, 1974. The results are shown in the following tables. We appreciate that our survey used a very simple definition of sex offenders, and we well aware of its arbitrary nature. We were repeatedly informed by the hospital staff that we excluded from the survey a considerable number of patients who had previously committed sex offences or who were known to be sexually malfunctioning in some way and therefore our figures are a minimal estimate of the sex offender population. Our justification for our unsophisticated survey was that we needed the figures quickly and if one wishes a large number of people to perform a task with accuracy and speed then it is essential to keep it short and simple.

Table 1 shows that between 1st February, 1971 – 4th October, 1974 there was a total of 396 males admitted to Rampton and of those 73 (18.4 per cent) were admitted as a direct result of a sex offence. The age range of the sex offender was 17–34 years (mean 25.9 years). Table 2

Table 1: Male patients admitted as a consequence of a conviction for a sexual offence 1st February 1971–4th October 1974

Total number of Sex Offenders admitted		73
Sex Offenders as a percentage of all Males admitted (396)		18.4%
Age of Sex Offenders on Admission	Mean	25.9 years
	S.D.	8.5 years
	Range	17–34 years

Table 2: A ward survey of male patients resident 19th December 1974

Total number of Sex Offenders		240
Sex Offenders as a Percentage of Total Male Population (803)		29.9%
Age of Sex Offenders on Admission	Mean	27.5 years
	S.D.	9.3 years
	Range	18–36 years

Table 3: Previous convictions of newly admitted patients

	Number	*% of Total (73)*		
None	10	13.7%	17	23.3%
Sex Only	7	9.6%		
Non-Sex Only	31	42.5%	56	76.7%
Sex + Non-Sex	25	34.2%		

Table 4: Previous convictions of resident patients

	Number	*% of Total (240)*		
None	18	7.5%	55	22.9%
Sexual Only	37	15.4%		
Non-Sexual Only	52	21.7%	174	72.5%
Sexual + Non-Sexual	122	50.8%		
Unclassified	11	4.6%		

shows that on 19th December, 1974, there were 803 male residents and of those 240 (29.9 per cent) were in Rampton Hospital as a direct result of a conviction for a sexual offence. Their ages ranged between 18–36 years with a mean age of 27.5. The higher proportion of sex offenders in the resident sample compared with the admission sample tends to suggest something that had been suspected, namely that sex offenders as a whole stay rather longer in Rampton than other offenders.

Looking at the previous convictions of the admissions (Table 3) we found what others have reported, namely, that the number of offenders who have committed sexual offences only is relatively small. The total number is 17 patients (23.3 per cent), but the vast majority 56 (76.7 per cent) have previously committed both sexual and non-sexual offences. Similarly, in the resident's survey we find the same picture (Table 4). The number committing a sexual offence only is this time 22.9 per cent whereas the great bulk 72.5 per cent have committed both sexual and non-sexual offences.

Tables 5 and 6 show the mental health classification. A bulk of the admissions (75.8 per cent) are classified either as subnormal or psychopathic disorder and for Rampton patients these two diagnostic categories are often inter-changeable. Whether a patient is called a psychopath or subnormal is often quite fortuitous. There is a small group of mental illness (15.1 per cent) among the admissions. If we look at the resident hospital population in Table 6 – there is a similar picture. Again the psychopaths and subnormals form the bulk of the mental health act

Table 5: Mental Health Act Classifications – Admissions

	Number	*% of Total*
Psychopathic Disorder	37	50.7%
Mental Illness	11	15.1%
Subnormality	19	26.0%
Severe Subnormality	1	1.4%
Under Disability (unfit to plead)	3	4.1%
Psychopathic Disorder with Subnormality	1	1.4%
Psychopathic Disorder with Mental Illness	1	1.4%
	73	100 %

Table 6: Mental Health Act Classifications – Residents

	Number	*% of Total*
Psychopathic Disorder	94	39.2%
Mental Illness	25	10.4%
Subnormality	83	34.6%
Severe Subnormality	18	7.5%
Under Disability (unfit to plead)	4	1.7%
Psychopathic Disorder with Subnormality	9	3.8%
Psychopathic Disorder with Mental Illness	1	0.4%
Mental Illness with Subnormality	3	1.3%
Mental Illness with Severe Subnormality	1	0.4%
Insane on Arraignment	2	0.8%
	240	100

Table 7: Marital status – Admissions

	Number	*% of Total*
Married	4	5.5%
Single	66	90.4%
Divorced	3	4.1%
	73	100

Table 8: Marital status – Residents

	Number	*% of Total*
Married and cohabiting	7	2.9%
Married not cohabiting	1	0.4%
Married and separated	2	0.8%
Married (unclassified)	12	5.0%
Divorced	8	3.3%
Single	210	87.5%
	240	100

classifications (73.8 per cent) though the percentage of each is different and there is a small group of mental illness (10.4 per cent). It is surprising how rarely in Special Hospitals one gets multiple classifications, one would think all of them are psychopathic in some way, but in fact the multiple classifications are quite uncommon.

Looking at the marital status of our offenders (Tables 7 and 8), we found that the vast majority were young single men. Of the admissions over 90 per cent were single, (Table 5) of the residents (Table 6) we found similarly that 87.5 per cent were single. The question of cohabiting or not was sought because accused persons who have been remanded often claim they committed their sex offence because their wife would not sleep with them or they were living apart. In our survey we found only one or two who were not cohabiting at the time of offending.

Tables 9 and 10 deal with the victims. The age of the victim has been divided into pre-pubertal, pubertal and post-pubertal age bands marked A, B and C. Males and females are considered separately. The figures show that the bulk of the offences were committed against females over 16, 16 cases (22 per cent) in the admissions and 42 cases (17.5 per cent) in the residents. When groups A, B or C are combined the numbers involved are small indicating Rampton patients' victims fall into quite discrete groups. It is quite uncommon for Rampton patients to assault both males and females. In summary a total of 69 per cent of victims were female alone while 20 per cent were males alone. The remainder comprise both male and female victims.

Tables 11 and 12 deal with the types of sexual offence. The bulk of the admissions were convicted of indecent assault (64.7 per cent). Many of the offences listed really are synonomous (i.e. rape and unlawful sexual intercourse, attempted rape and attempted sexual intercourse, indecent assault and sexual assault). It may not be very helpful to look at the patient's conviction for it often simply reflects the procedure that occurred in the Court rather than what actually took place. Since the disposal of the accused to a Special Hospital is usually known in advance of the Court hearing it is common practice for the Court to accept a plea to a lesser charge. This is reflected in Tables 11 and 12 which show the bulk of patients have been convicted of indecent assault, a quite minor offence. Descriptions of individual offences supplied by the police, however, clearly indicate that a much more serious offence occurred.

Table 9: Victims – Admissions (72)

Age of Victim	*Sex of Victim*		
	Male Only	*Female Only*	*M & F*
A 10 years	5 (6.9%)	8 (11.0%)	2 (2.7%)
B 10 – 16 years	4 (5.5%)	10 (13.7%)	–
C 16+ years	1 (1.4%)	16 (22.0%)	–
A + B	3 (4.1%)	3 (4.1%)	7 (9.6%)
B + C	1 (1.4%)	6 (8.2%)	–
A + C	–	2 (2.7%)	–
A + B + C	–	2 (2.7%)	2 (2.7%)
	14 (19.3%)	47 (64.4%)	11 (15.0%)

Table 10: Victims – Residents (234)

Age of Victim	*Sex of Victim*		
	Male Only	*Female Only*	*M & F*
A 10 years	16 (6.7%)	37 (15.4%)	7 (2.9%)
B 10 – 16 years	10 (4.2%)	21 (8.6%)	1 (0.4%)
C 16+ years	1 (0.4%)	42 (17.5%)	–
A + B	2 (0.8%)	3 (1.3%)	2 (0.8%)
B + C	1 (0.4%)	4 (1.7%)	–
A + C	1 (0.4%)	2 (0.8%)	3 (1.3%)
Not known	17 (7.1%)	58 (24.2%)	6 (2.5%)
	48 (20.0%)	167 (69.5%)	19 (7.9%)

Table 11: Precipitant offences – Admission sample

	Number	*% of Total (85)*
Indecent Assault	55	64.7%
Rape	6	7.0%
Attempted Rape	8	9.4%
Buggery	6	7.0%
Attempted Buggery	1	1.2%
Gross Indecency	2	2.4%
Inciting Boys to Gross Indecency	1	1.2%
Indecency with Children	1	1.2%
Sexual Assault	2	2.4%
Unlawful Sexual Intercourse	1	1.2%
Attempted Sexual Intercourse	2	2.4%

Table 12: Precipitant offences – Residents sample

	Number	*% of Total (244)*
Indecent Assault	108	44.2%
Rape	18	7.3%
Attempted Rape	15	6.2%
Buggery	17	7.0%
Attempted Buggery	6	2.4%
Gross Indecency	17	7.0%
Inciting Boys to Gross Indecency	1	0.4%
Indecency with Children	38	15.6%
Sexual Assault	10	4.1%
Unlawful Sexual Intercourse	8	3.3%
Attempted Sexual Intercourse	6	2.4%

(The remaining 9 were unclassifiable.)

Table 13: Patients whose sexual offence included violence – Admissions

	Number	*% of 73*
Murder	1	1.4%
Attempted Murder	1	1.4%
GBH/Assault	14	19.2%
	16	22.0%

Table 14: Patients whose sexual offence included violence – Residents

	Number	*% of 240*
Murder	15	6.3%
Attempted Murder	9	3.8%
GBH/Assault	16	6.7%
	40	16.8%

Table 15: WAIS IQ – 57 Admissions

		All Admissions (313)	*Sexual Offenders (57)*
Verbal	Mean	79.3	81.5
	S.D.	13.2	13.8
Performance	Mean	81.5	83.7
	S.D.	14.3	14.3
Full Scale	Mean	79.1	81.5
	S.D.	13.2	13.5

Tables 13 and 14 show offenders whose offences included violence. Table 13 shows of the admissions who had some association with violence; (22 per cent) of them had committed some form of GBH or assault. Table 14 shows that in the residents survey there is a smaller total proportion and the actual numbers were arranged rather differently, for as might be expected the ones who have actually committed a homicide tend to remain longer in hospital.

Table 15 shows the intelligence quotients of our patients, as measured by the WAIS. We only have the figures for 57 admissions because not all the patients in the hospital population have been tested. There is no significant difference in our survey between sex offenders and our ordinary male admissions to Rampton Hospital during the years 1971 to 1974.

A histogram (Table 16) shows the duration of stay of the survey patients. Unfortunately there are no figures to enable this to be compared with the length of stay for non sex offenders but from other sources it is known that for the Rampton male population, as a whole, 56 per cent remain after five years and a further 20 per cent between 5 and 10 years; whereas the sex

Table 16: Histogram to show the number of years patients classified as sex offenders had been in Rampton on 9.12.74

Table 17: Patients with Chromosome Abnormalities on 19th December 1974

Total Number of Patients with Chromosome Abnormalities:	45
Percentage of Total Male Population:	5.6%
Number Classified as Sex Offenders in Ward Survey:	13
Sex Offenders with Chromosome Abnormalities (13) as a percentage of all Sex Offenders (240):	5.4%
Sex Offenders with Chromosome Abnormalities (13) as a percentage of total number of Chromosome Abnormalities (45):	28.9%

Table 18: Breakdown of WAIS I.Q. Results Available for Patients with Chromosome Abnormalities (9th December 1974)

		All Patients with Chr. Abnm. (N:33)	*Sex Offenders with Chr. abnm. (N:11)*
Verbal I.Q.	– Mean	75.8	77.5
	S.D.	11.6	10.3
Performance I.Q.	– Mean	83.3	82.8
	S.D.	11.6	8.5
Full Scale I.Q.	– Mean	77.9	78.4
	S.D.	10.8	7.5

Table 19: Breakdown of Chromosome Abnormalities

	A Total 'N' In Each Group	*B 'N' who are Sex Offenders*	*'B' as a % of 'A'*	*'B' as a % of All Sex Offenders (240)*
XXY	16	3	18.75%	1.25%
XYY	19	8	42.1%	3.33%
XXYY	5	2	40.0%	0.83%
Others	5	0	–	–

offenders tend to stay for longer and some of them stay for very long periods indeed. Table 17 deals with the number of chromosome abnormalities at Rampton, they are nearly all sex chromosome abnormalities and at the time of the survey there were 45 (5.6 per cent) in the male population. Of the sex offenders in the survey 13 were found to have a chromosome abnormality

and they formed a similar proportion (5.4 per cent) of our sex offenders. It seems from the Rampton population that possession of a chromosome abnormality in no way makes a patient more liable to commit a sex offence. Table 18 compares the IQ's of patients with a chromosome abnormality with those of sex offenders with a chromosome abnormality and shows no significant difference between the two scores. While Table 19 identifies the types of sex chromosome abnormalities and again shows there is no significant difference between the types of chromosome abnormality and designation as a sex offender at Rampton Hospital.

In summary we found that of Rampton Hospital male patients 18.4 per cent were admitted as a direct result of a conviction for a sexual offence but nearly 30 per cent of the resident population could be so classified, their average age was 25.9 years (27.5 years for residents) with a range of 17–34 years (18–36 for residents), the vast majority – around 90 per cent – were single at the time of admission. Only a minority had no previous convictions and the vast majority, nearly three-quarters had previous convictions for both sexual and non-sexual offences. When we looked at the Mental Health Classification the bulk were either classified as psychopathic disorder or subnormality. These two diagnostic categories are simply legal and administrative methods of detaining patients and they are often quite inter-changeable so three-quarters of our patients fitted into this category. When we looked at victims 69 per cent were female whereas only 20.5 per cent were male, and usually the offences had been committed against a particular type of victim classified according to age and sex. There was no evidence of any association between chromosome abnormality and designation as a sex offender in our sample nor was there evidence of any association between intelligence and designation as a sex offender in the Rampton sample. Thus, our typical sex offender is a young, single dullard who had committed a sex offence usually against a female, has a number of convictions for both sexual and non-sexual offences and seems no more likely than any other Rampton patient to have a chromosome abnormality.

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4. Sentences imposed on sexual offenders

by Roy Walmsley

I want to tell you about the research we are currently doing in the Home Office Research Unit and to say something about the prevalence of the various sexual offences and about the sentences currently imposed on sexual offenders.

In July 1975 the Home Secretary announced that he had asked the Criminal Law Revision Committee to review the law on sexual offences. The Committee's terms of reference included an examination of the penalties for sexual offences. A Policy Advisory Committee has also been set up to provide the necessary expertise to deal with the medical and sociological questions involved in the review and to provide an assessment of lay opinion. The first question referred to the Policy Advisory Committee was consideration of the age of consent. Both committees are now meeting; the review is under way.

The Home Office Research Unit is currently undertaking research into sexual offences which is intended to be of particular value to the Criminal Law Revision Committee and the Policy Advisory Committee, and at the same time to make a contribution to the understanding of sexual offences generally by the collection and analysis of material not readily available but likely to be of interest to all those who are seriously concerned with the subject of sexual offences.

Two major surveys of sexual offences have been published in the last twenty years. The Cambridge study "Sexual Offences" edited by Sir Leon Radzinowicz appeared in 1957, and an American study "Sex Offenders – an Analysis of Types" written by Gebhard, Gagnon, Pomeroy and Christenson (of Kinsey's Institute for Sex Research at Indiana University) was published in 1965.

The present research is more modest in its intentions but it aims to improve on previous studies in several ways. The data used in the Cambridge study dealt with the situation over 20 years ago; and the Indiana researchers concentrated on selected parts of the United States, took their samples in a haphazard way from periods spanning 1940–1960, and confined their samples of convicted persons entirely to those imprisoned for their offences. The Research Unit's work is based mainly on 1973 figures, deals with the whole population of indictable sexual offenders for that year (or else samples strictly from among them) pays attention to fairly specific areas, and looks at some aspects not covered by the two earlier studies.

The research programme is intended to provide a wide range of general information about sexual offences (including the sentences imposed on sexual offenders) but it has a number of more particular objectives and special attention is being paid to the age of consent. These objectives include:

(a) to distinguish the more serious offences from the less serious and to identify those cases in which the age of consent is a relevant consideration;

(b) to show how seriously courts regard consensual heterosexual and homosexual offences where at least one party is below the age of consent;

(c) to discover for each indictable sexual offence the amount of variation in prosecution practice in England and Wales.

Detailed information has been collected concerning indictable sexual offences which led to court proceedings in 1973. The data, most of which has been obtained from police forces, includes the age and sex of offender and victim, the place of the offence (e.g. offender's home, victim's home, car, street, park, public conveniences), whether physical injury was caused, whether a victim unable to consent in law appears nonetheless to have been willing, how the offence came to the notice of the police, whether the offender and victim were known to each other, and the outcome of the proceedings including (in the case of persons convicted) the sentence passed. Information is also being collected about previous convictions of samples of offenders.

Although the age and sex of offenders and the outcome of proceedings are shown in the annually published Criminal Statistics this part of the research should produce a considerable amount of new information. Apart from throwing light on the comparative seriousness (or lack of seriousness) of the 7,000 or so annual convictions for indictable sexual offences and providing indications as to the effect that the age of consent has on sentencing, it should be possible to

ascertain, for example, whether convictions for certain offences (e.g. bestiality, incest between brother and sister, buggery with wife) are anything more than a rarity and whether the courts regard them as serious crimes. Again, the information obtained on homosexual offences will give some idea of how the Sexual Offences Act 1967 is working (e.g. whether the provisions which in some circumstances still prohibit consensual adult homosexual behaviour are ever enforced; how much private consensual behaviour involving someone between the ages of 16 and 21 leads to conviction).

To meet the third objective, i.e. the discovery of the amount of variation in prosecution practice for indictable sexual offences, information is being obtained from statistical returns, for each police force and for each sexual offence separately about the number of offences known and cleared up and the number of individuals cautioned and proceeded against. There are several reasons why these figures alone are insufficient to demonstrate conclusively whether or not real variations in practice are occurring, but it is hoped that by the collection of certain further data and by taking other necessary factors into account, any substantial variations that there may be in prosecution practice will become evident.

A number of controversial issues are involved in the work of the Criminal Law Revision Committee and the Policy Advisory Committee. Should maximum penalties for sexual offences be increased or reduced? Should the age of consent for homosexual activities be reduced to 18 – or even 16? Should the age of consent to heterosexual intercourse be reduced? Do we *need* an arbitrary 'age of consent' to protect our children or are there better ways of protecting them? Should homosexual offences be regarded more seriously than heterosexual offences? Need some offences remain on the statute book? Need some offences lead to court proceedings when a caution could be employed? Do sexual offences need to be kept as a category separate from other offences against the person? All the above changes are argued by some people. A major objective of this research is to provide information about *what happens now* which should enable discussion on these topics, and especially the deliberations of the Criminal Law Revision Committee and the Policy Advisory Committee, to be better informed.

We are currently analysing our data and submitting papers to the committees on a variety of topics, which have so far included 'convictions for incest – the relationships involved and the sentences imposed', 'unlawful sexual intercourse with girl under 16 – prosecution and sentencing practice', and 'buggery with women and bestiality – the nature of the offences which led to convictions in 1973'.

Although we are not yet ready to report the main results of our research I hope you will find it of interest if I say something about the recorded prevalence of the various sexual offences and about the sentences currently imposed on sex offenders. I will be drawing on information available in the published Criminal Statistics (to which we all have access but which perhaps inevitably often tell us much less than we would like to know) as well as the material we have collected for our research.

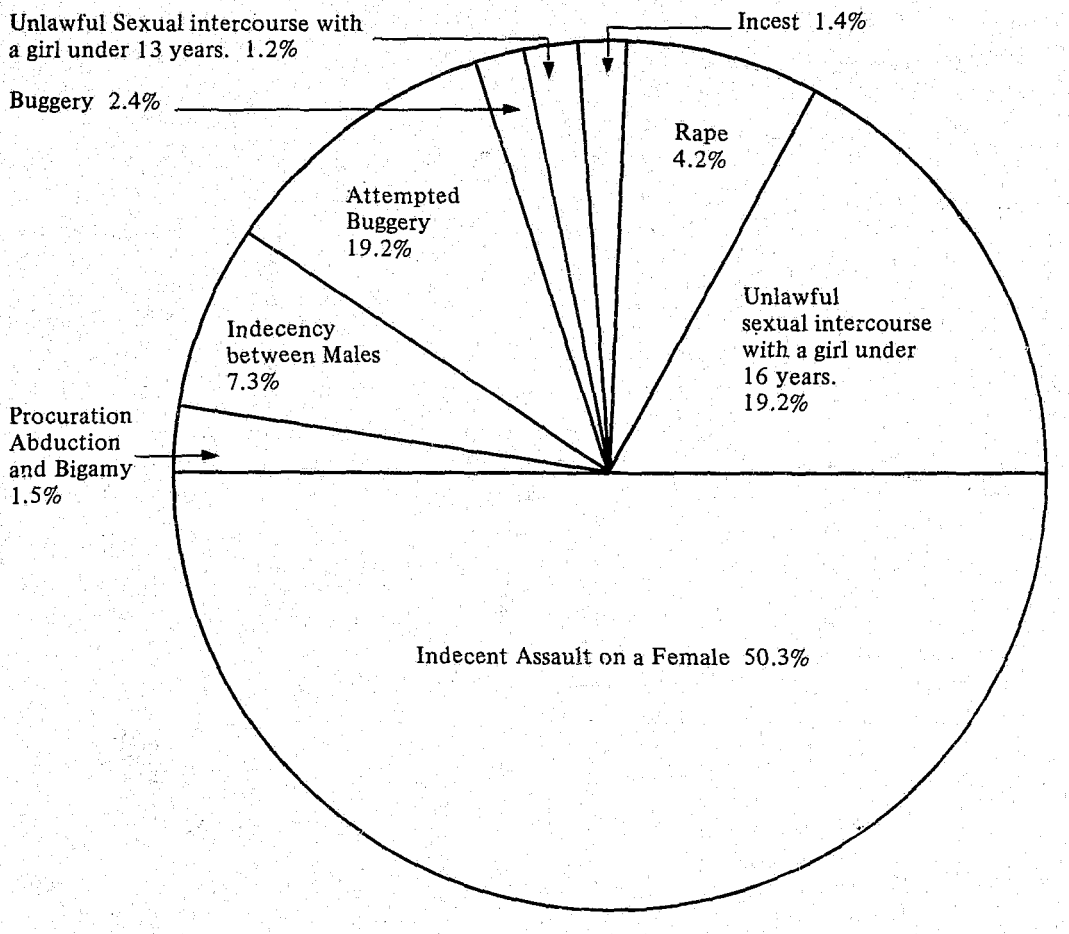
Recorded prevalence of sexual offences

In 1946 less than half a million indictable (serious) offences of all kinds were recorded as known to the police; in 1974 the figure was almost two million, a fourfold increase.

Most crime can be subsumed under the two headings 'offences against the person' and 'offences involving property'. Offences against the person are usually divided into offences of violence against the person and sexual offences. As is well-known offences of violence have increased dramatically since the war, sixteenfold in fact – four times the rise in all indictable crime. By contrast, the totals for sexual offences have risen much more slowly. In 1946 less than 10,000 sexual offences were recorded as known to the police; by 1959 over 20,000 were recorded, but now in the seventies the annual total is usually around 24,000, about two and a half times the 1946 figure.

Consistently around half the sexual offences recorded are indecent assaults on females; since 1960 another 20% have consistently been offences of unlawful sexual intercourse with girls of 13 but under 16 and another 15% have been indecent assaults on males. Three offences which, as we shall see, are on the whole regarded very seriously by the courts (buggery, incest and unlawful intercourse with a girl under 13) consistently comprise between them only 5% of the annual total of recorded sexual offences. Apart from the comparatively rare offences of procuration, abduction and bigamy this leaves just two offences, the prevalence of which has attracted some concern in recent years, rape and indecency between males.

Sexual offences recorded as known to the police (1974) distribution



To deal with rape first, 250 rapes were recorded in 1946, over 500 in 1960 and the current annual figure is around 1,000. Thus the total has increased fourfold since the war. Clearly this is a serious matter but it is perhaps seen in perspective when we realise that this rate of increase is no greater or smaller than that for all indictable crime. It is a rate higher than that for other sexual offences (except unlawful intercourse with a girl under 16, the figures for which are now falling back) but since rape is generally the most violent of sexual offences it is likely that it reflects on a very much smaller scale the great increase in recorded violence against the person.

As for indecency between males which usually involves mutual masturbation by two males in public conveniences, the oddity about the recorded incidence of this offence is that since 1967 (when homosexual behaviour between consenting adults became legal so long at it were performed in private) the figures have more than doubled. (*Public* conveniences of course do not count as *private* places). Why this rise should have occurred we are not sure (there is no corresponding rise in other homosexual offences) but I hope that our research will throw some light on this. It is however relevant that an even greater rise in the recorded incidence of this offence occurred between 1946 and 1955 before it fell again to a low level in the mid-sixties.

Before leaving the subject of the prevalence of sexual offences I should remind you that the relationship between the *recorded* incidence of these offences and the actual incidence is unknown. It can safely be assumed that for a variety of reasons a large number of offences are not reported, and the most reliable estimate of the reporting of rapes in the United States (we have no figures for this country) suggests that less than 30% of these crimes are reported.

Sentences currently imposed

The sentences imposed on offenders are of course an indication of the seriousness with which the different offences are regarded by the courts. I think the best way of assessing the comparative seriousness of the various sexual offences is to consider how many of the adults convicted of each

offence receive a custodial sentence. It is true that a very serious offence may on occasion lead to a non-custodial sentence because of the special circumstances of the offender but in general I think the method is reliable.

Rape, not surprisingly, emerged as the most serious offence with over 90% of adults (persons of 17 and over) who were convicted receiving a custodial sentence. There seems to be a clear distinction between what might be called the more serious sexual offences, which had custodial rates of at least 50% and the less serious offences for which custodial sentences were much less frequent.

Adults convicted of the main sexual offences, 1973: Proportion receiving custodial sentences

Offence	*Number of adults convicted in 1973*	*Number of adults receiving custodial sentences (including Restricted orders)*	*Custodial Rate*
Rape	204	187(3)	92%
Attempted Rape	91	84(9)	92%
Immoral Earnings	90	72	80%
Buggery	157	98(3)	62%
Incest	122	73	60%
Attempted Buggery	48	27(1)	56%
Unlawful sexual intercourse with a girl under 13 years	98	49(3)	50%
Unlawful sexual intercourse with a girl under 16 years	596	123	21%
Indecent Assault on a male	718	137(13)	19%
Indecent Assault on a female	2,416	318(16)	13%
Indecency between males	1,615	21	1%

The Criminal Statistics give information regarding sentencing, but the offence classifications used such as 'buggery', 'incest' embrace a wide variety of different types of offence, each with a different sentencing pattern. We have been able to throw light on some of these differences.

To take 'buggery' as an example, two-thirds of those convicted of this offence had committed it with boys under 16, and usually the boys were willing, even though a boy under 16 is too young in law to give consent. The maximum penalty that can be given is life imprisonment but the sentence actually imposed exceeded 5 years only in 10% of the offences involving boys under 16. The most commonly imposed sentence was imprisonment for between 2 and 5 years; if the boy was 14 or 15 the sentence rarely exceeded 3 years.

For the offence between consenting males where one is over 21 and the other 16 but under 21 the maximum penalty is 5 years imprisonment; the usual penalty in the year we studied was a suspended sentence or imprisonment not exceeding 3 years.

For the offence between two men over 21 the maximum penalty is 2 years imprisonment; a fine or a probation order was the usual sentence.

Cases of non-consensual, assaultive, buggery between males seem to be rare – there were only three convictions in 1973; each resulted in a sentence of 3 years imprisonment; the maximum penalty is 10 years.

Although buggery is thought of as a homosexual offence there are a small number of offences of buggery with females, and also of bestiality which for historical reasons comes under the same section of the Sexual Offences Act and is consequently classified with buggery in Criminal Statistics. These offences are subject to a maximum penalty of life imprisonment. Heterosexual buggery seems to fall into three main types: offences with young girls (aged 10 or less) by close relatives who usually received long prison sentences; offences with young women aged 16–25 in circumstances akin to rape, which were similarly penalised; and lastly offences with wives or cohabitees (usually reported by the women after a separation or a row) which were not followed by custodial sentences. As for bestiality, although it carries a maximum of life imprisonment probation seems to be the usual sentence in those few cases which come before the courts; the offenders are generally of low intelligence or mentally disturbed. The offence and the

maximum penalty are of course under review by the Criminal Law Revision Committee (as with *all* sex offences and penalties).

So you can see what a wide range of offences and sentences are included under the one Criminal Statistics classification 'buggery'.

A somewhat similar situation exists in the case of incest, although there are fewer varieties. In the year we studied (1973) three-quarters of the convictions were for father-daughter incest. This was usually met with a prison sentence, and the chances of a prison sentence and the length of the prison sentence increased the younger the daughter was. With brother-sister incest however a custodial sentence was very unusual.

A word about unlawful sexual intercourse with a girl aged 13 but under 16 – since it involves consensual behaviour with a girl just below the age of consent this offence is of particular interest seeing that the age of consent is being considered by the Policy Advisory Committee. Prosecution and sentencing practice have changed a lot in the last 25 years. Four times as many cases are now reported as in 1951 but a far smaller proportion of them come to court. There is a particular tendency not to prosecute juveniles. The offence is frequently dealt with by a caution and in 1974 for every three adults prosecuted seven were cautioned; for every three juveniles prosecuted 47 were cautioned.

Most of those who *are* prosecuted are over 17 and thus have to be tried at Crown Court, but the use of prison sentences has fallen from 35% of higher court cases in 1951 to 15% of Crown Court cases in 1974; and there are no signs that more offenders are being sent to Borstal or Detention Centre. The overall trend has been away from prison and towards fines and latterly suspended sentences.

Thus it would appear that the offence is regarded by the police and by the courts less seriously than it was 25 years ago. Whether that indicates the need for a change in the age of consent is of course another and a much more difficult question.

I would not like to finish addressing a Special Hospitals Research Unit symposium without mentioning Hospitals Orders and Restriction Orders. Perhaps it is worthwhile my reminding you what a small proportion of convicted sex offenders are dealt with in this way; it is only about 1% of the annual total of approximately 7,000. As for the sort of people who get Hospital Orders and Restriction Orders and the sort of treatment they get under them I think you all know more about that than I do.

5. Psychophysiological assessment of sex offenders

by John Hinton, Michael O'Neill and Jean Wooldridge

Introduction

Over the past fifteen years there has been an increasing interest in the development of techniques for the assessment of sexual orientation and responsiveness. Until recent years this has been largely concerned with the measurement of penile responses in males. This paper will be exclusively concerned with the measurement and assessment of sexual responses in male deviants; patients committed to Broadmoor Hospital for abnormal sexual behaviour, for the most part including an element of violence.

Generally, it has been found that psychophysiological measures other than direct genital measures are not related to degree of sexual stimulation. This was demonstrated by Bancroft and Matthews (1971) with electrodermal measures and heart rate, and was the conclusion of Zuckermann (1971) in an extensive review paper.

There appears to be some evidence, however, that skin conductance response can discriminate rapists from controls, while penile volume responses do not. This was reported by Kercher and Walker (1973), but this study has not yet been replicated. Also, pupil diameter increase to sexual stimuli has been claimed to discriminate homosexuals from heterosexuals (Hess 1960). However, this study of Hess used only a few subjects and has not been replicated. Despite this, it is frequently quoted. The work in this area was reviewed and extended by O'Neill and Hinton (1975) in looking at pupil diameter changes in relation to sexual interests and sexual arousal responses in sexually deviant maximum security patients.

This study was carried out on heterosexual offenders. The sexual interest index was a voluntary viewing time measure and sexual arousal was assessed by penis diameter increase. It was concluded that with socially acceptable sexual stimuli, pupil diameter correlated significantly with measures of sexual interest and sexual arousal. On the other hand, for socially deviant stimuli (pictures of young girls and men) negative correlations were obtained between pupil diameter and measures of sexual interest and arousal.

It was suggested that a defensiveness or inhibition factor may be operating in the control of sexual arousal with socially unacceptable sexual stimuli.

(In view of observations by Jan de Lang (1975 personal communication) that pupil diameter increases to visual stimuli correlated with skin conductance increases, and bearing in mind the findings just discussed, it might be worthwhile investigating both skin conductance and simultaneous pupillometric measures for a variety of sexual stimuli in the sexual assessment of rapists and other sexual offenders. This is one line of investigation which we are currently following up).

The results which we are going to report in this paper are based on the sexual assessment programme which one of us (JWH) developed and which we have used in the Psychology Department at Broadmoor Hospital over the past three years. The objective was to provide a standardized programme for the assessment of sexual orientation and responsiveness, covering as wide a range of sexual deviance as possible within a one hour testing period. Following the work previously carried out at Broadmoor Hospital by Gavin Tennent, using the technology of Bancroft (1966), it was decided to concentrate on the measurement of genital responses in assessing sexual behaviour tendencies, using the mercury loop method. Nevertheless, we thought it would be useful to record heart rate to give a crude index of general autonomic arousal changes, and it was also decided to extend the genital measures by including a measure of penis skin blood volume.

From the extensive work of Kurt Freund since 1963 it appeared reasonable to expect that changes in penile volume would differentiate between hetero and homosexual subjects. Freund's research was carried out using photographs of females and males, and was replicated by a number of subsequent investigators. He extended his research (1963, 1967) and claimed that penile volume responses could discriminate between heterosexuals and homosexuals with preferences for children, adolescents and adults. Freund (1967b) compared sex offenders with normals on their penile responses and reported that non-offenders did not produce increases in penile volume to the non-preferred sexual stimuli. By contrast, sexual offenders, (in this case paedophiliacs) did respond to a wide range of sex stimuli. The outcome of this research by Freund (1975) was the suggestion that bi-sexuality exists in paedophiliac homosexuals.

A recent report by Quinsey et al (1975), gave results on the testing of 20 male child molesters in a maximum security establishment, compared with 11 non sex offender patients from the same institution and 10 normal non-patients. Penile volume responses were found to discriminate offenders from non sex offenders and from normals. Of particular interest in the context of this paper is that ranking of sexual preferences, taken on slides of persons varying in age and sex, gave evidence of defensiveness in the patient offender population: the desire to conceal appeared to contaminate the results.

In designing our testing procedures, it seemed obvious that we should build in precautions against faking where possible. Thus, it was decided that the design should be such that our subjects were not aware that their preferences were being assessed, and a careful check was made to ensure that visual material was viewed fully. To our knowledge such precautions have not been reported hitherto.

In this paper a description is given of the standard procedures for psychophysiological assessment of male sexual offenders in Broadmoor Hospital. The technology, programme design and methods of data analysis will be outlined. In particular we shall attempt to deal with the problems of faking and defensiveness and their methods of detection. We shall go on to describe our test of validation of indices of sexual arousal and make comparisons between the results which we have obtained and those obtained by other investigators such as Bancroft (1971) on voluntary patients. An objective voluntary viewing time measure of sexual interest is described and an assessment is made of some of the results. A description will be given of our standard film programme for the assessment of sexual orientation and responsiveness of patients which allows comparisons to be made of sexual responsiveness of different offender groups and normal non-patients on penile volume responses to different types of sexual stimulation.

Procedure and methodology

Our standard laboratory procedure for sexual assessment is as follows. First the patient is briefed for about fifteen minutes and the programme is fully explained to him. He is then seated in the chair of the testing booth, which is made as cosy as possible. He attaches the loop towards the base of his penis and we have constructed a special swivel attachment so that the loop can hang down conveniently from above and be locked in position. Next he places a photo reflective pick up on top of the penis, just in front of the loop, and fixes a black apron over himself. A photo-electric transducer is attached to the patient's ear lobe to provide the pulses to record heart rate.

The programme starts with a series of 36 heterosexual slides shown for 10 seconds each. We think starting with slides provides a period of adaptation to the test situation for the patient and helps him to relax before going on to the main film programme. We ask the patient to rate each slide on an equal interval 10 point scale indicating the degree of felt sexual arousal. He can do this by pressing a button from one up to 10 times. (This simply operates a marker on the polygraph). The validation procedure we are interested in is correlation between the ratings which the patient makes, and the indication of his sexual arousal as recorded from penile blood volume and diameter. Slides are presented in a balanced type of design as determined from prior experimentation with the least sexually stimulating slides coming up at the beginning and end and gradually rising to maximum sexually stimulating slides in the middle of the series of 36. Thus by averaging out we should cancel carry over effects. Also we are able to measure gross inconsistency in ratings by looking at the differences between consecutive ratings of felt sexual arousal. The patient is then told that while we are preparing for the film programme, we would like him to fill in the time by triggering through some slides for himself, and we ask him to take his time, as we are in no hurry. These slides consist of a battery of 18. A randomised mixture of neutral scenes, pictures of men, women, girls and boys in states of nudity and semi-nudity, and matched as near as possible for type of pose. The patient triggers through the slides at his leisure, and we alternately score up his mean viewing time for different types of sexual material. (This same battery of slides is used in a separate psychophysiological test programme for pupillometric research: a number of patients have been tested on the two test programmes, so we have been able to intercorrelate measures of sexual arousal and preferences and the pupil diameter changes to different types of sexual stimuli (O'Neill and Hinton, 1975)).

Returning now to the main sexual testing programme, after the patient has completed the triggering of slides, he is shown a videotape of sex films presented in black and white on a 23" moniter. The films cover a wide range of sexual activities between individuals of different sexes and ages, and they are presented in a balanced design. The programme starts with a normal het-

erosexual film showing undressing, mutual masterbation and sexual intercourse in various positions. Second film involves boys aged about 8 or 9 years, this film shows mutual masturbatory and anal stimulation sequences. The third film involves a girl, the first few minutes of which the girl, who looks about 12 years old, is seen in the countryside alone, with her bicycle. She is approached by two men, who take her off, and this is followed by a scene of chase and struggle. The last three minutes of the film are violent rape. The fourth film shows homosexual activity between two consenting males of about 20. The films are then shown in reverse order. It is hoped that in this way carry over and fatigue effects can be eliminated by the averaging out of maximum responses to the different films. Between films there is a two minute gap when the patient is asked to concentrate on interesting reading of some fairly neutral material. Throughout the film programme the patient is seated within a darkened room. To check that the patient views the films we use an infra-red illumination system and a gold plated front surfaced mirror, shielded with a Wratten 87 filter to reflect an image of the patient's eyes into a video camera fitted with an infra-red sensitive camera tube. Throughout the entire programme the patient's viewing of the screen is monitored.

Results and analyses of results

Validation of sexual arousal measures

Validation was attempted by correlating psychophysiological measures of sexual arousal and the degree of reported felt sexual arousal while viewing the 36 heterosexual slides. The results for 24 patients are shown in Table 2. As can be seen from the column on the left, these patients commited a very wide range of sexual offences. Column three shows the mean penis diameter increase in millimetres over the series of 36 slides. As shown in Bancroft's data (1971) in Table 1 the range of diameter increase to slides is very considerable, and our data confirms this. Column 5 on Table 2 shows the correlation between penis diameter and self-rated felt sexual arousal. (At this point we must thank David Crawford for his help in carrying out the correlations on the 24 patients). It is interesting to compare the correlations in this Table with those obtained by Bancroft on his sample of voluntary patients. While Bancroft obtained fairly consistently high positive correlations between penis reactions and self-rating of sexual interest, where the mean erection increase was above 1 to 1.5 mm, this definitely does not apply for the Broadmoor sample. We are able to deduce from the data that a very high proportion of patients are very inconsistent in their ratings as shown on the last column on the table, and this could account for some of the low correlations. What is particularly surprising, however, is the incidence of negative correlations, some of them fairly significant statistically. We are well aware of the problem of defensiveness in Broadmoor patients and we would expect this to apply, especially in this type of test situation, as indicated by the results of Quinsey (1975) referred to in the introduction to this paper. We therefore carried out a blind assessment of defensiveness in fairly general terms: the patient's psycho-

Table 1: Correlations between reactions and self ratings of sexual interest (JOHN BANCROFT 1971)

Subject	*Aversion Group*		*Subject*	*Desensitisation Group*	
	Mean erection mm/increase/dia.	*Correlation between erection and subjective rating*		*Mean erection mm/increase/dia.*	*Correlation between erection and subjective rating*
1	3·0	0·903*	1	2·43	0·999*
2	2·76	0·978*	2	2·1	0·968*
3	2·09	0·590	3	1·94	0·819*
4	1·75	0·918*	4	1·54	0·705*
5	1·68	0·929*	5	0·89	0·709*
6	1·16	0·719*	6	0·75	0·890*
7	0·2	0·391	7	0·41	0·673*
8	0·19	0·251	8	0·40	0·000
9	0·18	0·657*	9	0·39	0·156
10	0·18	0·601	10	0·2	0·750*
11	0·11	0·550	11	0·18	0·463
12	0·04	0·167	12	0·15	0·323
			13	0·11	0·106

*p=0·05; df=9

Subjects are listed in order of degree of erectile response. These responses were recorded in the initial testing, before allocation to treatment groups. Mean erections are for homosexual and heterosexual responses combined.

Table 2: Table showing physiological measures of sexual arousal and degree of reported felt sexual arousal while viewing hetero slides

Offence	*Patients (listed in order of degr. penis diam. incr*	*Mean penis diam. incr (mms)*	*Penis diam. range (max–min)*	*Corre between penis diam & self rating of felt sex arousal (Calculated on each individual rating point)*	*Corre between penis skin blood volume & felt sex arousal (Calculated on each rating point)*	*Range of ratings of felt sex arousal*	*Reliability and inconsistency*
Physical attacks (Women/Girl) not overtly sexual	1.	4·2	11·6	0·25	0·39*	4	
H/sexual Buggery (sadistic attack on boys)	2. (D)	4·2	5·1	0·48**	0·07	9	I
Assault (GBH) Women	3. (D)	4·0	7·9	–0·03	–0·02	4	
Non-sex attack on women	4.	3·2	8·0	0·54**	–0·45**	8	R
Ind Ass GBH 8yr old boy	5. (D)	2·9	6·4	0·08	–	9	I
Rape (stranger)	6.	2·9	6·0	0·36*	–0·16	5	I
Arson	7.	2·2	7·3	0·71**	0·65**	9	R
Att rape & S.I. girls (aged 10 and 11)	8.	2·1	5·5	0·68**	0·44**	8	R
Attempted rape (girl)	9. (D)	1·6	3·0	–0·49**	0·39*	6	
Ind Assault (boys)	10.	1·5	1·6	–0·55**	0·58**	6	I
Att murder (woman)	11.	1·5	3·0	0·19	–0·29	9	I
Sex ass (boys/girls)	12.	1·6	5·4	0·26	0·52**	6	
Manslaughter (strangulation 9yr old girl)	13.	1·1	1·4	0·41*	–	4	
Manslaughter (H/sexual misconduct)	14. (D)	1·0	1·3	0·27	–0·30	9	I
Att rape (woman)	15.	0·9	2·2	0·52**	0·67**	5	
Att sex ass (females)	16. (D)	0·9	1·4	0·29	–0·60**	6	
Sex attack, Ind exp	17.	0·8	1·9	0·63**	–0·29	6	
Obscene letter & ass.	18. (D)	0·8	1·2	–0·67**	–	3	
Rape GBH	19.	0·6	1·5	–0·06**	–	5	
Manslaughter (male)	20. (D)	0·6	1·1	–0·46**	–	4	
Att murder (sex ass boy)	21.	0·6	1·4	0·24	–0·14	4	I
Indecent ass (girls) (Malicious wounding)	22. (D)	0·5	1·1	–0·24	–	4	
Arson/Burglary	23.	0·4	0·9	0·55**	0·36*	7	
Ind Ass & Att Murder (boy 10)	24.	0·3	0·5	–0·09	–	3	

(D) Denotes patients who, from their behaviour on testing and psychometric tests, were reported as being 'defensive': assessment carried out blind.

$P \leqslant 0{\cdot}05$ requires $r \geqslant 0{\cdot}33$
$P \leqslant 0{\cdot}01$ requires $r \geqslant 0{\cdot}42$

I. Inconsistent ratings Denotes more than 5 jumps of 4 between consecutive ratings over 36 slides.
R. Denotes patients whose records are reliable and satisfactory for indiv. analysis.

metric and psychophysiological test reports were scanned for indications of defensiveness. A number of these patients were classified as defensive because they closed their eyes on the actual film programme. As you can see in column two (table 2), nine of the 24 patients were classified as defensive. Our evidence suggests that negative correlations can be accounted for by defensiveness in the patients or inconsistency in his responding which could possibly denote defensiveness. All the significant negative correlations are with patients who fall in this category. Looking at Figures 1, 2 and 3 which are based on data of the three patients whose records were classed as reliable, (i.e. their ratings were consistent and spread over the full scale) their penis diameter range was fairly high and the mean penis diameter increase was above 2 millimetres. These scatter plots show a linear relationship between sexual arousal, as indicated by penis diameter, and reported felt sex arousal. The correlations are all statistically highly significant. It may be concluded, from the data in column 5 (table 2) that a high proportion of patients tested under conditions of indeterminate detention may adopt a number of defensive strategies in reporting their level of sexual arousal. In fact, a number of patients may actually report decreasing felt sexual arousal when in fact their sexual arousal as measured objectively is increasing.

Column 6 shows correlations between penis skin blood volume and felt sexual arousal. A number of significant correlations are shown – some negative, some positive. Our results indicate that patients are idio-syncratic in the extent to which they are likely to show skin blood volume

Figure 1: Plot of Penis Diameter vs Felt Sexual Arousal during Viewing of Normal Hetero Slides: Ca

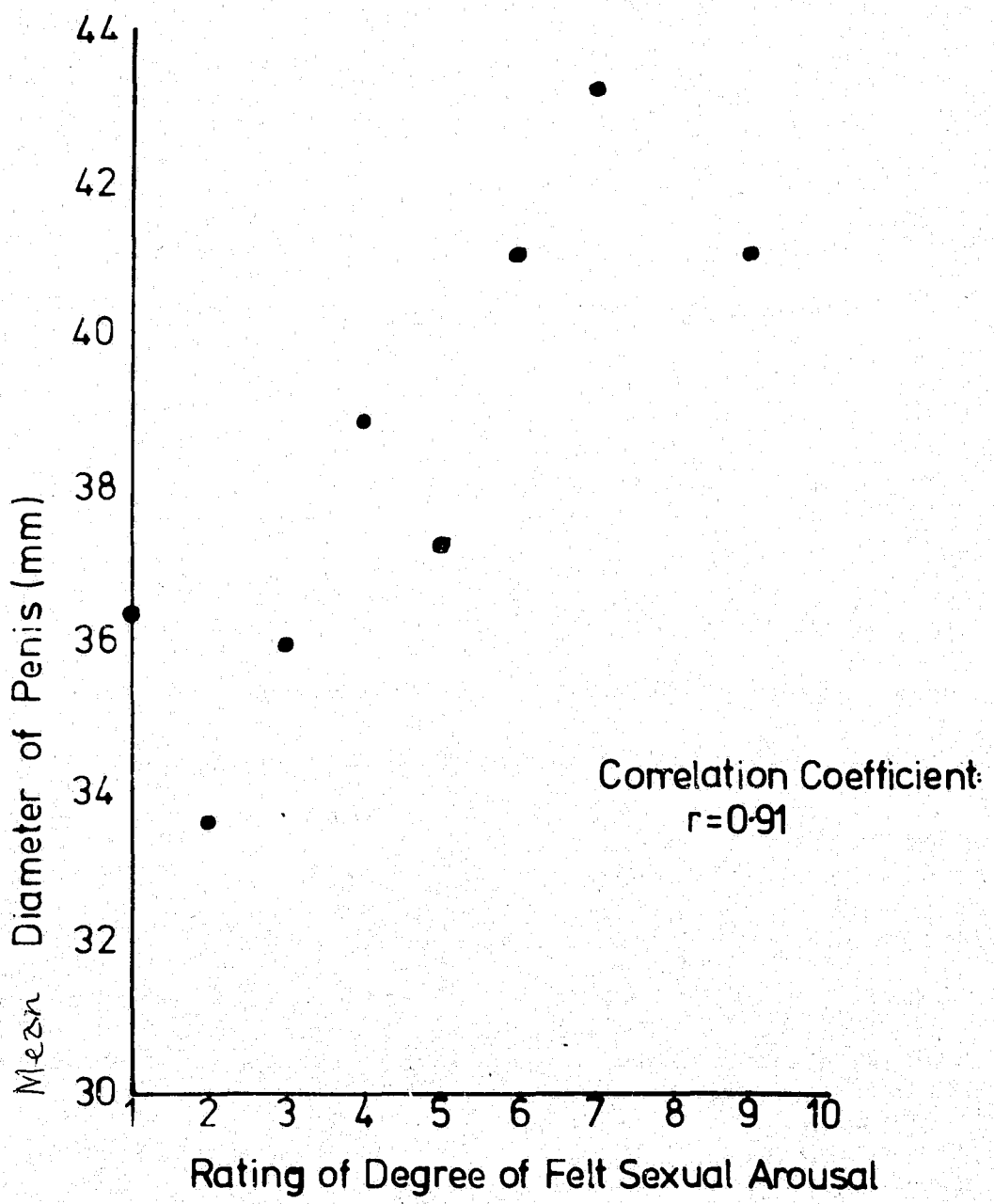
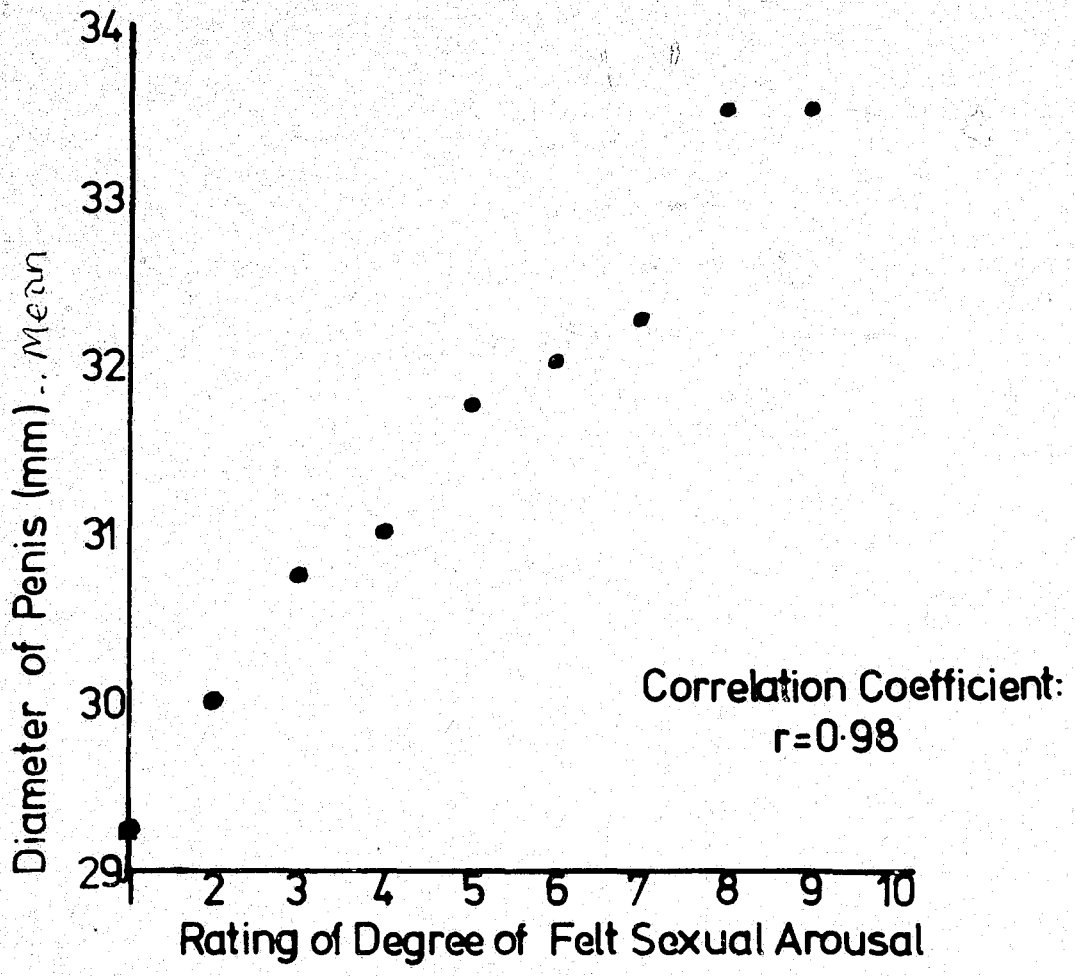


Figure 2: Plot of Penis Diameter vs Felt Sexual Arousal during Viewing of Normal Hetero Slides: Ta



increase, or decrease, with increasing penis diameter. We have some evidence from tests carried out on normals that penis skin blood volume changes may be a sensitive index of sexual arousal changes at low levels of sexual arousal when changes in penis diameter are very small indeed. Research on this is continuing.

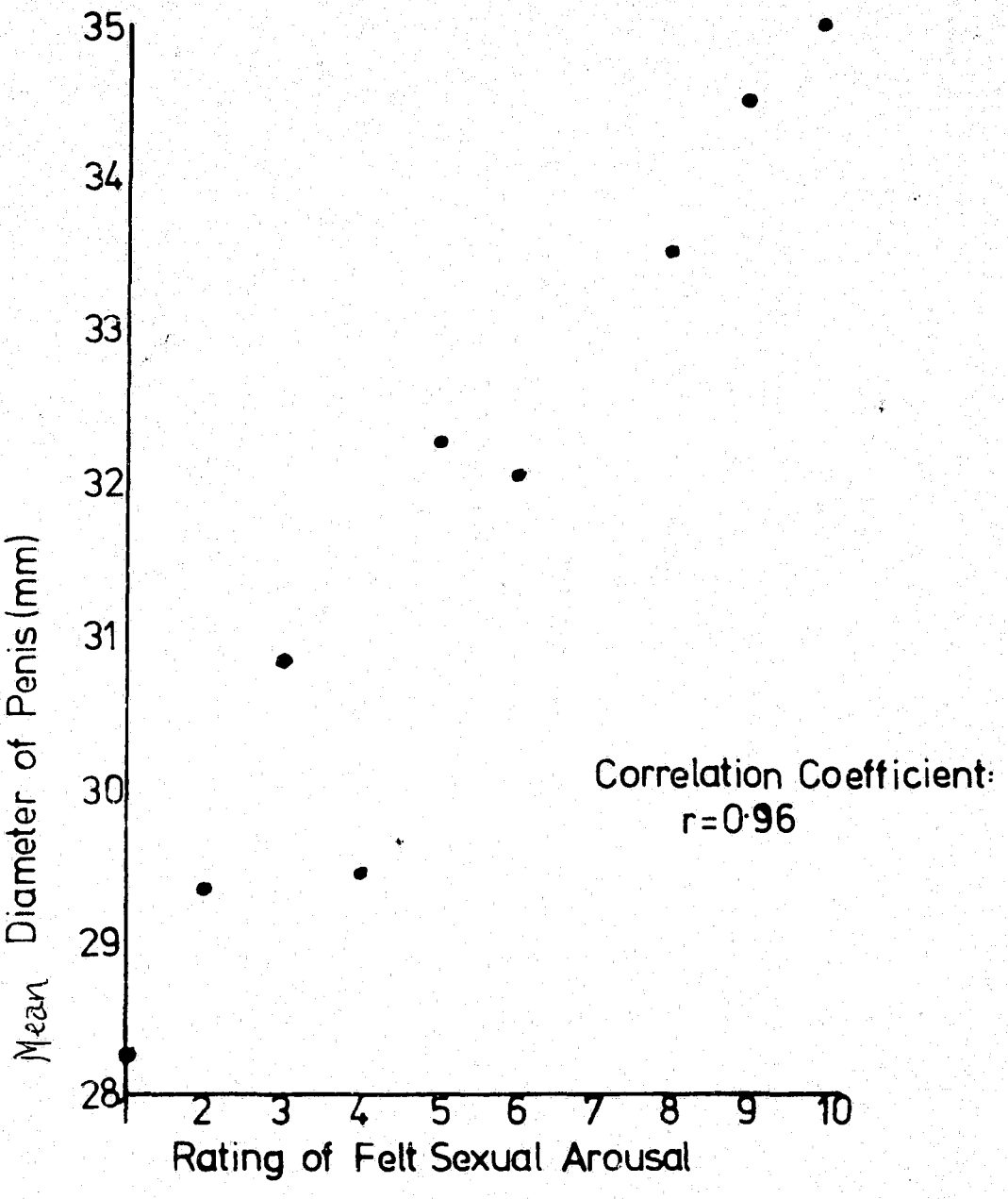
We have carried out tests on the correlation between voluntary viewing time on pictures of men, women, girls and boys, and an index of increase in penis diameter attained on films of similar material. With patients we obtained no significant relationship, while with normals significant positive correlations were obtained. Again, there may be a defensiveness or faking operating with patients, in their control of viewing time, even when precautions have been taken to ensure lack of knowledge that they are being timed.

As discussed in the introduction we have found further evidence of defensiveness in correlational studies on pupillographic assessment of sexual interest, fully reported in the paper which we presented to the British Psychophysiological Group in December of last year.

The film programme: Group comparison studies

We now come to a discussion of the result we obtained on our film programme and we would like to present some group comparison studies. Table 3 indicates the sexual responsiveness of specific types of offenders to films showing the deviant sexual behaviour. Looking at the column on the left, it can be seen that the offenders have been divided into first, 12 offenders against young girls, secondly 11 offenders against women, and a small number of offenders against boys and against men and finally if you turn over the page you will see results on a sample of normals: these are volunteers from within the hospital. The measure of penis diameter which we decided on at the outset of our work, was the percentage increase in diameter expressed as a function of the range which the patient achieved, i.e. maximum minus minimum diameter (recorded throughout the testing programme). This measure has a number of advantages in making comparisons between

Figure 3: Plot of Penis Diameter vs Felt Sexual Arousal during Viewing of Normal Hetero Slides: Ho



patients, since it is independent of actual penis size and individual differences in magnitudes of erection. It has a further advantage in that one can tell by looking at the figures at what level of sexual arousal the patient is operating throughout the test programme as a whole. Measures on this index are given in the middle 5 columns of the table. Columns two, three and four, show reaction to normal adult hetero, adult homo, and young boys films. These were found to produce no differentiation between groups of patients and between patient groups and normals using non-parametric tests. Quite different results are obtained when making comparisons on sexual responses to the film showing violent rape of a young girl. The percentage increase column figures are given in column 5 of the table. Both offenders against young girls and offenders against women taken together are significantly different from normal non-patients – the patients showing a significantly higher level of sexual arousal to the girl rape. These results are significant and could have occurred by chance, less than once in fifty times. Further, offenders against young girls were differentiated from normals at a chance level of one in a hundred. These results are particularly significant because responsiveness to the films showing consenting sexual activity was similar for both offenders and non offenders. It would appear that it is the aspect of violence in the sexual situation that differentiates between the heterosexual offenders and normals. It is important to note, that unlike the findings reported by Freund (1967 b) many normals do respond considerably to deviant material including rape and homosexual behaviour.

Table 3: Table indicating sexual responses of specific types of offender to films showing deviant sexual behaviours

(Standard Programme No. 1)

Offenders against pre-pubertal girls	*Maximum penis diam. to films (% of range)*					
	Adult Hetero	*Adult Homo*	*Boys (9 yrs old)*	*Girl Rape (12 yrs old)*	*Abduction of clothed girl (12)*	*Increase in diam. on abduction*
1. (RU)	80	55	53	93	60	yes
2 (KJA)	81	91	64	79	38	no
3 (DA)	62 (S)	9	14	30	11	yes
4 (TA)	91	97	62	77	95	yes
5 (KE)	21	21	45	61	18	no
6 (BL)	79	58	5	100	–	yes
7 (RI)	64 (C)	5 (C)	14 (C)	48 (C)	45	yes
8 (BR)	98	11	63	95	41	yes
9 (CL)	38	84	81	97	57	yes
10 (DA)	63 (S)	9	14	30	11	slight
11 (HA)	89	52	60	73	72	yes
12 (SJA)	94	20	12	91	47	yes
Mean % incr:	71·67	42·67	40·58	72·83	45·00	
Offenders against women	*Adult Hetero*	*Adult Homo*	*Boys 9 yrs Home*	*Girl 12 yrs Rape*	*Girl (12) Clothed attack*	*Increase in diam. on abduction*
1 (WI)	99	86	72	97	85	yes
2 (CH)	93	92	62	100	67	yes
3 (BA)	77	13	30	26	8	no
4 (CA)	91	4	5	74	16	no
5 (AG)	44	13	13	90	13	no
6 (FR)	72 (S)	17	18	77	22	no
7 (PJO)	92	20	64	66	25	no
8 (HA)	89	58	76	99	54	slight
9 (CR)	90	85	57	100	83	yes
10 (DI)	74	26	47	83	35	no
11 (GL)	66	15	13	13	14	no
Mean % incr:	80·64	39·00	41·54	75·00	38·36	
Offenders against young boys	*Adult Hetero*	*Adult Homo*	*Boys 9 yrs Homo*	*Girl Rape (12 yrs old)*	*Abduction clothed girl (12)*	*Increase in diam. on abduction*
1 (RO)	73	100	95	98	94	yes
2 (TU)	49	16 (C)	30 (C)	100 (C)	30 (C)	no
3 (GR)	32	51	51	80	26	no
4 (NU)	68	38	85	85	79	no
Mean % incr:	55·00	51·25	65·25	90·75	57·25	
Offenders against men	*Adult Hetero*	*Adult Homo*	*Boys 9 yrs Homo*	*Girl Rape (12 yrs old)*	*Abduction clothed girl (12)*	*Increase in diam. on abduction*
1 (TO)	97 (S)	53 (C)	69 (C)	47	51	no
2 (BO)	81 (S)	51	92 (C)	64	70	no
Mean % incr:	89·00	52·00	80·50	55·50	60·50	

S = Faking C = Eye closing

Table 3–*continued*

Normals non-patients presumed heterosexual	*Adult Hetero*	*Adult Homo*	*Boys (9 yrs) Homo*	*Girl Rape (12 yrs old)*	*Abduction clothed girl (12)*	*Increase in diam. on abduction*
1	78	21	35	56	32	Nil
2	93	84	82	96	62	Nil
3	95	61	42	24	26	Nil
4	83	36	62	67	46	Nil
5	96	32	32	81	10	Nil
6	58	88	24	71	11	Nil
7	85	37	40	24	23	Nil
8	86	93	79	79	71	Nil
9	76	21	23	42	18	Nil
Mean % Incr:	83·33	52·55	46·55	60·00	33·22	

It became apparent early in our testing of sexually deviant patients that offenders against young girls show a marked increase in penis diameter simply on viewing the *first* part of the girl rape film, that is the first two minutes, when the girl is standing alone fully clothed and is taken, chased and struggles with the men. Whether or not increase in diameter was recorded on this section of film is indicated in the last column of Table 3. Fisher exact probability and Chi Square Tests were carried out in comparing between groups on the incidence of sexual arousal during this section of the film. In comparing offenders against young girls with other sex offenders taken as a whole, girl sex offenders showed a significantly greater incidence of sexual arousal on seeing the young clothed girl. This result could have occurred by chance less than once in a hundred times. No normals showed any indication of sexual arousal during this part of the film. Comparing the results for the offenders against girls with the group of normals the outcome is very highly significant and could have occurred by chance less than once in 200 times. Thus it may be concluded that offenders against young girls can be differentiated in terms of their sexual arousal to seeing a clothed girl on film.

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6. Measurement of sexual orientation by relative response rates

by M. J. Cliffe

Introduction

The assessment of sexual orientation in sex offenders is of prime importance, both when considering the possible return of sex offenders to the community from institutional care, and in the evaluation of treatment. The various measures of sexual orientation have recently been reviewed by Bancroft (1974), who notes that sexuality is a complex matter involving the interaction of a number of factors each of which can be separately measured. Following Whalen (1966) he identifies these factors as follows:

1 gender identity and gender role behaviour
2 sexual preferences and other sexual attitudes
3 sexual gratification (i.e. the quality and intensity of sexual pleasure)
4 sexual arousability (i.e. the capacity to respond to sexual stimulation with increased sexual arousal)
5 sexual activity, fantasied or real.

All of these factors are evaluated in designing treatment or in considering suitability for discharge from detention under secure conditions, but as far as the latter question is concerned factors 2, 4 and 5 are of primary importance.

Factor 5, 'sexual activity, fantasied or real' is difficult to measure in an institutional setting for two reasons. First, opportunities for sexual activity within a security institution are severely circumscribed. Second, patients/offenders who are being compulsorily detained are likely to 'fake good' in the sense of not admitting to deviant fantasies, in an attempt to facilitate their return to the community at large.

Whalen's (1966) factors 2 and 4 have in practice involved attempts to measure sexual arousability and preferences by physiological methods, usually phalloplethysmography, or by pencil and paper tests. Freund et al. (1965) described a plethysmographic technique which has been used in the diagnosis of homo- or hetero-erotic interest (Freund, 1963) and of erotic age preference (Freund, 1967). Plethysmography is a technique of potential importance, but it has been shown (Laws and Rubin, 1969; Henson and Rubin, 1971) that penile erection is at least partially under voluntary control, so that the possibility of 'faking' remains. A promising recently reported physiological technique is that of pupillography (Hinton and O'Neill, 1975).

Measures related to factor 2, sexual preferences and other sexual attitudes have involved, in addition to physiological measures, a variety of pencil and paper tests. Thorne (1966a, 1966b) has devised a questionnaire of sexual attitudes and preferences. Marks and Sartorius (1968) have modified Osgood's Semantic Differential technique (Osgood, Suci and Tannenbaum, 1957) so that it describes a variety of sexual concepts. Feldman et al. (1966) devised the Sexual Orientation Method to measure change in hetero- or homo-erotic orientation during aversion therapy. A problem with all of these techniques is that they are all subject to faking and therefore of limited usefulness with potentially dangerous sex offenders.

Faced with the lack of a reliable and valid technique for measuring sexual orientation it was necessary to consider possible novel approaches to the problem. The remainder of this paper describes a proposed new sexual orientation measure designed to answer the question 'What is the reinforcement magnitude of various classes of erotic stimuli for a given individual?' It is based on recent laboratory experiments in operant psychology, and in particular on experiments concerned with concurrent Variable Interval schedules (Ferster and Skinner, 1957).

Two earlier experiments have attempted to answer questions related to the one being considered here. An interesting pioneer experiment was that of Brown (1964). In order to differentiate between homo- or hetero-erotic interest in a male subject Brown constructed a shutter that required a considerable force to operate. He demonstrated different frequencies of operating this shutter depending on the nature of the visual stimulus made accessible by shutter operation. In this case frequency was consistently higher with homo-erotic stimuli than with hetero-erotic stimuli or neutral stimuli. A criticism of this experiment was that it failed to provide a framework for calculating a quantitative measure of the difference in interest.

MacCulloch and Sambrooks (1974) were essentially interested in the same question. Their data suggested that '. . . the time which a subject is prepared to look at a given sexual stimulus before voluntarily switching it off (termed 'sexual interest latency') may reflect the interest strength of a particular sexual stimulus . . .'.

A criticism of both of the above experiments is that they employed a single response as the dependent variable. Catania (1963) reviews the animal experiments of Jenkins and Clayton (1949) and of Keesey and Kling (1961) and concludes that the effect of magnitude of reinforcement on the frequency of a single response is frequently either small or transient. He provides evidence that concurrent performances, i.e. the relative rates of responding on two operanda, are sensitive to changes in reinforcement magnitude. Similarly Herrnstein (1961) had indicated that single schedule response rates (e.g. on Variable Interval schedules) are notoriously insensitive to changes in rate of reinforcement.

The Matching Law

One of the prototype experiments examining concurrent performance was performed by Herrnstein (1961). Pigeons were exposed to a two-key concurrent procedure. Responding on keys A and B was maintained by separately scheduled Variable Interval schedules (a Variable Interval schedule varies the amount of time that must elapse before a response can be reinforced, about a mean value). The pigeons were penalized for alternating in response between the two keys by making reinforcement impossible for a short time (1.5 sec.) after every alternation. This procedure is known as the 'Changeover Delay' and is used in all the experiments reviewed below. The relative frequency of responding on a given key closely matched the relative frequency of reinforcement on that key. That is, a relationship of the following kind was observed:

$$\frac{P1}{P1 + P2} = \frac{r1}{r1 + r2} \qquad (1)$$

where P1 and P2 are the frequencies of responding at the left and right alternatives, and r1 and r2 are the numbers of reinforcements obtained from the left and right alternatives. (Different authors employ different letters to denote frequency of responding at the left and right alternatives. For the sake of clarity the letter P will be used throughout this paper).

This relationship has come to be known as the 'Matching Law'. It has been demonstrated to be extremely generally applicable. Within its framework it is now possible to state quantitative laws about the reinforcing properties of different rates (Herrnstein, 1961; 1970), delays (Chung, 1965; Chung and Herrnstein, 1967), and magnitudes (Catania, 1963; Brownstein, 1971) of a single type of reinforcer. The Matching Law has proved applicable to the description of the behaviour of several species, including man, working for a variety of reinforcers. Thus Iglauer and Woods (1974) found it to describe relative response rates of rhesus monkeys working for varying doses of intravenous cocaine; Berlyne (1972) found it to describe the higher reinforcement magnitude of complex versus simple visual stimuli in humans; Schroeder and Holland (1969) demonstrated that the distribution of macrosaccadic eye movements in human operators in a vigilance task conformed to the Matching Law; Nevin (1969) notes that matching is found in human psychophysical studies when the proportion of 'yes' responses is plotted against the proportion of 'signal' trials or against the relative size of payoff (i.e. frequency or magnitude of reinforcement).

Hollard and Davison (1971) have summarised these findings as follows; with concurrent variable interval schedules, if P1 and P2 are the number of responses per session to the left and right keys, and responses on the two keys are reinforced at different rates of reinforcement (r1 and r2), or with two different immediacies of reinforcement (reciprocal of delay, i1 and i2), or with two different amounts of reinforcement (a1 and a2), then:

$$\frac{P1}{P2} = \frac{r1}{r2} \qquad (2a)$$

$$\frac{P1}{P2} = \frac{i1}{i2} \qquad (2b)$$

$$\frac{P1}{P2} = \frac{a1}{a2} \qquad (2c)$$

(Hollard and Davison employ a slightly different and more useful form of the Matching Law equation than that originally proposed by Herrnstein, as in equation 1 above. Baum (1974) has demonstrated the superiority of the more recent formulation).

Baum and Rachlin (1969) have suggested that the manner in which these variables combine when more than one is manipulated is described by:

$$\frac{P1}{P2} = \frac{r1\ i1\ a1}{r2\ i2\ a2} \qquad (3)$$

It has been further shown by Catania (1966) and by Stubbs and Pliskoff (1969) that time allocation matches response allocation in concurrent VI schedules. The above relation therefore also applies to the ratio of the time spent responding to the two schedules, T1/T2.

Hollard and Davison (1971) extended the Matching Law to experiments in which responding on each of two keys was maintained by qualitatively different reinforcers. They used food versus ectostriatal brain stimulation, and their data conformed closely to the equation:

$$\frac{P1}{P2} = \frac{r1}{r2} \cdot \frac{q1}{q2} \qquad (4)$$

where q1 and q2 are measures of the value of the qualitatively different reinforcers. These authors were able to make accurate measures of the relative reinforcement magnitudes of food versus ectostriatal brain stimulation.

To test the applicability of equation 2a it is necessary to graph the logarithm of the response ratio, P1/P2, as a function of the logarithm of the reinforcement ratio r1/r2. A line fitted to data of this type has the equation:

$$\log (P1/P2) = a \log (r1/r2) + \log k \qquad (5)$$

where a, the slope, and log k, the intercept, are found empirically. Expressed in arithmetic terms, by exponentiating both sides, equation 5 becomes:

$$\frac{P1}{P2} = k \frac{(r1)^a}{(r2)} \qquad (6)$$

Baum (1974) in reviewing the published studies, claimed not to have found any study of simple concurrent schedules in which the data failed to conform to these equations.

The exponent a in equation 6 is of little interest here. The constant k is of great importance. The constant k in equations 5 and 6 corresponds to the ratio q1/q2 in equation 4, i.e. the ratio of the values of the two reinforcers. Substituting for k in equation 6 we have:

$$\frac{P1}{P2} = \frac{(q1)}{(q2)} \cdot \frac{(r1)^a}{(r2)} \qquad (7)$$

Implications for the measurement of sexual orientation

The above experiments within the framework of the Matching Law provide a useful paradigm for the calculation of the relative reinforcement magnitudes of qualitatively different stimuli. The process by which relative reinforcement magnitude is computed may be summarised:

1. Make the two stimuli being compared available for responding on two separate keys, each associated with a different Variable Interval schedule. Run the experiment until a stable relative response rate is attained.
2. Retain the VI schedule on one key and alter the value of the VI on the other key. Again, continue until stability.
3. Repeat for several new values of the altered VI schedule.
4. Plot the logarithm of the ratio of responses on the two keys, log P1/P2, as a function of the logarithm of the ratio of the number of reinforcements obtained on the two keys, log r1/r2.
5. Fit a line to the data points by the method of least squares.
6. Determine the equation of the line, to find the exponent a and the constant k as in equation 6. The constant k is the antilog of the intercept, and gives the relative reinforcement magnitude of the stimuli being compared.

This experimental paradigm is in principle applicable to the assessment of sexual orientation. The only further step is to substitute stimuli of a sexual nature as the stimuli whose relative reinforcement magnitudes are to be compared. Reinforcement would then be (for example) a few seconds exposure to slides or films with a defined sexual content which would depend on the

nature of the problem under consideration. The result would be expressed in the form 'for patient x the relative reinforcement magnitude of sexual stimuli involving (e.g.) children (same sex members, sadistic content, etc.) and a standard (e.g) heterosexual stimulus, is k.'

The problem of faking was mentioned above as a criticism of conventional sexual orientation measures. Faking is also a potential problem in key pressing experiments with sex offenders. There are two possible solutions. First, to retain key pressing as the operant, but to alter the contingencies so that the two classes of stimuli are available on only one key, for subtly different responses. For example stimuli in class A may be available on key B only for responses within a given range of interresponse times (IRTs). Stimuli in class C may be available for responses on the same key within a different class of IRTs. In effect, two operants are programmed on the same key. Relative response rates, P1/P2, within these IRT ranges may be treated in the same way as relative rates on separate keys. Second, subtle operants may be used so that the subject is unaware of which aspect of his behaviour is related to stimulus presentation. Operants may be defined as (e.g.) position in a room, detected by sensors in the floor, or position of the head, when seated, detected by photocells.

These are technical problems. It is suggested that the effort expended in their solution will be repaid by the advantages that will accrue from the addition of a highly sophisticated measure of sexual orientation to the range of currently available measures.

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7. Construct types in paedophiles and non sexual offenders

by Kevin Howells

Introduction

The small and rather tentative project I am going to describe arose out of clinical work with paedophile offenders at Atascadero State Hospital in California. Atascadero, at the time I worked there, housed a large number of Californian sex offenders. A substantial number of these offenders had repeated convictions for sexual offences against children.

One of the first problems encountered in any attempt to understand the aetiology of paedophilia is the question, why does the paedophile select the child as his sexual partner rather than an adult female? A reasonable but speculative hypothesis might be that the paedophile finds children more attractive than does average 'man in the street' who avoids sexual contact with children. Most of the experimental psychological work in the field of sexual deviance makes an implicit assumption of this type. Several studies (Quinsey et al 1975, Freund et al 1967, Freund et al 1972) have tried to assess whether the child molester or paedophile shows a larger physiological response of a sexual type to pictures of children than to pictures of adults. Such studies see the child victim as a *physical* stimulus to which the offender responds with *sexual* excitement. The paedophile is conceptualized as responding sexually to such stimuli as a 'young' bodybuild or to the absence of adult sexual characteristics such as pubic hair and developed breasts. This emphasis on the physical aspect of the sexual partner may be a consequence of the fact that many studies of sexual offenders form part of treatment programmes of an 'aversion' type, in which sexual responses to physical stimuli are seen as relatively easily measured and manipulated, (e.g. Quinsey et al 1975). Very little attention has been directed towards the *social behaviour* of the potential partner that might attract a sexual offender, though Freund et al (1972) have suggested that for some paedophiles, the child victim is a surrogate or a substitute for an adult female – that the adult female is the preferred sexual partner but that social difficulties may make an adult partner inaccessible.

Studies suggesting the importance of social interaction

Several sociological studies suggest that the social behaviour of the paedophile and of his victim may be important determinants of paedophilic offences. Mandel (1964) found that more than fifty per cent of sex offenders knew their victims and twelve per cent were related. Virkunnen (1975), in a review of evidence relating to the role of child victims in sexual offences, found that the majority of victims and offenders were not strangers to one another and that in many offences the victim actively precipitated the offence. Virkunnen concluded: 'Aggressive behaviour was not as a rule characteristic of these offenders . . . . they seemed to be in a pronounced manner, gentle, fond of children and benevolent. Obviously these characteristics contributed to the parents generally consenting to the childrens visits to persons of this kind' (Page 179). Pacht & Cowden (1974) surveyed 500 sex offenders and suggested that non-aggressive sex offenders were 'less capable of establishing satisfactory relationships leading to socially approved sexual behaviour with mature persons of the opposite sex. Perhaps because of their failures and frustrations in this area, they appeared to be striving to establish some type of relationship with socially inappropriate – i.e. immature or same sex victims. At the very least they seemed interested in evoking a positive response from their victim rather than simply using them as vehicles for immediate sexual gratification or as objects as aggressive impulses'. (Page 18).

The present study

The studies just cited might suggest that many sexual offenders experience difficulties in social behaviour that contribute to inappropriate sexual approach (e.g. that a person who has difficulty in talking to and interacting with adult women may be more likely to seek out children as sexual partners). Clinically, the tendency for sexual offenders to view adults and adult relationships in unusual ways is often noted. It is not always clear, however, whether the offender's perception of *all adults* is deviant or merely that of women. The purpose of the study to be described was to investigate the interpersonal perception of sexual offenders using a Repertory Grid technique (Bannister and Mair, 1968). It is assumed that *social behaviour* is related to and reflected by the person's *constructions* of other people, and that people experiencing social difficulties will reflect these difficulties in the nature of the constructs they use to describe other people. In order to investigate whether sexual offenders are unusual in their construction of adults in general or

merely in their construction of females, the construing of males and females was studied independently. It is assumed that different constructs fall within the range of convenience of each sex, i.e. that some constructs will only be used to discriminate between women and will not be used to discriminate between men, and vice versa.

Subjects

The sexual offender group consisted of 10 patients at Atascadero State Hospital. All 10 were classified as 'mentally disordered sex offenders'. All were diagnosed as 'sexual deviation – female paedophile'. No patient was psychotic.

The age range was 21–52 years with a mean of 28.3 years. The patients were all recruited from two wards at Atascadero. All patients were receiving group therapy in the hospital. All patients on the two wards who were sexual offenders against children formed the experimental group. The sex offenders had all spent a short time in prison prior to arriving at Atascadero. They had been institutionalised at the time of testing for periods ranging from 1½ to 17 months. It was felt that 'normal' people outside of an institution would not be appropriate controls for the sex offender group. It was decided that an appropriate control group ought to be institutionalised in a setting to that of sex offenders. The control group used consisted of a group of non-sexual offenders from the Californian Department of Corrections at the California Men's Colony. Most of the prisoners were convicted of acquisitive offences. The control subjects were selected from all prisoners who had been receiving group therapy in order to increase their similarity to the Atascadero sample. The prisoners were matched as closely as possible to the sex offender group for age and for number of grades completed at school. No prisoner control had been institutionalised for more than two years.

Method

The ten subjects in each group completed two forms of the Repertory Grid – a male and a female form. Each form of the grid took approximately two hours to complete. For each role description (see Table 1) the subject selected an actual person from his life. The female form for the sex offenders included victims as elements. Female children were used on the female form for the prisoners.

Constructs were elicited by asking the question 'In what important way are two of these people alike and different from the third'. Constructs were elicited using random triads from the twenty elements. A maximum of twenty constructs was elicited on each grid, or as many as the subject was able to provide. All elements were rank ordered for each construct. Any construct that could not logically be rank ordered (e.g. negro/white) was omitted. The subsequent grid of numbers was submitted to Slater's Ingrid '72 principal component analysis (Slater 1972). Each construct was categorized according to Landfield's Coding System. (Landfield 1971). The coding categories described by Landfield are shown in Table 2.

The author and an independent rater coded each construct, having studied Landfield's system. In Landfield's system each pole of the construct is independently rated and can be included in more than one category. For each Grid the total number of placements in each category was calculated and estimated as a percentage of the total number of category placements for that Grid. Percentage agreements in placements were calculated between the author and the second rater and were considered to be satisfactory. In a two-way analysis of variance with repeated measures on one factor the extent of use of each rating category on male and female grids for sexual offenders and controls was compared. In all calculations the ratings of the second observer only were used, who had no information as to which group each grid belonged.

Results

An individual paedophile's grid

As Repertory Grid technique is essentially a way of looking at an *individual's* construct system, I would like to show you an individual's results in order to demonstrate the usefulness of a grid in understanding a specific person and in order to give you some idea of what is being measured. These results are from the female grid of the most paedophilic member of the experimental group, a middle-aged man with a very long series of sexual involvements with children. In many ways, this person seemed to prefer children to adults. Table 3 shows the actual constructs provided when the subject was asked to make discriminations between females.

Table 1: Basic element list

Male Form

1. Father
2. Closest male friend
3. Another male friend
4. A male at work
5. A male teacher at school
6. A brother near my own age (or other male relative)
7. A former male friend
8. A male member of hospital/prison Staff
9. An attractive male child known to me
10. An attractive male child known to me
11. An attractive male child known to me
12. An older male relative (excluding father)
13. A male friend at school
14. A male with an attractive personality
15. A successful man I know
16. A younger brother (or younger male relative)
17. A man I really dislike
18. An old man
19. A man I have known for some time
20. A man who has been important to me in my life

Female Form

1. Mother
2. Wife (or girlfriend)
3. A female friend
4. A female at work
5. A female teacher at school
6. A sister near my age (or younger female relative)
7. A previous girlfriend (or wife)
8. A female member of hospital/prison staff
9. The first female child I molested (for prisoners: an attractive child).
10. The most recent female child I molested (for prisoners: an attrative child).
11. A female child attractive to me whom I did not molest
12. An older female relative (excluding mother)
13. A girlfriend at school
14. A woman I have been attracted to
15. A woman to whom I have been sexually attracted
16. A younger sister (or younger female relative)
17. A woman I really dislike
18. An old woman I know
19. A woman I have known for some time
20. A woman who has been important to me in my life

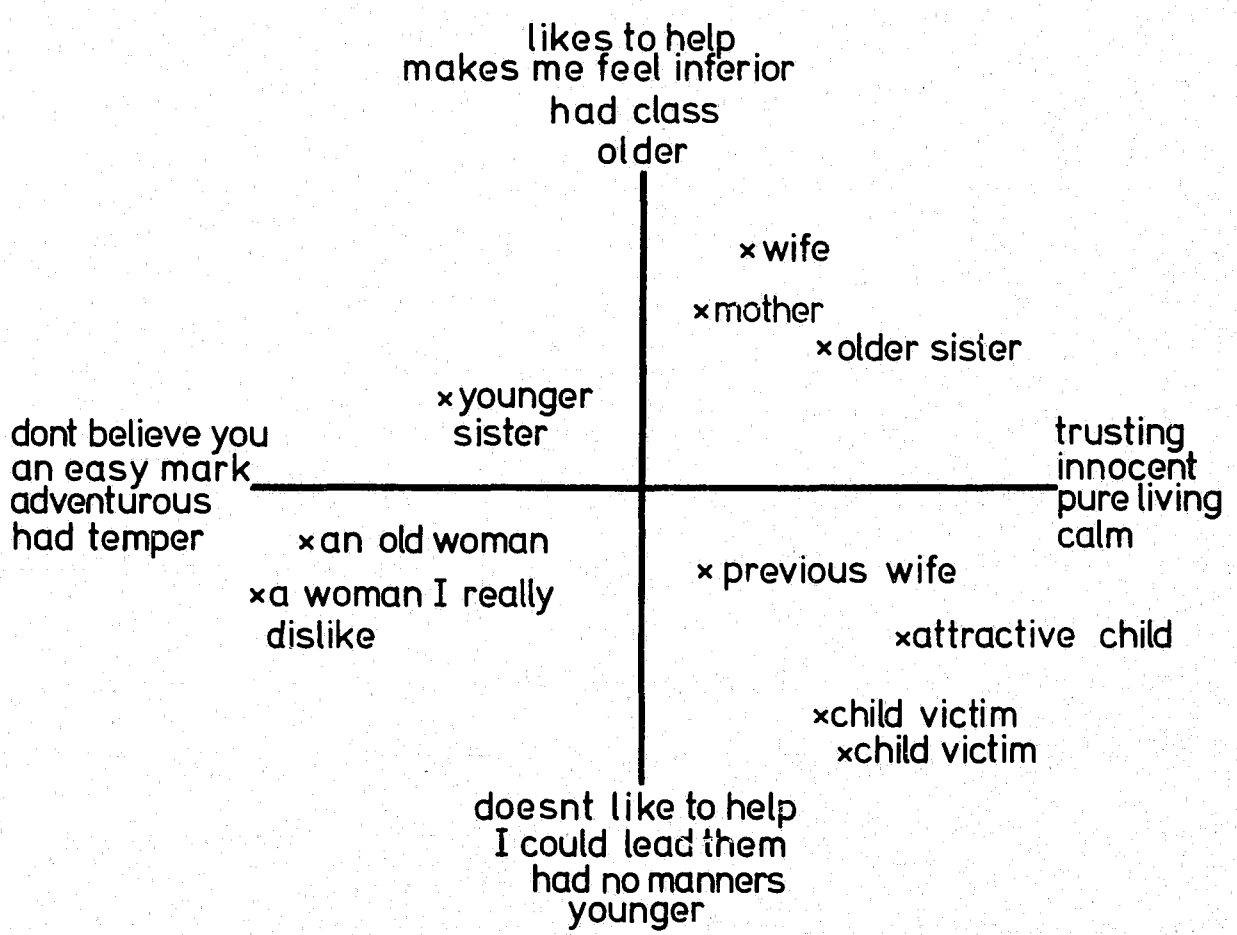
Table 2: Rating categories (form Landfield 1971)

1. Social Interaction
2. Forcefulness
3. Organization
4. Self-sufficiency
5. Status
6. Factual description
7. Intellective
8. Self-reference
9. Imagination
10. Alternatives
11. Sexual
12. Morality
13. External appearance
14. Emotional arousal
15. High Egoism
16. Tenderness
17. Time Orientation
18. Involvement
19. Extreme Qualifiers
20. Humour

Table 3: An individual paedophile's constructs

1. Younger	Older
2. Good Body	Not so nice
3. I had respect for	I would flirt with
4. Mean dispositions	Full of peace
5. Innocent	An easy mark sexually
6. Pure-living type	Adventurous
7. Easy to catch sexually	More difficult to
8. Bitch to get along with	Not difficult
9. Trusting	They don't believe you
10. Friendly	Unfriendly
11. Not troublesome	Had hate
12. Had class	Had no manners
13. Interesting to me	Not
14. I could dictate to	Didn't need me
15. Makes me feel inferior	I could lead them
16. I wanted for a plaything	Did not
17. Had a temper	Calm
18. Likes to help people	Doesn't like to help
19. Kind	Selfish
20. Sexually attractive	Unattractive

Figure 1: Plot of Elements on Components



The first problem is to categorize these constructs into types. Inspection of these constructs might suggest that several types occur – sexual, friendliness and innocence, for example. Using Landfield's system it is possible to categorize constructs in such a way that the kinds of constructs used by paedophiles and controls can be compared. The second aspect that can be studied is how different people in his life are seen in terms of important constructs. Figure 1 shows how significant females are plotted on the first two components of the grid. (As described by Slater 1972).

It can be seen that the two important dimensions described by the first two components are 'innocence' and 'superiority-inferiority'. The victims of his offences occupy a distinct position within the system, being seen as innocent, inferior and leadable. It might be concluded that this person has ways of construing females in general that predispose him to a social attraction to female children.

Group Results

The only structural measure from the Ingrid analysis I shall comment on here is the amount of variation accounted for by the first principal component. This measure is frequently taken as an index of cognitive simplicity/complexity. In general a large percentage variation score could be taken as indicating that the person is using only one basic dimension in making judgements about people. A low percentage variation score might indicate the use of several independent dimensions of judgement. No significant difference was found in the percentage variation score between sex offenders and controls or between male and female grids.

Initial inspection of the classification of constructs indicated that Landfield's categories of time orientation, humour, imagination, multiple descriptions, and extreme qualifiers were virtually unused on all the grids that these categories were consequently eliminated from the analysis. The results of the analysis of variance for each rating category are shown in Table 4.

The group effect (that is the sex offender/control effect) was significant at the .05 level only for Landfield's category of 'egoism'. The controls are less likely than the sex offenders to use the egoism category. Two categories showed significant group effects at the .1 level (i.e. 'involvement' and 'self-sufficiency'). The sex effects (i.e. the difference between male and female grids) provide the most statistically significant results. Both sex offenders and controls used 'organisation' and 'status' constructs more to describe males than females ($p<.05$), fewer 'sexual' constructs ($p<.01$) and fewer 'external appearance' constructs ($p<.01$) and more 'non-scorable' constructs. There was no statistically significant interaction.

The psychological significance of the greater use of 'egoism' constructs by the sex offenders is more evident if the actual constructs so categorized are inspected

Constructs used by the sex offenders in this way included 'demanding', 'tell me what to do', 'selfish', 'tell me how to help others', 'stuck-up', 'domineering' (several times), 'demands things of you', 'want you to accept what they say', 'want to dominate you', 'self-centred', 'bragging', 'smart alec', 'tell me what to do', 'give me what I want', 'don't go along with what I want', 'bold types', 'overbearing'. It is reasonable to conclude that sex offenders are more likely to construe adults in terms of whether or not these adults impose on them, or whether they can be imposed on. It might be hypothesized that the victim elements would tend to be seen as falling at the non-domineering pole of these constructs, i.e. that victims would be seen as easily dominated rather than as dominating. In order to test this hypothesis the rankings of the two victim elements on all 'egoism' constructs was investigated. The mean ranking (out of 20) for the victim elements was 13.98. (When the domineering pole of the construct is given a score of 1 and the non-domineering

Table 4: Differences between groups

Measure	*Male/Female*	*Paedophile/Control*
Social Interaction	NS	NS
Forcefulness	NS	NS
Organization	$p<.05$ M>F	NS
Self-sufficiency	NS	$p<.1$ C>P
Status	$p<.05$ M>F	NS
Factual description	NS	NS
Intellective	NS	NS
Self-reference	NS	NS
Closed to alternatives	NS	NS
Sexual	$p<.01$ F>M	NS
Morality	NS	NS
External appearance	$p<.01$ F>M	NS
Emotional arousal	NS	NS
Egoism	NS	$p<.05$ P>C
Tenderness	NS	NS
Involvement	NS	$p<.1$ C>P
Not scorable	$p<.05$ M>F	NS

pole of the construct a score of 20). This would indeed seem to suggest that victims tend to be seen at the non-domineering pole of the constructs. The number of victims evaluated as being at the non-domineering pole was significantly higher than would be expected by chance (chi-square = 9.8, $p<.01$).

The effect for male versus female grids was significant for 'organisation' constructs. The constructs included in this category are broad in scope and difficult to summarize in any simple way. Constructs rated as organisational included: 'lives for today', 'settled', 'meticulous in dress', 'regimented', 'impulsive', and 'sloppy in their emotions'. Landfield describes the criterion for inclusion in this category thus: 'the statement should indicate that a person either has or lacks the general trait of structuring, organising, and planning ability, or can be described as organised, structured, disorganised or unstructured'. It would appear that, for this sample of males, females are less likely to be seen in terms of planning and organisation than are males. The male/female effect was also significant for the 'status' category. This reflects a greater use of constructs relating to success and achievement in the areas of job, education and finance.

The 'sexual' constructs included the following: 'sexually attractive', 'they enjoy sex', 'have sexual hang-ups', 'wanted them as a sexual plaything', 'man-crazy', and 'liked to flirt'. 'External appearance' constructs included: 'heavyset', 'good looking', 'plain', 'pretty', 'small built', 'dark complexion', 'thin' and 'fat'. It was possible to compare the specific content of external appearance constructs for the paedophiles and for the prisoners. The only apparent difference between the groups was in the prevalence of physical constructs relating to bigness and smallness. Eight out of the 30 physical appearance constructs elicited from the paedophile group involved some concept of the big versus small body. Such constructs included: 'heavyset versus slender', 'skinny versus fat', 'petite versus big woman', 'small body versus big built', and 'small built versus heavyset'. Only 1 out of the 17 appearance constructs in the prisoner group was of this type. This difference in proportion, however, is not statistically significant (chi-square = 1.834).

Six of the 10 patients in the paedophile group included the constructs 'sexually attractive–unattractive' and 'small–big build' in the female grid. For these it is possible to look at the correlation between smallness and attractiveness. The correlations are as follows: +.820, +.450, +.105, -.705, +.189, +.337. There seems to be a general tendency for smallness to show a correlation with attractiveness. There is one correlation in the opposite direction. Interestingly this was the only person with victims seen as 'big', suggesting his orientation may have been towards preferring adult sexual characteristics.

Discussion

As a summary of these results, let us return to the questions which the study was meant to answer. How are the person perceptions of paedophiles different? Are these differences specific to females? The construct system of paedophiles are not structurally different from those of the controls in terms of the first principal component. There are, however, some differences in construct content.

1. Paedophiles are more likely to view both men and women in terms of dominance and submission. It is useful to ask here what kinds of social difficulty might predispose the person to view others in terms of dominance/submission, and to find other people domineering and overbearing. One such difficulty might be an inability to control the social environment. A person might find that others initiate and control social interaction because he is lacking in the kinds of social skills he needs in order to stand up for himself, take decisions, make suggestions or disagree with another person. Such a person might find the company of children rewarding in that it might provide him with a situation in which he is relatively competent, in control, dominant, an initiator rather than a follower. The current results do suggest that paedophiles see their victims as more passive and less dominant than other people on the grid.

The suggestion that some sex offenders have problems in the area of social skills is consistent with the clinical impression of many working in the Special Hospitals. David Crawford's paper on social skills treatment for sex offenders is clearly relevant to the problem of remedying such deficiencies.

2. The paedophile group tends to view women more in terms of physical appearance and sexual constructs than men and less in terms of organising and planning skills and of status. In this, however, they are not unlike the prisoner group and probably not unlike many males in our society. It may be that some sex offenders, like some 'ordinary men' outside of institutions, have difficulties in viewing females in terms other than sexual and physical. If such tendencies are to

be considered in need of 'treatment', perhaps therapy ought to promote identification and empathy with women so that women are seen less as physical or sexual objects and more as persons in their own right.

3. The current results show an interesting tendency for the paedophile group to be preoccupied with a small bodybuild and for sexual attractiveness to be related to a small build. These results are no more than suggestive but are clearly worthy of follow-up in some way. Future studies might look more specifically at physical constructs elicited when patients are asked to judge different body types, for example.

It ought to be re-emphasized here that the sample of paedophiles studied were non-aggressive. Pacht and Cowden's study suggest that non-aggressive offenders may be different from aggressive sexual offenders in many respects. The majority of sexual offenders confined to the Special Hospitals can probably be considered as violent sexual offenders, and it is unlikely that they bear much resemblance to the Atascadero sample. The type of grid analysis used for the American patients might fruitfully be applied, however, to Special Hospitals patients. We know very little about how aggressive offenders see women or the victims of their assaults. Why a particular person is selected by a patient as a 'victim' for an agressive attack could be looked on in terms of what constructs distinguish this person from others in the patient's life (see Howells 1976). Similarly do aggressive persons have characteristic ways of viewing themselves and other people that might predispose them to a violent response? These are evidently important questions for future research.

The present study does suggest that sexual attraction occurs in a complex social network in which the potential 'victim' may have multiple meanings for the offender, not all of which are purely physical.

Acknowledgements

This project would not have been possible without the help of Dr Bill Barkley of the California Men's Colony and Dr Richard Laws of Atascadero State Hospital. Thanks are also due to Dr Patrick Slater for the use of the INGRID '72 computer programme.

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8. Sex chromosome abnormalities in Special Hospital patients

by W. H. Price

This paper is concerned with male patients at the special hospitals who have additional sex chromosomes. Some have an extra X, others have an extra Y and a few have both.

Estimates of the frequency of sex chromosome abnormalities in the general population are based on surveys of consecutive male births in Europe and North America.[1] Out of a total of 28,000 babies karyotyped, 30 had an extra X chromosome a frequency of one per thousand, and 26 had an extra Y, an incidence of 0.9 per thousand.

After the age of puberty, males with extra X chromosomes may present because of infertility or an abnormality of sexual development. They have small atrophic testes and are azoospermic. Some also have gynaecomastia, a female distribution of pubic hair, little or no facial or body hair and eunuchoid proportions. This condition was described by Klinefelter and his colleagues, who also noted that a proportion were mentally subnormal. A second X chromosome shows up histologically as a densely staining concentration of chromatin under the nuclear membrane, a normal appearance in female tissues but only seen in males when there is an additional X chromosome. It is convenient to refer to these as chromatin positive males. More than one chromatin body indicates more than one extra X chromosome. Buccal mucosal cells are very suitable for this examination and are simply obtained by scraping the inside of the mouth with a spatula.

Although the average height of men with extra Y chromosomes is greater than normal, individually they have no distinguishing physical characteristics. If a fluorescent stain is used the extra Y chromosome can be seen in buccal mucosal cells.

By the simple expedient of nuclear sexing, it has been established that in ordinary mental subnormality Hospitals in Europe and America, the prevalance of chromatin positive males varies between 4 and 12 per thousand.[2] Casey and his colleagues at two of the English special hospitals, found 21 chromatin positive males out of 942 examined – a frequency of 22 per thousand.[3] When they analysed the chromosomes of the chromatin positive males, they found that 7 of the 21 had an extra Y chromosome as well as an extra X, that is, an XXYY sex chromosome complement. At that time, the extra Y could not be detected by the nuclear sexing technique, so to find males who had an extra Y chromosome without an extra X, Jacobs and her colleagues analysed the chromosomes of all male patients at the Scottish special hospital at Carstairs. As is now well known, 3% were found to have an XYY sex chromosome constitution.[4] Shortly afterwards a similar proportion was found in a survey of English special hospitals.[5]

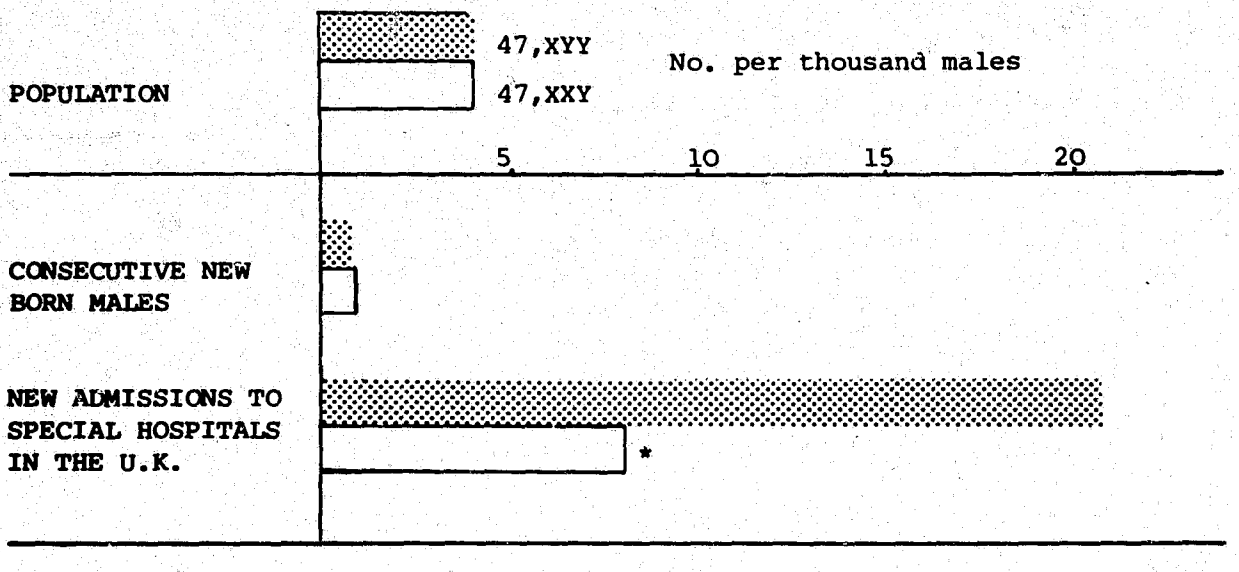
The XYY males at Carstairs hospital were considered to have personality disorders and were found, by comparison with a control group, to have committed offences from a younger age but their crimes were more likely to be aimed against property than against the person. They had almost all previously been patients at other psychiatric hospitals. By comparison with the controls they were *no* more likely to come from broken homes, problem families or neighbourhoods noted for delinquency.[6] When Casey and his colleagues examined the personal records of XYY males and XY controls at the English special hospitals, their findings were very similar.[7]

The XYY males at Carstairs had been detained for periods ranging from four to seventeen years. Any XYY male detained for a shorter time could be missed in a cross-sectional study so in order to be certain of obtaining a representative sample of males with this chromosome anomaly at the Special Hospitals, patients are karyotyped on admission. The survey which includes the four special hospitals in the United Kingdom, has been in progress since January 1972 and coincides, in the English special hospitals, with the setting up of the Register of case records described by Mrs Parker. The procedural details of the karyotyping survey are published elsewhere.[8] We have recently been able to carry out a preliminary analysis of the data up to the end of 1974. A variety of chromosome abnormalities has been found but the XYY patient is the only one identified in sufficient numbers to justify a more detailed clinical analysis at this point in time.

Incidence

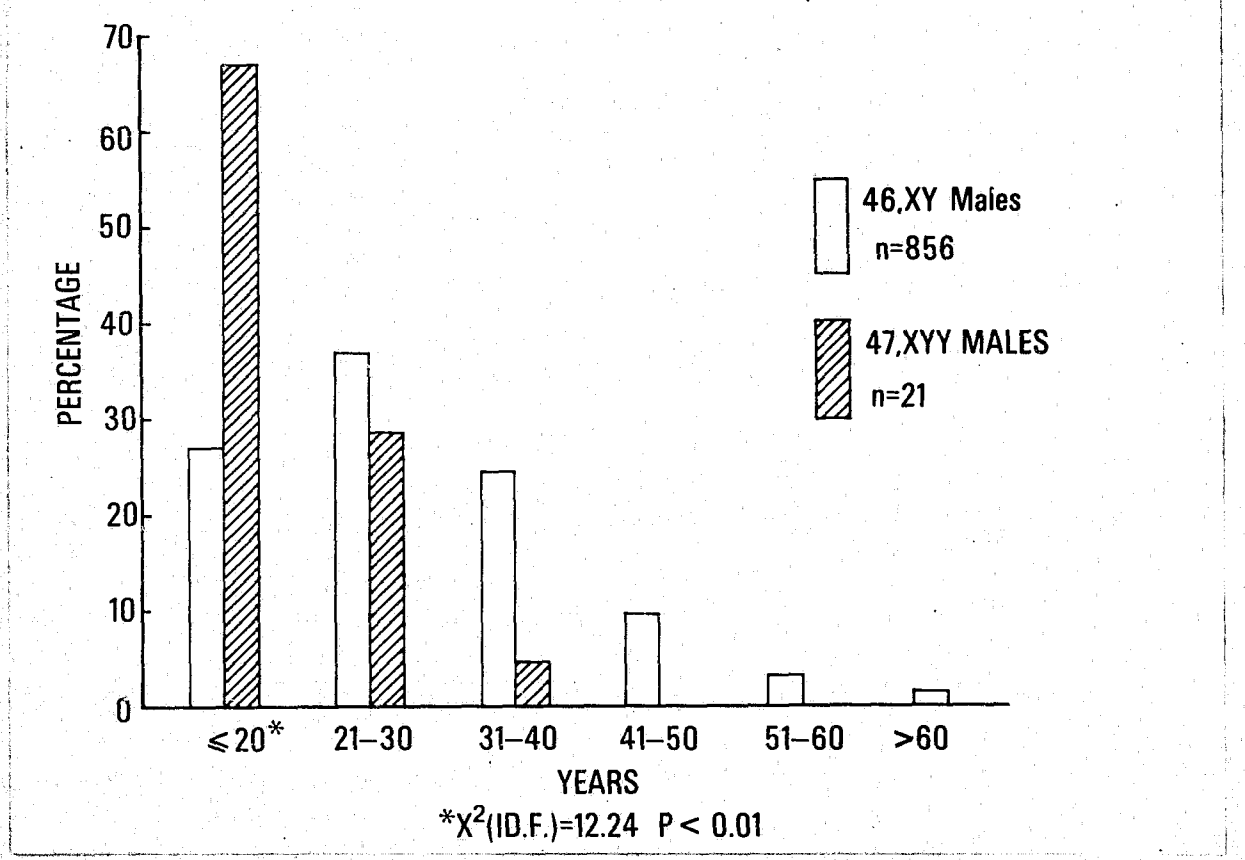
Of 885 men successfully karyotyped, 29 were found to have an abnormality of the sex chromosomes (Fig. 1) and 21 of these had a 47, XYY karyotype. The others had extra X chromosomes and in two it was additional to an extra Y.

Figure 1: Incidence of sex chromosome abnormalities in the English Special Hospital, 1972–74



* Includes 2 with a 48,XXYY karyotype

Figure 2: Age of XYY and XY males



Age of XYY males

The XYY males were concentrated in the younger age group (Fig. 2). Two-thirds were 20 years or less which is significantly greater than the proportion of XY males of this age. The incidence of XYY males rapidly declines in older age groups and over 30 years only one man with this

chromosome abnormality was admitted to a special hospital in the United Kingdom during the three year period.

Height and weight

The XYY males were distinguished by their greater average height and weight and Figures 3 and 4 show the difference in distribution of these two measurements in the 47,XYY males compared with 46,XY males. Almost all men over the height of 190 cms. (6ft.4in.) have two Y chromosomes.

Figure 3: Height of XYY and XY males

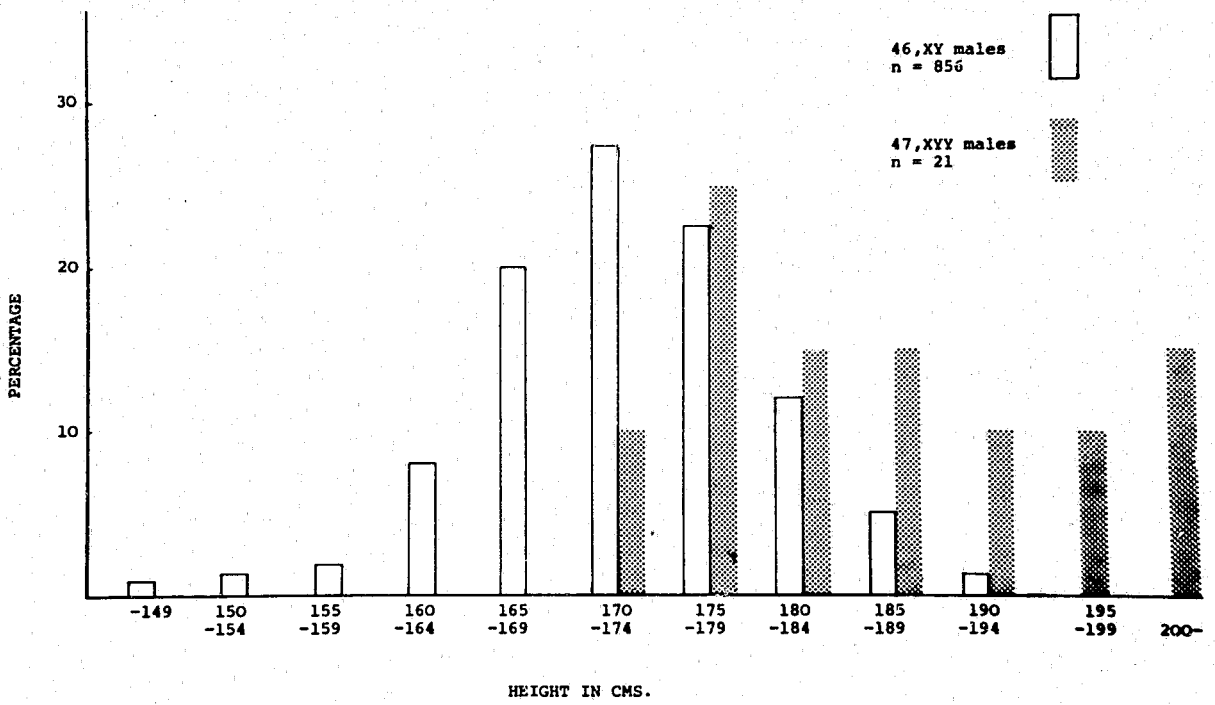


Figure 4: Weight of XYY and XY males

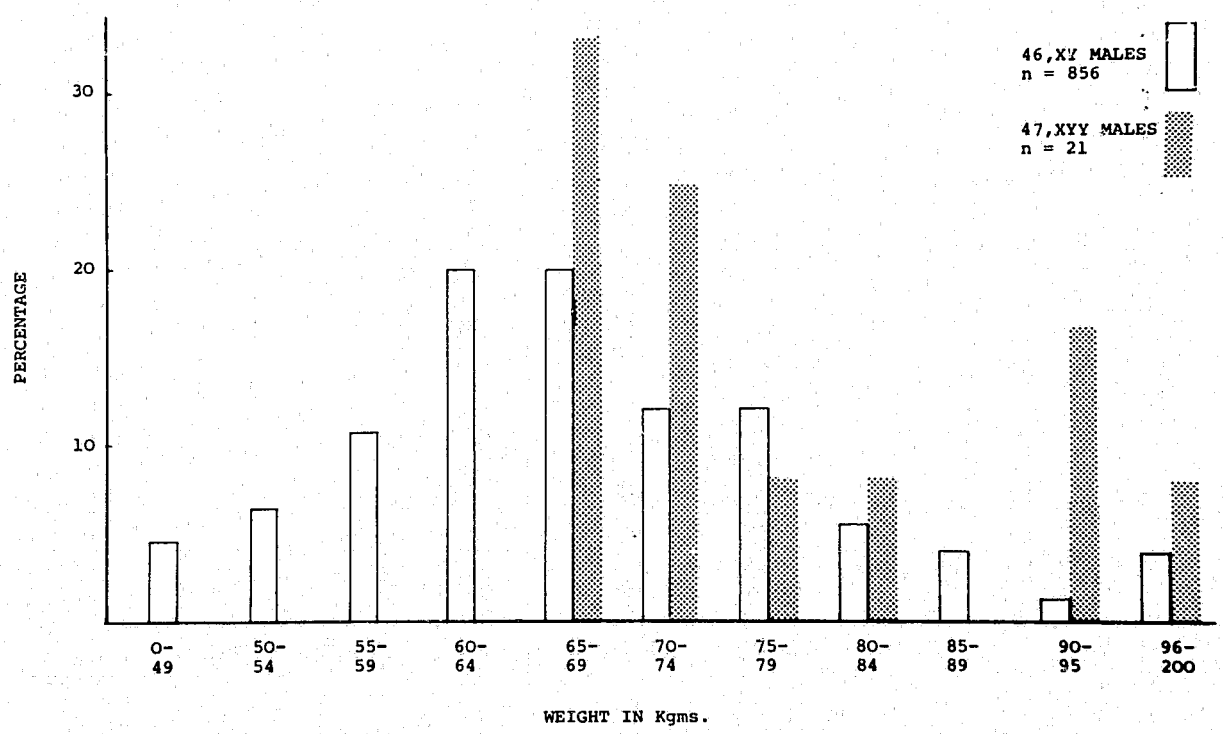


Figure 5: Mental Health Act Classification of XYY and XY males

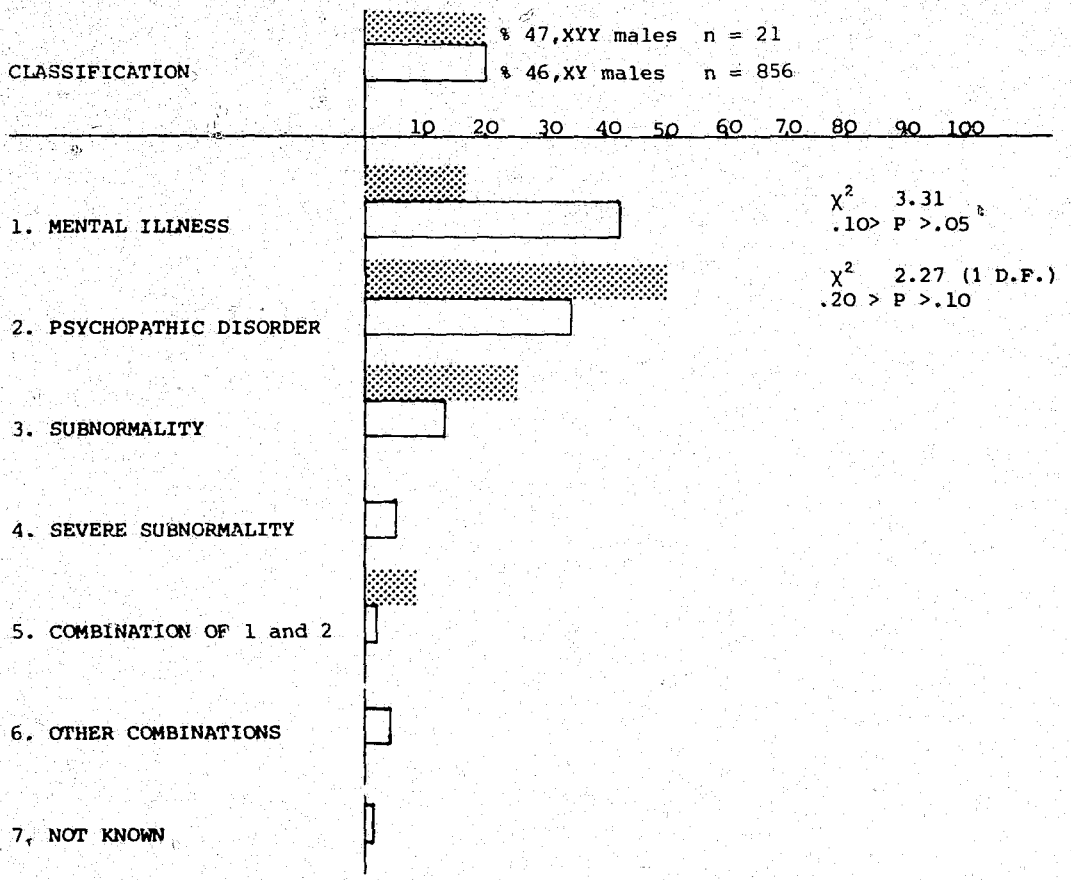
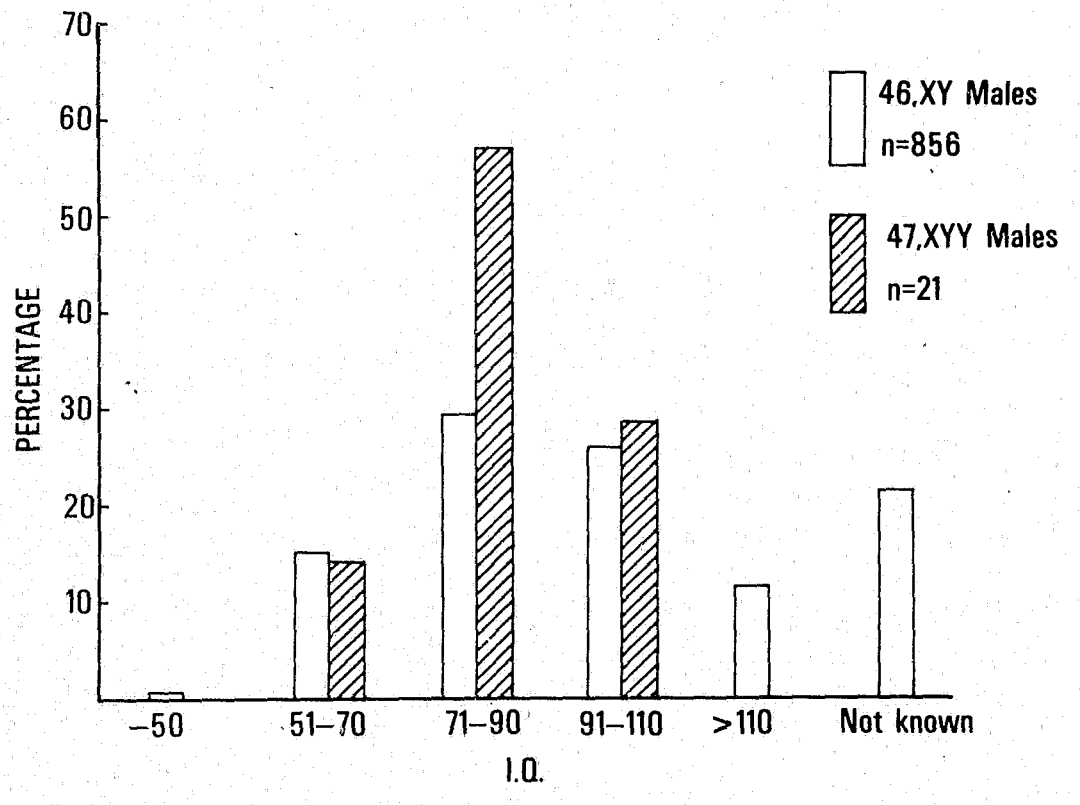


Figure 6: I.Q. of XYY males and XY males



Diagnosis

The Mental Health Act Classification of the patients on admission to the hospitals (Fig. 5) was the same for XYY males as for XY males but when reclassified after admission, but before the karyotype was known, only one XYY patient was diagnosed as 'mentally ill' which was a significantly lower proportion than amongst the XY males. The data on measurement of intelligence is incomplete (Fig. 6). There is a trend towards the subnormal ranges but a high proportion are rated of normal intelligence.

Family and educational background

The home background of the XYY males does not differ significantly from that of XY males. One has a professional father and the majority are sons of skilled workers (Fig. 7); they were no more likely to come from broken homes or to have lost a parent at an early age (Figs. 8 and 9). Their educational attainments were also the same (Figs. 10 and 11).

Previous institutional care

Figures 12 and 13 show that there is no marked difference between the institutional experience of XYY males and XY males before the age of 16 years, but by 20 years, more than 75% of XYY males had been admitted to National Health Service psychiatric hospitals compared with fewer than 45% of XY males (Fig. 14).

Figure 7: Social class of fathers of XYY and XY males

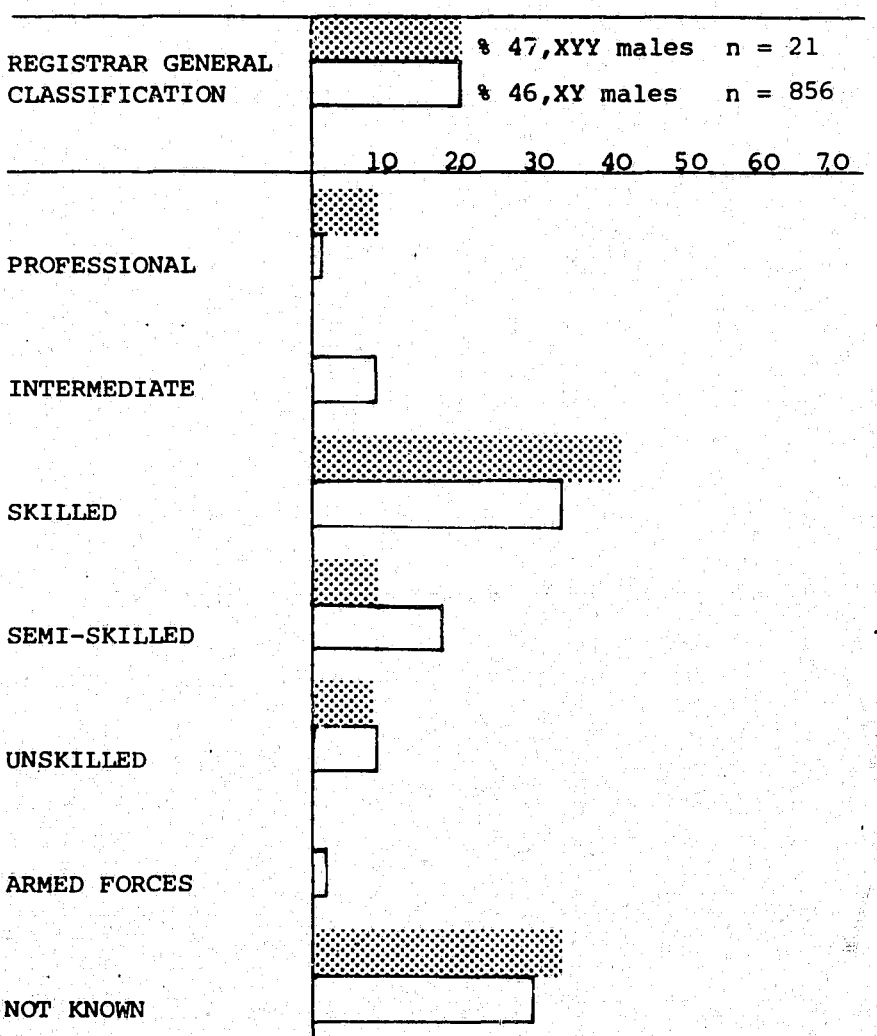


Figure 8: Early parental care of XYY and XY males

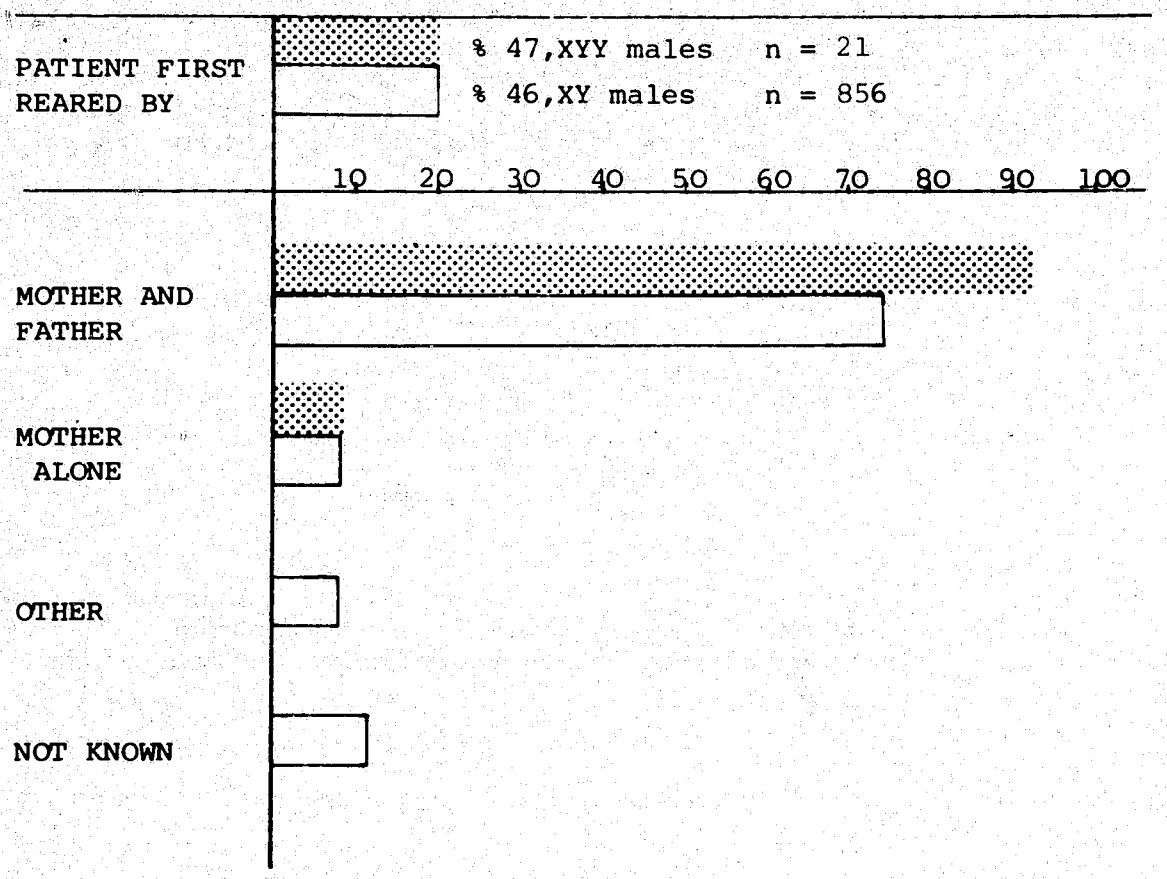


Figure 9: Age at first change in rearing agent before XYY and XY patients attained age of 16 years

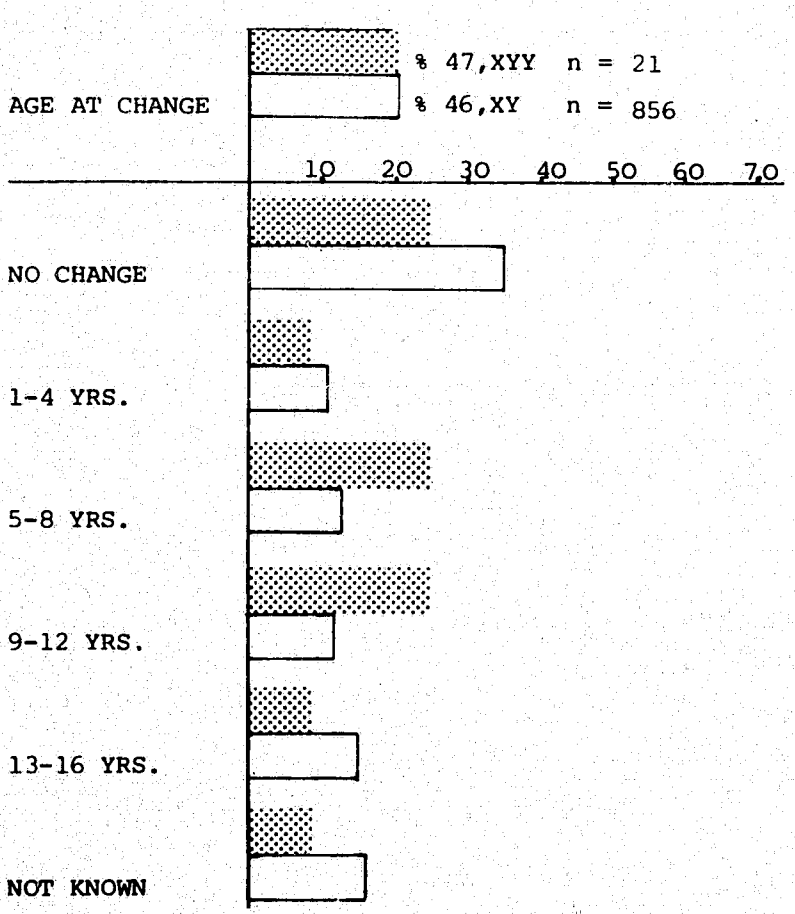


Figure 10: School last attended by XYY and XY males

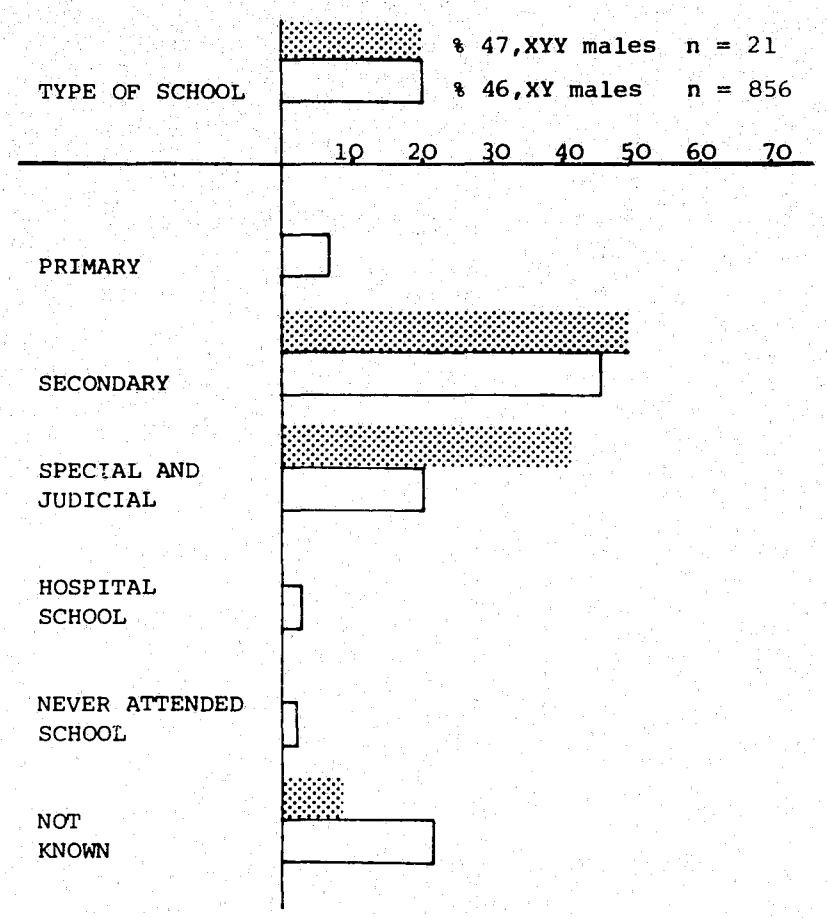


Figure 11: Academic qualifications of XYY and XY males

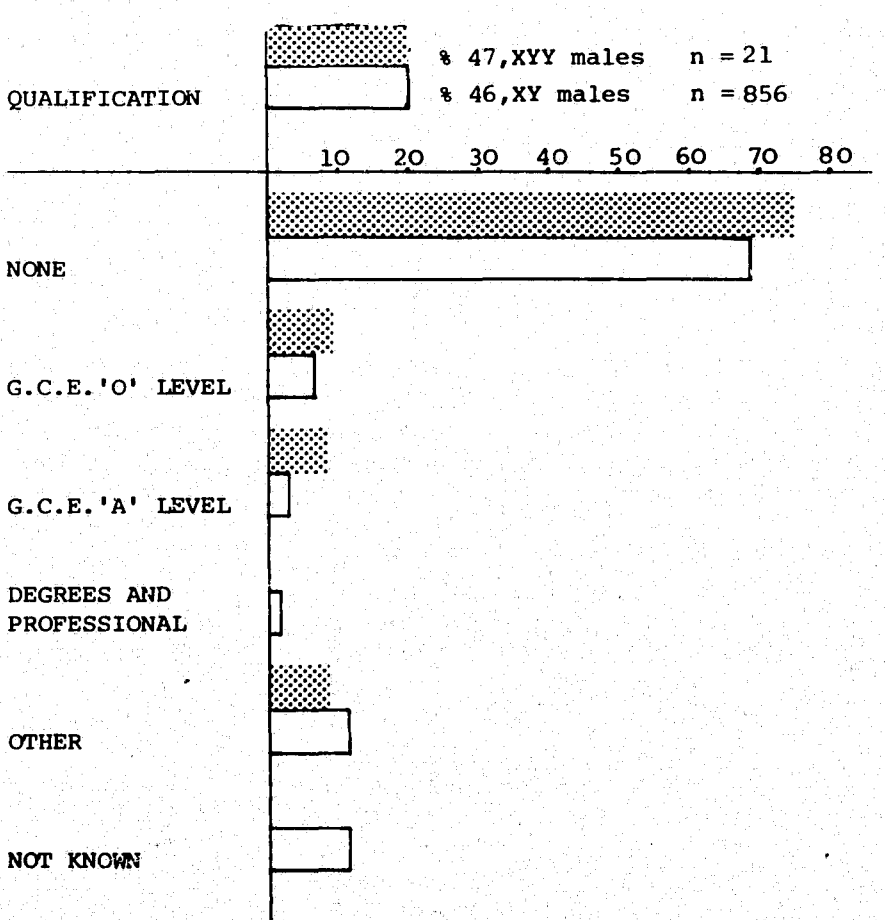
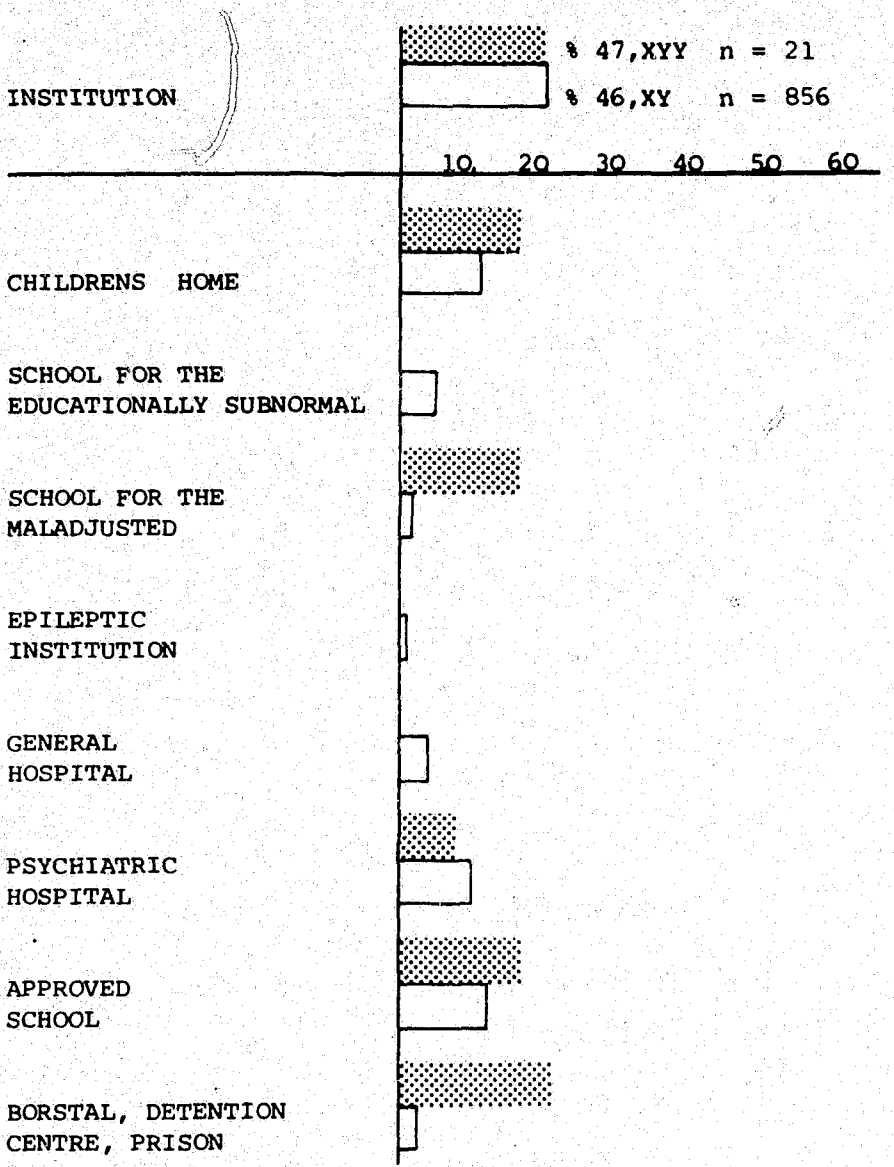


Figure 12: Previous institutional experience of XYY and XY males of more than 1 month's duration, before age 16 years



Criminal records

The criminal record of the 47,XYY patients is compared with 46,XY males in the Table and Figure 15. The number of patients with criminal records, the number of court appearances corrected for years at risk and the number of prison sentences per man are almost identical but offences against property exceed the number of offences against persons committed by XYY males, whereas the reverse is true for the XY males. These differences do not reach a level of statistical significance but it is clear that the XYY males do not commit offences that are any more violent or dangerous than those committed by XY males. The difference in the number of patients with juvenile criminal records (66.6% of XYY males and 41.0% of XY males) suggest a greater propensity to crime at a younger age in XYY males but the difference is not at a significant level. The proportion taking non-therapeutic drugs was the same for XYY and XY males but the XYY males did not admit to using either amphetamine or heroin (Fig. 16).

Physical features

On clinical examination the XYY males were indistinguishable from the normal males. As already mentioned, the average height of the group is greater than normal. Their anthropometric measurements were in proportion to their height and the lean body mass estimated from total body

Figure 13: Number of previous institutional admissions of XYY and XY males, of more than 1 months duration, before age 16 years

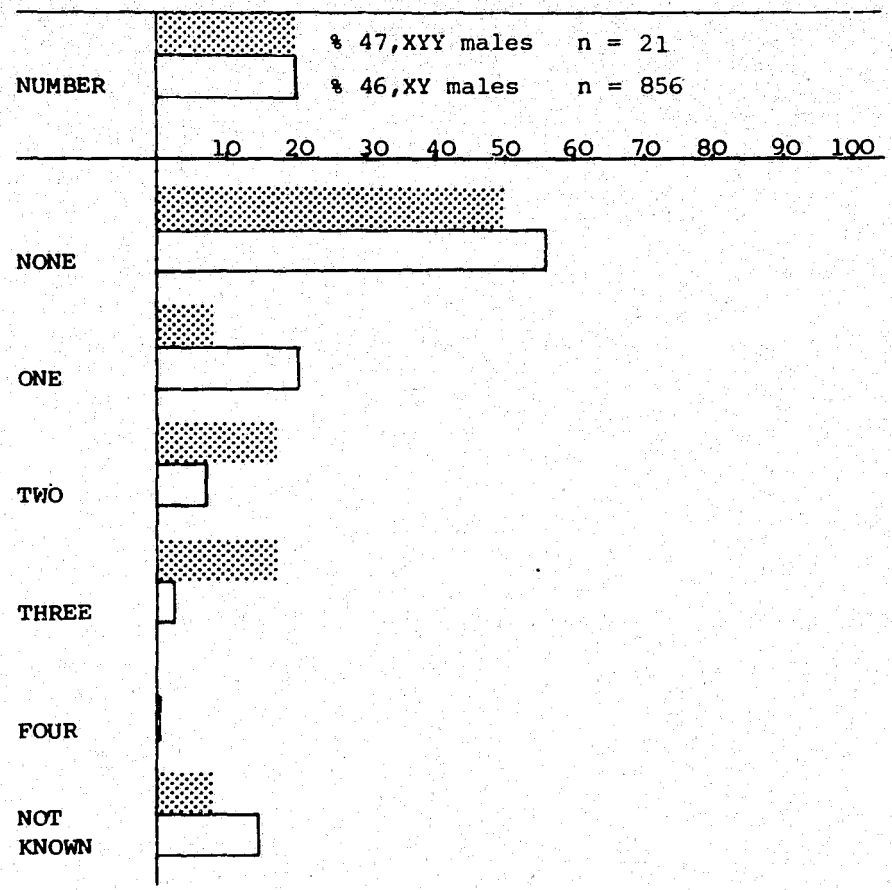


Figure 14: Age at first previous admission of XYY and XY males to a psychiatric hospital

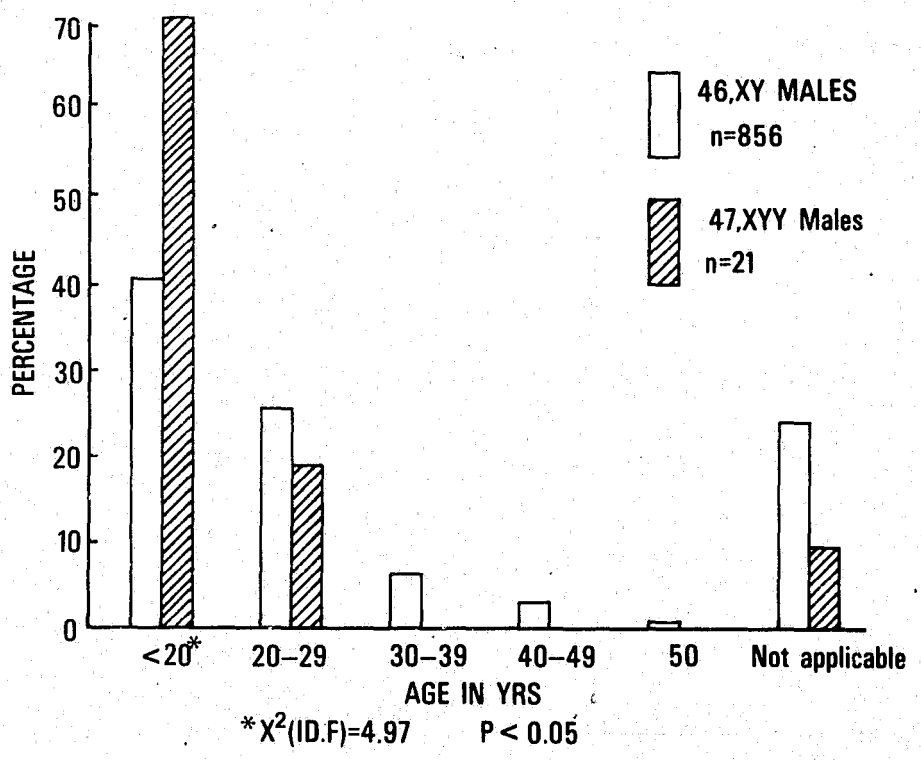


Figure 15: Type of offence committed by XYY and XY males leading to admission

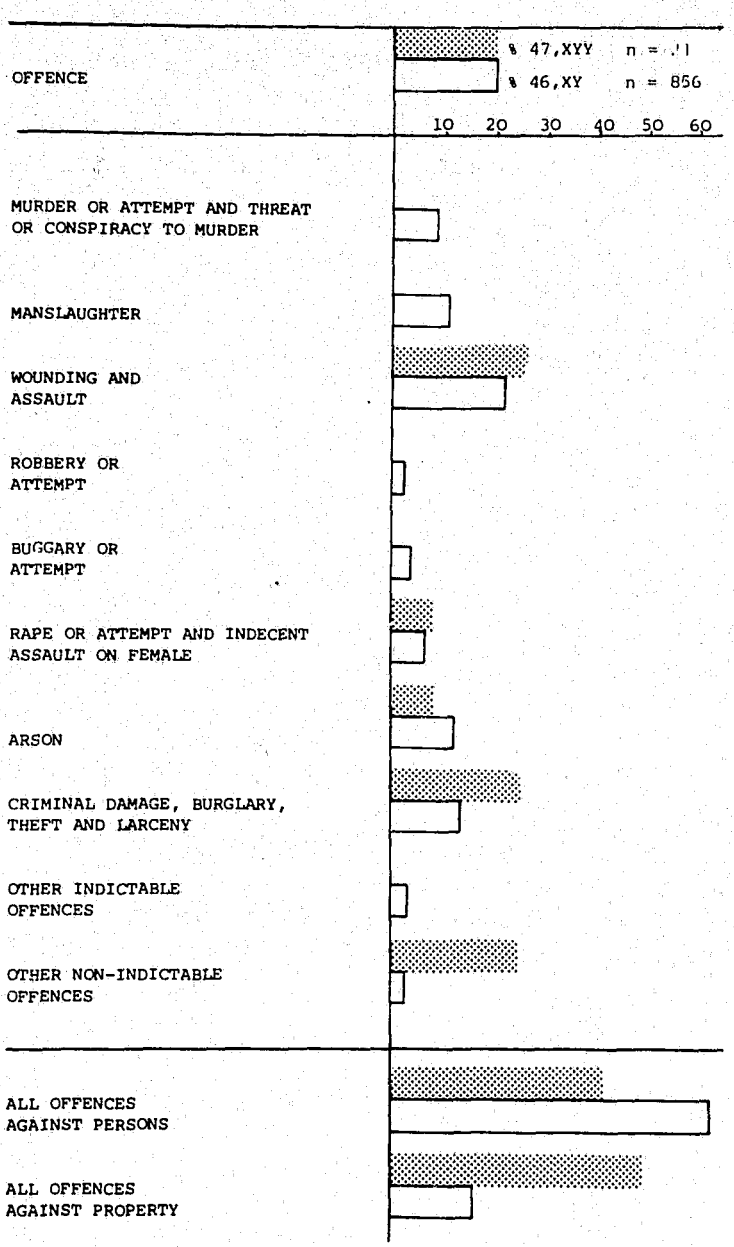
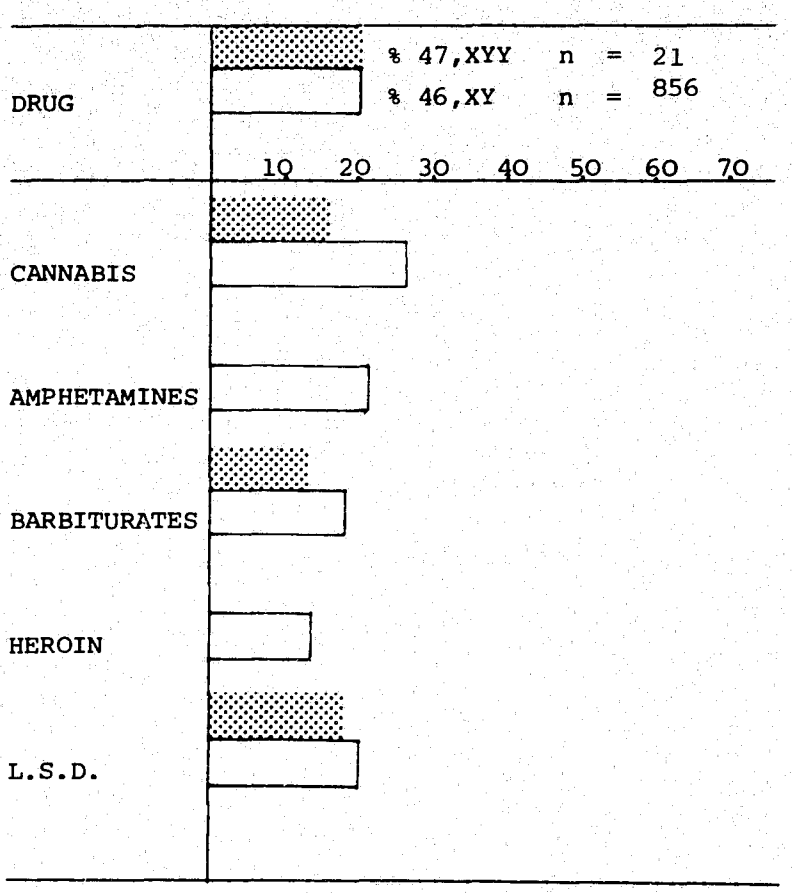


Table: Criminal record of XYY and XY males

	46,XY males	*47,XYY males*
Number of patients with criminal record	600 (74%)	15 (75%)
Number with juvenile criminal record	359 (41.7%)	13 (66.6%)
Total number of court appearances	3,390	68
Number of court appearances per man year over 8 years of age	0.24	0.25
Number of patients with past prison sentences	240 (28%)	5 (25%)
Number of prison sentences	468 (1.95/man)	10 (2/man)

Figure 16: Non-therapeutic drug consumption of XYY and XY males



potassium was not significantly different from estimates in a sample of XY males from the same hospital, matched as closely as possible for height.[9]

There was no evidence of endocrine disorder. The testes were of normal size and testosterone levels were within normal limits. Other hormone levels will be reported later.

Physiological studies showed that they had slower resting heart rates, even after correction for age and stature. In the electrocardiogram the ventricular depolarization was significantly slower and there were significant differences in the pattern of repolarization.[10] Conduction velocities in the median and the ulnar nerves were significantly slower and the distal latency, from a point close to the wrist to the stimulated muscle, was prolonged.[11]

Discussion

The incidence of males with a 47,XYY character at the four special hospitals in the United Kingdom during the three years 1972 to 1974, was twenty-five times greater than expected. This figure agrees very closely with the high prevalance found in the earlier cross-sectional studies.

Although the risk of being admitted to a special hospital is, therefore, so very much greater for an XYY male, it is still of a very low order. In each of the three years there were approximately twenty million males in the United Kingdom in the age group of men admitted to these hospitals. There were, therefore, an estimated 20,000 males with an XYY sex chromosome complement and only 7 of these, on average, were admitted each year to the special hospitals. In the 13 to 20 year age group, the risk is slightly greater since, of an estimated population of 3,000 XYY males in this age group, five were admitted to the special hospitals in each of the three years. Chromosome surveys at most other psychiatric hospitals,[12] prisons, detention centres, borstals and approved schools[13] in Scotland have not resulted in the detection of XYY males in numbers greatly in excess of the expected, so that the incidence figures for XYY males at the special hospitals, is the best index we have at present of an association between the extra Y anomaly and serious behaviour disorder.

In view of the very high frequency with which XYY males have previously been admitted to other psychiatric hospitals in the United Kingdom, it may be worth considering that the

increased incidence at the special hospital reflects problems in management at earlier places of referal. About 90,000 males over the age of 13 are admitted to psychiatric hospitals of one kind or another in the United Kingdom in any one year, so that without postulating any increased risk of behaviour disorder, there is a pool of 90 XYY males from which there could be a selective transfer or subsequent referal to the special hospitals. If one is seeking a possible explanation for a selective referal of this kind, it is possible that the normal psychiatric services cannot contend with mentally ill and retarded males in late adolescence who are also above average size. If so it should apply to XY males as well and it should be possible to test this thesis further as the survey progresses.

There is no evidence, at present, that the physiological abnormalities in XYY males have any clinical significance. We have now identified two males with cyanotic congenital heart disease requiring surgical treatment in the third decade, but we have no reason to believe that the ECG findings have a pathological significance. Neither have we found any evidence of abnormality in the central nervous system to associate with the prolonged nerve conduction times. It may be that the significance of the findings will become evident in the future and all these patients are followed annually, even after discharge, so that clinical developments can be related to the findings when they were identified.

I should like to acknowledge the collaboration of Mrs Parker and the Staff of the Special Hospitals Research Unit, of my colleagues at the MRC Cytogenetics Unit at Edinburgh and the considerable help which we receive from the medical and nursing staff at the special hospitals.

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9. Automated aversion therapy

by Dr M. J. MacCulloch

Note: This paper reports some aspects of collaborative work with J. E. Sambrooks and J. L. Waddington

In an attempt to create a treatment model derived from the known laboratory learning principles and apply it to willing humans under strict conditions, Feldman and MacCulloch (1965) described a method of applying anticipatory avoidance learning to humans in the treatment-laboratory situation. Since their statement of a high success rate in relation to homosexual attitudes and behaviour there has been much debate as to why and how their system works.

Feldman and MacCulloch, (1971), in reviewing their earlier work, suggest that aspects of the learning paradigm itself significantly contribute to the success of anticipatory avoidance learning (see page 17). This present paper presents some details of the automated laboratory which was used to derive results on two homosexual cases showing how a significant proportion of the desired attitude change to males occurs *outside* the treatment situation. This serendipitous finding was made because the assessment component of the treatment was fully automated.

Method

This experiment used a modified production version of an automatic aversion therapy system (described in outline by MacCulloch et al, (1971)) to give the treatment and an automated subject interface repeatedly to administer the Sexual Orientation Method (S.O.M.) Scale, (Sambrooks and MacCulloch, 1973).

Machine responses

The 'Programable Automatic Conditioning equipment' (P.A.C.E.) machine is a moderately complex electromechanical device which is highly flexible because of its photocell program reader. It reads a plastic program tape which can be idiosyncratically punched to produce any form of electrical aversion therapy, some components of systematic desensitisation, and administer sexual interest latencies (MacCulloch and Sambrooks, 1974). It uses the program card as an inhibitor and as a stopping device, in this case to present standard "A.A." aversion therapy. It functions were as follows:

(a) switch on male (CS_1)** (see key page 3)
(b) switch on shock (UCS),
(c) allow *or* override subjects CR_1 response,
(d) always *immediately* allow contiguous offset of CS_1 and UCS by subject,
(e) allow CS_2 in response to CR_2,
(f) vary all time parameters i.e. inter trial period, time to shock, delay to CS_2, aversive time.

Patient Responses

The patients could emit 1, 2 or no responses i.e. CR_1, CR_2, no response. All the instrumental parameters of the treatment were logged on to computer tape and avoidance latencies were computed for each session of treatment.

Two homosexuals were given anticipatory avoidance aversion therapy and were administered the sexual orientation scale before and after each session of therapy by the female therapist (J. E. S.). We thus had a set of attitudinal measures which could be considered either within or between treatments as below.

$S.O.M._1$ T_1 $S.O.M._2$ I_1 $S.O.M._3$ T_2 $S.O.M._4$ I_2 $S.O.M._5$

T – Treatment
I – Between treatment interval
Changes between $S.O.M._1$ to $S.O.M._2$ – within treatment changes
Changes between $S.O.M._2$ to $S.O.M._3$ – between treatment changes

** Key CS_1 Male Slide CR_1 avoid or escape male UCS – shock
CS_2 Female Slide CR_2 request female slide

TWO CASE HISTORIES

Case History 1 (M – 1)

The patient was a 34 year old married man, referred by his general practitioner complaining of strong anxiety and depression related to his homosexual feelings and behaviour. He presented with depression of mood and withdrawal existing over the previous ten months; on examination he showed early morning waking, thought retardation, impaired concentration, spontaneous weeping, and marked agitation and tension; his mood was both anxious and depressed. He related his depression to his sexual problem and his illness was formulated as "endo reactive". He stated that he wished to change to a "normal" way of life completely.

Sexual History

At nine years old the patient noticed a strong sexual attraction to a boy the same age and practised mutual masturbation for a period of one year, his auto-masturbatory phantasy was, at that time, partly homosexual. From ten onwards he practised mutual masturbation with a series of boys of his own age and some boys younger than himself.

The patient stated that his main interest was in men, although he was occasionally interested in boys between the ages of about fourteen and sixteen. His heterosexual interest was also strong and he had been interested in girls from the age of ten, although he had never taken any out or made any overt sexual approach to females until he was in his early twenties, when he married his present wife. In his marriage he had, at times, to practice homosexual phantasy in order to maintain an erection during intercourse, or to think of younger women, but on presentation he had just ended an extra-marital heterosexual association with a girl which lasted two years.

This patient was repeatedly administered the automated form of the Sexual Orientation Method (S.O.M.) before, during and after 25 sessions of automatically administered A.A. aversion therapy treatment. His pre-treatment scores were as follows:

Male	:	48 (range 6 – 48)
Female	:	36 (range 6 – 48)

These scores indicate high orientation to both males and females.

Outcome of treatment

1. *Clinical*

Six weeks after the initial presentation, the patient's mood was judged markedly improved and anticipatory avoidance aversion therapy commenced. His sexual preference with regard to homosexual stimuli appeared to be for older men in general rather than younger boys. Over the next five months the patient was given twenty-five sessions of anticipatory avoidance aversion therapy at approximately weekly intervals. During this time he showed some improvement in his homosexual activity in that it decreased in frequency from, on average, once every six weeks on presentation, to virtually nil. After twenty-three treatments his S.O.M. male score was 27, and his female score was 48.

One month after treatment the patient stated that he was free from any abnormal sexual interest in general, although he was still emotionally relating to the younger person to whom he had been previously attached. His heterosexual interest had increased, although he was having prolonged intercourse (ejaculatio tarda) and pain on ejaculation during masturbation, which was thought to have been a side effect of the tricyclic drug which he was taking. During the five month period of treatment his mood was, in general, well maintained although he had a tendency to be labile. However, there was no marked mood problem during the treatment period and he was maintained on amitriptyline, imipramine and diazepam. His total follow-up period is now three years and he has no sexual interest in men.

Case History 2 (M – 2)

Patient No. 2 was a 32 year old married hotel manager who was referred by another psychiatrist because of guilt relating to heavy drinking and a homosexual incident which occurred at his work.

Sexual history

He came from a disturbed home in that his father was an abnormally rigid, religious man, who died when the patient was ten. The mother was an alcoholic. The patient was encopretic and enuretic as a child and he was sent to a boarding school at the age of eight. He was shown homo-

sexual pornographic material at the age of eleven, when he commenced mutual masturbation with boys. At fourteen he was masturbated in a cinema by an adult male and thereafter commenced using homosexual phantasy during cross-dressed auto-masturbation. During his teens he took out a number of girls whom he kissed with enjoyment but he remained extremely shy of heterosexual relationships. His homosexual experience included buggery, mutual masturbation and nude petting. As he became older he began to drink increasingly. He practised homosexual prostitution at least once and paid for homosexual sex on several occasions. During one drunken escapade he was apprehended for damage to property when he was looking, unsuccessfully for a male partner.

He married at 26 without prior heterosexual experience of intercourse, and remained strongly orientated to males. The marriage was consummated and they had two children. Intercourse became increasingly rare and five years before presentation he became partially impotent. He resorted to homosexual phantasy to obtain and maintain an erection. Sexual intercourse ceased at presentation in the clinic. It seemed clear that the patient's wife held him in distaste because of his homosexual orientation and his drinking had become a problem. He was a hard drinker with loss of control, taking at least eight double whiskies a session. It was in one of these drunken states that he made the homosexual pass at another hotel staff member.

Premorbid personality

He was judged to have a self insecure personality disorder with asthenic (hypochondriacal) features. He worried obsessively about his obesity and his heart.

On examination he was an obese man of medium height, very smartly dressed with an anxious and covert manner. It was difficult to establish a rapport with him sufficiently strong easily to elicit the more sensitive details of his life history. He was assessed as a strongly homosexual man (18 years practice), with definite, but weak, heterosexual interests; and a personality disorder predominantly of the self insecure and asthenic type. At the time of presentation he was on the verge of being a loss of control alcoholic. His occupation was threatened by both his homosexual tendencies and by his drinking.

Outcome of treatment

1. *Clinical*

His motivation for treatment was judged to be good and his wife was able to play a genuinely sympathetic and supportive role. He was given anticipatory avoidance aversion therapy by a female therapist (J.E.S.). He developed a reactive depression to financial difficulties which he initially attempted to cope with by drinking whisky. He was put on imipramine, 30 mgs. t.d.s. and diazepam, 20 mgs. t.d.s. and his depression and inertia improved; at the same time his alcohol and cigarette consumption went down. Three months after completion of treatment his mood was normal off psychotropic drugs. His sexual relationship with his wife was normal, and his homosexual interest was reduced to an aesthetic appreciation of men.

He continued to drink in a well controlled fashion and one year after treatment he was lost to further follow up because of promotion and a subsequent move to another part of the country.

His S.O.M. score on presentation was male, 47, female 22. At 1 year follow up male, 17, female 31.

Results: The Sexual Orientation Method Data

We had administered the sexual orientation method (S.O.M.) both before and after each of the treatment sessions for both patients. Fig. 1 presents male S.O.M. data from M – 1 over 25 sessions and shows that the within treatment changes differ from the between treatment changes in a very interesting way. We therefore decided to examine all the S.O.M. data from both patients in two ways:

(1) The change in male and female scores *during* the course of each treatment session, and
(2) The change in these scores between each treatment session.

These data are presented as *cumulative* male score changes *within* and *between* treatments in Figure III.

A striking feature of the raw data (as shown in Figure II) was its variability, there being marked score changes both in and out of treatment.

Figure I: Change in male S.O.M. score during and between treatment

	In treatment		*Between treatment*	
	Increase	*Decrease*	*Increase*	*Decrease*
T_1	–	5	4	–
T_2	–	3	–	–
T_3	DK	DK	–	2
T_4	–	3	9	–
T_5	–	8	5	–
T_6	–	11	–	–
T_7	DK	DK	4	–
T_8	–	1	0	0
T_9	–	2	0	0
T_{10}	0	0	–	1
NOT	–	–	–	9
T_{11}	1	–	16	–
T_{12}	2	–	–	15
T_{13}	DK	DK	2	–
T_{14}	1	–	–	15
T_{15}	2	0	8	–
T_{16}	17	–	–	14
T_{17}	5	–	–	4
T_{18}	0	0	–	1
T_{19}	1	–	10	–
T_{20}	–	10	–	1
T_{21}	–	1	2	–
T_{22}	0	0	3	–
T_{26}	–	1	–	6
T_{24}	0	0	–	1
T_{25}	1	–		
	30	45	63	69

Key

DK = No date gathered

0 = No change

– = Date relates to adjacent column

Figure II: Variation in actual male SOM Score pre and post treatment, Patient 1

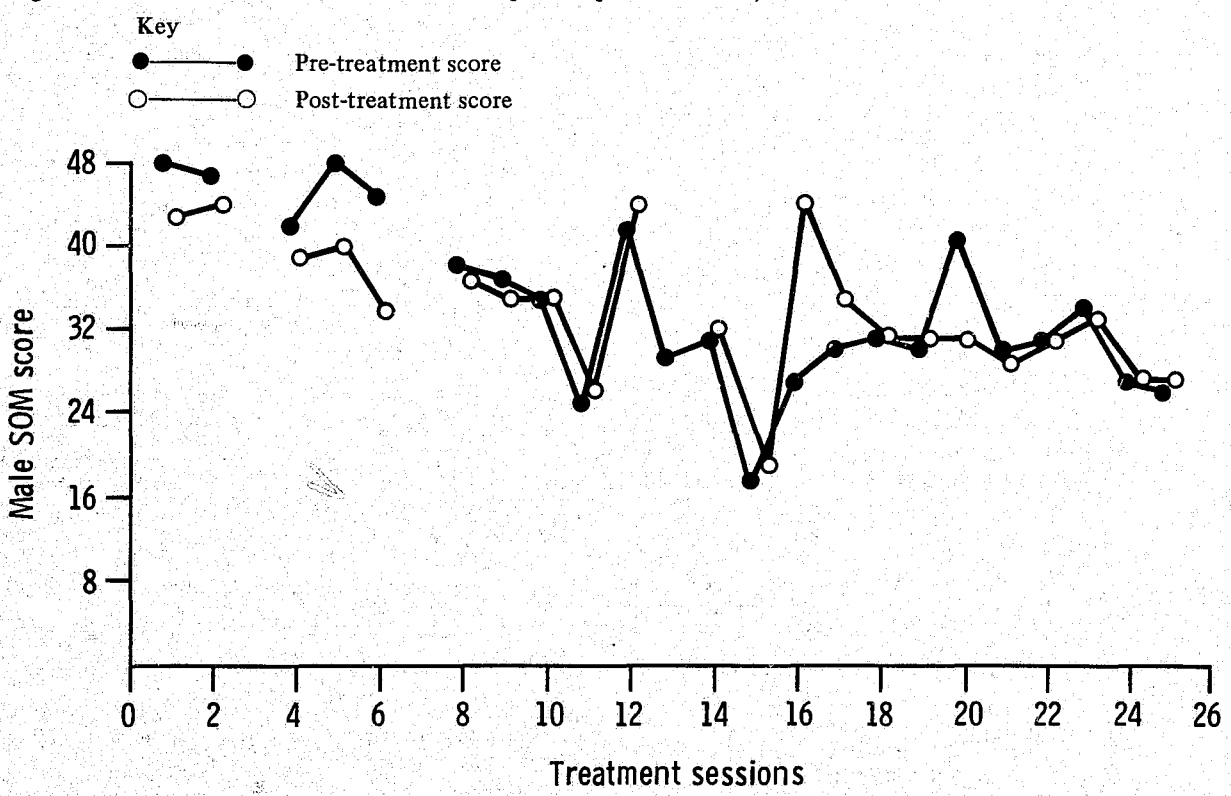
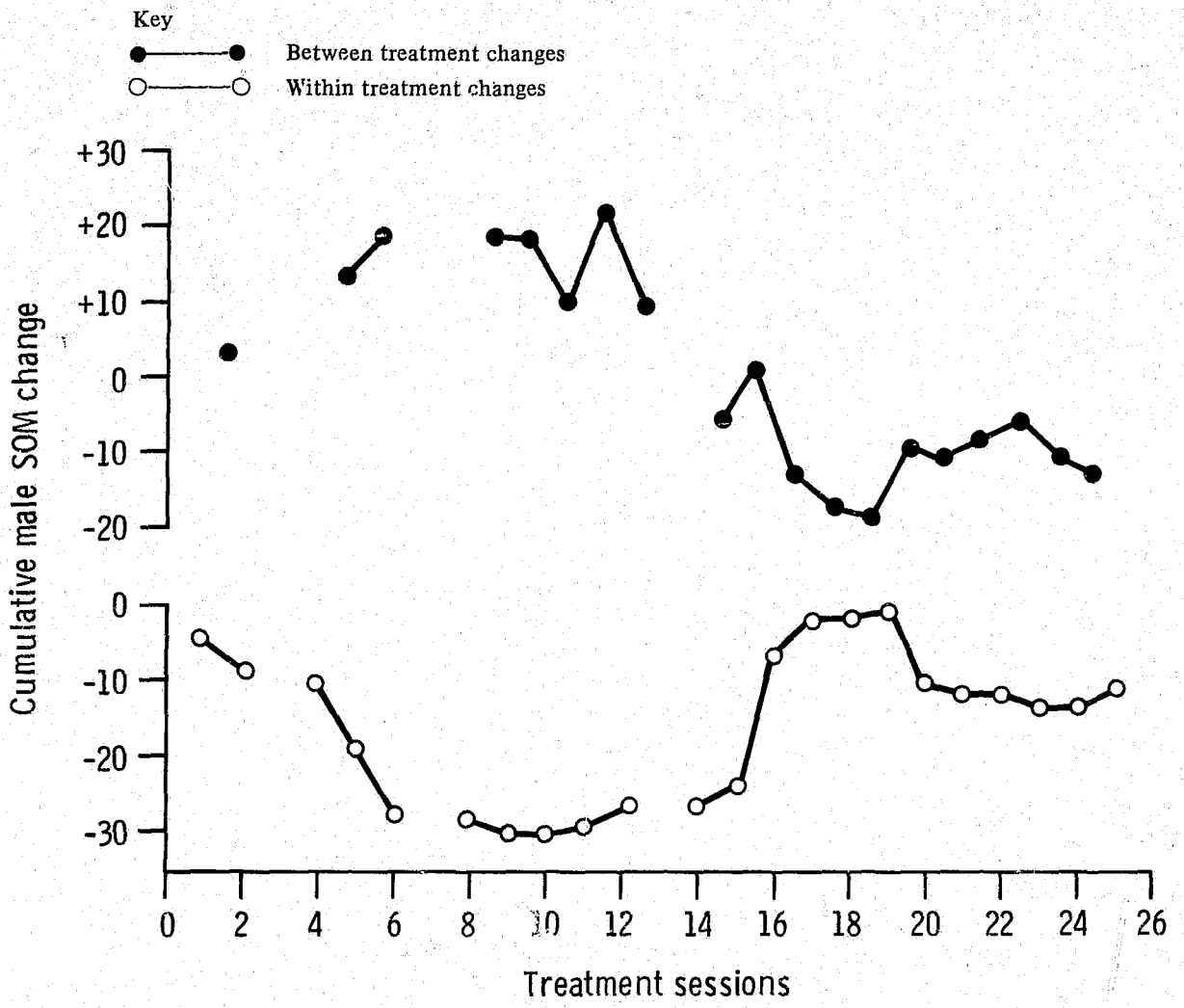


Figure III: Cumulative change in male SOM score between and within treatment sessions – Patient 1



The influence of treatment itself, and the between treatment periods for M – 1 is well shown in Figure III.

Figure III shows that in-treatment cumulative male score changes are increasingly negative for the first 6 sessions. This means that the male S.O.M. was decreasing during the course of each of the 30 minute treatments. Conversely, the *between* treatment male scores increase over the first 10 sessions by an equivalent amount. This second phenomenon could possibly be interpreted as extinction; after session 8 the in-treatment cumulative scores *increase* by 25 points. However, from session 12 through to 25, the between treatment cumulative change scores fall, indicatiing that a significant attitude change is occurring *between* these treatment sessions. This change might be interpreted as a response increment effect, or the so called type 2 incubation (see Eysenck 1968). If the two curves are considered together it appears that the second half of the *between*-treatment curve mirrors the improvement of the first part of the *in*-treatment curve, and that the first part of the *between*-treatment curve anticipates the second half of the *within*-treatment curve. This last phenomena could be explained as follows. When the patient first comes into treatment he is highly interested in the male slides and early sessions reduce his male scores; as treatment proceeds, he succumbs less often at a behavioural level to homosexual temptations between treatments. Thus, at the start of the later sessions his S.O.M. male score was depressed in value as a generalisation from his improvement between treatment. Then in treatment he allows himself to examine slides for interest and realises that 'men' are more interesting than he had thought at the start of the treatment. An alternative hypothesis might envisage a relearning effect due to repeated exposure to male slides with a reduced number of shock trials.

Figure IV shows the pre and post S.O.M. scores for Patient 2, and Figure V the cumulative male S.O.M. changes both within and between treatments for Patient No. 2. Patient No. 2 differs from Patient No. 1 in that there is no initial increase and reduction in the between and within

treatment scores respectively and the changes are similar to those shown by Patient No. 1 from session 10 onwards.

Discussion

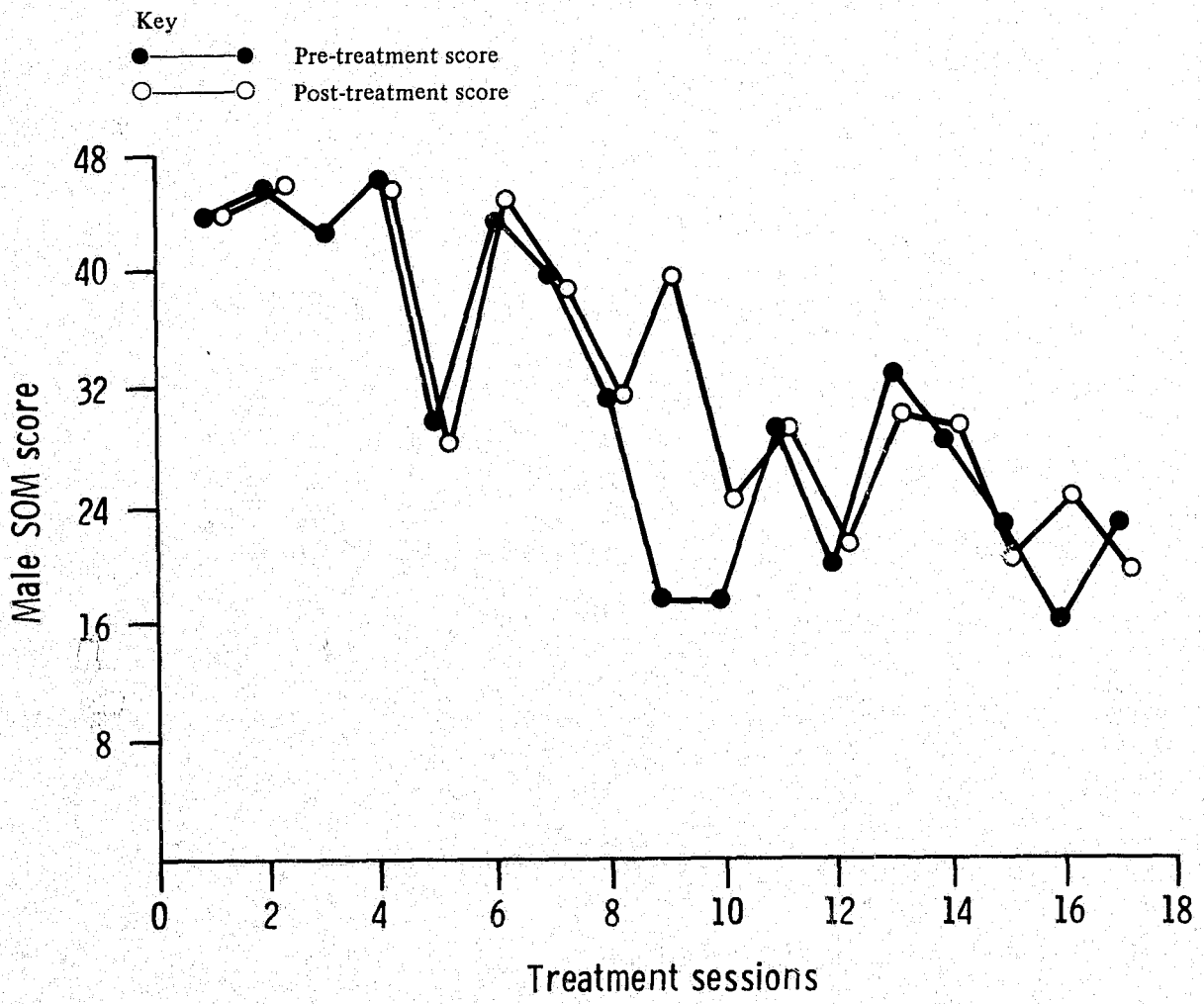
Clearly these two subjects differed in their initial response to the treatment. In the first 10 sessions, M–1 showed rapid in-treatment learning and between-treatment extinction.

After session (M–1) and after session 4, (M–2), both subjects show a notable reduction in between-treatment male S.O.M. score. It is this change that is responsible in both cases for the overall reduction in male interest scores.

A further serendipitous finding is the paradoxical increase of the male S.O.M. score which occurs *within*-treatment in both cases; in the first case at session 9 and in the second case at session 8. This data appears to suggest that "unlearning" of avoidance of men is taking place during avoidance conditioning. The major net attitude change which has occurred appears to have taken place *between*-treatment sessions.

I assume that the internal response to the external conditional stimulus, ($CS_E - CS_I$) was an internal pleasure response (PR_I). If a male subject has a high score on the male concept in the S.O.M. and a low score on the female concept, he is likely to feel a pleasureable internal response (PR_I) when he looks at chosen real life males or male pictures. Aversion therapy has been shown to be highly successful in changing S.O.M. scores and self reported sexual behaviour (Feldman and MacCulloch, 1971); the first part of this therapeutic process presumably consists of establishing the $CS_E - UCS_E$ link, so that the CS_E (the first presented male slide) comes to evoke a nocive response (NR_I) which leads to the CR_E, the instrumental response of avoidance. During aversion therapy treatment this process is repeated many times and an increased tendency to avoid the nocive response is reinforced by having one third of the training trials of the forced escape type, I (MacCulloch 1969) have repeatedly noted a tendency for S.O.M. male scores to 'coast' downwards

Figure IV: Variation in actual male SOM score pre and post treatment — Patient 2



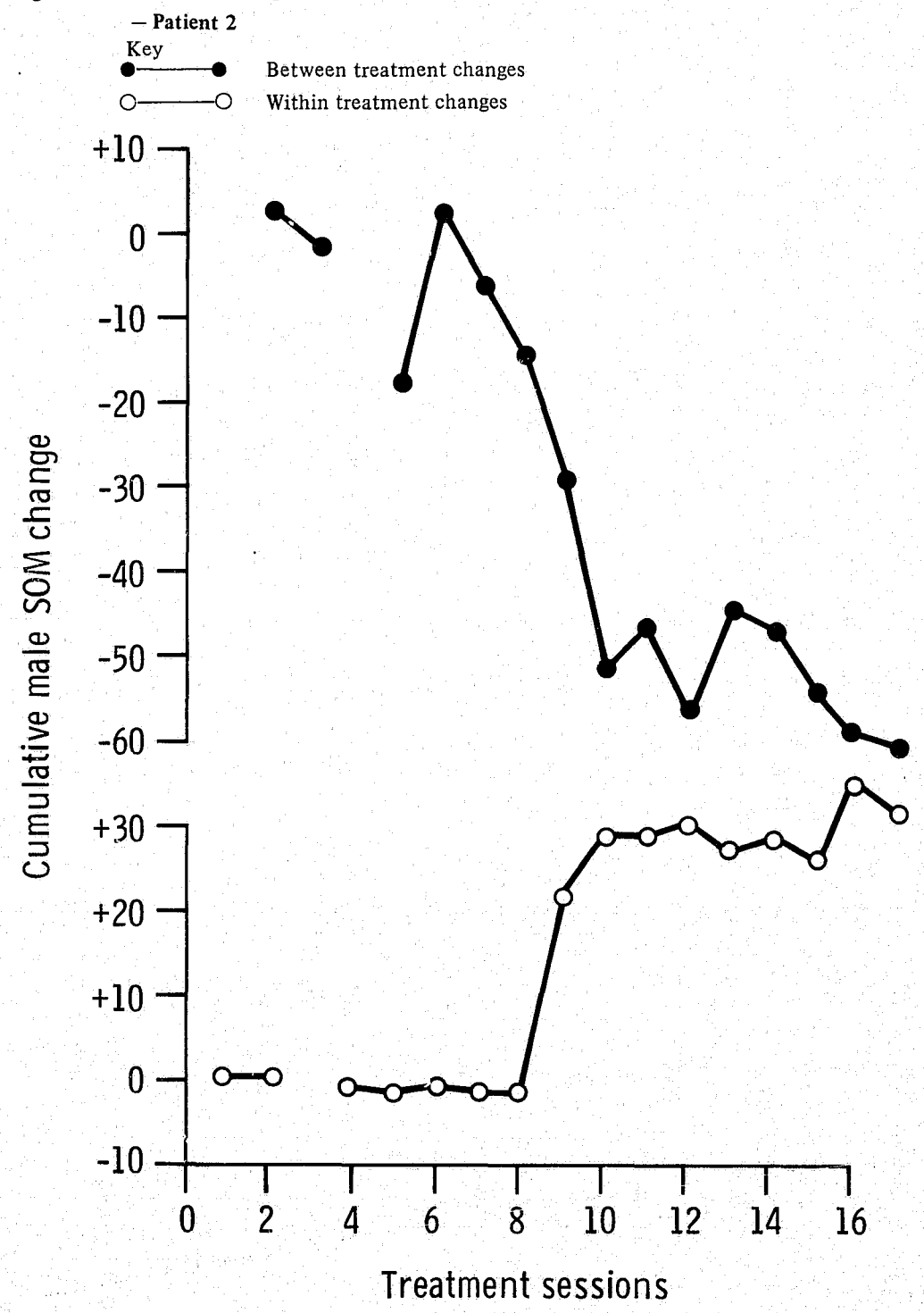
after the cessation of aversion treatment, particularly in patients whose ultimate outcome was satisfactory.

These observations suggest that type two incubation (Eysenck, 1968) may be occurring *between* treatment sessions. The process might work as follows: after the subject has acquired a conditioned NR to the CS_E/UCS_E exposure in treatment, he is subject to CS trials both in vivo and in phantasy in the time period between treatment; the CS_E (in vivo) or CS_I (phantasy) evoke NR_I *class* responses which produce a change in attitude to the CS_E and CS_I and so strengthen the generalised aspects of the CR_E responses.

Conclusions

Anticipatory avoidance aversion therapy has been subjected to much technical criticism. (Rachman and Teasdale, 1969; MacDonough, 1972, McConaghy, 1971).

Figure V: Cumulative change in male SOM score between and within treatment sessions



It is clear that treatment techniques other than AA aversion successfully alter sex attitude scale scores but I and my colleagues still argue that AA aversion therapy has an important contribution to make to the treatment of unwanted approach behaviour. We would suggest that Eysenck (1975) has dealt with much of the prevailing confusion: specifically, his discussion of the possibility of incubation of responses (CS). Clearly the possibility for increment or decrement of attitude exists; thus different techniques will result in different rates of incubation and because of individual differences, different subjects (exposed to the same paradigm) would be expected to change at different rates. Where the process of extinction quantitatively equals the rate of acquisition of learning then no net attitudinal change will ensue. Where between treatment extinction exceeds in treatment avoidance learning there will be treatment failure; where between treatment responses incrementation exceeds extinction (whenever that occurs), the treatment will succeed. The data in this paper appear to demonstrate a form of type 2 incubation in the human. While it may prove difficult to set up nice experiments which control for such factors as phantasy and in vivo experience, we must assume that this method has great potential for helping us to understand how attitudes are developed and behaviour is changed even in the absence of relevant external events.

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68552

10. A social skills treatment programme with sex offenders

by D. A. Crawford

I should like to start by justifying the inclusion of a paper on social skills in a conference on sexual deviance. This task has been made much easier by the paper presented by Kevin Howells in which he argued on the basis of his results that a social skills treatment programme is an obvious choice for paedophiles.

Whilst I hope the relevance of social skills to sexual deviance is obvious to many of you, I can understand it if some of you have difficulty in seeing the relevance of a subject area in which much of the research has dealt with the dating habits of American college students. Hardly a topic of vital concern for most of us here! The days when deviant sexual behaviour was seen simply as a penile response to an inappropriate stimulus, to be treated with aversion therapy, or as a result of hormone imbalance, to be treated with drug therapy are, I hope, over. Increasingly, sexual behaviour is being seen as the final link in a long and complex social behaviour chain.

In a behaviour chain satisfactory completion of one link in the chain is the stimulus for the start of the next piece of behaviour, conversely breakdown of any link in the chain will disrupt all subsequent links. It is clear that for normal, satisfactory sexual behaviour to take place, a sexual partner must be found, and some sort of relationship must be formed, even if it is only a question of negotiating the price. If a person lacks the appropriate social behaviours to form a satisfactory social relationship that may subsequently develop into a satisfactory sexual one, it is obvious that he will not be able to achieve sexual gratification through socially acceptable channels and we must not be surprised if he turns to alternatives. The alternative may well be children because they cannot compare his sexual performance with others, and also because the social skills needed to relate to children are easier to perform than those necessary to form a relationship with an adult. In this case, we have paedophilia. Alternatively, the person may resort to violence to achieve sexual gratification, in this case, we have the rapist. Once the pattern of deviant sexual behaviour has become established, it may well become sexually arousing in its own right by a process of orgasmic conditioning. However, if any treatment is to stand a chance of long-term success it seems clear that appropriate social behaviours must be established in addition to modifying any deviant sexual arousal.

This need for a comprehensive treatment approach to the problem of sexual deviance has been suggested by Bill Marshall (1975) in his work on rapists and paedophiles at Kingston Penetentiary in Canada and by David Barlow (1974) working in America. It also follows logically from the results of Feldman and MacCulloch's (1971) work on homosexuals.

In this paper I shall be giving details of some of my clinical work at Broadmoor in which I have been treating a group of three sex offenders with a behaviourally orientated social skills training programme. A comprehensive pre and post assessment was carried out, on both this group and a waiting list control group. By waiting list control I mean a group of patients who are also in need of social skills training, who were assessed on two occasions, the gap between the two assessments being the same as for the treatment group, but who were given no treatment at that time, although subsequently this is now being given.

The mean age of the patients was 29 and the mean length of time in Broadmoor was 4¼ years. Four were in Broadmoor for explicit sexual offences such as rape and indecent assault and the remaining two for violent offences, but against sexual partners. Four had histories of sexual offences and all six had long standing social problems which had prevented the formation of satisfactory sexual relationships.

Assessment

A variety of assessment techniques, summarised in Figure 1, were employed based on the comprehensive review of behavioural assessment methods for social skills by Arkowitz (1975).

Firstly, a questionnaire designed by Watson and Friend (1969) was given to the patients, which provides a score on two scales. One, social anxiety and distress, that is the extent to which patients feel anxious in social situations, for example a typical question is: "I am usually nervous with people unless I know them well", and secondly, a fear of negative evaluation scale, that is the extent to which the person is worried about other people making negative comments or evaluations about him. A typical question here is: "I am usually worried about what kind of impression I make". In addition to these two scales I added short descriptions of different social

Figure 1: Assessment Methods

1. *QUESTIONNAIRE*
   - Social Anxiety and Distress
   - Fear of Negative Evaluation
   - Social Situation Difficulty Rating

2. *TAPED SEQUENCES*

3. *VIDEO*
   - Solo Talk
   - Party Role Play – Male
   - Party Role Play – Female

4. *PHONE*
   - Job
   - Date

situations and asked the patients to give a rating of how easy or difficult they would find these situations. For example:– "You are introduced to a girl you have not met before and then left to make conversation with her".

Secondly, a series of taped sequences, in which the patient heard a short description of a situation followed by someone in that situation speaking to him. The patient then had to reply as spontaneously as possible to this person. For example, the sequence might be: "You are at a dance when someone you don't know comes over to you and says: "Hello, don't I know you from somewhere?"' The patient then had to respond to this situation. There were 18 of these situations and the patients' responses were recorded on tape.

The third part of the assessment involved use of the video equipment, and was itself split into three parts. In the first part the patient was simply asked to give a short talk on any topic of his own choice lasting for about three minutes. In the second and third parts he was told to imagine himself at an on-going party with other people, food, drink and music. A stooge was then brought in and introduced to him, and he was left to make conversation with this stooge. The only difference between the two parts being that in the first case the stooge was male and in the second female.

The fourth part of the assessment involved the use of the telephone and was split into two sections. Firstly the patient was given an imaginary job advertisement relating to car production work and asked to phone up to enquire about the job and arrange an interview. In the second phone assessment he was required to phone up the girl he had met at the party in the video role-play situation and ask her out for a date.

Treatment

The waiting list control group were told that on the basis of the first assessment they were considered suitable for, and in need of, social skills training, but unfortunately due to pressure of work it would not be possible to start treatment for approximately 3 months. They were also told that when treatment did start it would begin with a repeat of the assessment programme in order to get an up-to-date measure of their performance.

The treatment group were seen on a weekly basis for approximately an hour and a half by myself and a female psychologist. The treatment lasted 16 sessions over a period of 3 months. Earlier sessions were held in the psychology department but later ones were held on the wards in order to aid generalisation of the behaviours learnt in the treatment setting to the ward setting. The orientation of the treatment programme was behavioural and the methods used were similar to those used by a number of other workers, for example, Michael Argyle (1974) and John Marzillier, (1976).

The basic format was to start with some sort of role-play or viewing of the patients performance on video tape. This was followed by feedback and discussion as to how the behaviour could be improved including modelling by the therapists, and finally by a repeat performance by the patient.

Throughout the sessions appropriate responses were reinforced immediately with social praise and attention, whilst inappropriate or unacceptable responses were either ignored or at

times punished by the patient being told that what he was doing was not appropriate. Initial sessions dealt with non-verbal aspects of social behaviour, such as posture, eye contact, smiling and gestures and these were practised and shaped up until they could be performed competently, at which stage we moved on to vocal aspects of speech, such as volume, clarity, intonation and emphasis. For these sessions a tape recorder was used to give feedback to the patients of how they sounded to others.

We then progressed on to verbal aspects of communication such as topics for starting and maintaining conversations and finally on to conversational techniques in general such as listening skills, handing over the conversation to the other person, picking up cues as when to speak and when not to speak and how to finish a conversation. This led naturally on to role-plays of more complex social situations such as at work, parties, in a pub, at discos, dealing with authority figures and troublesome neighbours and, in particular, we concentrated on interactions with a female.

As well as creating artificial role-played situations in which to practise their new skills, we also used the treatment sessions themselves as a social situation. So if, for example, they exhibited inappropriate social behaviour during the treatment session, we would point this out and suggest more appropriate ways of responding. In addition, in one of the final sessions we introduced a new female to the group and, rather than using her immediately in a role-play situation, we simply brought her in, introduced her, and left the patients to make conversation with her for a period of half an hour.

We attempted to encourage generalisation of the new behaviours learnt in the treatment sessions to the wards and the rest of the hospital setting by a number of methods. As already mentioned we transferred the treatment sessions from the psychology department to the ward. We also told the patients to put into practise each week what they had learnt at the treatment session, and always made a point of asking to what extent they had been effective in doing this. We also set specific homework tasks, such as attending social functions, and towards the end of the treatment programme we went along to these socials ourselves to observe and interact with the patients in a more natural social setting. Finally, we encouraged the patients to provide feedback to each other throughout the course of the week on how well or badly they were performing.

Results

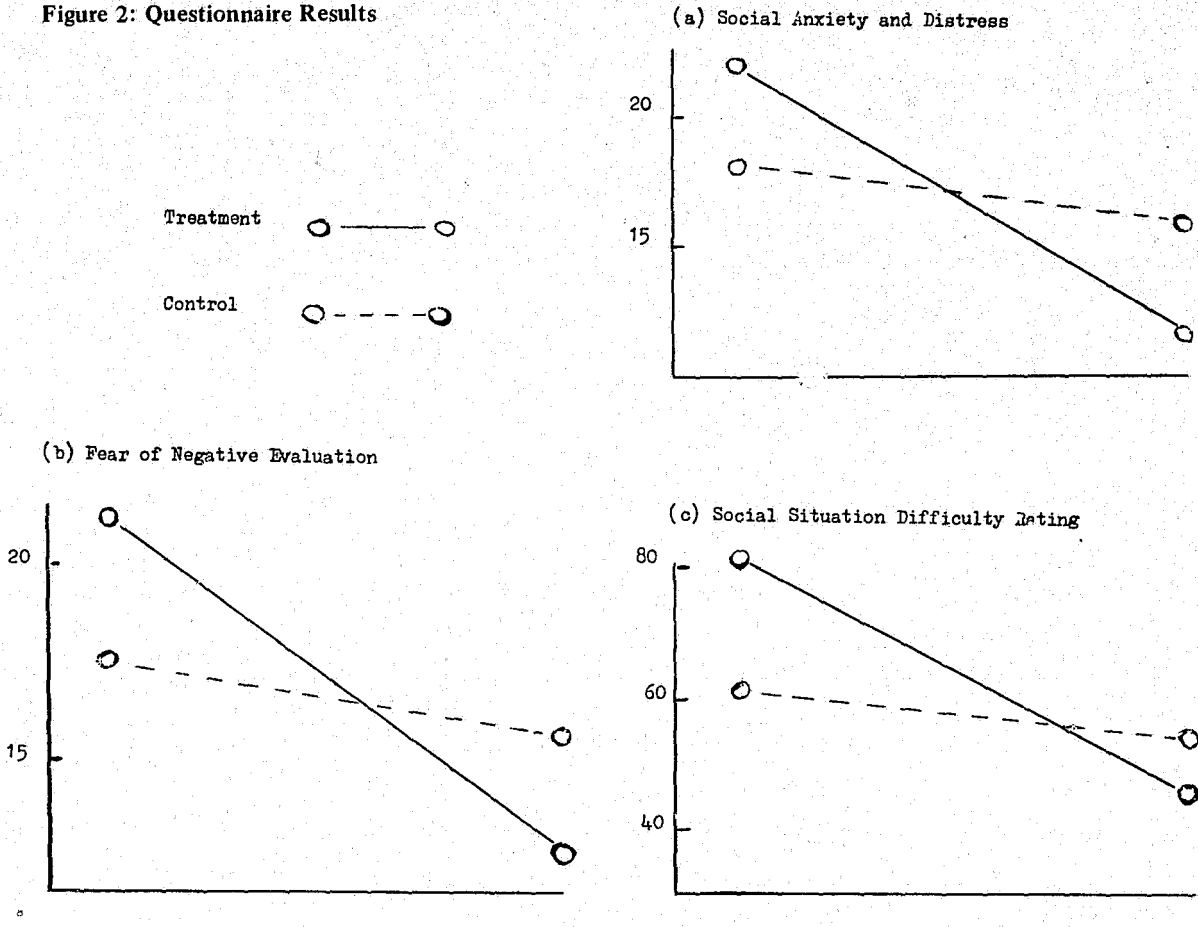
Subjectively, changes in all patients in the treatment group were clear and quite convincing. They certainly felt it had helped, one of them saying it was the best thing to happen in Broadmoor! The nurse who escorted them from the ward to the psychology department noticed and commented on the change with some degree of surprise, even though he knew what we were doing in the treatment sessions.

More objective evidence for these changes comes from the assessment programme. The comprehensive assessment programme I described to you earlier produced a great deal of data, which I have condensed quite drastically for this paper, averaging across individuals and across measures. I hope I have done this as fairly as possible so as to give an unbiased picture of the results that were obtained.

Questionnaire

In all of the graphs the treatment group is the solid line and the control group is the dashed line. Graph (a) in Figure 2 deals with the social anxiety and distress scale. You will recall that is the scale asking questions about how anxious the patients feel in different social situations. You will see that the treatment group's average score has dropped quite markedly whereas the control group shows only a slight drop. Although the treatment group starts off higher than the control group, they end up lower, suggesting that they experience less anxiety in social situations following treatment. Similarly, looking at the second graph showing the fear of negative evaluation scale, one can see a similar picture. The treatment group shows a large drop, far more than the slight drop shown by the control group. In the final graph are the figures relating to the difficulty experienced in different social situations and again one can see that whilst the treatment group started off considerably worse than the control group, post-treatment they are better. So on questionnaire measures one can conclude that the treatment group, after treatment, report less anxiety in social situations, they are less concerned about negative social evaluations, and they report less difficulty in being able to deal with a variety of social situations. However, one cannot ignore the fact that the treatment group saw myself and Judith Allen once a week over a period

Figure 2: Questionnaire Results



of about 3 months and undoubtedly at the end of it they may have felt that they did not want to offend us by saying that everything was just as bad as before we started, so they may have been biased to present themselves in the post-assessment in a better light than in fact was the case. However, more independent data confirms the improvement shown in the questionnaire.

Taped Sequences

Figure 3 shows the result from the taped sequences assessment. Taped sequences, you will recall, were a series of simple situations to which the patient had to respond as spontaneously and naturally as possible. Graph (a) shows the average number of words used by the patients in their replies. One can see that whilst both groups show an increase, the increase for the treatment group is over twice as large as for the control group. Differences are even more convincing if one looks at the other measures. Graph (b) shows the latency of response, that is the length of time before the patient started to respond. One can see that for the treatment group it has dropped whereas for the control group it has actually increased. So although the control group managed to say more words in their reply, it took them longer to think about it, whereas the treatment group both managed to say more words and to say them spontaneously.

Finally, Graph (c) shows the number of fluency errors, that is a simple count of the number of errs and umms made by the patients, one can see that again the treatment group have improved, in as much as they are making less errors, whereas the control group have crossed right over and got worse. So one can conclude that following treatment the patients had more to say, said it more spontaneously and said it more fluently. But does this necessarily mean that their answers were more socially skilled? That is a more subjective judgement and was therefore made by independent blind observers who were not involved in either the treatment or assessment programmes.

The responses of each subject were rated on 11 different scales such as clarity, fluency, friendliness, confidence and appropriateness. Figure 4 shows for each of the groups the total number of scales which showed an improvement on the second assessment, the number which did not change, and the number that got worse.

Figure 3: Taped Sequences Results

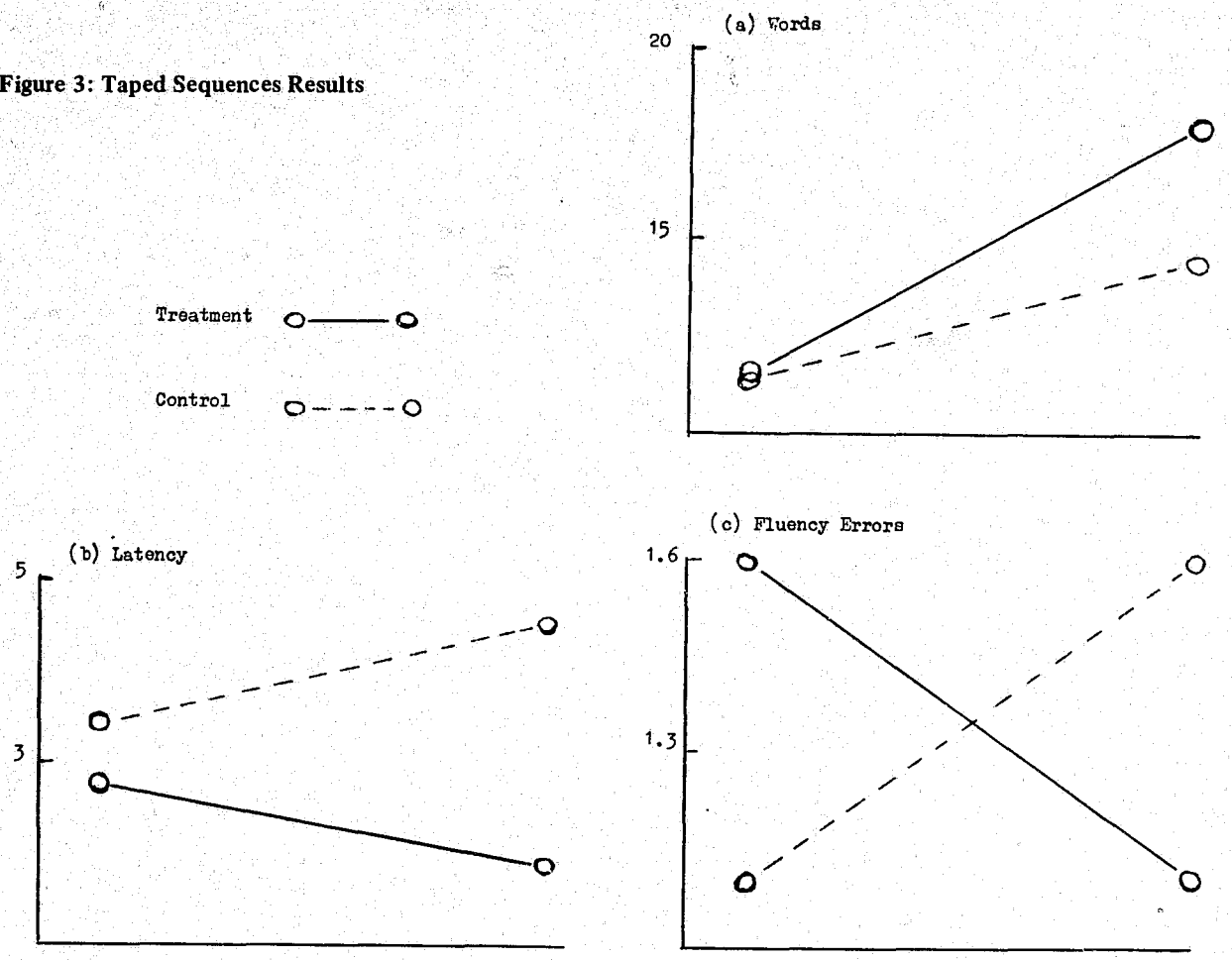
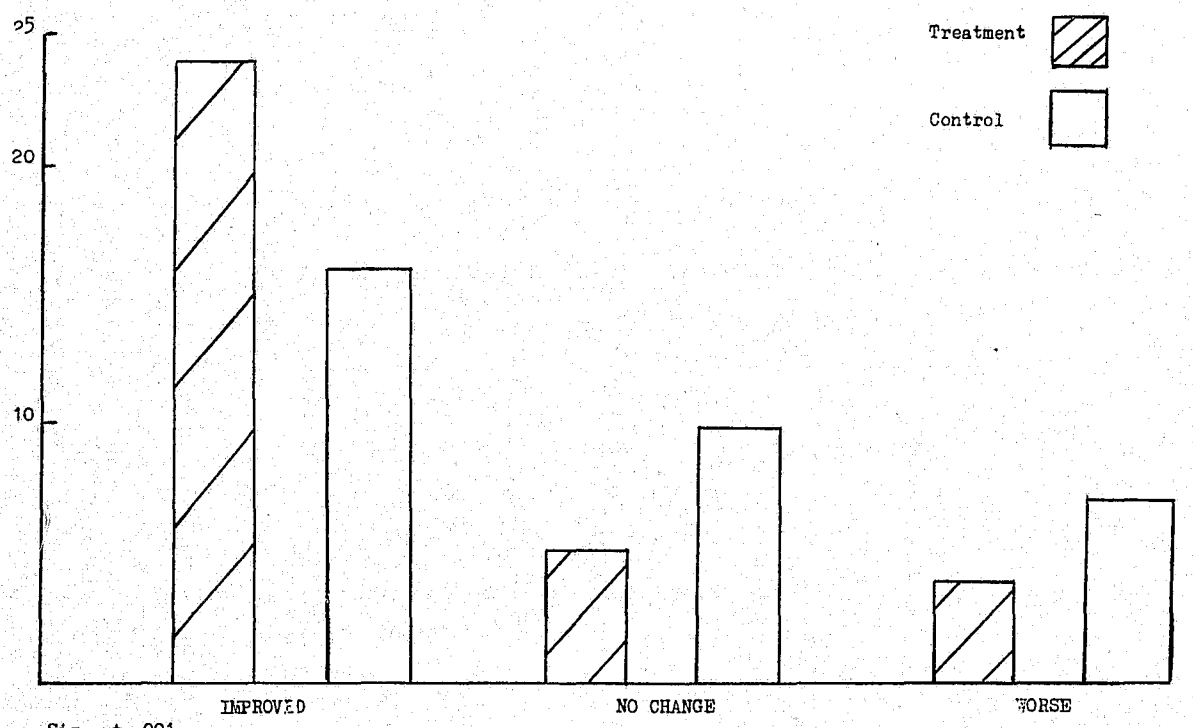


Figure 4: Taped Sequences Results — Independent ratings



This is a fairly crude measure as it takes no account of the magnitude of any change, only the direction, and it masks individual variations in performance. For example, one patient accounts for over half of the improved scales in the control group. However, it does provide an overall picture of the results, showing that the treatment group as a whole improved on 24 scales, showed no change on 5 scales and got worse on 4 scales. Whereas the control group improved on 16 scales, showed no change on 10 scales and got worse on 7 scales. The difference between treatment and control groups is significant at beyond the .001 level.

So one can conclude that the treatment group not only improved on objective measures such as number of words spoken, latency of response and fluency errors but that their resulting performance was independently rated as more socially skilled.

Video

Here you will recall the patients were asked to, one, give a talk on a topic of their own choice, secondly, to role-play a party situation with a male stooge, and thirdly, to role-play a party situation with a female stooge. For presentation of results in this paper I have combined the data across all three situations. Graph (a) in Figure 5 shows the amount of time the patients actually spent talking.

One can see there is very little change in either of the groups. This might at first appear to suggest that we have had very little effect with our treatment programme in improving their social skills in these sorts of situations. However, I do not believe that this is the case. If one looks at group (b) showing the percentage of time which was simply spent in silence, by both the patient and the stooge, you will see that there has been a considerable drop for the treatment group in the amount of time spent silent, whereas for the control group there has been an increase. In other words, although the treatment group are not speaking any more they have managed to encourage the stooge to speak more and to fill in more of the silences. How did they manage to do this? If one looks at Figure 6 we have the answer.

Graph (a) shows the amount of eye contact and one can see that the treatment group shows an increase in eye contact after treatment, whereas the control group shows a very slight drop. If one looks at graph (b) showing smiling, one can see a similar pattern of a considerable increase for the treatment group with a slight drop for the control group. However, as they started out at a higher level the final difference between the groups is negligible. Again, looking at graph (c) showing the number of head nods in response to the stooges conversation these show a large increase in

Figure 5: Video Results

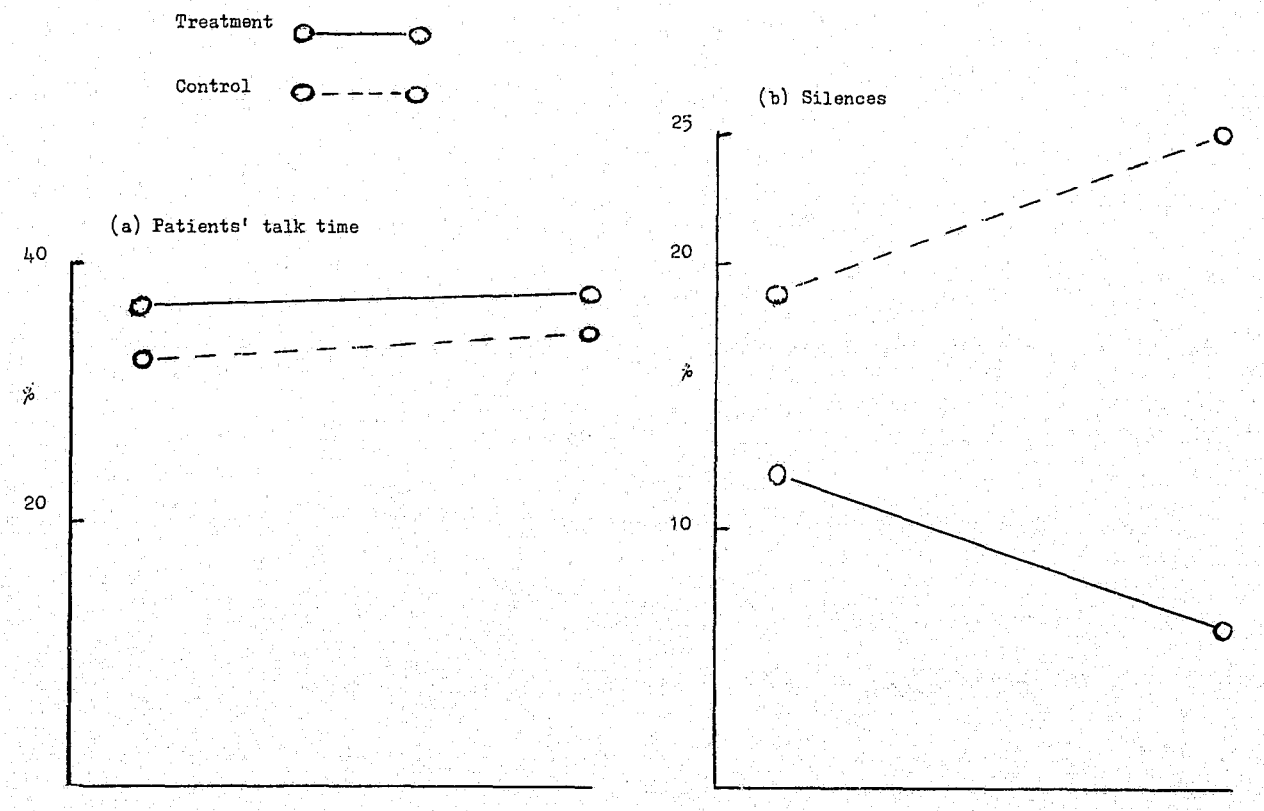
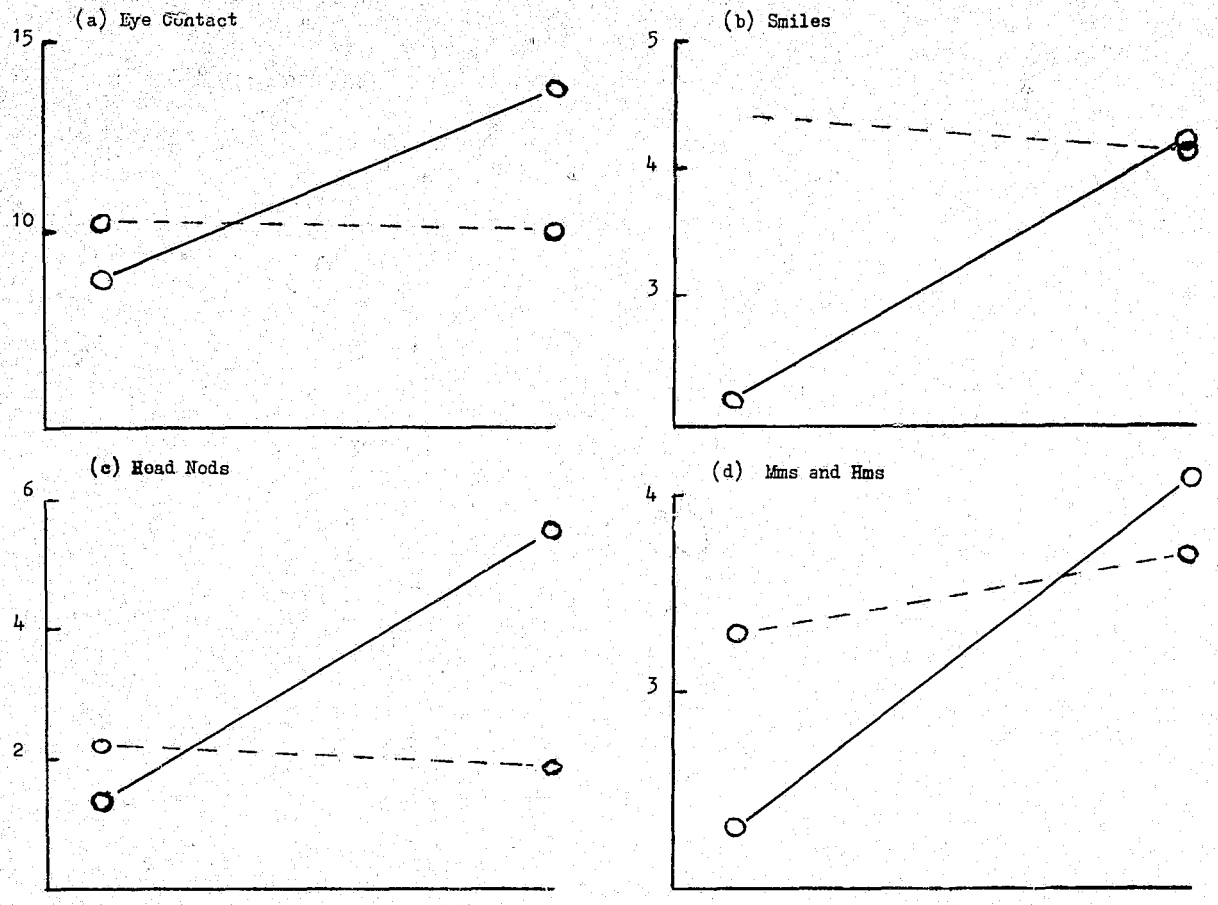


Figure 6: Video Results



the treatment group but again a marginal decrease in the control group. Finally, graph (d) shows the number of ah ahs and ah umms in response to the stooges conversation. There is almost a doubling in these for the treatment group and just a slight increase for the control group. So these measures clearly demonstrate that the treatment group have improved their listening skills and it seems reasonable to conclude that this explains the decrease in silences without any corresponding increase in the patient's talk time. The patients were encouraging the stooge to do more.

However, it does not necessarily mean that the patients were more socially skilled simply because they were nodding away, uh umming away, eye contacting and smiling. To make this rating we got independent blind observers to assess the video tapes.

Each patient's performance was rated on 18 scales for the solo talk and on 34 scales for each of the party role-plays. These covered non-verbal, vocal, verbal and general aspects of the patient's behaviour.

As with the taped sequences results, figure 7 shows for each of the groups the total number of scales which showed an improvement, no change, or were worse on the second assessment. One can see there are large differences between the two groups, the treatment group showing an improvement on 180 scales in contrast to the control groups 64. Conversely the control group were rated worse on 139 scales against only 46 for the treatment group.

It is clear therefore that on both objective and more subjective measures the treatment group showed an improvement in their social skills which was not matched by the control group.

Phone

The results here are the combined data from the phone call in reply to the job advertisement and the phone call to make a date with the female they met at the party.

If we look at graph (a) in figure 8 which is the amount of time spent talking by the patient one can see a slight decrease for the treatment group and a somewhat larger decrease for the control group. But if we look at graph (b) showing the length of silences during the conversation one can see a decrease for the treatment group but an increase for the control group. So, as with

Figure 7: Video Results — Independent ratings

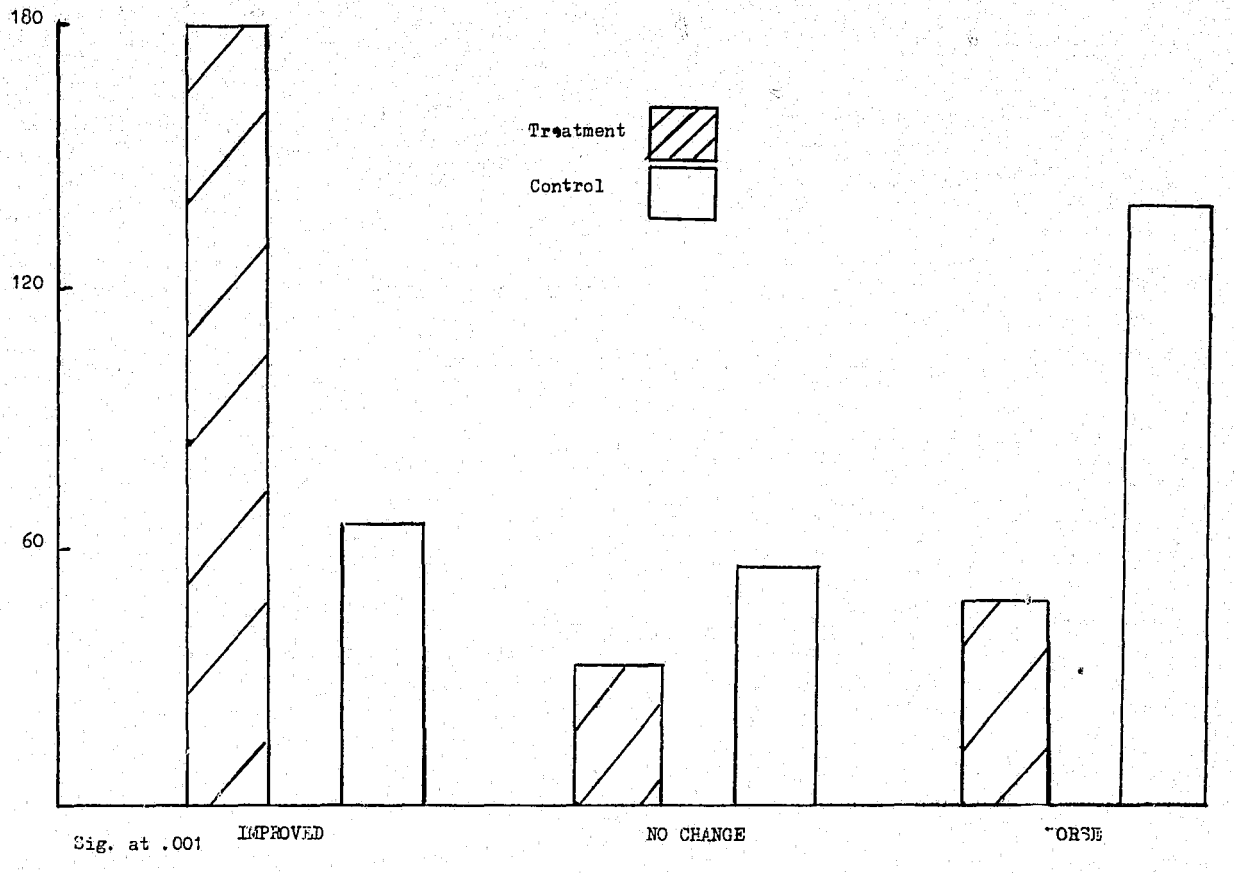
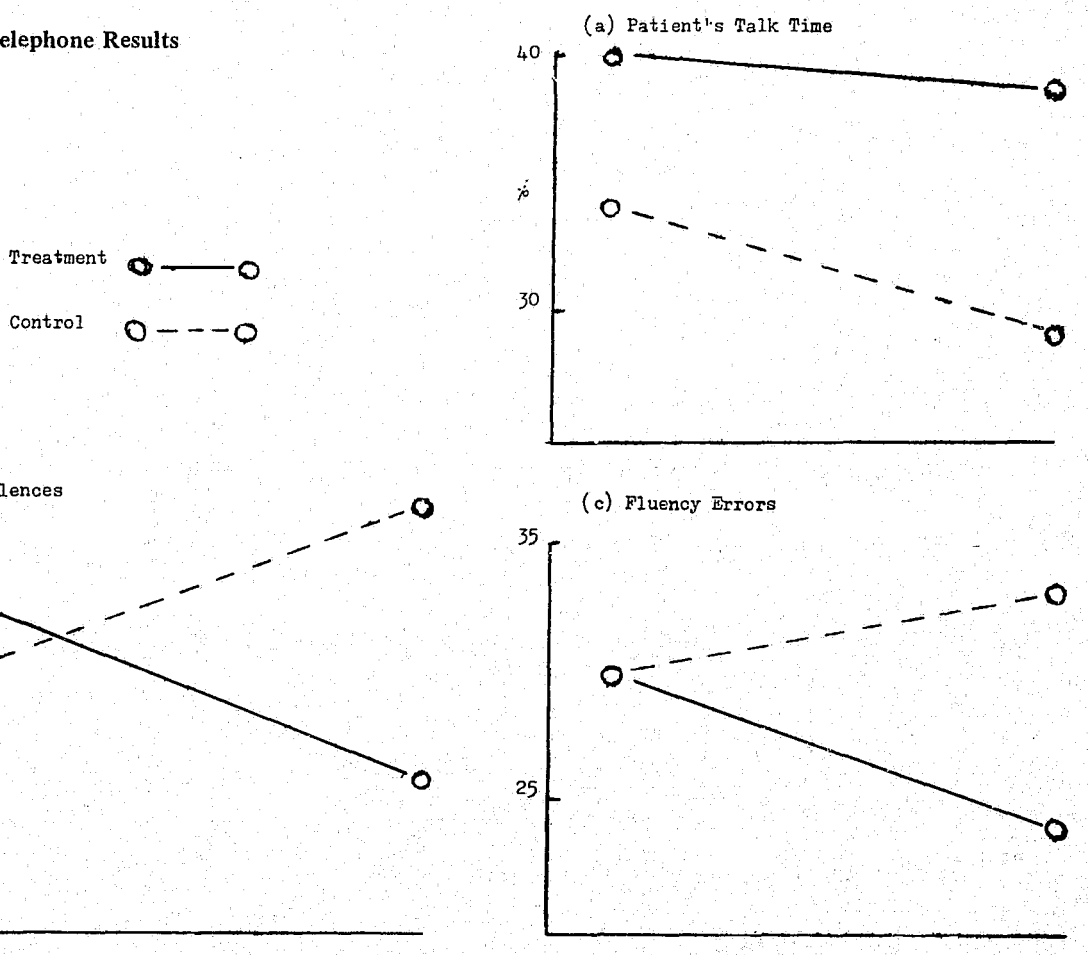


Figure 8: Telephone Results



the video assessments, we must conclude that the treatment group have been effective in encouraging the person at the other end of the phone to talk more thus filling the silences, without talking any more themselves. Finally, graph (c) shows the number of fluency errors, during the conversation. One can see a decrease for the treatment group and an increase for the control group.

In summary then I believe that I have clearly demonstrated that a structured behavioural social skills programme is effective in bringing about improvement in patients social behaviour in a variety of situations and assessed by a variety of measures. Moreover, such a programme was acceptable to the patients and felt to be of value.

Two problems remain. Firstly, aiding generalisation to more real-life situations. Most other researchers in the field of social skills have reported this as the biggest problem, even when they are doing outpatient work, and therefore one can see that the problems are multiplied many times over when dealing with patients in Broadmoor. We simply do not have the opportunity to expose them to real-life situations.

The second problem is how does one decide what are appropriate and inappropriate social behaviours? At a basic level there is not too much of a problem. For example, if the patient is speaking so quietly that he cannot be heard, it is fairly reasonable to conclude that this is inappropriate and teach him to speak louder. However, when we come on to the finer points of conversational technique in asking a girl out, there are undoubtedly large variations across social classes. For example, I was told only the other day by someone who went out for the evening with her daughter to a discotheque, that the socially acceptable technique for asking for a dance is almost the exact opposite of what we have been teaching our patients. You apparently walk across avoiding all eye contact, look as casual and disinterested as possible, do not smile and, if you are one of the verbal ones, utter the single word 'dance'. Whilst the ones with only average verbal skills simply tap you on the shoulder and jerk their head in the direction of the dance floor. Suggestions as to how such 'skills' can be incorporated in a treatment programme will be most welcome.

Acknowledgements

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I should also like to acknowledge the help of Eric Wright and Brigid MacCarthy who acted as stooges during the assessment programme.

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11. The potential of self control training procedures in the treatment of sex offenders

by Michael Lee-Evans

The purpose of this paper is probably more modest than others presented in this symposium – simply to outline the considerations which have led me to an interest in applying self control training procedures to the problem of modifying sexual interest with male sex offenders at Rampton. I should make it clear from the start that this paper does not describe any ongoing research programme as exploratory work with these treatment procedures is only about to begin. My main purpose is presenting this paper is that it will, I hope, indicate to others the direction of my research interests in this area.

Rationale of approaches towards self control training

Kanfer & Phillips (1970) define the process of self control as one in which a person alters the probability of a behaviour occurring, by changing the variables which has controlled its occurrence in the past. In other words, by becoming more aware of the various factors which influence his own behaviour and by taking steps to modify these, the individual exercises increased control over his own actions. For example for an individual to modify his smoking habits he must become more aware of the situation and circumstances which are associated with his smoking behaviour and take steps either to modify these (for example by avoiding the situations in which he is likely to smoke or by asking acquaintences to stop offering him cigarettes) or to make the consequences of smoking aversive for himself (for example by self-imposed fining), and the consequences of resisting temptation rewarding.

In the clinical situation self control procedures are characterised by the therapist's concern not to directly influence the patients behaviour himself but to do so indirectly by teaching the patient to monitor carefully his own behaviour and to develop skills necessary to effect change. An example of an early approach towards self control training is found in a report of the use of faradaic aversion therapy by McGuire and Vallance in 1964, in which the authors instructed their patients in the theory and practice of aversion therapy and then gave them portable electric shock equipment to allow them to systematically selfadminister aversion therapy outside the clinical situation. Though this particular procedure seems to have neglected explicit instruction in some of the basic procedures involved in self control which will be outlined, it does represent an example of an attempt to teach patients in the use of a specific self controlling response. Such an approach contrasts with the more traditional use of aversion therapy in which treatment is confined to a clinical setting and shock is directly administered by the therapist to the patient who plays a relatively passive role.

One of the more systematic analyses of the processes involved in self control is provided by Kanfer (1971) who identifies three basic related processes involved in self controlling behaviour; these are self monitoring, self evaluation and self reinforcement. Each of these processes, as well as a repertoire of specific self-controlling responses necessary for disrupting established response chains and for prompting more appropriate responses, is required for the individual to exercise self control in modifying established habit patterns.

Self Monitoring refers to the process of becoming aware of the circumstances under which the behaviour to be controlled occurs – of the environmental cues that prompt it and of the behaviours which lead up to it. Bergin (1969) in describing the use of a self-regulating procedure in teaching a patient to inhibit his homosexual behaviour, points out how homosexual responses had become so habitual, that the sequence of actions which typically preceded the patients homosexual behaviour were initially unnoticed and unattended to by him. Self monitoring is considered a necessary process not simply as a means of helping identify the various factors which influence the target behaviour but also as a means of providing feedback with which the patient can evaluate his progress in developing effective controlling responses. It is notable that some element of self-monitoring is usually a component of most 'traditional' behavioural approaches.

Self Evaluation refers to the process of being able to recognise when behaviour is appropriate or inappropriate – i.e. the patient must be able to evaluate his behaviour accurately – to recognise a certain action is likely to lead to inappropriate behaviour and to use this as a cue for exercising specific self controlling responses.

Self Reinforcement is closely linked to self evaluation but requires that the individual is capable of reinforcing himself appropriately following the execution of self controlling responses. It is noteworthy that in this respect self control behaviours are seen as being subject to the same principles of reinforcement as other classes of behaviour.

Finally the individual must have within his behaviour repertoire appropriate specific self controlling responses. Kanfer (1971) outlines a number of types of controlling response which the individual can learn to inhibit an inappropriate behaviour. Two of these are particularly relevant to the following discussion. These are:

(i) the development of competing responses

This might involve the individual in taking steps to avoid or to restrict the situations in which the inappropriate behaviour occurs. Thus Goldiamond (1965) describes how one of the strategies followed in dealing with an overweight patient's 'compulsive eating' was to have him systematically dissociate eating from other activities with which it had become linked, for example watching television or reading. An alternative approach might have a patient use the initial part of a response chain as a stimulus for engaging in a competing response. Thus Bergin (1969) encouraged his homosexual patient to engage in competing nonsexual thoughts or actions, the moment he became aware of showing interest in another male.

(ii) Bringing the aversive consequences of the tempting response into play prior to the completion of the behavioural chain. An example of this procedure is found in the use of covert sensitisation, which will be considered below.

The potential use of self control training procedures as methods for helping patients learn to modify their sexual interest, seems worth exploring for a variety of reasons. Firstly the approach has a certain 'face' validity. As Thoreson & Mahoney (1974) point out, the ability to exercise self control is considered one of the hallmarks of socialisation and certainly many of the characteristics associated with delinquent adjustment (for example inability to defer gratification, a history of inconsistent reinforcement during childhood) can be conceptualised in terms of deficiencies in the development of self controlling behaviours. Moreover, if the patient can be taught those skills necessary to help him modify his own behaviour, this may be a step towards overcoming some of the difficulties associated with the generalisation of the effects of traditional behaviour therapy procedures outside the clinical situation. (Gruber 1971). As Kanfer (1970), perhaps rather enthusiastically remarks

> 'ultimately most patients leave therapeutic supervision. It is apparent that training in self control can help not only to shorten the therapeutic process but also to maintain and extend the changes initiated in therapy'.

However interest in investigating the potential usefulness of self-control training procedures was prompted, not solely on these perhaps rather speculative grounds, but also after consideration of some recent behavioural techniques which have been used to modify deviant sexual interest and which place emphasis on the importance of modifying deviant sexual imagery, particularly masturbatory fantasy. For some of these techniques can be described as involving training in self control.

This emphasis on modifying deviant sexual fantasy originated largely as a consequence of the role that sexual fantasy, particularly masturbatory fantasy is considered to play in helping form and maintain the patient's deviant sexual behaviour. Bancroft (1974) indicates that this was first emphasised as long ago as 1892. However the premise that masturbatory fantasy is important in maintaining deviant interest and therefore deserves specific attention in treatment procedures, has been more recently expounded by McGuire et al (1965) who suggests that the orgasm experienced during masturbation provides the critical reinforcing event for the conditioning of the deviant fantasies accompanying masturbation. McGuire et al drew upon several case histories for evidence in support of this hypothesis. Further tentative evidence has also been provided by Annon (1971) and Evans (1968). McGuire et al argue that the implication of this hypothesis for treatment procedures is that these should be directed towards modifying the patient's sexual fantasies. A number of investigators have in fact used aversion therapy to suppress deviant imagery (e.g. Marks & Gelder 1967) whilst others have attempted to encourage patients to develop normal sexual fantasies by deliberately masturbating to heterosexual rather than deviant pictures or imagery (e.g. Thorpe et al (1964)). However probably the most systematic method for modifying masturbatory fantasies is that described in 1970 by Marquis and called 'Orgasmic Reconditioning'. Briefly this procedure requires the patient to gradually substitute normal heterosexual fantasies for deviant sexual fantasies by masturbating first to deviant imagery then, shortly before orgasm, substituting instead normal heterosexual imagery. Once the patient can do this successfully, he

is then required to substitute the normal heterosexual imagery at slightly earlier steps in the masturbatory sequence, until he can successfully masturbate with satisfactory sexual arousal to normal heterosexual imagery alone. At the same time the patient is instructed at all cost to avoid masturbating to orgasm with deviant sexual imagery. Marquis reports that this procedure was successful in bringing about some degree of increase in heterosexual interest in 13 out of 14 patients. Marshall (1973) also reports the successful use of this procedure, but in combination with other methods. However in recent study Conrad & Wincze (1976) point out that whilst there have been a number of case studies reporting the effectiveness of orgasmic reconditioning, these do not permit any definitive conclusions about the specific effects of this procedure, since they typically suffer from a variety of shortcomings; these include exclusive reliance on the patient's self report to evaluate outcome and confounding specific treatment effects by combining orgasmic reconditioning with other treatment procedures. Conrad & Wincze report a study in which the effects of orgasmic reconditioning are monitored using measurements of penile circumference changes and daily 'diaries' of the frequency of sexual urges, as measures of physiological and behavioural arousal respectively. The results make them less optimistic about the effects of orgasmic reconditioning for they found that the subjective accounts of improvement reported by their patients were not reflected in the behavioural and physiological measures.

Orgasmic reconditioning can be conceptualised as a self control training procedure in two major respects:

1. It places the onus for behaviour change firmly on the patient himself by drawing his attention to the importance of developing skills that will help him modify his masturbatory practices;
2. It directs him towards learning a specific controlling response, in this case substituting a competing response (i.e. normal sexual imagery) in the behavioural chain which previously led to the positive reinforcement of deviant imagery. However, Kanfer (1970) and others have emphasised that to be effective as a controlling response, a competing response should be substituted early rather than late in the established response chain. This would lead one to predict that the orgasmic reconditioning procedure should be more effective if normal heterosexual imagery is substituted near the beginning rather than at the end of the masturbatory sequence.

This suggestion is also made by Annon 1973 though on slightly different grounds. He points out that orgasmic reconditioning does not take account of the fact that the sexual act involves a number of conditioning trials many of which may take place to the deviant fantasy prior to the final inclusion of the appropriate fantasy. Annon describes the use of an alternative procedure in which the patient is taught to shape his existing deviant sexual fantasies in successive approximations to normal sexual fantasies. For example if a paedophilic patient's sexual fantasies involve mutual masturbation with a young girl, he might be instructed to gradually change this fantasy to involve females of older ages, until he could derive sexual arousal from imagining the act with a mature female. At this stage the fantasy would then be shaped further to include other heterosexual behaviours. This procedure has a certain resemblance with the stimulus fading procedure described by Barlow and Agras (1973) though it is not clear to what extent their patients were instructed to actively modify their sexual fantasies during treatment, the main feature of which involves fading from an arousing picture reflecting deviant interest, to a non arousing heterosexual picture, in sufficiently gradual and small steps to ensure the sexual arousal is maintained. A more similar procedure is described by Bancroft (1974) in which a patient is first of all required to become sexually aroused by concentrating on deviant sexual fantasies and then to gradually modify these fantasies so that they become more normal, but in such small steps that sexual arousal, monitored by penile plethysmograph, was maintained. Both Annons and Bancroft's procedures can be conceptualised as involving training in self control skills and, on theoretical grounds, may have an advantage over orgasmic reconditioning insofar as they involve training the patient to substitute a competing response earlier in the masturbatory sequence.

Covert sensitization is another relatively recent behavioural procedure which has been used as a method for inhibiting deviant sexual interest and which also involves the modification of sexual imagery. Briefly, it involves guiding the patient through a training programme in which he is required first to fantasise a deviant sexual activity and then to immediately associate this fantasy with unpleasant or aversive imagery. For example, a male paedophilic patient might be instructed to create an arousing deviant fantasy involving approaching an attractive young boy in a park with a view to molesting him. Once this fantasy became clear he would be instructed to switch immediately to a fantasy which he found particularly aversive, for example the boy vomiting over his face and clothes etc. The successful use of covert sensitization in inhibiting

deviant sexual interest has been reported in a number of case studies (e.g. Kendrick & McCulloch 1972). Barlow et al (1969), (1974) have provided evidence to suggest that the effects of covert sensitization are dependent upon the pairing of the deviant and noxious imagery (and therefore cannot be explained in terms of extinction) and also that the effects cannot be accounted for by expectations which patients might develop as a result of therapeutic instructions. In a systematic comparison of faradaic aversion and covert sensitization, Callahan & Leitenberg (1973) found both procedures effective in inhibiting deviant interests, with some indications that covert sensitization was possibly more effective in suppressing subjective measures of sexual arousal.

When covert sensitization was introduced by Cautela in 1967, he conceptualised it as an aversive punishment procedure, whose main advantage lies in its avoidance of some of the ethical and practical difficulties which can be associated with chemical or faradaic aversion. However, at this stage he did reflect that one of the reasons for its effectiveness lay in the possibility that it gave patients a sense of control over their feelings. In a more recent paper describing the use of covert sensitization in the treatment of sexual deviants, Cautela & Wisock (1971) place more emphasis upon covert sensitization as a means of training in self control and indeed see the failure of certain patients to practise covert sensitization as a self control technique outside the treatment situation, as one reason why the procedure might be ineffective. Despite the emphasis placed on the importance of treating covert sensitization as a procedure in which the individual is taught self controlling skills, it is noteworthy that several investigators make no explicit reference to this in their account and indeed Cautela himself places no explicit emphasis on the self monitoring, self evaluative and self reinforcement functions which Kanfer and others would argue are necessary for the formation and maintenance of controlling responses. This lack of emphasis may possibly be accounted for by an adherence to a traditional aversion therapy rationale, one which simply emphasises the role of aversive imagery as providing another means of 'punishing' deviant imagery. However, if we are to consider covert sensitization as involving training in a self controlling response, one might expect it to be more effective when it is conducted within a therapeutic procedure which emphasises its importance as a self controlling response (that must be practised outside therapy) and which also emphasises the importance of self-monitoring, self evaluation and self reinforcement. One might also add that the effectiveness of the pairing of aversive imagery with deviant imagery may not be due simply to the punishing role of the former. In fact covert sensitization can be seen as providing training either in the production of a competing response that simply disrupts an established behaviour chain, of which deviant imagery is a part, or as a method of bringing forward aversive consequences in the response chain, – thus instead of allowing the patient to associate deviant imagery with gratification he is encouraged to associate it with possible aversive consequences. That the procedure could operate in either of these two ways is suggested in an experiment by Foreyt & Hagan (1973) who found that covert sensitization was just as effective in the management of overweight patients as a 'control procedure' in which patients were encouraged to disrupt imagery associated with appropriate eating patterns, with nonaversive but distracting imagery. As Elliott & Denney (1975) suggest the covert sensitization procedure may have been effective because it involved training the patient in a thought-blocking or substituting skill which he could then use to block imagery which might be part of a response chain associated with an inappropriate eating habit. Elliott & Denney themselves found covert sensitization to be no more effective in producing weight loss in overweight patients than a control procedure which involved self monitoring of eating habits and weight loss. This tentatively suggests that it may be as much the emphasis on self monitoring as on any self controlling response of producing aversive imagery, which was effective in this particular case. Such a finding is not so surprising when one considers that, in certain cases, self monitoring alone may be sufficient to produce behaviour change (Thoresen & Mahoney 1974).

Procedures for training in self control

The foregoing considerations have led to an interest in exploring the effectiveness of treatment programmes which consist of two basic components:

(i) instructing the patient in self monitoring, self evaluation and self reinforcing procedures; and

(ii) involving him in covert sensitization or fantasy shaping procedures presented to the patient as methods of developing self controlling responses which he should practise outside treatment and also implement whenever he begins to engage in deviant imagery.

These two basic components can be more fully described as follows:

(i) General orientation towards self controlling functions.

(*a*) *Self monitoring function*

Here the patient would be first encouraged to recognise the role of deviant sexual imagery generally, but particularly during masturbation, in maintaining deviant sexual interest. He would be instructed to keep a diary of the daily record of the frequency with which he engages in such imagery, the situations in which these occur and the events that might evoke them, with a view to helping him to become more aware of the various environmental conditions or behaviour patterns which might lead to deviant imagery and associated masturbatory behaviour.

(*b*) *Self evaluation and self reinforcement functions*

Here the patient would be instructed to use his daily diary to help him monitor and evaluate his progress in exercising controlling responses which might help him avoid deviant sexual imagery and help him increase the relative frequency of normal heterosexual imagery. Explicit self praise or self criticism would be encouraged in interviews in which the patient reviews his progress.

(*c*) *Self controlling functions*

Patients would be instructed generally to take steps to (a) restrict the stimulus situations which lead to deviant imagery (for example by avoiding childrens television which have previously been sources of excitement) and correspondingly to increase his exposure to similar situations which might provoke normal heterosexual imagery. He would also be instructed to exercise the specific controlling response in which he has been trained whenever he finds himself beginning to engage in deviant imagery.

(ii) Specific training in self controlling responses

At the same time the patient would be involved in either covert sensitization or fantasy shaping procedure conducted according to following principles:

(*a*) *Covert sensitization*

This would differ from procedures of covert sensitization described by Cautela in one main respect: as our patients can find it difficult to produce arousing fantasies in the laboratory situation, the patient would be first presented with an attractive picture and instructed to incorporate the subject of this in a deviant fantasy. Similarly once the patient indicated arousal, the attractive picture would then be replaced by a noxious picture (previously pictures of syphillic sores have been found to be most effective) which would be used as a stimulus for aversive imagery.

(*b*) *Fantasy shaping procedure*

Again, in order to make it more easy to create a fantasy in a laboratory setting, this procedure would combine aspects of Barlow & Agras' (1973) stimulus fading procedure describes by Bancroft (1974) and Annon (1973). Specifically, the patient would be presented with an attractive picture reflecting his deviant interest and instructed to engage in an attractive sexual fantasy involving that picture. Fading would then take place either by (i) gradually fading from the presentation of the 'deviant' picture into the presentation of a normal heterosexual picture and/or by gradually altering the content of fantasy so that it includes normal heterosexual activities. This procedure would adhere to the same principle advocated by Barlow & Agras and by Bancroft that fading should take place in sufficiently small steps to ensure that sexual arousal (monitored by penile plethysmography) is maintained.

Research Directions

To date I have explored only on a limited scale the use of the self monitoring and self evaluation procedures but less systematically than described above. Whilst these procedures do seem to have some beneficial effect with a small number of patients, it is the difficulties experienced by some patients that has included a need to be more systematic in introducing such procedures and to supplement them with training in specific self-controlling responses. Consequently I am only just beginning to explore the use of the covert sensitization and stimulus fading training procedures outlined above. From these comments it will be clear that what work we are doing is still very much at the stage of developing 'treatment packages' and of determining whether they result in any treatment effect at all. At this stage it is the intention to explore the effectiveness of the 'treatment package' involving fantasy fading procedures with those patients who show relatively weak or absent heterosexual interests, whilst the 'package' involving covert sensitization would be intended for those whose deviant sexual interest persist alongside heterosexual interest. Clearly our future concern should be not simply with demonstrating treatment effects but with isolating the various components of the treatment procedures and comparing these to assess their relative

effectiveness, using group comparison methods. Although a number of different comparisons might be made, it would probably be useful for an initial study to be concerned with comparing three different treatment conditions with a no-treatment control group:

(i) instruction in self monitoring, self evaluation and self reinforcement alone;
(ii) covert sensitization in combination with self monitoring instructions etc;
(iii) fantasy shaping in combination with self monitoring instructions etc.

Such a comparison would allow one to assess (a) whether specific training in self controlling responses using covert sensitization and fantasy shaping added substantially to the effects of the instructions in self monitoring etc. and (b) the relative effectiveness of the covert sensitization and fantasy shaping procedures in training self controlling responses. (Such a comparison would be interesting because both procedures can be seen as sharing a common component – i.e. training in 'thought substitution' to interrupt deviant imagery, but achieve this by different methods). In such a study, it would be necessary to make some attempt to match the patients treated by each method on relevant variables such as intelligence, previous heterosexual experience and relative strength of current heterosexual interest.

Finally, the methods that we have used so far for assessing sexual interest have included the use of penile plethysmography in assessing sexual orientation and attitudinal measures, based on the semantic differential technique. However, we are in the process of developing two further measures which might also be used in future work. These are:

(a) frequency counts of the occasions on which patients attend activities where they might interact with the opposite sex and a time sampling technique for recording the extent to which interaction takes place. This work has been undertaken primarily in connection with the evaluation of a social skills training programme, but might also be used in connection with evaluating to what extent modification of a patient's sexual interest is associated with his making more use of opportunities to interact with females.
(b) An attitudinal measure (based on Rotter's concept of locus of control (1966)), intended to measure the extent to which patient's see their problems and the solution to these as originating in their own actions or in the actions of others or fate or luck etc.

Previous studies have related this attitudinal dimension to various indices of maladjustment and there are some indications that improved adjustment is associated with an increasing expectancy that future reinforcements are determined by one's own actions (Joe 1971). Certainly one would expect patients who do benefit from procedures intended to teach them self controlling skills, to show an increased expectancy that their own actions will be instrumental in helping them regulate their sexual interests.

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12. Drugs and the treatment of sex offenders

by Dr T. Gavin Tennent

As an introduction to this review of some of the work carried out at Broadmoor between 1969–72 I would like to make it clear that I do not believe that drugs are the only possible form of treatment for sex offenders, although I would maintain that in selected cases they may have a role, often whilst other methods of treatment are being employed. This paper represents the work of a number of people and my main responsibility has been co-ordination. Dr John Bancroft and Dr Frances Murray of Oxford and all the doctors at Broadmoor, where the study was carried out, were involved and this was very much a joint project with them. The nursing staff, in particular Mr Ratray and Mr Cass were also extremely co-operative in helping to make sure that the trials ran smoothly.

This was very much a consumer orientated project. Shortly after the research unit was opened at Broadmoor I was approached by one of the RMO's about a patient who was petitioning the Ministry of Health, as it was at that time, for a castration operation, the research unit was asked to find out what we recommend or suggest. Hence the research was conducted in response to a clinical enquiry and was not something that was initiated by the research unit.

The treatment of sex offenders presents many difficulties. The well known study of Radzinowicz and MacClintock showed that in general the probability of a first time sex offender being convicted of a further offence is very small, so the prognosis for the group as a whole is good whatever the treatment given. There is however an important group of cases in which offences are repeated and are of an exceedingly grave nature. Recidivist sex offenders and those committing more serious sexual offences attract long prison sentences and some of these offenders find their way to the Special Hospitals even though they are not psychotic. Their long term detention is often related to anxiety about the commission of similar offences on discharge. Assessment of results of treatment is especially difficult in the setting of long term detention, as it is well known that sexual practices and behaviour depend on cultural and environmental factors that alter when the culture and the environment are changed. Problems therefore arise for this group in evaluating the most appropriate form of treatment and in assessing the effectiveness of treatment in whatever form it is given. Psychological treatment may produce a more normal pattern of sexual behaviour but is of value in only a small proportion of cases. Currently most reliance is being placed on methods which aim to reduce sexual behaviour in general. Castration is not only unethical but is excluded as it is irreversible and results achieved from it unpredictable. Oestrogens have been widely used and appear to be particularly effective when the behaviour pattern is an overtly sexual one but side effects such as nausea, vomiting, and feminisation are often a problem in the management of these cases. A number of tranquillizers have been reported as being potent libido reducing agents, thioridazine, fluphenazine enanthate and in more recent years a butyrophenone, benperidol. Currently most interest is centred around an anti-androgen, cyproterone acetate which is described as and has now been fairly definitely shown to be, a potent libido reducing agent.

Because of the interest shown in these drugs the Research Unit in co-operation with the staff at Broadmoor and the Professorial Unit at Oxford set out to try and investigate to what extent such drugs might be useful in the treatment of sex offenders at Broadmoor. The assessment of such drugs is not an easy matter. Changes in sexual behaviour may follow the use of many drugs particularly if such an effect is anticipated by the subject. Furthermore in the assessment of offenders there is the inevitable problem of estimating the validity of the subjects' reports. The final test of effectiveness is the subsequent behaviour of the individual living in the community but obviously such experimental procedures cannot be carried out unless there is a reasonable degree of certainty that the drugs used are effective. Trials were therefore carried out using a number of different preparations. The aim was to try and achieve a double blind comparison with a control drug which on the one hand did not produce libido reducing effects but on the other did produce similar side effects. We also tried to use measures of change relevant to the deviant sexual behaviour that were not entirely dependent on the subjects reports. The details of the methods used have been described in published articles.

We used changes in penile diameter, the levels of plasma testosterone, and luteinising hormone (LH), in the second trial follicular stimulating hormone (FSH) was also measured.

Table 1 shows some characteristics of the individuals included in the first trial. They were a fairly young group of individuals and very active sexually because one of the criteria for inclusion was a very active sexual life both in terms of arousal during physiological testing and in terms of masturbatory activity. The majority of the subjects had had a substantial number of previous convictions, mostly serious. If you define a paedophile as an adult sexually interested in people under the age of 16 years then all the sample were paedophiles. There were both heterosexual and homosexual paedophiles. There were twelve individuals and three treatment conditions in the first trial. The three treatment conditions were benperidol, a placebo, and chlorpromazine. The subjects were on each of these treatments for a period of six weeks.

Table 2 compares the pre-treatment period with a non treatment period which we introduced into the design. The measures used were a sexual interest – as measured on a self rating continuous line scale, a sexual activities score whereby the subjects rated the number of times they had masturbated during the previous week, a sexual attitude score using a semantic differential technique and two psychophysiological measures one in which the subjects were asked to imagine previously described fantasies and look at material which they had chosen previously as being sexually arousing, and another in which they were shown a one minute extract of a film. One of the concerns was that repeating the same procedure, for example looking at the same film more than once, might produce a lesser response merely because it was familiar. Table 3 shows the comparison between the pre treatment and placebo phases and there are no differences. Table 4 shows the differences between the three different treatments, placebo, chlorpromazine and benperidol. There are no significant differences except in the self rating in the frequency of sexual thoughts so we concluded that the libido reducing effect of benperidol was rather weak and unlikely to be sufficient to control serious antisocial sexual behaviour. The other problem with benperidol was the side effects it caused. Every patient was given orphenadrine with each treatment (benperidol, chlorpromazine, and placebo) but even so drowsiness and extra pyramidal side effects were frequently reported with benperidol. Table 5 shows that there were no plasma testosterone or luteinising hormone differences between the three treatments.

Table 1: Drug Trial No. 1. Patients treated

Patient	*Age*	*Years in Hospital*	*Most Recent Offence*	*Number of Previous Convictions*	*Age of Victim*	*Sex of Victim*
1	[illegible]	3½	Rape	3	4–13	Female
2	46	5	Buggery	6	8–16	Mainly male
3	26	2½	Indecent Assault	5	9	Male
4	34	6	Buggery	6	7–13	Male
5	45	1½	Indecent Assault	2	6–11	Male
6	29	4½	Indecent Assault	0	10–12	Male
7	56	3	Buggery	3	13	Male
8	26	1 month	Buggery	2	7–16	Male
9	32	3½	Rape	2	13	Female
10	26	3½	Indecent Assault	2	9–10	Female
11	37	1 month	Att Buggery	1	11	Male
12	21	1 month	Att Rape	5	7–13	Male & Female

Table 2: Drug Trial No. 1. Comparison of pre-treatment and no treatment periods

	Pre-Treatment	*No Treatment*	*Difference*
Sexual Interest Self-Rating	3.25	2.59	t = 1.492 NS
Sexual Activity Score	5.37	3.75	t = 0.987 NS
Sexual Attitude Score	6.97	8.75	t = 0.898 NS
Erection to Fantasy and Slide	2.18	2.94	t = 1.432 NS
Erection to Film	4.01	5.23	t = 0.37 NS

Table 3: Drug Trial No. 1. Comparison of pre-treatment and placebo – group means

	Pre-Treatment	*Placebo*	*Difference*
Sexual Interest Self-Rating	3.25	2.34	t = 1.586 NS
Sexual Activity Score	5.75	2.33	t = 1.714 NS
Sexual Attitude Score	6.97	8.76	t = 1.255 NS

Table 4: Drug Trial No. 1. Group mean scores

Measure	*Initial Testing*	*Placebo*	*Chlorpromazine*	*Benperidol*	*F. Ratio df 2,22*
Sexual Interest Self-Rating Score (0–5)	3.25	2.34	2.65	1.73	F = 5.67 p = < 0.025
Sexual Activity Score (Frequency Count)	5.38	2.33	3.17	1.33	F = 2.5 NS
Sexual Attitude Score (4–16 range)	6.97	8.76	7.09	9.99	F = 5.1 p = < 0.025
Erections to Fantasy and Slide (Combined) (mm/increase/diam)	2.18	2.15	2.10	1.53	F = < 1.0 NS
Erections to Film (mm/increase/diam)	4.0	4.37	5.58	5.35	F = < 1.0

Table 5: Plasma testosterone and LH levels in Study 1 (means ± SD)

	Pre-Treatment	*Placebo*	*Chlorpro-mazine*	*Benperidol*	*F ratio and P value (between treatments)*
Testosterone (ng/100 ml) (n = 12)	604 ± 186	714 ± 242	769 ± 284	677 ± 280	F 2.22 = 1.0 NS
LH (mu/ml) (n = 12)	12.2 ± 4.3	11.4 ± 4.0	13.5 ± 4.8	11.7 ± 3.9	F 2.22 = 2.7 NS

NS – not significant

The first trial was very useful in that we were able to sort out many snags. We then went on to look at the effects of cyproterone acetate which we used in a dose of 50 mg bd and ethinyl oestradiol 01 mg bd.

Table 6 shows some of the characteristics of the individuals involved in the second trial and again these were basically a very young group of offenders, with a fairly large number of previous sexual offences and again they are predominately paedophiles but this time we did include some individuals who prefer older subjects. In the second trial we did not use a placebo, we had a no treatment period instead. With hindsight I think this was a mistake. Table 7 shows that there is no significant difference between the drugs, in terms of reducing the frequency of sexual thoughts and activity. Only when on cyproterone acetate was any effect in reducing erectile responses to erotic stimuli observed. One of the problems with these trials is that the physiological measures that we used are those which show least change and are the ones which are least subject to individual variability. We can see from Table 8 that the cyproterone acetate produced a reduction in plasma testosterone, luteinising hormone and in follicular stimulating hormone. Ethinyl oestradiol produced a rise in plasma testosterone which is rather a strange incidental finding really. Frances Murray, who did all the work on this, says that the unexpected effects of ethinyl oestradiol are attributed to an increase in sex hormone binding globulin (SHBG) leading

to a rise in bound inactive testosterone. Direct measurement of this showed 2–3 fold rise in the ethinyl oestradiol treated group, whilst there was no change with cyproterone acetate, but in both drugs there was a significant change in the levels of these circulating hormones.

Table 6: Drug Trial No. 2. Patients treated

Patient	*Age*	*Years in hospital*	*Most recent offence*	*Number of previous sexual offences*	*Age of victims*	*Sex of victims*
1	24	3½	Indecent assault & attempts to choke	1	10	Male
2	22	9 months	Attempted buggery & indecent assault	2	14–18	Female
3	26	4 months	Attempted murder (Sexual element)	15	15+	Female
4	31	6 months	Rape & Indecent assault (24 offences taken into consideration)	4	17–23	Female
5	19	3½	Rape	7	50	Female
6	34	3½	Indecent assault (15 offences taken into consideration)	7	6	Female
7	26	2	Rape, wounding with intent	4	20+	Female
8	25	1½	Indecent exposure	7	18+	Female
9	25	5½	Indecent assault	4	6	Female
10	28	2	Assault – occasioning actual bodily harm, use of weapon	3	20+	Female
11	27	1	Manslaughter (sexual element)	8	13+	Female
12	26	2½	Attempted rape	5	10–21	Female

Table 7: Drug Trial No. 2. Group mean scores

Measure	*Initial Testing*	*No Treatment*	*Ethinyl Oestradiol*	*Cyproterone Acetate*	*F Ratio d.f. 2,22*
	Mean	Mean	Mean	Mean	
Sexual interest Score (0–5)	2.89	2.9	1.58	1.67	F = 9.44; P = < 0.001
Sexual activity Score (frequency count)	2.83	3.0	1.29	0.79	F = 6.87; P = < 0.01
Sexual attitude Score (4–28 range)	6.66	7.24	9.68	10.28	F = 1.91; NS
Response to erotic stimuli					Between conditions
(a) Self-ratings (0–5)					F = 6.68; p = < 0.01
Fantasy	2.33	2.33	1.42	1.17	
Slide	3.0	2.17	1.42	1.0	
Film	3.67	3.58	2.75	2.25	
(b) Erections (mm. incr. diam.)					Between conditions
Fantasy	1.57	3.99	1.47	1.91	F = 4.45; p = < 0.025
Slide	4.17	3.96	2.33	2.04	
Film	4.93	5.54	5.43	4.97	

Table 8: Plasma testosterone, LH, FSH, total oestrogen and sex hormone-binding globulin (SHBG) levels in Study ii (means ± SD)

	Pre-treatment	*No treatment (a)*	*Ethynyl oestradiol (b)*	*Cyproterone acetate (c)*	*(groups with significant P values)*
Testosterone (ng/100 ml) (n = 11)	848 ± 308	842 ± 325	1242 ± 461	321 ± 144	P < 0.01
LH (mu/ml) (n = 11)	14.2 ± 4.3	14.3 ± 4.0	21.1 ± 7.9	10.5 ± 5.7	P < 0.01
FSH (mu./ml) (n = 11)	10.6 ± 5.3	9.3 ± 5.4	9.3 ± 5.0	6.0 ± 1.3	P < 0.05
Total oestrogen (ng/100 ml) (n = 11)	13.7 ± 5.3	12.5 ± 4.4	11.9 ± 5.3	10.8 ± 3.1	–
SHBG x 10^{-8} mol/l (n = 11)	5.1 ± 1.7	4.6 ± 1.6	11.2 ± 3.0	4.2 ± 1.0	P < 0.01

NS – not significant

These experiments seem to have a number of clinical implications but I want to re-emphasise my original point that drugs should not be seen as the only treatment for sex offenders but that they may be useful as a part of a programme for reducing and altering the sexual drive. These results also suggest that in future sexual drive may be measured and assessed with a greater degree of certainty than is available at present.

13. An overview of the Seminar

by Dr J. H. Bancroft

Thank you very much for allowing me into your ranks because I found the meeting very stimulating and informative and I have been very encouraged as an outsider at much of the enthusiasm and research that is going on within the Special Hospitals. I hope it will continue. My task is to overview the symposium. The three themes that seem to have mainly occupied the meeting have been (i) what is a sexual offence and what do we understand by sexual motivation?; (ii) how can we assess sexual offenders, their sexual preferences, responses and the extent that they change?; and (iii) what methods of treatment are appropriate to that population?

What is a sexual offence?

This question was asked by the first three speakers Mrs Parker, Dr Fowles and Mr Walmsley, and it is clearly important for a number of reasons. Firstly to make the law more appropriate, and we all hope that the Criminal Law Revision Committee is effective in its current task to achieve this. There is and has been for a long time, I would suggest, confusion in the way the law is formulated and applied. There are three things to consider – the specific type of sexual act, the type of interpersonal transaction that is involved in that sexual act, and the impact that the sexual act may have on the social group within which it occurs. If we take the second of those, the kind of interpersonal transaction, there is good agreement that it should be an offence when one individual is assaulted, or is forced by means of physical violence, to submit to a sexual act unwillingly, or is exploited because of a weakness such as personality or age, by another person for sexual purposes. We may argue about such things as the precise age of consent, but it is unlikely that there would be very much disagreement about the general principle of protection. The importance that should be attached to the particular type of sexual act however is another matter, as is the impact of sexual behaviour on society. Attitudes and values are changing and I think it is timely for us to reappraise this aspect of the law.

One of the functions that has been given to the law or perhaps that the law takes upon itself, is the maintenance of certain standards. When you look at the debate that has been going on about homosexual acts and homosexual age of consent for example, you see that much of the argument for maintaining a different age of consent stems from the idea that young people should be protected from developing homosexual tendencies and that the law should contribute to that protection. The fact that the law has permitted homosexual acts between adults has therefore contributed a certain confusion. On the one hand it is saying homosexual behaviour between adults in private is all right, on the other hand it is saying we must discourage people from doing this by preventing the development of that kind of interest. The fact that the operation of the law relating to the age of consent is, in my view, extremely unlikely to have any bearing on whether people develop homosexual preferences is another matter. I think we have really got to consider whether we should be using the law to discourage people from behaving homosexually regardless of the type of homosexual relationship involved. Then there are particular forms of sexual behaviour that are singled out for special treatment for reasons that are no longer very clear on rational grounds. Buggery is an obvious example. It gets very special treatment and evokes very special horror in the courts and, as Mr Walmsley outlined, particularly heavy sentences are meted out. Why we should single out buggery from other types of sexual contact, regardless of the type of interpersonal transaction, is not at all clear. Perhaps it stems from the middle-ages and the fear of witches; when buggery or sodomy was considered to be something that went on between witches and the devil. If so I am not sure that this is a rational basis for our present law on buggery. Let us hope that the recommendations of the Working Party of the Royal College of Psychiatry will have an effect and there will be changes for the better.

Turning to the protection of the social group, I think it is reasonable to say that the social system needs sexual behaviour to be controlled. Sexual behaviour should be conducted in relative privacy, if not it may have a disruptive effect on social groups. If this is accepted can we justify the very different values attached to public sexual behaviour between homosexuals and heterosexuals? As Mr Walmsley pointed out, one is an indictable offence the other is not and is rarely heard about. We must be clear about what it is we are trying to control with the law and what we are trying to achieve. I was particularly heartened to hear from Mr Walmsley about the research he is carrying out and I look forward with great interest to hearing the results of that study.

Sex is a very complex form of behaviour mainly because there is a rather special interaction between biological, social and psychological factors. There is no doubt at all in my mind that to understand why people behave sexually in particular ways requires not only a developmental analysis, up to that time but, as our Chairman has mentioned in making predictions about the future, an allowance for a continuing developmental process. Even though there are likely to be key periods in an individual's development, sensitive periods if you like, when important patterns of behaviour are established, you cannot put people into static categories at any point in their life-span when you are considering their sexuality.

There has been a tendency to look for simple solutions to explain sexual behaviour. Dr Fowles and Dr Price reminded us of the futility of that approach by showing us that there are no simple associations between sex chromosome abnormalities and patterns of sexual behaviour in adults. This of course should not surprise us, but it was nevertheless somewhat disturbing to have someone in the audience suggest that this labelling of people as chromosomally abnormal may have a considerable bearing on how they are treated and managed. I think that is a note of caution we should take very seriously. Why should patients be admitted more readily to Rampton if they are shown to have an XYY karyotype, if indeed this is the case?

When we impart our own values to the development of sexual behaviour, we are probably looking for the incorporation of sexual responses and drives into our diadic interpersonal relationships. Such incorporation is a complex process which happens more smoothly in some people than others and in quite a few doesn't seem to happen at all in that sex remains detached from their pattern of diadic interpersonal relationships. There are many social processes that operate against this incorporation, for example the encouragement of men to use sex as a way of exercising dominance and control over women, or the 'machismo' culture in young male adolescent groups where the so-called 'homosocial' processes operate to make heterosexual behaviour a means by which males assert themselves one against the other. Difficulty in bringing sex and diadic relationships together may make it more difficult for the individual to control or manage his sexual feelings and his behaviour may move into the realm of sexual offences. This is where we need to consider what it is that underlies this poor control, why it is that some people have sexual fantasies and feelings which are quite abnormal or different from the rest of us but don't get into any trouble, whereas others do. This leads on to the more specific question that was raised several times – when is behaviour motivated sexually? Normal sexual behaviour has several purposes or goals. There is the need for orgasmic release from a state of heightened sexual arousal. To behave sexually in order to simply experience pleasurable sensations, is similar though not the same as the need for orgasmic release. Sexual contact is also a way of getting close to another person. Sometimes it is a way of exercising control and exerting power over people, it may even be a way of humiliating or acting out hostility against other people. A mixture of such factors has no doubt influenced many of us in our sexual encounters during our sexual careers. Similarly such factors influence our sex offender too and need to be taken into consideration when we try to understand the nature of a particular offender's motivational system.

The involvement of violence is another complexity. Some people develop a pattern of erotic responsiveness to violence, in which a violent stimulus arouses them sexually and this plays a part in sadistic types of sex offences. Alternatively violence may stem from anger or frustration in the sexual encounter e.g. being unable to perform properly sexually. Sometimes, particularly after orgasm has occurred, the humiliation to which this uncontrolled behaviour has exposed the sex offender may be a cause for anger.

One of the most puzzling aspects we have to consider, which most often strikes us when we are dealing with exhibitionists, is when the person gets into a difficult situation which doesn't have any obvious bearing on sex at all, becomes upset or worried and for reasons which are often far from clear goes out and commits an offence such as indecent exposure. In some cases the obvious appeal for punishment that may be involved by offending in this way, gives us some insight into why these acts occur, but on the whole they remain, I think, some of the more puzzling of the motivational aspects of sexual offences.

Mr Howells in his paper, introduced a very useful approach to these other aspects of sexual motivation and I hope very much that he continues with that line of research. What one has to remember of course, is the need to combine these interpersonal processes with the more biological ones if we are to understand how such factors as dominance lead to particular types of relationship. It would be helpful to know how such a process becomes charged with an erotic stimulus quality. Can it be explained in terms of orgasmic conditioning as some of you have mentioned or

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are there other mechanisms which sexualise and then serve to perpetuate the behaviour in a semi-sexual form?

So just as the biological explanation, looking for chromosomes or hormones to explain why people behave in the way they do, is far too simple, so the sociological approach, (remembering the very many interesting and valuable ideas put forward by sociologists such as John Gagnon about social learning and social development of sexual behaviour) is also inadequate because of the difficulty in bringing in the biological component. What we should be working towards is an approach which enables us to bring in all these factors in a useful and constructive way.

Assessment

Both Dr Hinton and Mr Cliffe had interesting ideas and work to report in the field of assessment; again I hope this work will continue. Their papers raise a very fundamental point which I want to stress, but with which they may not agree. They are trying it seems, and I can remember very clearly sharing this approach at an earlier point in time, to look for objective ways of evaluating an individual's sexual response, and sexual preferences, which will not be distorted by faking or concealment of information. Obviously one of the first approaches to try is the use of physiological measures and Mr Cliffe has introduced an ingenious alternative to that. I think we should really question whether their methods are likely to succeed. There is no doubt in my mind that the best way to find out what a person finds most interesting sexually is to ask him, or her, but in order to get valid information there needs to be a good relationship based on reasonable trust, mutual respect and good communication. I do appreciate that working in a Special Hospital, in the prison service, or in any part of the forensic service may make it difficult to achieve these requirements, but the question is can they be replaced or substituted with alternative methods. I personally doubt it. What is more, I hope that we don't arrive at such a method which is successful. The whole notion of lie detectors worries me and the prospect of having a laboratory, computerised no doubt, where people can be moved through, have their sexual fantasies checked and be passed out the other side, horrifies me. That is not to say that the methods that these two papers described are not worth pursuing or will not be valuable; to me their main value lies in the ways in which they may facilitate the otherwise interpersonal communication that goes on between the subject and the professional investigator. There is no doubt in my mind that using physiological techniques does enhance, in terms of clarifying points, what is otherwise a good and trusting relationship. It enables you to do a much more meaningful behavioural analysis of what is going on, it facilitates communication, enables you to give feedback to the patient of what his responses are, often helps the patient or subject to clarify something about his own responses. So, added to what is basically a person-to-person relationship, I think these techniques can be of considerable value.

To take perhaps the most interesting finding from Dr Hinton's work, the difference between the response of the offenders and non-offenders to rape film, I think that is something well worth pursuing to try and work out what is actually happening in those people when they respond in that way. But in order to do that effectively I think you need to get into the right sort of relationship with the patients to get the appropriate information. I also think physiological techniques are useful as measurements in comparative studies of the kind that Gavin Tennent mentioned, where again the patients should be involved positively and constructively in the enterprise. Physiological measures should be seen as one variable in a multi-variate method of assessment. Perhaps more emphasis, more 'head-on' research, more attention needs to be paid in Special Hospitals to try to reduce the likelihood of faking, the need to conceal, or the lack of trust, rather than finding ways round them.

Methods of treatment

This morning Dr MacCulloch dealt with psychological methods of treatment, what some of us would now call behavioural psychotherapy, which is a very lively voguish branch of sex therapy at the moment. Recently it has moved towards a position where the emphasis is very much on positive methods and a multi-faceted approach to treatment for the individual. This has been referred to particularly by Mr Crawford, and several others of you as well have stressed this need. Certainly Mr Crawford's paper is very much in the spirit of this new ethos in sex therapy. What about aversion therapy? This is rather more problematic. There is no doubt that Dr MacCulloch and his colleagues have produced some very striking results with aversion therapy; but looking at the situation as a whole I think it is becoming increasingly difficult to support aversion therapy in preference to other types of techniques either on the grounds of effectiveness or on the grounds of general acceptability, particularly where you are talking about building up alternative methods of sexual behaviour. If aversive techniques have any place now, and I think they do have some

place, it is very much in the field of self-control that Mr Lee-Evans was concentrating on, and it is the word 'self' which is the important one.

Mr Lee-Evans really brought out two absolutely fundamental issues about treatment in this area which are of great importance for you people in the Special Hospitals to consider. First of all, the importance of responsibility for change being with the patient, and secondly, accepting that most of the important changes that go on, go on outside your specific treatment session. Now Malcolm MacCulloch did report such within session changes, and they don't surprise me at all. In fact I react to his report by saying it really is time that we moved away from seeing methods of psychological treatment as methods of influencing people by keeping them in a state of suspended animation except while they are being treated. The things that go on in a treatment session between a therapist and patient may be important, but are only one set of factors operating in a whole host of things going on in that patient's life. What happens between sessions is of crucial importance. A fundamental aspect of recent behavioural psychotherapy, particularly in the field of sex therapy, is the attention being paid to what is going on between treatment sessions, the understanding of the difficulties the patient is having in carrying out the appropriate behaviours, the setting of appropriate target behaviours, getting the patient to go off from the session and carry them out, analysing carefully and finding ways of helping him achieve the correct behaviour. Techniques such as aversion, covert sensitisation and so on, have a place in providing, often in ways we do not adequately understand, tools and material for the individual to make use of in the real world. This is why this notion of self control is very fundamental to what you are trying to do. I would say the same in respect of most psychological methods of treatment.

You have problems in applying this format in the Special Hospital setting for two reasons. First of all this type of therapy requires a particular type of therapist/patient relationship, one of trust, respect between two adults where one is offering expertise and knowledge, in order to help the other carry out certain tasks. In other words, the helping relationship is not necessarily the traditional doctor/patient relationship. When a person is considered ill then responsibility for that person may be taken over, but the traditional counselling relationship is not necessarily in a medical setting. When the responsibility is laid in the hands of the subject or patient there must be feeling of mutual trust and respect and if you haven't got that I would suggest that these psychological methods of treatment will not be effective. I think the case that John Gunn showed illustrates that point far more clearly than I could have hoped to. The second point is that in order for that change to come about there has to be the appropriate opportunities for behaviour change outside the treatment session and obviously you have problems that you are well aware of with these institutionalised patients. Nevertheless there will be some behavioural changes that can be brought about within the institutional setting as was shown by the social skills project, and what is more how a person copes with this sort of approach within the institution may tell you a great deal, about how they will cope, with this sort of help, once they get outside the institution. Such a technique could therefore form a very important first part of an on-going treatment programme that continues, or should continue, once the patient is outside the institution.

Finally, just a brief word about drug treatment. John Gunn's tape illustrates quite beautifully the dilemma which faces the forensic psychiatrist. If we accept for the moment that there are drugs such as cyproterone acetate which are effective in controlling sexual behaviour they can be used within the sort of adult/adult type of relationship that I have described and can be a useful adjunct to the types of psychological treatment that I have been talking about too. However, if you are in the position where you feel that you have to impose the drug on the patient for the protection of society, regardless of what the patient wishes, you are in a different 'ball game', and you are talking about social control, not medical treatment. The point that I would make, I hope not too critically, of John Gunn's tape, is that in writing to the court he was talking about the need for his patient to have medical treatment and he was putting under the heading medical treatment -- not only psychotherapy, quite justifiably I believe, but also the need to control this man with drugs. I think that should not be called medical treatment it should be called social control by drugs. Regrettably it is undoubtedly necessary on occasions, but such use has to be subjected to all the care and caution that is used in applying other types of social sanction and control such as imprisonment. Otherwise we are in danger of sliding surreptitiously into a state where medical treatment gets abused in ways which we have watched with great anxiety in other countries of the world. Therefore, it is important, although very difficult, and I do appreciate the difficulties of the forensic psychiatrist in this respect, to try and avoid blurring this distinction between our proper therapeutic relationship and the use of drugs and medical expertise to exercise control by society on any individual.

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