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ON THE 'CAREERS' OF SEX OFFENDERS IN THE WESTERN AUSTRALIAN  
PRISON POPULATION.

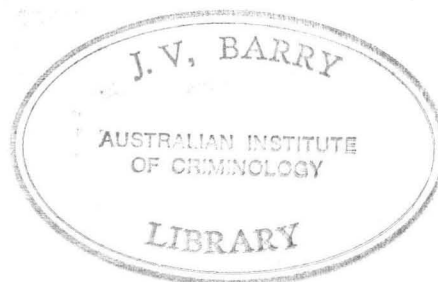
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## INTRODUCTION

As part of a larger study of the 'criminal careers' of institutionalised offenders in Western Australia, this report describes the incidence and recidivism of offenders imprisoned for sex crimes. In particular we concentrate on the offence of rape or sexual assault as it is now more broadly defined in the revised Western Australian criminal code (the revision was effective from 1986). We are able to measure the prevalence of this offence more readily than that of other sexual offences, as records of reports to police are available and some estimates of victimisation are possible. Indecent assault, sexual relations with children (those under 16 years), incest, and wilful exposure are also examined here in relation to the criminal careers of incarcerated offenders but we are less certain of the extent of these crimes and of how representative a population of incarcerated offenders may be. Reference will also be made to homicide offenders, by way of comparison, where the problems of case loss and non-custodial sanctions are minimal.

Despite the relatively few serious violent offenders found amongst prison populations, there is no doubt that their impact on public attitudes to crime and penal policy in general is profound and significant. Public fear and concern is largely conceived in terms of personal crime and violence (see for example Indermaur 1987). In particular public fear, especially the female public's fear of the recidivist or

repeat sexual offender or violent offender warrants special attention to the prevalence and frequency of these events.

Criminologists have tended to play down these fears (unsuccessfully one might add) on the grounds that the available research has stressed the rarity of these offences and especially the low likelihood of repetition. Yet the fear of sexual and violent crimes can be very limiting on the quality of life of women; and has even been described as 'irrational' because it does not appear to relate to objective rates of actual victimisation (see Mugford 1984, Junger 1987, and Box et al 1988). In a recent study of attitudes to crime in Perth as many as 75% of women reported feelings of being afraid if out alone at night in the city (Indermaur 1987). Some scholars have implicated the selective reporting of the media in the amplification of fear of crime in attempts to account for the difference between perceived and actual risk of victimisation (see for example, Skogan and Maxfield 1981). In reality the likelihood of sexual victimisation may not be as rare and the fear as irrational as supposed even if risks are negligible for some (depending on age and situational factors).

Relying on official statistics clearly limits measurement of the extent of criminal behaviour. Various studies of the victims of sexual offences show that while rape/sexual assault is relatively infrequent compared to other offences, most instances go unreported, and perhaps about four times

as many offences actually occur as are reported to authorities (Amir 1971, Australian Bureau of Statistics 1979, 1986, and Hough and Mayhew 1983). Although such high levels of under-reporting are not peculiar to sexual offences alone (they are also common to offences such as assault, robbery and theft), there are also significantly higher levels of less serious sexual offences such as wilful exposure (Kapardis, 1984), obscene telephone calls (Pease, 1985), personal crimes in general (Worrall and Pease 1986) and other 'incivilities', that approach the commonplace in the lives of women (Junger 1987). Undoubtedly the frequency of these lesser 'sexual assaults' contributes to the fear of crime amongst women. Thus while sex offenders make up a very small proportion of all known offenders their impact is substantial and oppressive.

A link between the fear of sexual crime and the recidivism of sex offenders is the notion that such crimes are committed by specialist 'undeterred' offenders who account for most of the predatory crime of this nature. At the risk of oversimplifying, this presupposes sexual crimes are aberrations caused by pathological individuals ('beasts of lust') who are by definition unusual - hence identifiable in some way. One revived policy response to this problem is to anticipate such behaviours and employ incapacitation strategies to reduce the opportunity for reoffending; that is, imprisoning repeat sexual or habitual offenders for longer terms (eg. Floud 1982 and others).

An important question must then be: how typical and frequent is the specialist repeat sexual offender and can we predict him? While the clinical literature gives detailed case examples of such specialist or compulsive behaviours and their treatment (eg. Green and Stuart 1983, Marshall 1979, Abel 1982, see also "Archives of Sexual Behaviour" etc.) we are unable to assume that these pathological behaviours are representative of offenders who commit sexual offences - indeed the proportion of known offenders undergoing such treatment is in the minority (Marques 1980, Sturgeon and Taylor 1980, Borzecki and Wormith 1984, Marshall and Barbaree 1988). Nevertheless evidence for the view that incarcerated offenders represent a substantial proportion of the potential offending population is warranted given the number of offences self reported by offenders. For example Radzinowicz (1957) found in his sample (n=509) of mostly first time convicted sexual offenders that some 55% had at least one self-admitted unrecorded report of sexual crime, while 10% had 5 or more additional but unrecorded sexual offences. A number of American studies have confirmed these higher levels of unrecorded offending amongst prisoners (eg. Chaiken and Chaiken 1982, Groth et al 1982, and Rolph and Chaiken 1987). The authors are unaware of any self report studies of Australian adult prisoners, although such information is currently been gathered from sex offenders undergoing treatment in Western Australian prisons. From personal communication it is understood that similiar unrecorded offending has been reported. A 'triangulation' of

victim self report, offender self report and official reports may provide the best estimate of the hidden crime rate but no such current investigation is known to the authors.

#### PREVALENCE AND THE INCARCERATED SEX OFFENDER

This report focuses on adult male offenders imprisoned for sex offences and follows their reincarceration over time. We attempt to estimate the risk of repetition and describe how it varies according to race, age, sentence duration, previous record and so on. In order to relate this specially selected population of offenders to the wider context, we review the available information on the prevalence of sex offences through police, court and prison records, taking note of the attrition of cases from initial report to incarceration. We have relied on published records to estimate attrition, as continuous case records across the criminal justice system are not available. Thus we rely on annual counts from each agency, and problems of comparison arise due to varying counting rules and definitions. While these signal the possible lack of representativeness of incarcerated sex offenders they do not detract from the need to adequately summarise what information we have on known sex offenders. The central question in this study is: how likely are these offenders to repeat sexual or other violent offences? We discuss now the difficult question of how representative of all sex offenders these prisoners may be.

The prevalence of sex offences and other offences has in the

past been variously estimated by victim surveys which attempt to measure the 'true' extent of crime by interviewing random samples of the population. In Western Australia such estimates can be derived from the crime victim survey undertaken throughout Australia in 1983 by the Australian Bureau of Statistics (A.B.S. 1986), involving 1/3 of one percent of the population over age 15. Questions relating to sexual assault in this survey were confined to females over the age of 18 which significantly underestimates the incidence of such events since those under the age of 18 are frequently victims. Sexual assault, including threats of as well as actual sexual assault, was defined in this survey as, "any incident of a sexual nature considered by the respondent to be forced upon her" (A.B.S. 1983: 2). Victimization rates based on this definition were estimated nationally to be in the order of 5 per 1,000 persons per annum (the rate in Western Australia was estimated to be 7 per 1,000 persons) with an estimated 26,700 victims per annum nationally or 3,100 victims per annum in Western Australia.

Based on raw data provided by the Bureau, 30% of these reports related to rape or attempted rape and 29% of all reports related to verbal threats only; but as few as 28% of these offences were reported or became known to police. A factor in this may have been the fact that in 42% of the sex incidences reported, the offender was known to the victim and furthermore most (79.5%) were related in some way. In

Western Australia the proportions were higher for rape (46%) and reporting to police (36%), but lower for the proportion reporting only verbal threats (21%). Experience of victimisation was also sensitive to age (ages 20-29 were most at risk), to place of residence, (more prevalent in large cities), to socio-economic status (higher educated more at risk), and to marital status (single/separated more at risk).

These proportions and rates must be treated with considerable caution, as the estimates are based on very small numbers of cases. Only 18,000 households were interviewed by the A.B.S. and only 84 respondents reported a sexual assault. (In a similar sized survey population of 16,000 households in Britain only one incident was reported to interviewers, Hough and Mayhew 1983). Thus estimates are subject to substantial standard error and to possible biases due to sampling and reporting inconsistencies. Nevertheless we may use these proportions to calculate the annual number of rape/sexual assault occurring in Western Australia during the early 1980's and thus 'guesstimate' the 'hidden' or unreported extent of crime. Discounting verbal threats and sexual assaults not regarded as rape or attempted rape by respondents, we estimate approximately 513-853 victims (over the age of 18) by these means. Of these, approximately 143-238 report to police. Table 1 below summarises cases reported to Western Australian police since 1963. As can be seen from this table, reports to police around 1983-84 were considerably lower than our estimate, although by 1984-85



the reported number more closely matches the expected figure.

The A.B.S. survey also found that only one in four of sexual assaults reportedly occurring to female respondents were reported to police. We may assume that official records substantially underestimate the prevalence of these offences (see also The British Crime Survey for similar data, Hough and Mayhew 1983). The precise extent of under-reporting remains a matter of speculation, controversy and 'guesstimate', in part due to problems such as the character of offence definitions used in victim surveys and problems of recall (see Turner 1981). While the estimates of the incidence of sexual assault do vary (eg. the 1982 British Crime Survey estimated that the sexual assault rate was about 1.6 per thousand per annum compared to the 5 per thousand estimated in the Australian survey of 1983), the percentages not reporting offences seem reasonably constant (ie only about a quarter report) in British, U.S. and Australian studies.

Corroborative data provided by a specialist medical service for rape victims (the Sexual Assault Referral Centre) records that 42% of its clients were referred by police but as this service is metropolitan based, has low utilisation rates by Aboriginal women, and all referrals are not officially reported it is assumed this figure overstates police reporting. In addition some 69 victims of the 310 who have visited the clinic in the past year (1987-88) referred

themselves for assistance for assaults that had occurred prior to the reporting year. If we include these cases then the proportion referred by police falls to about a third of all referrals.

Table 1 summarises rape/sexual assault cases reported to Western Australian police since 1963, adjusted by removal of "unfounded" reports to ensure comparable counting rules. This table also includes the number of reports 'solved' by charge (plus percentage cleared), the number of offenders involved in the clearance of a reported case by charge, and the number of adult offenders eventually incarcerated. The percentage incarcerated does not count the number of juveniles (under 16 years of age), as no separate record is available for those in 'juvenile prisons'. Table 1 shows that there has been a 22 fold increase in reports and a 9 fold increase in offenders over the period 1963-1988. Controlling for population size we still observe a radical increase in reports as follows:

CENSUS YEAR	REPORTED RAPES PER 100,000 FEMALES	OFFENDERS CHARGED PER 100,000 MALES
1966	2.19	4.21
1971	6.58	5.67
1976	9.93	8.25
1981	15.54	5.44
1986	30.57	14.80

While there has been a very substantial increase in the

number of rape/sexual assaults reported to police, we cannot assume that this necessarily reflects a real or actual increase in the offence rate. The willingness of victims to report and of police to record has from all accounts greatly increased, but much of the evidence for this is poorly documented and no estimates are available in Australia. Police recording practices have been shown to vary widely from constabulary to constabulary (McCabe and Sutcliffe 1978), and can contribute in themselves to apparent increases in crime rates. Thus there has been a tendency to discount increases based on official statistics. Certainly even small shifts in the willingness of victims to report, and/or improved or less discretionary recording practices by police would contribute significantly to official increases. Possibly the charge rate, which shows a less clear but nevertheless steep increase particularly since the introduction of wider definitions of sexual assault, better reflects behaviour, but we have no way of confirming this. We see no compelling reason however to discount these official figures so completely as to negate an increase in prevalence. To do otherwise, and argue for stasis since the 1960's, would at the very least require a very substantial suppression of reporting or frequent over reliance on extra-legal interventions for which we have little or no evidence.

It is worth noting that the population of Perth has grown very substantially since 1963 and it can no longer be

regarded as a large provincial town. Increases in crimes of violence or against the person are more readily associated in the literature with the ecology of the large city. Attitudes to gender and sexual relationships have also changed over the ensuing years and may have significantly increased both the opportunity and risks of sexual assault. In any event some changes are reflected in the recording (including police attempts to circumscribe recording) of the offence irrespective of how this may reflect the 'true' or hidden prevalence of the offence.

The total number of sexual assault/rape cases reported to the police during the period for which we follow up incarcerated offenders (between June 1975 to June 1986) was 1,541, of which 372 or 24.1% were classed as 'unfounded' by police. Of the 1,167 actual offences known to police during this period, 654 (56%) were cleared by arrest/charge. These involved 759 distinct persons charged with rape/sexual assault. Of these a number were not convicted or received non-custodial orders. As reports to police include offences by juveniles and we are unable to identify the precise number of juveniles incarcerated

TABLE 1. TRENDS IN THE NUMBER OF RAPE/SEXUAL ASSAULT OFFENDERS KNOWN TO POLICE BY YEAR (INVOLVED IN CLEAR UP).

	reports adjusted (1)	cleared by charge (2)	% (3)	offenders charged (U16) (4) (5)	adults imprisoned (6)	% (7)
1987-88	274	164	60	154 (16)	36	26
1986-87	221	121	55	109 (17)	30	33
1985-86*	163	88	54	78 (10)	26	38
1984-85	163	76	47	90 (18)	26	36
1983-84	73	39	53	44 (6)	35	92
1982-83	87	59	68	71 (5)	35	53
1981-82	82	32	39	35 (7)	27	96
1980-81	98	54	55	50 (8)	19	45
1979-80	84	40	48	62 (12)	-	-
1978-79	62	40	64	77 (13)	- n.a.	-
1977-78	56	40	71	57 (9)	-	-
1976-77	44	34	77	48 (14)	-	-
1975-76	40	31	77	38 (1)	-	-
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1974-75	43	36	84	61 (10)		
1973-74	31	28	90	42 (7)		
1972-73?	31	31	100	33 (2)		
1971-72	33	30	91	30 (4)		
1970-71	15	6	40	11 (2)		
1969-70	9	7	78	9 (0)		
1968-69	5	5	100	8 (0)		
1967-68	3	3	100	5 (1)		
1966-67	9	7	78	20 (3)		
1965-66	9	9	100	18 (5)		
1964-65	10	7	70	7 (0)		
1963-64	4	4	100	5 (0)		

\* Denotes changes to the criminal code abolishing the offence of rape and replacing it with the offences of sexual assault and aggravated sexual assault.

Notes: (1) 'Unfounded' reports were removed - they varied from as much as 53% of all reports in 1976-77 to as few as 8% in 1987-88. (2) The number of reports leading to the offender(s) being charged. (3) The percentage of reports cleared by charge. (4) The number of offenders charged. (5) The number of offenders under 16 years charged. (6) The number of adult offenders imprisoned - data prior to 1980 is not available for distinct persons. (7) The percentage of those charged who were incarcerated after removing juveniles (under 16) from the count.

specifically for this offence we calculate case attrition from charge to incarceration based on adult prison records. To add to our difficulties in reconciling these figures our population of 285 incarcerated rape offenders includes only those released from prison. Those not released on their first offence at the cut off date 30/6/87 have been excluded from the data base and consequently our population cannot be expected to coincide exactly with the data reported by police over this period.

In summary, the best we can do is to compare the number of prisoners received for rape on an annual basis for the period 1980-88 (n=234) against the number of offenders charged (n=607) less the 87 offenders under the age of 16 who if convicted would serve time in a juvenile facility and conclude with an estimated overall average adult incarceration rate of 45%, with annual rates varying very widely from 26% in 1987-88 to 92% in 1983-84. These incarceration rates are somewhat higher than the 27-32% eventually incarcerated in the studies of the attrition of rape cases reported by Polk (1985) and Wright (1985).

If to this analysis we add the information from annual reports of higher court proceedings, the problem of estimating attrition becomes even more complex. We lack the detailed information for instance on multiple offences or multiple offenders (or combinations thereof) and there is a lag effect produced by differing annual counting rules. Furthermore attrition can be calculated by losses arising

from either the unsolved, unfounded or unreported events, or more conventionally from the population of known offenders, compared with the numbers of charges in court and to convictions and incarcerations. According to available system wide records summarised in Table 2 we have unexplained case losses even allowing for lag and varied counting rules. Clearly calculation of attrition based on this data lacks precision and reliability; still it may serve as a useful guide. Court statistics show that a very high proportion of convicted offenders are incarcerated, and that about three quarters (76.6%) of those eventually charged are in fact convicted. (It is worth noting that in contested 'rape' trials the conviction rate is much lower at approximately 55% in Western Australia, (see Scott 1988)).

TABLE 2. CASE ATTRITION OF RAPE/SEXUAL ASSAULT IN WESTERN AUSTRALIA

YEAR	conf. reports	cleared by charge	offenders involved	charged court	convicted (nos prison)	prison
	1	2	3	4	5	6
87-88	274	164	154	74	57(46)	36
86-87	221	121	109	79	58(56)	30
85-86	163	88	78	57	41(40)	26
84-85	163	76	90	50	36(36)	26
83-84	73	39	44	53*	47(43)	35
82-83	87	59	71	not collected		35

\* Lag effect presumed; as Higher Court statistics record only those charges completed in a given year, some charges commenced in a previous year are carried forward.

1. Confirmed reports to police less 'unfounded'. 2. Reports cleared by charge; 3. The number of offenders involved in reports cleared by police. 4. The number of offenders charged with aggravated sexual assault in higher courts in the same year. 5. The number convicted by court and in brackets the number sentenced to prison terms. 6. The number of adult offenders received (by major offence) in prison in the same year.



Table 3 below briefly summarises Higher Court data for sex offences other than 'rape'. Higher court proceedings are the only data available that distinguishes for these. Very high conviction rates are recorded in these statistics with nearly all of those charged for carnal knowledge or incest being convicted. The lowest annual conviction rate for incest was 82% and for indecent assault was 77%.

TABLE 3. HIGHER COURT CONVICTIONS - OTHER SEX OFFENCES

	1988*	1987	1986	1985	1984
carnal knowledge	)	5	6	11	5
	9)				
incest	)	14	8	4	9
indecent assault	14	19	19	14	17
other sex offences	3	15	14	20	17

\* A.B.S. classification changed in 1988 with carnal knowledge and incest joined under the heading 'sexual offences - consent proscribed' and indecent assault classed as 'sexual assault'.

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Data published in Police Annual reports group all sex offences other than rape/incest, together. In the reporting year 1986-87 police recorded 1,516 sex offences other than rape and charged 573 offenders a small number of whom found their way to higher court proceedings.

To summarise: we can with confidence presume that offenders convicted of rape/sexual assault are imprisoned but we cannot justifiably generalise beyond this group. Nevertheless, given the higher frequency of offending reported by incarcerated sex offenders and the fact that the

majority of those charged by police are convicted, we speculate that incarcerated sex offenders represent a substantial proportion of all serious sex offenders. But there remains a significant 'unknown group' who remain undefined.

#### THE STUDY POPULATION AND PREVIOUS ANALYSIS

The subjects in this study are derived from a large computerised prisoner record file comprising all prisoners released for the first time from Western Australian prisons between July 1 1975 and June 30 1987 - some 16,433 cases. General recidivism probabilities and statistical analysis of some aspects of this data have been described in previous work (Broadhurst et al 1988, Broadhurst and Maller). Recidivism probabilities, defined as return to prison for any offence, were found to be about 75% for male Aborigines and 45% for male non-Aborigines with considerably shorter times to return to prison for Aborigines.

Offenders convicted and imprisoned for sex offences as their major offence at any stage of their 'careers' make up about 3.9% (n=571) of the study population.

It must be stressed that even though these estimates of recidivism control for the potential bias associated with censored data, they are conservative because they fail to take account of imprisonment in other jurisdictions, mortality, juvenile offences and non-custodial interventions. Furthermore as the prison record file only

counts the major offence per term of imprisonment (defined as the offence receiving the longest sentence), a number of sex offences, especially less serious sex offences, will be under enumerated.

The recidivism percentage (return to prison for any offence) estimated in Broadhurst and Maller (1988) for prisoners convicted of serious offences on their first offence (i.e. incest, rape, homicide) was about 34% for male non-Aborigines and 78% for Aborigines. Thus probabilities of return for these more serious offenders were lower for non-Aborigines and about the same for Aborigines, as in the whole population.

#### PREVIOUS STUDIES OF SEX OFFENDER RECIDIVISM

In Australia, Burgoyne (1979) examined the proportion recidivating after five years, of 644 Victorian prisoners released in 1972 in 1973 following conviction for homicide, assault, robbery and rape. In his study, 115 offenders convicted and imprisoned for rape were followed up for five years, and at the cut off date 58.3% had at least one subsequent conviction while 31.3% had been convicted of 'violent' offences. Burgoyne failed to adequately control for periods of incarceration affecting follow up, and prior record.

Broadhurst et al (1988) calculated recidivism probabilities using 'failure rate' analysis (which removes the bias arising from censoring or varying follow-up time) for sex

and homicide offenders released for the first time and followed up for periods of up to 9 years. Recidivism was defined as any return to prison. Homicide category offenders (driving causing death, manslaughter, wilful murder etc) were found to have a recidivism rate of 19% (standard error 7%; n=99) for non-Aborigines and no reliable estimate could be made for the 20 Aboriginal cases found. Sex offenders in general (including indecent dealings, aggravated assault, rape, carnal knowledge, incest etc.) were found to have a recidivism rate of 30% (standard error 7%; n=184) for non-Aboriginal prisoners and 75% (standard error 7%; n=107) for Aboriginal prisoners. Specifically rape or attempted rape recidivism was estimated at 23% for non-Aborigines (n=64) and 55% for Aborigines (n=46). In a later study follow up was extended to up to 12 years (Broadhurst and Maller) and for rape /attempted rape and incest offenders, similar rates of recidivism were found for non-Aboriginals of 21.5% (n=119) but were calculated to be much higher for Aborigines at 83.8% (n=68). (This was again failure following first release). As with the previous estimates the standard errors were high; for example the 95% confidence interval for Aborigines was between 58% - 89%.

These estimates described the recidivism for any return to prison for these first timers by grouping broad classes of behaviour (ie. carnal knowledge or wilful exposure was treated in the same context as rape or incest) and did not look for repetition. In the present study we account for these factors and describe and analyse all cases of sex

offences found in the data.

A number of other studies have followed up the 'careers' of sex offenders. Some have relied on police arrest records, others prison or court records, and no study has used offender self report (as far as the authors are aware). All these studies as well as our own share shortcomings in relation to the accurate tracking of offending behaviour through official records. We have not found studies of recidivism which have attempted to use failure rate analysis to estimate the probability of 'homologous' recidivism. Most studies have noted the importance of long follow-up but seldom do they adequately address the differential effect of prior record on the probability of recidivism. Problems of censored data (controlling for bias resulting from variation in time at risk) and differences in recidivism arising from the prior records of sex offenders are better managed in the failure rate (Weibull mixture model) analysis employed here. The application of this analysis is reported below following a description of the data but even with a data base of the size here, the population of sex offenders is relatively small when broken down by key factors such as age, race and prior record, and this imposes limitations on full exploitation of the method.

A number of studies from other jurisdictions are worth noting for comparative purposes. Soothill and Gibbons (1976) followed up for 22 years a sample of 86 English rape offenders (including attempted rape) convicted in 1951. Of

these, 13 subsequently went on to commit further sex offences of whom 5 repeated the offence of rape - a further 14 committed other crimes of violence against the person. Only 44 had no record of further convictions. It should be noted that in this sample 60 had prior records and 14 had prior sex offences. In a later study Soothill and Gibbons (1978) examined the reconviction records of a sample of 174 offenders convicted in either 1951 or 1961 for offences of rape, incest and unlawful sexual intercourse with girls under the age of 13. As with their previous study, many in this sample had previous records (46%) and 15% had prior records involving sex or offences of violence. They followed up this select group for 12 to 22 years and found that 67 had been reconvicted (for 'standard list offences'), 27 for a variety of further sexual offences plus a further 5 for crimes of violence.

In this study Soothill and Gibbons were at pains to address the under-enumeration of recidivism rates that occurs when insufficient account is taken of the need for long follow up and the offenders' actual times at risk. They contrasted their work in this regard with that of the large study of Christiansen et al (1965). By applying 'life-table' methods to take account of time at risk they were able to estimate a reconviction probability of .48 for 174 cases of serious sex offenders (reconvicted for any 'standard list' offence), and .23 for reconviction for sex or violent offences. Methods that did not take account of 'time at risk' cumulative

percentage failure would have returned estimates of 38.5% (67/174) and 18.5% (32/174) respectively. Nevertheless despite this improvement Soothill and Gibbons do not adequately account for the differential effect of prior record on confounding rates of recidivism. They do correctly stress that short follow-ups are much more likely to result in significant under-enumeration of sex offenders, since reconvictions continue to occur long after release.

The large Danish study of Christiansen et al (1965) followed up also for 22 years 2,934 prisoners released from prisons between 1929-1939. Only 88 were specifically identified as 'rapists' and of these 13 (11.6%) committed further offences of a sexual nature (4 for rape again) and in all 28.4% had returned by the end of the follow-up. Incest offenders of all forms (n=394) had the lowest recidivism rates for any offence. Those committing paternal incest had the highest repetition rate (5.2%) and fraternal incest the lowest with one case repeating (1.3%) among sex offenders. Generally, recidivism for all sex offences was 24.3% for any offence and 9.7% for repeating, but indecency with minors (33.3%) and women (22.9%) had the highest percentages of repetition in this population.

In the United States, Romero and Williams (1985) followed up for up to 10 years 231 adult sex offenders placed on probation in Philadelphia in the late 1960's, of whom 48 were exhibitionist and 39 pedophiles. The remainder were convicted of sexual assault including what we class as

carnal knowledge. Of this sample 168 (73%) had prior arrests and 61 had arrests for a sex offence of whom 26 (11%) had committed rape offences. In terms of arrest following the probation intervention, 26 (11.3%) of the sample were re-arrested for further sex offences; 15 of the 144 sexual assaulters, 3 of the 45 pedophiles, and 8 of the 31 exhibitionists. Of these re-arrests Romero and Williams report over half (15) were convicted. In all 132 of the sample were re-arrested for any offence and the sexual assaulters were the most likely to be re-arrested. Romero and Williams considered that the most significant factors were the most obvious, age (young offenders were more likely to reoffend), prior history of sex offending and low income. After noting that longer follow up is particularly important with sex offenders (7 of the repeaters in their study were not arrested until after 4 years) and as with Soothill and Gibbons (1978) that recidivism varies according to the type of sex offence, they concluded..."individuals with a history of sex offences and sexual assaulters with a history of any violent offences are more likely to recidivate over a long timespan than individuals with one sex offence" (Romero and Williams 1985:63).

In a more recent study Grunfeld and Noreik (1986) followed up for a similar period (9-14 years) 541 Norwegian offenders convicted of 'felonies against public morals' for the first time between 1970-74, of whom 83 were rape offenders, 152 were obscene conduct cases (exposure, offensive language), 279 were cases of abuse of minors



including what we have defined as rape (in the case of those under 13) and carnal knowledge, and 27 were 'other sex offences' which included incest, defilement and so on. In that study the researchers found that across all classes of sexual offenders about 12.8% had been reconvicted of a further sex offence, but those convicted of rape had the highest reoffence rate of 21.6%. Of these 8, or 9.6%, had committed a further rape offence by the end of the observation period.

#### DESCRIPTIVE STATISTICS

In the Western Australian prison data base we found 285 subjects who had been imprisoned for rape or attempted rape of whom 140 or 49.1% were Aborigines. In this category we include 4 cases of carnal knowledge of a girl under 13 years of age, 1 case of indecent assault of a child under 13, and 6 cases of sodomy. In addition 5 cases were classified 'aggravated sexual assault' and these represent convictions under the changed definition of rape (that is, gender neutral 'sexual penetration') in the criminal code introduced in 1986. 47 of these 285 cases were yet to be released at the cut off date, 3 had been deported and 6 had died in custody thus comprising 56 cases which could not be followed up.

By way of comparing rape with other serious offences we also describe and analyse homicide offenders (excluding 'driving cause death') of which there were 172 cases (i.e. murder, wilful murder, unlawful killing, manslaughter, inclusive

attempt and accessory) including 3 cases of 'not guilty for reasons of insanity' and 3 cases of prisoners sentenced to indefinite detention ('governor's pleasure'). Of these 51 or 29.6% were Aborigines. Some 28 subjects were yet to be released by the cut off date, 4 were deported and a further 3 had died in custody comprising a total of 35 which could not be followed up.

There were also 143 cases of indecent assault of whom 34 or 24% were Aborigines. 11 of these cases were still to be released by the cut-off date, 1 had been extradited and 1 had died in custody. A further 69 cases of carnal knowledge or attempted carnal knowledge occurred of whom 24.6% were Aborigines and all of these cases were released. These 'less' serious sexual assaults are included in our analyses, although as noted above, we lack sufficient data about these offences to adequately discuss prevalence.

We also describe all incest and wilful exposure cases found. Insufficient numbers of these cases were present for accurate 'failure rate' analysis and they will not be described beyond the present section. Specifically, 31 cases of incest /attempted incest, 4 cases of indecently treat a child under 14, 4 cases of aggravated assault against a male child and 2 cases of 'defilement by guardian' occurred. Only one case was yet to be released. Finally 39 cases of wilful/indecent exposure and 7 cases of gross indecency were found.

In the summary statistics (Tables 5,7,8) below we describe prisoners incarcerated for rape, indecent assault and carnal knowledge according to their status as first or multiple offenders and their subsequent status as recidivists for any offence, repeaters of further sex offences, or repeaters of violence. We define an offence of violence as any assault, robbery, sex offence, homicide (excluding motor vehicle manslaughter) or other offence against the person. Certain good order offences and those against the administration of justice (i.e. resist police) which often imply violence are excluded from this definition. In the case of prisoners with prior terms of prison we counted any prior term for a violent offence. In addition some characteristics of the population such as age, time served and release form are described.

Note that the tables take no account of the bias resulting from censored observations. We will account properly for this bias when calculating the ultimate probability of recidivism for any offence or for a return for any offence of violence in the section on statistical analysis below.

#### RAPE

Nearly three-quarters (72%) of those incarcerated for rape were 25 years of age or younger at the time of receipt but Aboriginal offenders were more likely to be younger; 42.4% of Aborigines were under 20 years of age compared to 25% of non-Aboriginals, and 10 of the 12 offenders over the age of 40 years were non-Aboriginal. As has been shown in previous

studies offenders are predominately from younger age groups.

The actual time served for the offence also varied considerably within races and there was a tendency for Aborigines to serve shorter sentences - these differences are compared below. A small number (7.1%) served less than six months but the majority (56.7%) served sentences in excess of two years. It should be borne in mind that remission or 'time off for good behaviour' (which is either one quarter of sentence for those sentenced before 1982 or one third of the sentence for those sentenced later), parole sentences, variation arising from whether the offence was an attempt or not and the effect of prior record all could account for the differences in sentences actually completed by offenders. Non-Aboriginal offenders, however, were much more likely to receive a parole sentence than Aboriginal offenders (80.1% compared to 53.6%). This reflects the reluctance of judges in this jurisdiction to apply parole terms to Aborigines and this is sometimes justified on the grounds that parole supervision is inadequate in rural districts.

TABLE 4. TIME IN PRISON FOR RAPE BY RACE

Race	<3 mths	<6 mths	6-1yr	1-2yrs	2-3yrs	3+yrs
% non-Abor	0.7	4.2	10.4	25.0	20.1	39.6
% Abor	3.6	5.8	10.9	26.8	26.1	27.4

Most of the offenders incarcerated for rape were 'first

timers' (n=169) and their subsequent records show that by the cut-off date some 58 had returned at least once for a further term; of these 13 had repeated sexual offences, 6 of these repeated the offence of rape again, (i.e. 'homologous' offenders). The other 'repeaters' included 3 indecent assaults, 3 of carnal knowledge and 1 of indecently treating a child. A further 13 prisoners went on to commit other offences of violence, including 2 homicides (both non-Aboriginal; one attempted murder, the other convicted of manslaughter). Thus just under half of those who had returned to prison by the cut off date returned for violent offences.

TABLE 5. RAPE: CRIMINAL CAREERS (numbers of Aborigines in brackets)

	any recidivism	repeat offence	repeat <sup>^</sup> violence	not released <sup>+</sup>
-----				
no priors	169 (69)	58 (40)	13 (7)	25 (16)**
-----				
one or more priors	116 (71)	39 (29)	6 (4)	49 (38)
-----				
all cases	285 (140)	97 (69)	19*(11)	74 (54)
-----				

Notes: ^ includes any act of violence against the person; \* 10 cases of repeat rape; + counts the number of cases yet to be released; i.e. 45 cases or 16% not yet released after the sex offence; 6 cases, four of whom were Aborigines died in custody; \*\* includes two cases of homicide.

Of the 'rapists' identified 40.7% had prior records before being incarcerated for rape and 33 or 28% of these had four or more prior terms of prison. Of the 70 cases with prior records who had been released by the cutoff date, 39 were again incarcerated for any offence 6 of whom had committed further sex offences. Four of these six repeated rape or attempted rape and one, an Aboriginal offender had a total of nine terms, four terms of assault prior to his first term of attempted rape followed by three further terms, including one further assault before being incarcerated for rape. The other two offenders with a prior sex record were a non-Aboriginal male who had two terms for indecent assault and disorderly conduct prior to his incarceration for rape and an Aboriginal offender with two terms for theft followed

by a breach order then a carnal knowledge offence followed by a further breach order returning finally for a rape offence.. A large proportion of those with prior records, 49 cases (including the homologous offenders) had committed an offence of violence against the person at some point either before or after the offence of interest.

To sum up: of the 229 rape offenders able to be followed up (subtracting deaths, deportations and those yet to be released), 97 had returned at least once following their rape offence and of these 10 had committed rape again (homologous offenders). A further 9 had committed other sex offences by the cut off date. In all some 74 repeated an offence of violence indicating high risks of dangerous re-offending bearing in mind this records only known transgressions punished by prison terms.

#### OTHER SEX OFFENCES - INDECENT ASSAULT

As already noted, a number of the rape offenders also had other sexual offences on their record, and we now describe them. Indecent assault prisoners tended to be older than those incarcerated for rape, although again Aboriginal offenders were much more likely to be younger. This was even more marked for the offence of carnal knowledge, as only two of the 17 Aborigines incarcerated for carnal knowledge were over 25 years of age. Only 23% of all the 'indecent assault' prisoners were aged 25 years or younger, and 43% of the non-Aborigines were over 35 compared to 22% of Aborigines.

The average time served for indecent assault offences was, given the lower statutory maxima, considerably shorter than for rape offences, with most (60.5%) serving less than six months. Time served for carnal knowledge was even shorter, and only one offender served 3 or more years. Again as with rape, Aboriginal prisoners for these offences were more likely to serve shorter sentences than non-Aborigines and less likely to be released on parole. No Aborigines received parole for carnal knowledge, compared to 30% of non-Aborigines, and for indecent assault only 6% (2 cases) received parole compared to 36% of non-Aborigines. Table 6 below summarises the sentences served by all prisoners for these offences.

TABLE 6. TIME IN PRISON FOR INDECENT ASSAULT AND CARNAL KNOWLEDGE

	<3 mths	<6 mths	6-1yr	1-2yrs	2-3yrs	3+yrs
% indecent assault	29.9	30.6	19.0	10.9	5.8	3.6
% carnal knowledge	29.5	27.8	26.2	14.7	0.0	1.6

Most of those imprisoned for indecent assault had no prior record (68%). If we take account of race we find that in fact 79.4% of non-Aboriginals but only 29.4% of Aborigines had no prior term. Of the 96 'first timers' (including 3 females), 21 had returned to prison at least once and 8 had repeated a sex offence. Of these 8, all non-Aborigines, one committed incest, another carnal knowledge. The remaining 6 committed further indecent assault offences, 2 of whom twice



repeated the offence. One of these also had another offence for common assault. In addition a further five cases repeated offences of violence, mostly common or domestic assaults.

Of those with previous terms of prison, 40.1% of non-Aborigines had only one prior term compared to 74% of Aborigines. 9 Aborigines had more than 4 terms but only 2 non-Aborigines had such records. Of the 47 cases with prior terms, 21 had returned for at least one further term and of these, 10 repeated sex crimes including four rape cases described above. For the remaining 6 cases; one, a non-Aboriginal, had in addition to indecent assault, 3 previous terms for wilful exposure. The other 5, cases all Aborigines, comprised the following: one case of aggravated assault against a male child as the first term followed by two good order and one theft offence before a final term of indecent assault; two cases of repeat indecent assault where one prisoner had a record also of two traffic offences and one of drunkenness, while the other had 4 prior terms for theft before serving two consecutive terms for indecent assault; finally two cases where the repeat sex offence involved one term of wilful exposure in amongst very long records (20 and 23 terms respectively) which included in both cases offences for various theft, motor vehicle theft, traffic, assault and drunkenness, of which the indecent assaults which occurred on the 20 and 22 terms were the most serious.

To sum up, of the 130 cases followed up (excluding the 11 cases still to be released, one case of extradition and one death) 42 had returned at least once for any offence following their imprisonment for indecent assault. Of these, 18 had repeated various sex offences (four had prior commitments for rape offences), three had records for wilful exposure and one for an assault against a male child while the remainder committed further indecent assaults. Amongst the records of these prisoners we found 41 cases where an offence of violence against the person (including the sexual assaults) was repeated - the most serious being a prior term of manslaughter for an Aboriginal prisoner. As with the rape offenders, many of these repeat violence prisoners had prior records.

TABLE 7. INDECENT ASSAULT OFFENDERS - CRIMINAL CAREERS  
(Aboriginals in brackets)

	any recidivism	repeat offence	repeat violence	not+ released
-----				
no priors				
96 (10)^	21 (6)	8* (0)	14 (3)	0
-----				
one or more priors				
47 (24)	21 (12)	10 (7)++	27 (18)**	11
-----				
all cases				
143 (34)	42 (18)	18 (7)	41 (21)	11
-----				

Notes: ^ includes 1 female non-Aboriginal who returns for only one further minor offence and 2 Aboriginal females with no other prison record \* includes two cases where indecent assault was repeated twice; ++ includes 4 cases also counted in rape offences and includes one case of repeat wilful exposure; \*\* includes one case of homicide; + 7.1% of cases yet to be released.

#### CARNAL KNOWLEDGE

There were 68 prisoners identified (including one Aboriginal female with no other record) who had a carnal knowledge offence recorded and 4 of these have already been noted in the description of rape offenders. One combination of indecent assault and carnal knowledge appeared in our records and was noted in the description of indecent assault. Except for 7 cases (two involving Aborigines) of carnal knowledge 'contrary to nature' all cases were charged for the offence 'unlawful' carnal knowledge, only 3 of which were incarcerated for attempts. Two (both non-Aboriginal) cases where the offence was particularly specified as carnal

knowledge of a girl under 16, occurred.

36.8% of these cases had at least one prior term and 4 had 4 or more terms. As with the other offences, Aborigines made up a disproportionate percentage of those with prior terms.

Amongst the 43 cases imprisoned for the first time for this offence, 13 returned at least once for any offence and of these, 2 had repeated a sex offence. One of these, a non-Aboriginal, had come back for incest, and the other, an Aboriginal, committed two further offences of theft before returning for a further carnal knowledge offence (and by the cut off date had come back for another theft offence). A further 3 Aborigines committed offences against the person and all these were for assault - these offenders had long records: one had 11 terms, including 4 assaults and 3 offences of escaping legal custody as well as offences for theft and drunkenness.

Of those with prior records, 13 had returned to prison yet again following their incarceration for carnal knowledge, and of these 7 repeated a sex offence, 4 had prior records for rape (rape was the first offence for 3 of them) and were described previously. One had a prior record for indecent assault, and there were 2 cases of offenders with 3 prior records for theft each followed by 2 offences of carnal knowledge; in one instance the carnal knowledge offence was followed by a breach of parole and then rape - this particular offender, an Aboriginal, was yet to be released at

the cut off date. Including the repeat sex offenders, 14 cases had repeated at least two violent or against person crimes, and in this group one prisoner, a non-Aborigine, had a prior record for manslaughter.

To summarise, all the 67 cases identified (excluding one female) could be followed up after release for the carnal knowledge offence, and of these 26 came back at least once, and 9 had committed one more sex crime. Strictly speaking only 2 of these repeated carnal knowledge offences and in both these cases other records of theft were included. As with the other offences described, a significant proportion of these offenders repeated crimes of violence.

TABLE 8. CARNAL KNOWLEDGE OFFENDERS - criminal careers  
(Aboriginals in brackets)

	any recidivism	repeat offence	repeat violence	not+ released
-----				
no priors				
43 (5)	13 (5)	2 (1)	5 (4)	0
-----				
any priors				
24 (10)	13 (6)	7 (3)++	14 (7)*	0
-----				
all cases				
67 (15)	26 (11)	9 (4)	19 (11)	0

Notes: all offenders released and one female case excluded;  
\* includes one case of homicide; ++ 4 cases previously  
counted in rape.

-----

#### Incest and other offences against children

We found 31 cases of incest and of these only 3 were  
Aborigines. In this section we also note: 3 cases of  
aggravated assault against a male child (one of the three  
offenders was a non-Aboriginal); 1 case of unlawful assault  
against a male child by an Aboriginal offender; 2 cases of  
'defilement by a guardian' (both non-Aboriginal offenders);  
and 5 cases of 'indecently treat a child under 14' all of  
whom were non-Aborigines and included a female offender.

Unlike the offences described above, these offenders were  
much older, with 85.4% over the age of 35 years. Only 4  
cases (9.7%), of whom 3 were Aborigines were aged between  
20-25 years - there were no offenders under the age of 20  
recorded for these offences. Sentences varied, but the

majority were of more than 3 months and less than 2 years. Just over 15% served 2 or more years and were more severely dealt with than indecent assault or carnal knowledge offenders, but less severely than rape offenders.

Table 9. Time in Prison for Incest and other offences against children

	<3 mths	3-6 mths	6-1yr	1-2yrs	2-3yrs	3+yrs
%	2.4	22.0	24.4	36.6	9.7	4.9

-----

In view of the small number of incest prisoners who had recidivated by the cut off date, each case can be described. 29 cases of incest involved imprisonment for the first time; of these only one prisoner had returned to prison and in this case the offence was a breach of parole. But it should be noted that five of these prisoners had been released for less than a year and five for less than 3 years by the cut off date. In addition only two cases of offenders with prior imprisonment records were subsequently imprisoned for incest. One, a non-Aboriginal, had a prior conviction for 'carnal knowledge' and is therefore classified a repeater; he was yet to be released. The other, also an Aborigine, had been to prison 19 times, the ninth return being for incest, preceded by two terms for drunkenness, five terms for various theft charges and the first term for drunk driving. His subsequent 10 terms of prison culminated in imprisonment for robbery with four further terms for theft and five terms for various good order and drinking related offences.

Also of the 4 cases of offenders imprisoned for 'indecently treat a child', 2 had prior records. One, a non-Aboriginal, (indecently treat a child under 14) had one prior term involving the charge of being 'unlawfully on the premises' and has since been released for about four years. Another, an Aborigine, had a prior conviction for rape followed by indecently treating a child and then assault as the last offence recorded at the cut off date.

Of the three Aboriginal cases involving 'aggravated assault against a male child' two were first terms of imprisonment; one of these offenders went on to commit an indecent assault for the fifth return to prison; he had not been released for this offence by the cut off date. The other Aboriginal case had three prior terms and two subsequent terms for various traffic, good order and property offences. The two cases involving 'defilement by guardian' and the four other cases of 'indecently treat a child under 14' were all non-Aborigines and first term offences with no other prior record. One of these cases was followed up for less than a year.

#### WILFUL EXPOSURE/EXHIBITIONISM AND GROSS INDECENCY

Finally we briefly note the incidence of gross indecency (n=7) and exhibitionism (n=39) amongst the prison population. In general these offenders were older and served relatively short sentences compared to the offenders described above.



All seven 'gross indecency' or homosexual conduct cases (usually in a 'public place') were male non-Aborigines and none of these had returned by the cut off date.

14 (35.9%) of the 39 'wilful exposure' cases were Aborigines and these included the only two females identified. 3 of the Aboriginal males repeated a sex offence, one repeating wilful exposure and the other 2 committing indecent assaults.

22 (56.4%) cases committed wilful exposure on their first term of prison. Of these 9 returned for any offence and 4 repeated the offence again - 2 twice and one of these also returned for a term for indecent assault. In addition a further 2 returned for assault offences.

Overall 17 cases (43.6%) had prior records with 8 having more than 4 prior terms. Of these, 3 repeated a sex offence, 2 involving indecent assault and a further 4 cases also repeated at least another offence against the person, and in all cases these were assaults

#### STATISTICAL ANALYSIS

In the previous detailed descriptions of re-offending characteristics we have been careful to avoid making the simple but erroneous calculation:

proportion of recidivists = number re-offending/number released.

This is incorrect with data such as we have since those

released can only be followed up until the cut off date ( in extreme cases, for only a few days) and releasees not re-offending by that time always have the potential to do so after the cutoff date. Such observations are said to be 'censored'. The problem is well recognised in the criminological literature (eg, Soothill and Gibbons 1978) , and a methodology to properly account for them is now well established.

In Maller (1989) this methodology has been extended to include 'covariates', thus enabling valid statistical comparisons to be made between subgroups via a likelihood ratio test. This approach has also been utilised by Maltz (1984) and Schmidt and Witte (1988) in some forms to analyse recidivism data and by Farewell (1982) in a medical context. However there seems to have previously been no systematic attempt at analysis of cross classified data such as we use here. In particular we can find no analysis of the recidivism of sex or homicide offenders using these techniques.

In this study we measured the time to failure of an individual for any offence or for a specified offence (in this study we stipulate an offence of violence) following commission of a sex or homicide offence. For those not failing, the 'survival' time, i.e., the time from release to the cutoff date, was computed. The 'failure rate' method described below describes estimates of the probability of eventual recidivism using this data.

Experience with many sub-sets of the present data set has shown that the distribution of failure times can usually be well described by a Weibull mixture model which allows for the possibility that individuals may never recidivate (Broadhurst et al, 1988, and Broadhurst and Maller 1989). This model specifies the cumulative distribution of failure times as:

$$P\{ T \leq t \} = P.[1 - \exp(-(\lambda t)^\alpha)] , \quad t \geq 0,$$

where  $P$ ,  $\lambda$  and  $\alpha$  are parameters to be estimated.  $P$  gives an estimate of the ultimate probability of recidivating,  $\lambda$  measures the rate of recidivating and  $\alpha$  specifies the 'shape' of the Weibull (see for example Figure 7-6 in Maltz (1984:83)).

Covariates are easily introduced into this model as in Maller (1989), by allowing the parameters  $P$ ,  $\lambda$  and  $\alpha$  to vary over the sub-groups of interest. 'Fitting' the model to a data set consists of estimating these parameters for the particular set of covariates specified (eg. race, age, gender, prior terms of prison etc.), and is done by maximising the likelihood, or joint probability distribution, of the data under the specified model. Significance tests for the 'effects' of the covariates are done by omitting them from the specification and calculating the change in the quantity  $-2 \log L$ , where  $L$  denotes the log-likelihood of the fitted model. There are theoretical reasons for believing this quantity to be approximately distributed as chi-squared, with degrees of freedom equal to

the number of omitted parameters. Differences between sub-groups may occur in  $P$ ,  $\lambda$  or  $\alpha$  with various interpretations.

One of the drawbacks of the likelihood procedure is that data on a substantial number of individuals is required before reliable estimates can be obtained. In the present analyses this is sometimes achieved by pooling smaller categories of offence or other classes. Further discussion of the likelihood approach used here is given in Maller (1989).

#### RESULTS OF FAILURE RATE ANALYSIS

Of the 420 male non-Aborigines and 242 male Aborigines in our data base who ever committed a sex (excluding incest and exposure offences discussed separately above) or homicide offence, some 86 cases were yet to be released from prison following their incarceration for these offences, and a further 8 cases are counted twice (eg. have rape and indecent assault records) leaving 568 cases available for analysis. Of these 153 had at least one prior record and 204 (121 Aborigines and 83 non-Aborigines) had returned to prison at least once by the cut-off date. There were sufficient numbers to fit the Weibull mixture model and test for the significance of race, prior convictions (i.e. none or one or more) and offence type. For failure rate analysis offences were grouped as follows:

1: carnal knowledge and indecent assault (SEX OFFENCES)

2: rape and aggravated sexual assault (including carnal knowledge of girls under the age of 13 and sodomy) (SERIOUS SEX OFFENCES)

3: any homicide offence except driving causing death (i.e. attempts and accessory, unlawful killing, manslaughter, murder and wilful murder) (HOMICIDE OFFENCES)

As previously discussed, the additional sex offences of incest and wilful exposure are not analysed here because of the small numbers.

#### (A) RETURN FOR ANY OFFENCE

For the race effect, the best model fit as judged by  $-2\log L$  required separate parameters for  $P$  and  $\lambda$  but not for  $\alpha$ , as shown in Table 10(a); in fact equality of the  $P$  and  $\lambda$  parameters between races was rejected at the .001 level, demonstrating a much greater probability of reconviction and a much shorter time to reconviction for Aborigines. The Weibull model fitted to this data is shown in Figure 1.

The best model fit to the different offence categories required separate values only of  $\alpha$  but not of  $P$  or  $\lambda$  (see Table 10 (a)). Thus the only significant difference between the offence groups examined here is in the shape of the distribution of failure, signifying a longer lag time for serious sex offender (rapists) reconvictions' than for other sex offenders, and even longer reconviction times for homicide offenders.

Small numbers in cells prevented a complete joint analysis of race and offence types, but it was possible to fit the joint model with equal values of lambda . It was clear from this that there were no significant differences between offence categories for either race other than in the parameter, so there was no suggestion of an interaction between race and the offence types under consideration. This vindicates our use of marginal estimates for race and offence type in Table 10(a).

Elsewhere (Broadhurst and Maller 1988) and (Maller and Broadhurst 1988) we have stressed the necessity to control for the number of recidivist events in studies of this kind, since failure probabilities (for any offence) increase dramatically for the second recidivism compared to the first, and for the third compared with the second, etc.. In the present small data set we simply tested for the significance of prior or no prior term of imprisonment, as there were insufficient cases to classify the number of prior terms in greater detail. There were large significant effects; as expected those with prior terms had greater probabilities of failure and returned at a faster rate. (Table 10(a) and figure 2). There was no evidence of an interaction with race, that is , the differences applied equally for each race.

#### (B) RETURN FOR AN OFFENCE OF VIOLENCE

A further analysis of these prisoners sought to estimate the probabilities of the offender returning for any offence

involving violence. The number who return for the same or similar offence were noted in the descriptive tables. The population of offenders remains the same ; but in calculating the failure time, we specify that the recidivist offence must involve an offence of violence against the person.

TABLE 10(a) SERIOUS MALE OFFENDERS - TIME TO RECIDIVATE FOR ANY OFFENCE\*

CATEGORY	N	(N-fail)	PROBABILITY	$\lambda$	$\hat{d}$	$-2\log L$
non-Abors	371	(83)	.38 (.29,.47)	.020	1.28	} 2210.3
Aborigine	197	(121)	.77 (.67,.84)	.036	1.28	
carnal knowledge & other sex	187	(65)	.52	.027	1.02	} 2291.3
rape	238	(95)	.52	.027	1.27	
homicide	143	(44)	.52	.027	1.84	} 2307.0
all sex and homicide	568	(204)	.50	.029	1.28	
no priors	415	(117)	.44 (.37,.51)	.022	1.35	} 2231.7
1+ prior	153	(87)	.74 (.62,.83)	.043	1.35	

Note: \* analysis only of prisoners released after committing the violent offence.

(This wider definition of violence includes offences involving any assault (from minor to grievous bodily harm), robbery, stealing with violence or other offence against the person, but excludes property thefts, drug offences, traffic/driving, 'good order' offences and offences against justice including those involving resistance to arrest).

For this analysis small numbers were a problem but it was possible to do a limited analysis on sexual offences only by pooling Groups 1 and 2. (Homicide - Group 3 - offenders were omitted from this analysis; details of their repeat offences for violence are given in the appendix and discussion /summary section below). The number of prior terms of prison



did not affect overall probabilities of violent recidivism, but rates were different; those with prior terms failed more quickly. Results of this analysis are provided in Table 10(b) and the fitted failure curves for this data are shown in Figure 3.

It was not possible to fit a model to describe the differences in race although Kaplan-Meier plots indicated much higher ultimate probabilities of failure by Aboriginal prisoners (Figure 4).

TABLE 10(b) SERIOUS MALE OFFENDERS - TIME TO FAIL TO ANOTHER OFFENCE OF VIOLENCE\*

CATEGORY	N	(N-fail)	PROBABILITY	$\lambda$	$\alpha$	-2log L
no priors	304	(41)	.57	.0055	1.18	} 893.7
1 priors	121	(26)	.57	.0132	1.18	
overall	425	(67)	.49	.0078	1.12	910.4

Note: \* analysis only of those offenders released for serious sexual offences.

#### DISCUSSION AND SUMMARY

Perhaps the most important finding arising from this description of the 'careers' of incarcerated sex offenders is the relatively high proportion of those who eventually repeat the same or similar offences, especially those involving sexual assault (rape and indecent assault). This study also confirms previous findings, that long follow up

is required for sex offenders in particular, and that higher risks of repetition may subsequently be identified for them. Bearing in mind that our analysis is based on prison records which can be assumed at best to be only a very conservative sample of all offending (but usually, at least in the present jurisdiction, almost the whole population of those convicted) the amount of repetition can indeed be regarded as high. In addition, large numbers of these sex offenders also repeat offences of violence (eg. assault and robbery) and this seems particularly so of those who have had prior terms of prison.

Failure rate analysis showed that serious and sex offenders had approximately a 38% chance of returning to prison for any offence for non-Aborigines and, a 77% chance for Aborigines. Having a prior record significantly increased the probability of failing for either race. These effects of race and prior record were independent of the character of the offences. Somewhat more disturbingly, high probabilities were also estimated for the sex offenders (homicide cases excluded) returning for another violent offence. In excess of 20% of non-Aboriginal cases were ultimately expected to return for yet another violent offence ; for Aborigines the estimate exceeded 60% (Figure 4). Prior record influenced the rapidity of failure with those having previous terms failing sooner. Averaged over race, sex offenders have a better than even chance (57%) of returning for another violent offence.

In terms of the degree of specialisation of prisoners the evidence suggests that except in a few cases most recidivating offenders are likely to be committed for a wide variety of different offences. Prisoners incarcerated at some time for a sexual offence who subsequently recidivate or are recidivists tend (on the basis of official records here) to be 'generalists' rather than 'specialists' in offence preferences. Considering the potential for 'labelling', that is offenders known to police stand a higher chance of re-arrest, the level of specialisation found does not suggest the existence of a special type of offender who can be readily identified.

We compared sex offenders with those imprisoned for homicide and selling narcotics (see appendix for more details) in order to place the likelihood of repeating a sex offence in the context of the experience of other serious offences. In the summary table below we identify the number of prisoners found in the population with at least one offence of interest (1), and the number released (2) (able to be followed up). Of those released we count the number who returned for any offence following imprisonment for the offence of interest (3), those who repeated the offence (4) and finally those who had any offence of violence (including a sex offence) recorded either before or after imprisonment for the offence of interest (5). Recidivism, column (3), must be taken from the population of those released, column (2), and repetition of offence (4) and violence (5) must be taken from the population of prisoners in that offence

group, column (1).

SUMMARY OF SEX OFFENCES COMPARED WITH HOMICIDE AND NARCOTICS SALE.

offence group	cases n=	Number released	Return any offence	Repeat class	Any violence
	(1)	(2)	(3)	(4)	(5)
rape	285	229	95	19	74
indecent assault	143	131	42	18	41
*carnal knowledge	67	67	26	9	19
incest	31	30	1	1	2
*homicide	168	141	42	1	28
*sell narcotics	188	171	34	5	5

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\* female cases excluded.

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The summary table shows that repetition of the offence class is much rarer for offenders incarcerated for homicide and for those selling narcotics. If we broaden the definition of repetition in the latter case to include the selling of other drugs, only 5 prisoners incarcerated for selling narcotics repeat a term for the same offence. But a further 13 cases sold other drugs and another 10 had been incarcerated for drug use - in all 28 cases who repeated a drug offence of some nature. Using this wider definition of repetition suggests that narcotics sellers also have high probabilities of repetition. Of the 5 cases of narcotics

sellers found to commit an offence of violence 4 had served terms for robbery. This offence group, however, appears to be associated with lower levels of violence than either sex offenders or homicide offenders. The proportion of homicide offenders who repeat violence also appears lower than that of sex offenders.

Prisoners incarcerated for incest provide little evidence of histories of officially punished violence or other sexual offences, and this suggests that their behaviour can and should be distinguished from that of other sex offenders. We have too little data on incest offenders to analyse their 'careers' if indeed the concept is applicable.

Overwhelmingly, though, these violent offences seem associated also with offenders who show a pattern of aggressive behaviour - suggesting aggression rather than perversion may be the more salient characteristic of sexual assault offenders. Nevertheless, large numbers of sex offenders never return to prison, and even larger numbers never return to prison for a further sex offence. What appears to be clear is that we have no evidence that permits, except in the most general sense (i.e. age, race, sex and prior terms), useful predictions of the subsequent behaviour of incarcerated sex offenders. We have too few cases of repeat offenders and need much larger populations of such offenders than can be 'supplied' by this jurisdiction, in order to provide more precise estimates.

While we have been able to address the question of how many

imprisoned sex offenders are likely to continue offending (and, with less precision to continue sexual or other serious offences) as officially recorded, we are of course unable to be sure what kind of a sub-sample of all sex offenders this may be. It is possible that known sex offenders may be a more representative sample than had previously been thought, simply because evidence from self report studies suggests that those convicted often report the commission of many more offences (reported or not to authorities by their victims).

It is possible, however, to be more precise about the utility of the intervention of prison on subsequent behaviour of sex offenders. The problem in evaluating specific treatment/deterrent interventions is that very long follow up is required in order to establish effectiveness in respect to homologous re-offending. Thus evaluations of special treatment programmes for sex offenders should not expect 'results' in the short term with respect to the reduction or otherwise of sex offending. It may be reasonable to consider general reduction in re-offending as an interim indicator, given our conclusion that most sex offenders appear to be generalists rather than specialists. Adopting such an evaluation criteria would permit review earlier than otherwise and may prove reasonably reliable.

We have demonstrated that for the entire prison population there is a tendency for those who fail to have reasonably high probabilities of returning for more serious offences,

in other words to progress to more serious offences in their 'criminal careers'. A criteria that evaluates interventions on their capacity to reduce progression to more serious offences is of utility and may suffice as evaluative substitute for sex offender treatment programmes. More research involving larger populations of sex offenders than are available here is required before this can be established as a legitimate alternative. Meanwhile it is unrealistic to subject special programmes for sex offenders to meaningful evaluation until at least 3 and preferably more years have passed. In addition the existence of early failures, if they occur, should not be interpreted as signifying the complete failure of the intervention.

The goal (as expressed by the the National Academy of Sciences panel on criminal careers: Blumstein et al 1986) of measuring not only the prevalence of participation in crime but the frequency of offending by active offenders and the duration of their 'criminal careers', as the appropriate means for properly distinguishing between criminals and non-criminals, is an ambitious one. In fact the panel specifically argue that aggregate measures of crime rate obscure important differences and relationships which can only be explicated by analysis of individual level data. The problems in measuring these parameters alone are substantial and a reliance on official statistics (either arrest, conviction, or imprisonment) inevitably requires the assumption that such records represent, albeit

conservatively, only a sample of offenders and offences. The method we have adopted provides estimates of the frequency of offending and the duration of criminal 'careers', but can be relied upon only to the extent that official records can be accepted as representing an index of the universe of offences. While we can reasonably expect to solve the counting problems, we cannot expect to sensibly study 'criminal careers' until comprehensive records including self reported offending are also available. Until this is the case we cannot effectively test the assumptions or crime control strategies of those researchers who see in 'criminal career' research a major breakthrough in the understanding and control of crime. We can conclude from this study that incarcerated offenders do have high re-incarceration rates and that a significant number do repeat serious sex offences: thus in reality their re-offending can only be assumed to be worse.

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APPENDIX - 'CAREERS' OF SEX OFFENDERS IN THE WESTERN AUSTRALIA PRISON POPULATION, ADDITIONAL OFFENCE GROUPS .

TABLE A: NUMBER OF HOMICIDE OFFENDERS KNOWN TO POLICE BY YEAR (INVOLVED IN CLEAR UP)

	reports	cleared (by charge)	nos.offenders		
			m	f	
1987-88	39	36	--	37	1
1986-87	32	32	--	25	4
1985-86	37	36	--	37	3
1984-85	42	42	(40)	31	5
1983-84	38	38	(34)	24	6
1982-83	33	30	(30)	32	3
1981-82	33	32	(28)	26	4
1980-81	29	29	(27)	30	3
1979-80	35	33	(30)	29	2
1978-79	39	35	(33)	36	2
1977-78	25	24	(24)	26	4
1976-77	39	39	(38)	49	3
1975-76*	21	20	(17)	21	0
1974-75*	60	58	(58)	56	5
1973-74	28	27	(26)	27	3
1972-72	29	29	(26)	25	4
1971-72	33	33	(32)	30	5
1970-71	18	18	(16)	14	2
1969-70	12	10	(9)	10	2
1968-69	18	18	(18)	13	4
1967-68	8	8	(7)	5	3
1966-67	13	13	(12)	13	0
1965-66	11	11	(11)	9	2
1964-65	8	8	(8)	6	2
1963-64	17	16	(14)	13	3

\* reports include driving cause death under manslaughter but 1974-75 record does not permit distinction.

TABLE B. HOMICIDE: male prisoners criminal careers by  
(Aborigines in brackets)

	any recidivism	repeat offence	repeat violence <sup>^</sup>	not* released
-----				
no prior				
111 (23)	27 (9)	0	6 (3)	0
-----				
one or more priors				
61 (28)	17 (13)	1 (1)	26 (12)	28
-----				
total cases				
172 (51)	44 (22)	1 (1)	32 (15)	28

notes:

<sup>^</sup> includes any act of violence against the person

\* counts the number of cases yet to be released \*\* includes 4 sex offence cases including two rapes.

TABLE C. SELL NARCOTICS CRIMINAL CAREERS BY GENDER\*  
(Females in brackets)

	any recidivism	repeat offence	repeat violence <sup>^</sup>	not* released
-----				
no prior				
179 (36)	26 (2)	4 (0)	7 (0)	6
-----				
one or more priors				
51 (6)	10 (0)	1 (0)	3 (0)	13
-----				
all cases				
230 (42)	36 (2)	5 (0)	10 (0)	19

Note: no cases of Aborigines male or female found in the data base, and no continuous annual arrest data available.

Fig 1: Failure rate  
curves, any return  
after release for  
sex or homicide  
offenses, for races.

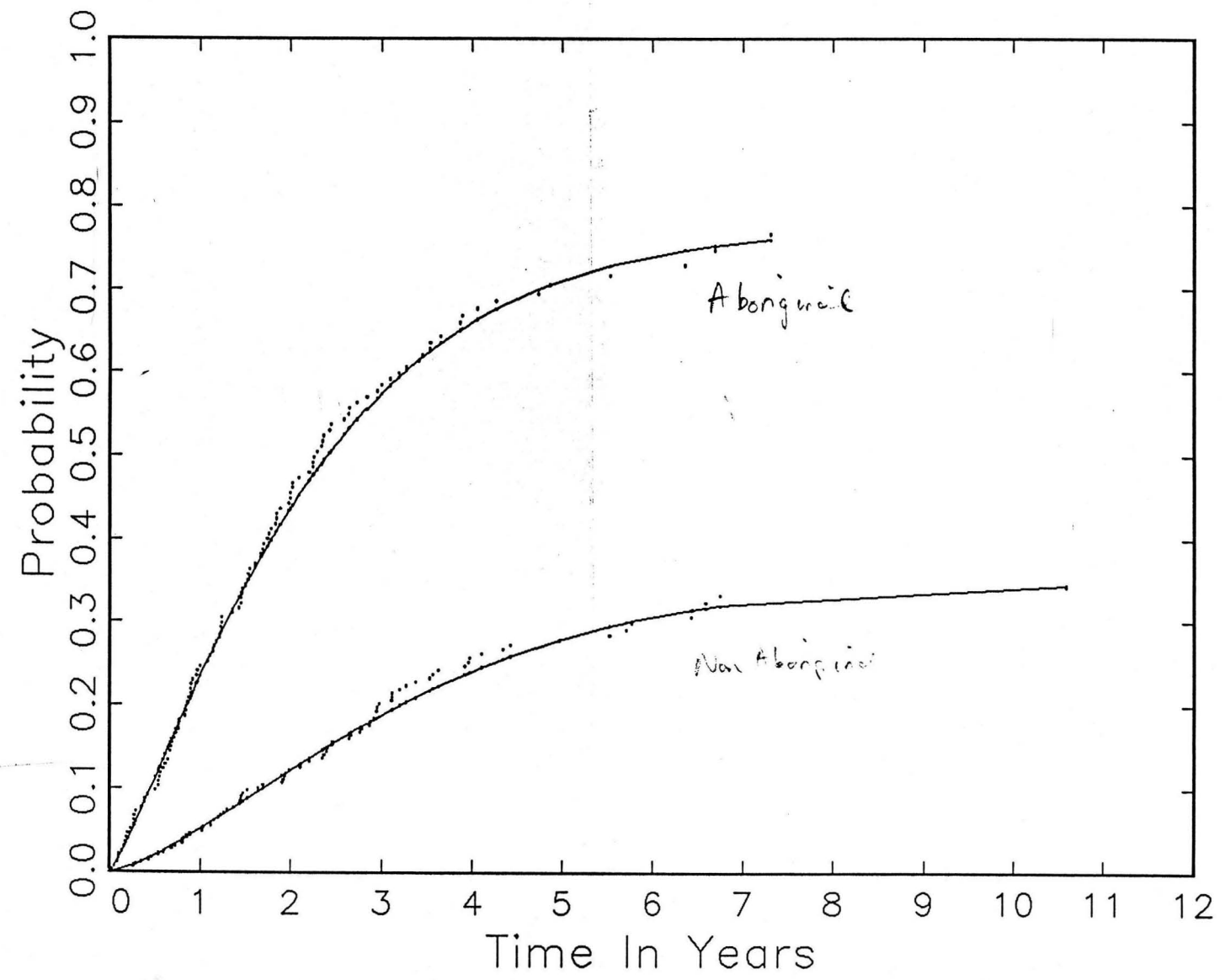
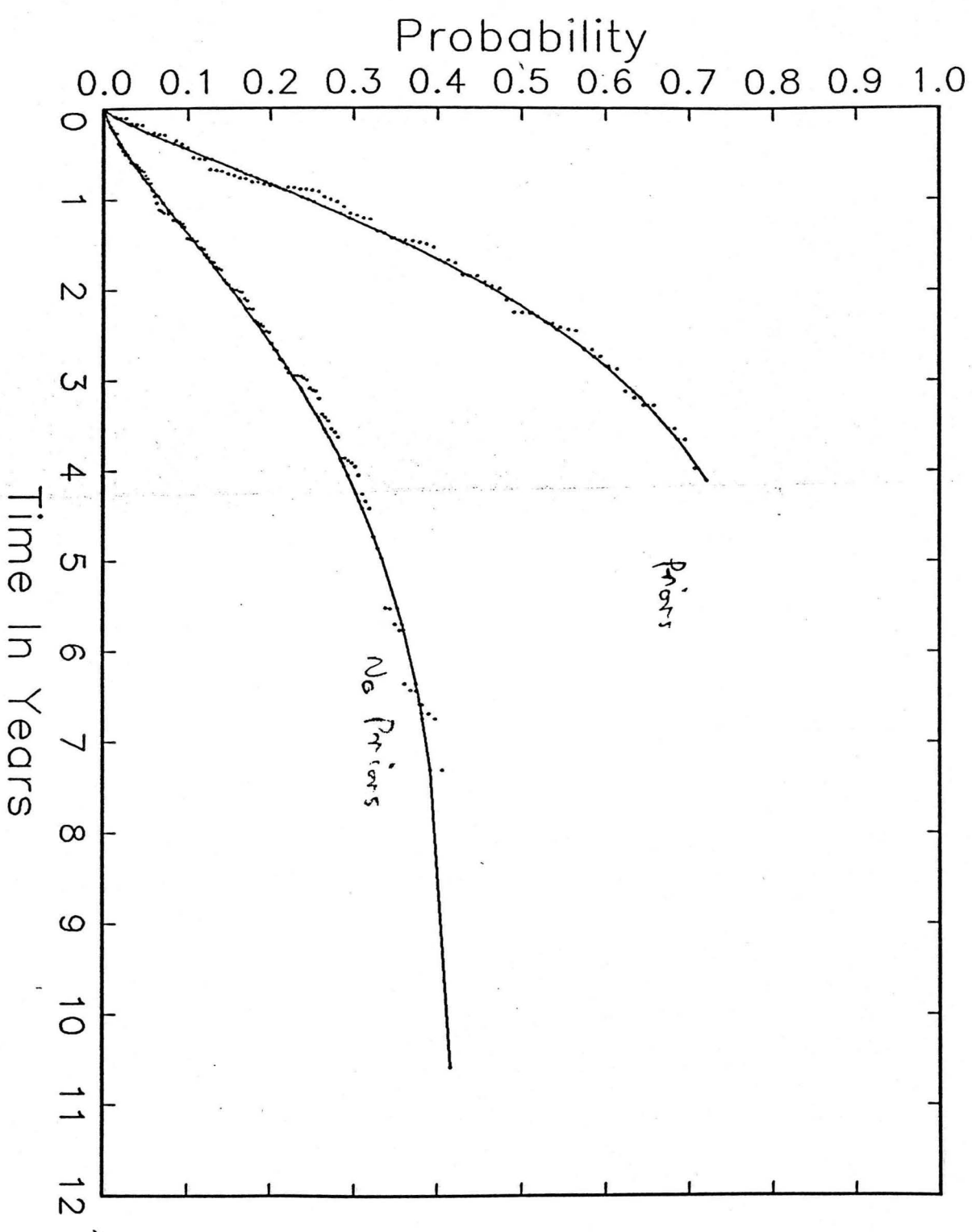


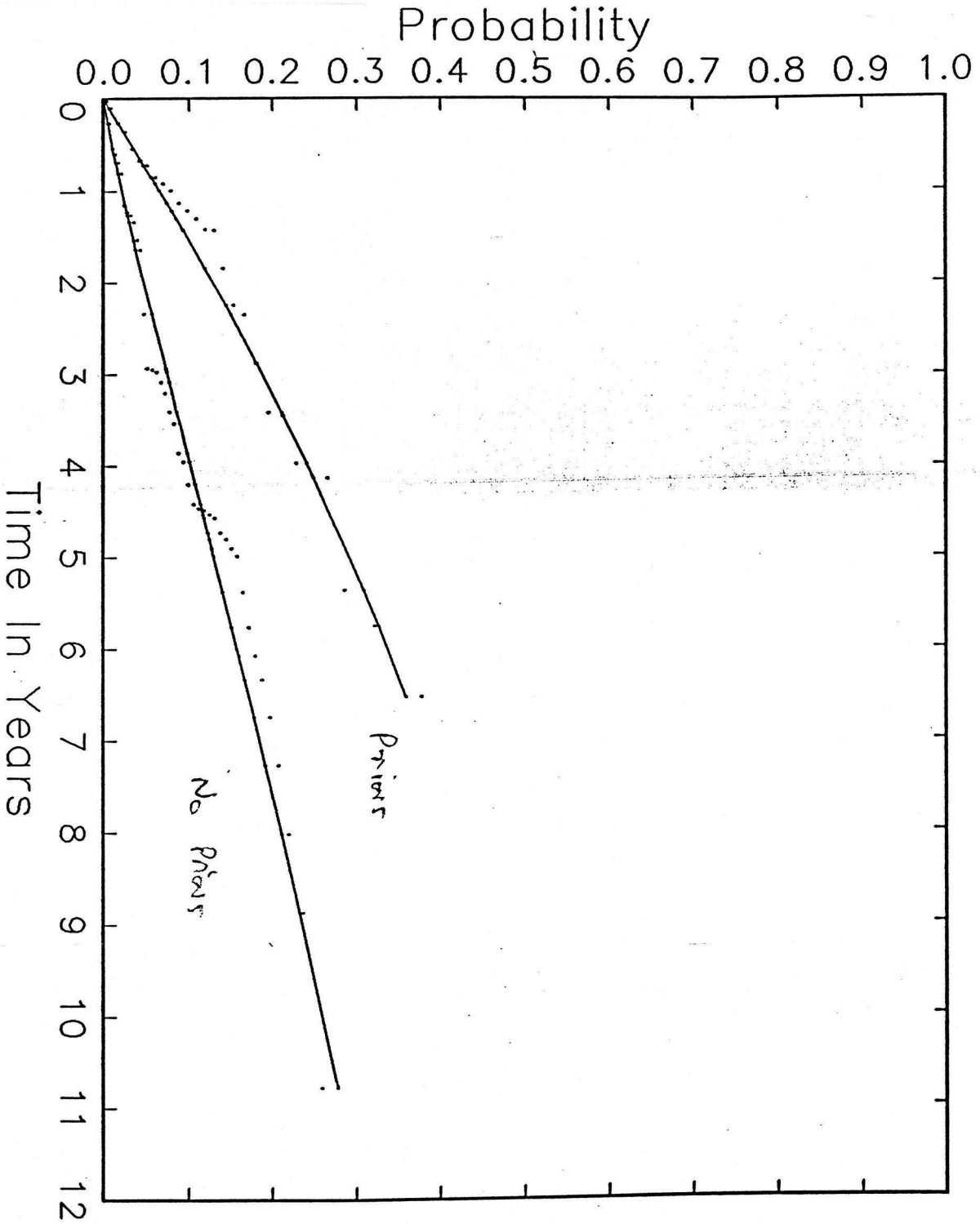


Fig 2: Failure rate  
returns, any return  
after release for  
sex or homicide  
offenses, for priors/  
no priors



10/1/89

Fig 3: Failure rate  
curves, return for  
repeat crimes a first  
release for sexual  
offenses, & for priors /  
no priors



1 p. 10

Fig 4: Failure rate curves, return for violent crimes after release for sexual offences, for races.

