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**Initiation and continuation of a  
criminal career**

Who are the most active and dangerous offenders  
in the Netherlands?

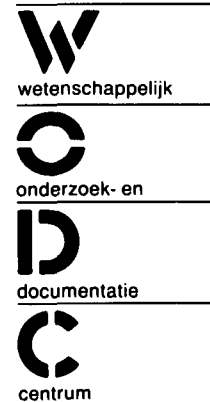
*C.R. Block*  
*C. van der Werff*

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Gouda Quint bv  
1991

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## Voorwoord

Het onderhavige rapport is in de eerste plaats bestemd voor Nederlandse beleidsfunctionarissen. Daarnaast beoogt het aan criminologen een verantwoording te geven van de wijze waarop het onderzoek is opgezet en uitgevoerd. Om op een efficiënte wijze aan deze eisen te voldoen, gaat een uitgebreide Nederlandse samenvatting vooraf aan het Engelse verslag waarin tevens nader op de methodische kant wordt ingegaan. De tabellen en figuren zijn — op enkele na — alleen in het Engelse verslag opgenomen. In de Nederlandse tekst staan verwijzingen naar deze tabellen en grafieken.

Allen die hebben meegewerkt aan het onderzoek dan wel een bijdrage hebben geleverd aan de totstandkoming van dit rapport, zijn wij zeer erkentelijk. Dat betreft met name dr. J.J.M. van Dijk die, toen hij nog hoofd van het WODC was, toestemming gaf het door ons voorgestelde onderzoek uit te voeren en de eerste concepten van het verslag van kritische kanttekeningen voorzag. Dat laatste geldt eveneens voor prof. dr. David Farrington van de University of Cambridge en prof. dr. Daniel Glaser van de University of Southern California. Prof. dr. Richard Block van de Loyola University of Chicago heeft ons gedurende het gehele project met suggesties en adviezen ter zijde gestaan en was tevens verantwoordelijk voor het ontwerp van veel van de grafieken.

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Tenslotte danken we drs. Hans Boutellier voor het redigeren van de Nederlandse samenvatting, Sjaak Essers voor het maken van de grafieken, en Monique Overwater en Marianne Sampiemon voor het verzorgen van het manuscript.

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## Preface

This report is intended primarily for Dutch policymakers. In addition, it aims to describe, for a criminological audience, the research design and analysis methods of the Recidivism 1977 research project. Consequently, the report contains both a Dutch overview of the research and an extensive English review containing methodological details. The Dutch overview contains only the most important tables and figures, but discusses findings that are laid out in precise detail in the English section of the report.

The authors gratefully acknowledge the many people who co-operated in the investigation or contributed to the realization of this report. In particular we appreciate the contribution of dr. J.J.M. van Dijk, director of the RDC during the critical stages of the project, who encouraged and advised us, and criticized early drafts of the report. In addition, Professor David Farrington of the University of Cambridge and Daniel Glaser of the University of Southern California both offered valuable advice on earlier versions, and Professor Richard Block of Loyola University of Chicago offered suggestions and advice throughout the project and was responsible for producing many of the figures. Further, the project would not have been possible without the assistance of many of our colleagues, including drs. Max Kommer, who draw the sample, ir. Hanneke Naborn and Frans F. Schachtschabel who carefully collected the coded the data, and the staff of the 'rapsheet department' (Justitiële Documentatiedienst), who compiled the records prior to coding. Very special thanks belong to Truus Remmelzwaal for her indispensable help in organizing and analyzing the data in the computer, and who, in fact, was the third collaborator in crucial stages of the project. We thank drs. Hans Boutellier for editing the Dutch summary. Finally, we appreciate the help of Sjaak Essers for making the figures, and Monique Overwater and Marianne Sampiemon for so carefully preparing the manuscript.

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# Samenvatting

## Inleiding

In een eerdere publikatie (Van der Werff, 1986) heeft het Wetenschappelijk Onderzoek- en Documentatiecentrum (WODC) van het Ministerie van Justitie recidivecijfers gepresenteerd van een steekproef van personen die in 1977 met justitie in aanraking zijn geweest. Daarmee was slechts over een gedeelte van de verzamelde gegevens gerapporteerd. Op het toen verzamelde materiaal zijn nadere analyses uitgevoerd. Het doel daarvan was meer inzicht te verschaffen in het verloop en de aard van de misdrijven die zijn gepleegd door de desbetreffende delinquenten, zowel vóór als na de in 1977 afgedane strafzaak.

De analyses, waarvan in dit rapport verslag wordt gedaan, zijn beperkt tot personen die in 1977 zijn veroordeeld door de rechter en personen van wie de strafzaak in 1977 uit beleidsoverwegingen werd geseponeerd (de zogenaamde beleidssepots). Personen die in 1977 werden vrijgesproken of om technische redenen niet zijn vervolgd (bijvoorbeeld wegens onvoldoende bewijs) zijn buiten beschouwing gelaten. Als analysemethoden zijn gebruikt de zogenoemde *survival-analyse* en de *tijdreeks-analyse*.

De analyses zijn verricht vanuit de vraag of er in de steekproef sprake is van een duidelijk te omschrijven groep loopbaancriminelen.

## Verwante studies

Er zijn twee Nederlandse onderzoeken bekend die enigszins vergelijkbaar zijn met onderhavig onderzoek. In de eerste plaats is dit de studie van Buikhuisen en Jongman (1968). Hun onderzoeksgroep bestond uit alle in 1964 en alle in 1965 veroordeelde 21-jarige Nederlandse mannen. Voor al deze veroordeelden zijn zij nagegaan welke delicten op hun straflijst voorkwamen. De onderzoeksvraag was of bij delinquenten een duidelijke 'voorkeur' bestond voor een bepaald type delict. De delicten werden ingedeeld in vier categorieën: vermogensdelicten, agressieve delicten, seksuele delicten en verkeersdelicten. Buikhuisen en Jongman toonden aan dat bij ruim de helft van de delinquenten alle door hen begane delicten, of alle delicten op één na, tot hetzelfde type behoorden.

Het tweede onderzoek is dat van Nijboer (1975). Het was gericht op het voorspellen van recidive. Zijn onderzoeksgroep bestond uit mannelijke delinquenten over wie door een bepaalde psychiater in één arrondissement in de periode 1948 tot en met 1970 een rapport voor de rechter was uitge-

\* Deze samenvatting is een uitgebreidere versie van het artikel dat is verschenen in *Justitiële Verkenningen* nr. 4, 1988.

bracht. Indien minstens 75 procent van de misdrijven op de straflijst tot één categorie behoorde, werd de betrokkene beschouwd als een delinquent van die categorie. Zo bleek zijn onderzoeksgroep te kunnen worden onderverdeeld in vermogensdelinquenten, zedendelinquenten en een groep met een sterk gevarieerde straflijst. Nijboer trachtte voor elk van deze groepen kenmerken te vinden die tot voorspelling van de recidive konden leiden.

In het buitenland, onder andere in Duitsland, Denemarken, Finland en de Verenigde Staten, is uitgebreid onderzoek gedaan naar criminele loopbanen van beroeps- en gewoontemisdadigers. De beschikbare ruimte laat bespreking van deze studies niet toe.

Voor een overzicht van belangrijke Amerikaanse onderzoekingen op dit gebied kan worden verwezen naar een publikatie van het U.S. Department of Justice (1983) en naar een publikatie van Kommer (1988). Van de Bunt (1988) heeft een aantal Duitse onderzoeken besproken.

## De gegevens en de methode van onderzoek

### *De steekproef*

De groep personen waarop dit onderzoek is gebaseerd bestaat uit een representatieve steekproef van vier procent van alle misdrijfzaken die in 1977 in Nederland onherroepelijk werden afgedaan. De hier beschreven analyses zijn — zoals gezegd — alleen gebaseerd op delinquenten die het misdrijf van de in 1977 afgedane strafzaak hoogst waarschijnlijk inderdaad hadden gepleegd. In de populatie kwamen zoveel zaken voor wegens rijden onder invloed dat de steekproef uit deze categorie is beperkt tot twee procent. Door weging is dit verschil in de totaaluitkomsten vereffend.

Zodoende ontstond een gewogen steekproef van 2.706 personen die in 1977 door de rechter waren schuldig verklaard en 1.320 personen van wie de strafzaak uit beleidsoverwegingen was geseponeerd. Dit leverde een steekproef op van 4.026 personen die zich, hetzij volgens de rechter, hetzij naar het oordeel van de officier van justitie hadden schuldig gemaakt aan een misdrijf. Deze steekproef wordt aangeduid als 'Steekproef 77 schuldig' (Sample 77 'Guilty').

De steekproef blijkt bij vergelijking in diverse opzichten gelijkwaardig te zijn samengesteld als de populatie. Aangenomen mag worden dat de uitkomsten representatief zijn voor de totale groep in 1977 veroordeelden en uit beleidsoverwegingen niet-vervolgden (beleidssepots).

### *De gegevens*

Voor het trekken van de steekproef is gebruik gemaakt van de kopie van het bestand van het Centraal Bureau voor de Statistiek (CBS) die op het WODC aanwezig is. Naast de gegevens over de wijze van afdoening en de aard van het misdrijf van de in 1977 afgedane strafzaak zijn uit het CBS-bestand onder meer gegevens overgenomen over geslacht, nationaliteit, burgerlijke staat in 1977 en werksituatie in 1977. Deze informatie is ontleend aan de Verificatie- en Informatiestaat die door de politie bij aanhouding van een verdachte wordt opgemaakt.

Vervolgens is van elke persoon in 1983 het uittreksel uit het Algemeen Documentatieregister van de Justitiële Documentatiedienst opgevraagd.

Hierop wordt elke strafzaak vermeld die bij het parket van de officier van justitie is ingeschreven. Op het uittreksel van één van de personen in de steekproef stonden 102 zaken vermeld. De oudste zaak die op één van de uittreksels voorkwam dateerde uit 1920.

De gegevens van alle strafzaken die op de uittreksels stonden vermeld zijn door ons overgenomen ongeacht de wijze van afdoening. Ook de zaken die eindigden in vrijspraak, ontslag van rechtsvervolging, gevoegde zaken en zaken die werden geseponeerd wegens onvoldoende bewijs, zijn dus meegenomen. Van elke zaak is vastgelegd:

- de datum van inschrijving bij het parket van de officier van justitie;
- de datum van de onherroepelijke beslissing;
- de aard van het betreffende misdrijf volgens vonnis respectievelijk het oordeel van de politie;
- de aard van de beslissing;
- de aard van de opgelegde straf of maatregel;
- de duur van de opgelegde onvoorwaardelijke vrijheidsstraf, respectievelijk het onvoorwaardelijke gedeelte ervan.

Per strafzaak worden in sommige gevallen verschillende soorten misdrijven ingeschreven, bijvoorbeeld een diefstal en een verkeersmisdrijf. Deze misdrijven zijn apart gecodeerd. Ook komt het voor dat meer misdrijven van dezelfde soort, bijvoorbeeld drie diefstallen, onder één parketnummer worden ingeschreven. In dit voorbeeld is het misdrijf dan drie maal vastgelegd. In de hierna beschreven analyses is dit aantal overigens niet in beschouwing genomen. Verder is voor elk van de misdrijven een ernstscore bepaald. Deze is gebaseerd op de maximum gevangenisstraf die in de wet op het misdrijf is gesteld.

In 1983 bleek ruim 4% van de personen in de steekproef niet (meer) bekend te zijn in het Algemeen Documentatieregister van de Justitiële Documentatiedienst. De helft van deze groep 'onbekenden' was waarschijnlijk overleden. Van al deze personen zijn dus geen gegevens bekend over de eventueel na 1977 ingeschreven strafzaken. We beschikken echter wel over door het CBS vastgelegde gegevens over vroegere strafzaken.

#### *De definitie van een 'criminele loopbaan'*

Gottfredson en Hirschi (1986) hebben er op gewezen dat talrijke en vaak tegenstrijdige definities bestaan van iemand met een criminele loopbaan. De omschrijving die het Ministerie van Justitie in de Verenigde Staten hanteert is relatief duidelijk: '... a person having a past record of multiple arrests or convictions for serious crimes, or an unusually large number of arrests or convictions for crimes of varying degrees of seriousness' (U.S. Department of Justice, 1983). De definitie die in onderhavig onderzoek wordt gehanteerd is wat exacter. Bij onze definitie van (iemand met) een criminele loopbaan gaan we uit van de volgende criteria:

- *Aantal*: het is niet logisch om bij één misdrijf, ongeacht de ernst, van een 'loopbaan' te spreken. Een noodzakelijke voorwaarde voor een criminele loopbaan is dat er sprake is van minstens twee misdrijven.
- *Zekerheid*: er moet redelijke zekerheid zijn dat deze misdrijven inderdaad door de persoon in kwestie zijn gepleegd. Daarom stelt onze definitie als

eis dat de persoon, hetzij door de rechter, hetzij door de officier van justitie schuldig werd geoordeeld aan twee of meer misdrijven.

- *Ernst*: onze definitie is niet beperkt tot ernstige misdrijven, maar 'triviale' misdrijven, zoals verstoring van de openbare orde, vallen er niet onder. In operationele termen vertaald: we telden die misdrijven waarbij de maximaal toegestane straf volgens de wet minstens 18 maanden bedraagt. Dat impliceert dat iemand met een criminele loopbaan ten minste twee niet-triviale misdrijven op zijn naam heeft staan.
- *Misdrijfvrije periode*: het lijkt een logisch vereiste voor het gebruik van het begrip criminele loopbaan dat hij niet alleen wordt voortgezet, maar dat dit relatief snel gebeurt. Met andere woorden, voor iemand met een criminele loopbaan is de tijd tot aan de aanhouding wegens het volgende niet-triviale misdrijf significant korter (zoals wordt gemeten met de Survival Score) dan voor andere delinquenten.

#### *De analyse van criminele loopbanen, de vraagstelling*

In het onderzoek wordt de gehele strafrechtelijke geschiedenis in beschouwing genomen van de 'Steekproef 77 schuldig'. Het gaat daarbij om de volgende vraag: was er onder deze personen een groep bijzonder actieve of gevaarlijke personen, die verantwoordelijk zijn voor een onevenredig groot aantal ernstige misdrijven in verhouding tot hun aantal?

Dit is een gecompliceerde vraag, omdat een criminele loopbaan vele aspecten heeft. In ieder geval moeten de volgende punten in beschouwing worden genomen:

- het totale aantal misdrijven in het leven van een persoon;
- de lengte en de volgorde van actieve en inactieve (misdrijfvrije) perioden gedurende zijn leven;
- strafrechtelijke categorieën van misdrijven (zoals vermogens-, agressieve, drugs- en verkeersdelicten) en de eventuele overgang van de ene strafrechtelijke categorie naar een andere;
- de ernst, inclusief patronen van toe- of afname in ernst gedurende het gehele leven.

Geen enkele statistische analysemethode kan al deze aspecten tegelijkertijd in beschouwing nemen. Daarom zijn deze aspecten achtereenvolgens geanalyseerd. Uiteindelijk is getracht alle stukken van de puzzel samen te voegen om de volgende vragen te beantwoorden:

- a. zijn er één of meer groepen bijzonder actieve of gevaarlijke personen in de steekproef uit 1977;
- b. wat zijn de kenmerken van deze groepen;
- c. vertonen de criminele loopbanen van deze personen een speciaal patroon?

#### **De resultaten**

##### *Leeftijd en het begin van een criminele loopbaan*

Bij onze poging criminele loopbanen te beschrijven, hebben we allereerst de factor leeftijd onder de loep genomen. Nagegaan is of er een verband was tussen de kans op recidive na 1977 en de leeftijd in 1977 (ten tijde van

het 'steekproefmisdrijf'). Tevens is het verband nagegaan met de leeftijd waarop het eerste contact met justitie plaatsvond.

De analyses brachten aan het licht dat bij mannelijke delinquenten de recidivekans sterk samenhangt met de leeftijd op het moment van het plegen van het '1977-delict' indien dit het eerste (officieel geregistreerde) delict was. Naarmate het aantal officieel geregistreerde, voorafgaande delicten toenam, werd de leeftijd op het moment van het plegen van het '1977 delict' steeds minder belangrijk voor de kans op recidive; bij mannen die meer dan zes delicten op hun naam hadden staan, was de recidivekans ongeacht hun leeftijd erg groot. Bij de onderzochte vrouwelijke delinquenten bleek een dergelijk verband niet aanwezig te zijn (zie tabel 2, p. 22).

De recidivekans hield geen verband met de leeftijd bij het eerste justitiële contact, los van de leeftijd bij het '1977-delict'. Bij de onderzochte mannelijke delinquenten leek soms veeleer het omgekeerde het geval te zijn: een late 'begintijd' hield verband met een grotere kans op een nieuwe arrestatie. Deze tendens is waarschijnlijk een weerspiegeling van 'recency': indien een delinquent kort geleden met justitie in aanraking is gekomen, is de recidivekans groter dan indien het voorgaande justitiële contact jaren geleden plaatsvond.

Zodra we rekening houden met het strafrechtelijke verleden, lijkt de huidige leeftijd van de delinquent voor de recidivekans weinig verschil te maken. Zelfs onder degenen uit de oudste leeftijdscategorie, dat wil zeggen personen tussen 40 en 80 jaar oud, kwam drie kwart van degenen met een lang strafrechtelijk verleden binnen zes jaar opnieuw met justitie in aanraking (zie tabel 3, p. 24).

Dus, als we worden geconfronteerd met een aselekt gekozen groep 'schuldige' delinquenten, en we willen weten wie van hen de grootste kans loopt opnieuw met justitie in aanraking te komen, dan vormt het strafrechtelijke verleden de belangrijkste indicatie. Bij personen met zes of meer eerdere justitiële contacten is leeftijd in het geheel niet meer relevant. Anders gezegd: degenen met meer dan zes voorgaande justitiële contacten maken een grote kans opnieuw met justitie in aanraking te komen. Dit geldt ongeacht het soort misdrijf in 1977 (vermogensmisdrijf, agressief misdrijf of verkeersmisdrijf en dergelijke) (zie tabel 5, p. 27). Het geldt eveneens in gelijke mate voor zowel mannen als vrouwen en voor elke leeftijdsgroep.

#### *Het voortzetten van een criminele loopbaan*

Onze definitie van een criminele loopbaan bevat de begrippen aantal, zekerheid en ernst: iemand met een criminele loopbaan moet zich schuldig hebben gemaakt volgens de rechter of de officier van justitie aan ten minste twee niet-triviale delicten. Deze vereisten betreffen iemands verleden vóór het misdrijf in 'Steekproef 77 schuldig'. Er is echter nog een vierde vereiste, en dit betreft het toekomstige gedrag. De tijd tot het volgende justitiële contact moet significant korter zijn voor mensen met een criminele loopbaan dan voor andere delinquenten. Kunnen we vaststellen wie van degenen die zich schuldig maakten aan ten minste twee niet-triviale delicten naar alle waarschijnlijkheid slechts korte tijd 'misdrijfvrij' zullen zijn?

Om deze vraag te kunnen beantwoorden is gebruik gemaakt van de 'survival-analyse'. Met behulp van deze analyse kan men, bijvoorbeeld per maand, de recidivekans berekenen van degenen die tot aan die maand nog niet eerder recidiveerden (die hebben 'overleefd'). Met andere woorden, degenen die reeds hebben gerecidiveerd of mensen die om een andere reden waren uitgevallen, worden niet weer in de berekening betrokken. De berekening voor een bepaalde maand is *alleen* gebaseerd op die personen die in die maand hadden kunnen recidiveren.

Een nadeel van survival-analyse is dat de lengte van de 'misdrijfvrije' periode alleen wordt gemeten tot het eerste nieuwe misdrijf. Zij beschrijft dus niet iemands gehele criminele loopbaan, maar alleen een gedeelte ervan. Voor wat men als het eerste nieuwe misdrijf ('eerste recidive') beschouwt, kunnen allerlei criteria worden gekozen. In deze eerste analysefase besloten we ons te richten op de niet-triviale recidive. Deze werd gedefinieerd als de datum van de eerste inschrijving van een misdrijf waarop ten minste 18 maanden gevangenisstraf staat en die resulteerde in een veroordeling, beleidssepot of voeging.

Alle personen in de steekproef zijn precies zes jaar 'gevolgd', gerekend vanaf de datum van inschrijving van het misdrijf in de 'Steekproef 77 schuldig'. Bij degenen die wegens het misdrijf in 1977 gedetineerd werden, hetzij omdat preventieve hechtenis werd toegepast, hetzij omdat gevangenisstraf werd opgelegd, of beide, besloten we de recidive te meten vanaf de geschatte dag waarop zij in vrijheid werden gesteld.

Nadat een groot aantal analyses was gedaan, vonden we uiteindelijk binnen de groep personen met ten minste twee niet-triviale misdrijven op hun naam twee subgroepen met extreem korte misdrijfvrije perioden, namelijk:

- delinquenten met ten minste eenmaal diefstal met geweld (of afpersing) in hun loopbaan;
- delinquenten met ten minste eenmaal aanranding of verkrachting in hun loopbaan.

Personen die voor het eerst met justitie in aanraking kwamen, vertoonden een significant langere misdrijfvrije periode, zelfs als zij zich schuldig hadden gemaakt aan diefstal met geweld of aan aanranding of verkrachting. Vier typen van delinquenten in de steekproef, zo gedefinieerd op basis van het *aantal* misdrijven en het *type* misdrijf in hun geregistreerde strafrechtelijke verleden, konden worden ingeschaald naar de mate van gevaarlijkheid (dat wil zeggen van kans op en snelheid van nieuwe justitiecontacten) na het misdrijf in de 'Steekproef 77 schuldig'. 'Delinquenten met diefstal en geweld in hun loopbaan' (Career Robbery offenders) hadden de kortste misdrijfvrije periode, gevolgd door achtereenvolgens 'delinquenten met aanranding of verkrachting in hun loopbaan' (Career Sexual Assault offenders), delinquenten die zich eerder aan een ander misdrijf dan deze hadden schuldig gemaakt en delinquenten die zich voor het eerst aan een misdrijf hadden schuldig gemaakt. De helft van de eerste twee groepen recidiveerde binnen respectievelijk 8 en 20 maanden. Van de laatste twee groepen had de helft nog niet gerecidiveerd na 72 maanden. Dit betekent bijvoorbeeld dat een delinquent met diefstal met geweld in zijn of haar loopbaan dit misdrijf slechts een keer hoeft te hebben gepleegd om in deze categorie te vallen.

Staat 1: Gemiddeld aantal justitiële contacten wegens misdrijf\* en gevangenisstraffen en percentage TBR, voor en na 1977, per type delinquent

gemiddeld aantal	beide 'typen' in loopbaan (n=11)	diefstal met geweld in loopbaan (n=116)	seksueel geweld** in loopbaan (n=65)	alleen andere misd. in loopbaan (n=1948)	in 1977 eerste justitiële contact (n=1886)
voor 1977:					
justitiële contacten*					
- totaal	25	16	12	6	0
- wegens gevaarlijke misdrijven***	5	2	3	1	0
gevangenisstraffen	6	3	3	1	0
TBR	27%	14%	11%	2%	0%
na 1977:					
justitiële contacten*					
- totaal	8	11	7	4	1
- wegens gevaarlijke misdrijven***	2	2	1	0,5	0,2
gevangenisstraffen	2	2	1	1	0
TBR	0%	3%	8%	1%	0%

\* resulterend in veroordeling, beleidssepot of voeging

\*\* verkrachting of aanranding

\*\*\* diefstal met geweld, afpersing, agressie tegen personen, verkrachting of aanranding

Hierna worden het aantal misdrijven en de soorten misdrijf in het leven van 'loopbaandelinquenten' vergeleken met die van andere personen die zich eerder aan misdrijven schuldig hebben gemaakt. Daarbij wordt afzonderlijk aandacht besteed aan de groep van elf personen in de onderzoeksgroep die zowel diefstal met geweld als aanranding of verkrachting in hun loopbaan hebben, de groep 'Beide criminele loopbanen' (Career Both).

#### *Het aantal misdrijven voor 1977*

Uit de analyses blijkt dat bovengenoemde vijf typen delinquenten duidelijk verschillen in het aantal misdrijven in het algemeen en het aantal gevaarlijke misdrijven in het bijzonder, waarvoor zij met justitie in aanraking zijn gekomen. Dat geldt het sterkste voor de periode vóór 1977. Zo bedraagt het aantal justitiële contacten wegens misdrijf resulterend in veroordeling, beleidssepot of voeging bij de vijf onderscheiden groepen vóór 1977 gemiddeld respectievelijk 25, 16, 12, 6 en (uiteraard) nul (zie verder staat 1 of tabel 14, p. 52).

#### *Het type misdrijf in 1977*

Het feit dat een delinquent in één van de categorieën van 'loopbaancriminelen' kan worden ondergebracht, wil niet zeggen dat het misdrijf waarvoor hij of zij in 1977 met justitie in aanraking kwam een ernstig misdrijf was. Bij delinquenten met diefstal met geweld in hun loopbaan was het misdrijf van 1977 bijvoorbeeld in een meerderheid van de gevallen een diefstal of inbraak (zonder geweld) of een verkeersmisdrijf. Wel betrof het in vergelij-

Staat 2: Overzicht van het percentage delinquenten dat binnen 6 jaar recidiveerde\*, naar aard van de recidive, per type delinquent

recidivecategorie	beide 'typen' in loopbaan (n=11)	diefstal met geweld in loopbaan (n=110)	seksueel geweld** in loopbaan (n=64)	alleen andere misdr. in loopbaan (n=1906)	in 1977 eerste justitiële contact (n=1776)
diefstal met geweld of afpersing	9%	23%	8%	4%	1%
inbraak	45	50	25	20	7
diefstal	73	64	36	35	12
agressie tegen personen	73	51	31	21	8
seksueel geweld**	9	4	14	1	0
misdrifft Opiumwet	9	25	11	9	2
verkeersmisdrifft	36	41	44	34	16
misdrifft Vuurwapenwet	9	19	12	6	2
totaal misdrijven	91	91	80	66	33
gevaarlijk misdrifft***	73	55	42	23	8

\* veroordeling, beleidssepot of voeging

\*\* verkrachting of aanranding

\*\*\* diefstal met geweld, afpersing, agressie tegen personen, verkrachting of aanranding

king met de andere categorieën delinquenten vaker diefstal met geweld. Bij delinquenten met aanranding of verkrachting in hun loopbaan was het misdrijf van 1977 relatief vaak een seksueel geweldsdelict, maar in een meerderheid van de gevallen bestond het ook hier uit een andersoortig misdrijf, zoals uit diefstal of inbraak (zonder geweld) of uit een verkeersmisdrifft (zie tabel 18, p. 62).

#### *Recidivepatronen na 1977*

Zijn de 'loopbaancriminelen' nadat ze op grond van hun strafrechtelijk verleden als zodanig door ons zijn aangemerkt, na 1977 gevaarlijker dan de overige delinquenten? Als men 'gevaarlijkheid' omschrijft als de kans op het plegen van een misdrijf waarbij geweld wordt gebruikt, dan kunnen we constateren dat 'loopbaancriminelen' inderdaad gevaarlijker zijn dan anderen. De resultaten waaruit wij deze gevolgtrekking maken, zijn weergegeven in staat 2 (zie ook tabel 21, p. 71). Bij delinquenten die in 1977 als 'loopbaancriminelen' zijn te onderscheiden, blijkt in de zes jaar daarop de kans om wegens een gevaarlijk misdrijf met justitie in aanraking te komen groter te zijn dan voor de andere delinquenten die in 1977 met justitie in aanraking waren geweest. Voor delinquenten met beide 'loopbanen' is deze kans bijvoorbeeld 73%, voor de delinquenten met diefstal met geweld in hun loopbaan 55%, tegen 23% van de delinquenten met alleen andere misdrijven in hun loopbaan.

Uit staat 2 blijkt verder dat, met betrekking tot alle soorten misdrijven, voor delinquenten met een criminele loopbaan de kans om op zijn minst één keer binnen zes jaar met justitie in aanraking te komen, groter te zijn dan voor andere delinquenten die reeds minstens twee maal met justitie in aanraking waren geweest. Zo was na 1977 23% van de delinquenten met diefstal



met geweld in hun loopbaan wegens diefstal met geweld met justitie in aanraking gekomen tegen 4% van de delinquenten die zich eerder hadden schuldig gemaakt aan een ander misdrijf. Men zou dit een vorm van 'specialisatie' kunnen noemen, die ook valt waar te nemen bij de delinquenten met aanranding of verkrachting in hun loopbaan: na 1977 is 14% van hen met justitie in aanraking gekomen wegens verkrachting of aanranding tegen 1% van de delinquenten met alleen andere misdrijven in hun loopbaan.

Voor de meeste typen misdrijven geldt dat voor delinquenten met 'beide loopbanen' de kans het grootste was na 1977 om met justitie in aanraking te komen, gevolgd door achtereenvolgens delinquenten met diefstal met geweld in hun loopbaan, delinquenten met aanranding of verkrachting in hun loopbaan, delinquenten met alleen andere misdrijven in hun loopbaan en tenslotte delinquenten die niet eerder waren veroordeeld.

De relatie tussen type delinquent in 1977 en het meest voorkomende geregistreerde misdrijf na 1977 is uiteraard niet perfect. Zo zijn er onder de delinquenten die zich tot in 1977 alleen aan andere misdrijven hadden schuldig gemaakt, enkelen die na 1977 met justitie in aanraking kwamen wegens diefstal met geweld (één van hen zelfs vijf maal). Deze personen werden zodoende delinquenten met diefstal met geweld in hun loopbaan.

Hoewel loopbaancriminelen zich gedurende de follow-up periode vaak aan bepaalde 'karakteristieke' misdrijven schuldig maakten, begingen ze ook veel andere soorten misdrijven. Wat dit betreft verschilt het recidivepatroon van loopbaancriminelen niet wezenlijk van dat van de andere delinquenten. Waarin ze wel duidelijk afwijken is de frequentie van het plegen van misdrijven. Bij loopbaancriminelen is die niet alleen voor, maar ook na 1977 gemiddeld hoger.

#### *Het aandeel van de loopbaancriminelen in de na 1977 geregistreerde misdrijven*

De groep loopbaancriminelen is niet erg omvangrijk. In 1977 vormden zij te zamen 4,8% van alle delinquenten die met justitie in aanraking kwamen. Van alle justitiële contacten wegens misdrijf die in de zes jaar na 1977 plaatsvonden, bleek evenwel 14,7% voor hun rekening te komen. Dat is 3,1 maal zo veel als hun aandeel in de delinquentenpopulatie. Telt men alleen de 'gevaarlijke' misdrijven, dan blijkt 18,1% daarvan op naam van de loopbaancriminelen te staan; dat is zelfs 3,8 maal hun aandeel in de delinquentenpopulatie.

Een reëlere vergelijking krijgt men als men de loopbaancriminelen in dit opzicht vergelijkt met alleen de delinquenten die in 1977 eveneens reeds minstens twee misdrijven op hun naam hadden staan. De verhoudingsgetallen worden dan wat kleiner, maar het aandeel van de loopbaancriminelen in de totale criminaliteit na 1977 blijft onevenredig groot. Staat 3 geeft hiervan een gedetailleerd beeld (zie ook tabellen 26, 27 en 28).

De loopbaancriminelen blijken dus verantwoordelijk te zijn voor een onevenredig groot aantal van de misdrijven en een onevenredig groot aantal van de 'gevaarlijke' misdrijven die in de follow-up periode werden geregistreerd. Omdat de groep loopbaancriminelen evenwel niet zo omvangrijk is, vormt het aantal door hen gepleegde delicten (van de geregistreerde en op-

Staat 3: De verhouding tussen het percentage per 'delinquenttype' in zes jaar tijd gepleegde delicten\* en het percentage dat de betreffende groep delinquenten uitmaakt van alle delinquenten die in 1977 met justitie in aanraking kwamen

recidivecategorie	beide 'typen' in loopbaan (n=11)	diefstal met geweld in loopbaan (n=110)	seksueel geweld** in loopbaan (n=64)	alleen andere misdr. in loopbaan (n=1906)
diefstal met geweld of afpersing	3,8	5,3	1,9	0,7
inbraak	1,4	3,0	1,0	0,9
diefstal	2,0	2,5	1,2	0,9
agressie tegen personen	3,0	2,4	1,6	0,9
seksueel geweld**	4,0	2,7	8,5	0,6
misdrifj Opiumwet	0,8	2,9	1,9	0,9
verkeersmisdrifj	1,2	1,2	1,5	1,0
misdrifj Vuurwapenwet	1,0	2,5	1,7	0,9
totaal misdrifjen	1,6	2,4	1,4	0,9
gevaarlijk misdrifj***	3,2	2,8	1,9	0,9

\* resulterend in veroordeling, beleidssepot of voeging

\*\* verkrachting of aanranding

\*\*\* diefstal met geweld, afpersing, agressie tegen personen, verkrachting of aanranding

gehelderde) toch slechts een klein deel van de totale criminaliteit van na 1977, respectievelijk van de 'gevaarlijke' misdrijven.

Het merendeel van deze misdrijven uit de follow-up periode, ook van de 'gevaarlijke', werd gepleegd door delinquenten die in 1977 (nog) niet als loopbaancriminelen waren aan te merken. Dat betekent dat het met het oog op de preventie van criminaliteit van belang is te voorkomen dat delinquenten die nog niet tot de loopbaancriminelen behoren, tot loopbaancriminelen worden. Zodra zij voldoen aan de criteria: twee justitiële contacten wegens misdrifj, waarvan ten minste één wegens diefstal met geweld, afpersing, verkrachting of aanranding, wordt de kans groot op veel volgende misdrijven, waaronder veel 'gevaarlijke'.

*Het aandeel van de loopbaancriminelen in de voor en na 1977 geregistreerde misdrijven, per jaar respectievelijk per maand*

Vervolgens is met descriptieve tijdreeksanalyses nagegaan welk gedeelte van de strafzaken die per jaar zijn afgedaan, kon worden toegeschreven aan de delinquenten in de steekproef uit 1977. Het gegevensbestand van Recidive 1977 bevat — zoals gezegd — een aselechte steekproef van 4% van de zaken die in 1977 onherroepelijk zijn afgedaan. Als we het aantal afgedane zaken dat aan de personen in de steekproef wordt toegeschreven met 25 vermenigvuldigen en tellen hoeveel dit er per jaar zijn voor de jaren 1970 tot en met 1981, dan kunnen we een schatting maken van het aantal afgedane zaken dat voor rekening komt van degenen van wie in 1977 een strafzaak is afgedaan.

Door deze aantallen te vergelijken met het totaal aantal zaken dat per jaar in Nederland is afgedaan, bijvoorbeeld in 1971, krijgen we een indruk van het aandeel van de in 1971 afgedane strafzaken dat voor rekening komt

van de personen die in 1977 met justitie in aanraking zijn geweest. In figuur 6 (p. 88) is dit in beeld gebracht. De bovenste, geleidelijk stijgende lijn geeft het totaal aantal afgedane zaken weer en de middelste, onderbroken lijn het gedeelte dat voor rekening komt van degenen die in 1977 met justitie in aanraking kwamen. Zij zijn uiteraard in ieder geval verantwoordelijk voor alle in 1977 afgedane zaken, maar zelfs voor meer, zo blijkt uit figuur 6. Dit laatste is echter het gevolg van de wijze van steekproeftrekken: de meest actieven hadden de grootste kans om in de steekproef te komen doordat bij het trekken van de steekproef is uitgegaan van zaken en niet van personen (zie noot 4 in de Engelse tekst).

De personen die in 1977 met justitie in aanraking zijn geweest (ons 'cohort') blijken ook verantwoordelijk voor een groot gedeelte van de zaken uit de jaren 1970 tot en met 1976; dit aantal nam zowel absoluut als relatief van 1970 tot 1977 gestadig toe. In 1970 betrof het 27% van de zaken en in 1976 48%. Na 1977 neemt het aandeel geleidelijk af.

Dat de personen in de steekproef in 1977 en vlak daarvoor erg actief waren op het criminele vlak blijkt eveneens duidelijk als het misdrijf van de steekproef van 1977 buiten beschouwing wordt gelaten. Dan ontstaat het beeld zoals weergegeven in figuur 9. In deze figuur zijn de aantallen per maand zijn vermeld en niet per jaar zoals in figuur 6.

In de figuren 9 en 10 zijn de in 1977 afgedane strafzaken die in de steekproef vielen en de overige zaken die tussen 1968 en 1983 voor rekening kwamen van de betrokken groepen, afzonderlijk weergegeven. Daardoor wordt duidelijk zichtbaar dat delinquenten met diefstal met geweld in hun loopbaan (figuur 11, p. 97) — afgezien van het in 1977 afgedane misdrijf — gedurende de gehele onderzochte periode zowel voor als na 1977 erg actief waren, veel actiever dan de delinquenten in 'Steekproef 77 schuldig' als geheel (figuur 9, p. 95). Hiervoor is dit reeds geconstateerd, doch toen voor de periodes voor respectievelijk na 1977 als geheel.

Hoewel de 'loopbaancriminelen' erg actief waren, zijn zij in de jaren 1971 tot en met 1981 slechts verantwoordelijk voor een klein deel van het totaal aantal afgedane strafzaken, zo valt af te lezen uit figuur 6 (p. 88). Ook dit is een bevestiging van eerder vermelde uitkomsten die betrekking hadden op de totale periodes voor respectievelijk na 1977.

Uit figuur 6 blijkt voorts dat het totaal aantal afgedane misdrijfzaken in Nederland in de 12 onderzochte jaren sterk is gestegen. Tussen 1975 en in 1981 was de toename 68%. Bekijkt men alleen de 'gevaarlijke' misdrijven, dan blijkt de toename 58% te zijn (figuur 7, p. 91). Het aantal zaken wegens diefstal met geweld (of afpersing) blijkt tussen 1975 en 1981 meer dan verdubbeld te zijn (figuur 8, p. 92); 87% van laatstgenoemde zaken die in 1978 zijn afgedaan blijkt voor rekening te komen van ons 'cohort', dat wil zeggen de personen die in 1977 hetzij door de rechter, hetzij door de officier van justitie, schuldig werden bevonden aan een misdrijf. In het daaropvolgende jaar is dit percentage 70 en neemt in de daaropvolgende jaren steeds verder af. De groeiende kloof wordt gevuld door recidivisten die in 1977 niet met justitie in aanraking kwamen en door personen die nog niet eerder met justitie in aanraking waren geweest.

*Recidivepatronen door de tijd heen*

Uit 'self-report' studies onder delinquenten is gebleken dat criminele loopbanen worden gekenmerkt door periodes waarin men veel activiteiten ontplooit die worden afgewisseld met misdrijfvrije periodes. In een totaalbeeld ziet men hier niets van, omdat deze periodes tegen elkaar wegvallen. Geacht is hiervan iets aan het licht te brengen door middel van meer gedetailleerde analyses.

Zo bleek bijvoorbeeld dat in het misdrijfpatroon van delinquenten met diefstal met geweld in hun loopbaan die in 1977 tot een onvoorwaardelijke gevangenisstraf waren veroordeeld enkele jaren daarna sprake was van een snelle, sterke toename (figuur 15, p. 101), in tegenstelling tot bij de delinquenten met diefstal met geweld in hun loopbaan die in 1977 niet tot gevangenisstraf werden veroordeeld. Bij de laatste groep blijft het recidivecijfer dalen (figuur 16, p. 101).

Het betreft slechts exploratieve analyses. Nader onderzoek toegespitst op bepaalde soorten misdrijven en bij meer typen delinquenten kan meer over de 'gevaarlijkheid' en recidivepatronen aan het licht brengen. Hiertoe zijn suggesties gedaan.

**Slotbeschouwing**

De oorspronkelijke bedoeling van het onderzoek was de volgende vragen te beantwoorden: zijn er een of meer groepen bijzonder actieve of gevaarlijke personen in de steekproef uit 1977 te lokaliseren en zo ja, wat zijn de kenmerken van deze groepen en vertonen de criminele loopbanen van deze personen een speciaal patroon? Kunnen we op basis van de besproken resultaten deze vragen nu beantwoorden?

Uit de analyse kwamen drie groepen naar voren die significant verschillen van de 1.948 personen die eerder volgens de rechter of de officier van justitie schuldig waren aan een misdrijf, maar die niet tot één van de groepen met een criminele loopbaan behoorden. Het ging om een groep van 116 delinquenten met diefstal met geweld in hun loopbaan, een groep van 65 delinquenten met aanranding of verkrachting in hun loopbaan en een groep van 11 delinquenten met beide misdrijven in hun loopbaan.

De meest kenmerkende eigenschappen van de groepen met een criminele loopbaan hebben te maken met hoe actief zij waren, in het bijzonder met het aantal officieel geregistreerde justitiële contacten en de snelheid waarmee zij opnieuw met justitie in aanraking kwamen wegens een niet-triviaal delict na het misdrijf in 'Steekproef 77 schuldig' (korte misdrijfvrije periode). Deze twee kenmerken zijn niet terug te voeren op verschillen in leeftijd.

Het verschil in aantal justitiële contacten is het duidelijkste bij de groep delinquenten met beide misdrijven in hun loopbaan en de delinquenten met diefstal met geweld in hun loopbaan, die zich zowel vóór als na het misdrijf in 1977 vaker schuldig hadden gemaakt aan een misdrijf dan de delinquenten die eerder een ander misdrijf hadden begaan. Bovendien was de misdrijfvrije periode van de groep delinquenten met diefstal met geweld in hun loopbaan veel korter, ongeacht het aantal eerdere justitiële contacten.

Hoewel alie groepen met een delinquente loopbaan gedurende hun leven veel actiever zijn dan de groep delinquenten die zich eerder aan een ander misdrijf hadden schuldig gemaakt, vertoont de combinatie van typen misdrijven van de onderscheiden groepen onderling veel overeenkomst. Zo is bijvoorbeeld diefstal het misdrijf dat in alle groepen het meeste voorkomt als men de gehele onderzochte periode in ogenschouw neemt. Om vast te stellen of van een criminele loopbaan sprake is, dient het gehele patroon van geregistreerde delinquente activiteiten in beschouwing te worden genomen.

De kans is groot dat de drie onderscheiden groepen delinquenten na een korte tijd opnieuw met justitie in aanraking komen wegens een ernstig misdrijf. Ruim de helft van de groep delinquenten met diefstal met geweld in hun loopbaan kwam bijvoorbeeld binnen acht maanden opnieuw met justitie in aanraking wegens een niet-triviaal misdrijf. Binnen zes jaar werd 23% ten minste eenmaal opnieuw aangehouden wegens diefstal met geweld. Van de delinquenten met aanranding of verkrachting in hun loopbaan kwam de helft binnen 18 maanden opnieuw met justitie in aanraking. Binnen zes jaar werd 14% opnieuw aangehouden wegens ten minste één seksueel geweldsmisdrijf. De kans op agressie tegen personen was relatief groot in alle drie de groepen, met name bij de groep delinquenten met zowel diefstal met geweld als aanranding of verkrachting in hun loopbaan. Bovendien was bij de groep delinquenten met diefstal met geweld in hun loopbaan de kans relatief groot op een nieuw contact met justitie wegens een misdrijf van de Opiumwet.

Bij delinquenten met diefstal met geweld in hun loopbaan is de kans op het plegen van diefstal met geweld groter zoals bij de delinquenten met aanranding of verkrachting in hun loopbaan de kans op een nieuw seksueel geweldsmisdrijf. De kans dat zij worden aangehouden wegens andere soorten misdrijf is echter eveneens in vrijwel alle opzichten groter dan bij delinquenten die andere misdrijven pleegden. Delinquenten met een criminele loopbaan zijn in hun leven vaker met justitie in aanraking gekomen, maar wegens eenzelfde variëteit aan delicten.

Met deze analyse zijn inderdaad groepen delinquenten geïdentificeerd die 'bijzonder actief en bijzonder gevaarlijk zijn, personen die gedurende hun leven verantwoordelijk zouden zijn voor een onevenredig aantal misdrijven in verhouding tot hun aantal'.

In dit verslag hebben wij ons geconcentreerd op de vraag of delinquenten met een criminele loopbaan in Nederland konden worden gedefinieerd en niet op de vraag of te voorspellen is wie een dergelijke delinquent zal worden. Ook de vraag naar de relatieve effectiviteit van alternatieve interventiestrategieën is niet aan de orde gekomen. Wat uit de resultaten van dit onderzoek wel kan worden gedestilleerd is dat men door het minimaliseren van de gelegenheid tot het plegen van misdrijven door deze bijzonder actieve delinquenten, bijvoorbeeld door hen te detineren gedurende zes jaar, over het geheel gezien relatief weinig misdrijven voorkomt. Het gaat namelijk om erg weinig personen. Bovendien loopt men, gezien de gevonden recidivepercentages, een gerede kans personen ten onrechte te detineren.

# 1 Introduction

This report asks the following question:

Of those people found guilty of a criminal offense in the Netherlands in 1977, was there a group of particularly active and dangerous people, who would be responsible within the next six years for serious crimes out of proportion to their numbers?

The answer to such a question must be complex, because each individual's involvement with crime and the criminal justice system over a lifetime is correspondingly complex. Consider just a few of the aspects of crime patterns over a lifespan:

- *Number* of crimes committed or criminal justice contacts, both the total number and the crime rate (crimes per month or year) and changes in the number and rate over the lifespan.
- Patterns of *activity*, including the age of onset, the length of time (days, months, years or never) between one criminal episode or criminal justice system contact and the next (which we call in this report the 'crime-free period'), the sequential pattern and length of these crime-free periods over a lifespan, and the occurrence of complete desistance or cessation of criminal justice contacts.<sup>1</sup>
- *Specialization* in a specific type of offense (such as violent, property, traffic, drug or sexual) or a specific combination of offense types, and the sequential pattern of offense types over a lifespan.
- *Seriousness* of offenses (amount of damage, property lost, physical damage or danger to victims, threat to society), and escalation or de-escalation of offense seriousness over a lifespan.

With such a myriad of possibilities for each individual's lifetime criminal history, the task of identifying, prospectively, those offenders who would become particularly active and dangerous is a most difficult enterprise. Fortunately, the Netherlands 'Recidivism 77' dataset, on which the analysis in this report is based, provides a tool that is equal to such a task - a random sample of all serious cases adjudicated in the Netherlands in 1977, with complete juvenile and adult criminal histories of offenses occurring before the 1977 case and a follow-up of criminal histories for six years after the 1977 case's date of adjudication. This dataset, containing information on about 6,000 defendants and 60,000 offenses, was designed so that offenders could be identified who were not only active and dangerous in

<sup>1</sup> The analysis of the crime-free period immediately prior to the current event is an analysis of 'recency'. The analysis of the crime-free period after the current event is an analysis of 'survival'.

the past, but who would be expected to become particularly active and dangerous in the future.

The Recidivism 77 dataset is uniquely suited to answer the questions that provide a framework for this report — the initiation and continuation of criminal careers, and the identification of the most active and dangerous offenders — for several reasons.

- The dataset is large enough and detailed enough so that the numerous aspects of crime patterns over a lifespan can be considered.
- It links juvenile and adult (officially-recorded) criminal histories.
- It samples defendants at a moment when criminal justice intervention is possible (at adjudication, not after they are already imprisoned).
- The sampled defendants represent the entire spectrum of cases encountered by prosecutors and judges (men and women, children and adults, those acquitted and those found guilty, first-offenders and habitual offenders, those accused of 'victimless' crimes and those accused of 'predatory' crimes).
- Most importantly, the prospective longitudinal design of the Recidivism 77 dataset permits inferences that would not be possible with retrospective data.

### 1.1 Previous analysis

In earlier publications the WODC (Research and Documentation Center) of the Netherlands' Ministry of Justice presented recidivism rates of the Recidivism 77 sample of persons whose cases had been adjudicated in 1977 (Van der Werff, 1986a/1989). The recidivism rates in the earlier analysis were calculated in the 'classical' way, by taking the percentage of the people whose case had been adjudicated in 1977 who were re-arrested in each year, for six years afterwards. They were categorized by several characteristics, including the outcome of the 1977 case, gender, age and criminal history. This analysis shows that the chance of recidivism was related to the number of prior convictions and to the age at the conviction in 1977. Moreover, the earliest age at which the person had ever been convicted of a crime (age of onset) turned out to be slightly relevant.

However, because these earlier results did not give sufficient insight into the meaning of the interrelations between age, criminal history and recidivism, so that this information could provide a basis for administrative decisions and policy formulation, further analyses now have been done on the data, the results of which are reported here and in Block and Van der Werff (1988).

The entire Recidivism 77 sample includes not only 1977 court cases, but also cases that were disposed of in 1977 by the public prosecutor. The official criminal record of each person was followed for exactly six years from the date of registration at the Public Prosecutor's Office of the 1977-adjudicated crime. For an overview of the universe from which this 'Recidi-

vism 77' sample was taken, see Figure 1. In the present report we are concerned with the criminal history of only those offenders sampled in 1977 who according to the judge or just the public prosecutor were 'guilty' of a criminal offense. Thus, this analysis was limited to those people who had been found 'guilty', either by the judge or only by the prosecutor (see Figure 1). People acquitted in 1977, and those whose cases were dismissed for technical reasons or for lack of evidence are excluded in the current analysis.

In the analysis presented here, we try to give more insight into the course and the kind of the crimes committed by the group of sampled offenders, not only the crimes committed after but also those committed before the criminal case that was dealt with in 1977. In order to do this, survival analysis and time series analysis have been used as methods for analysis. This is an improvement over the classical method of measuring recidivism, because it is much more exact. It measures the exact time period between the day when a person is adjudicated for a crime (or leaves prison) and the day when the person is arrested for committing an additional crime (with a subsequent criminal justice disposition; see Glossary). We call this measure of recidivism the 'crime-free period'. For people who did not recidivate (were not arrested followed by a 'disposition') during the six year follow-up, the crime-free period was, thus, six years. This is a conservative measure of recidivism (see Maltz, 1984), and should perhaps be called 'arrest-free' period. It is conservative in that we know that those people who were arrested (and whose case was disposed of by the criminal justice system) were *not* crime-free. In a search for the most 'active and dangerous' offenders, it is, therefore, a useful definition.

## 1.2 Central questions

The data set is so extensive that it allows the analysis of numerous questions. However, the analysis problems are proportionally extensive, and therefore time consuming. Consequently, as yet we have had to confine ourselves to a few questions. The questions that served for guidance in the present report were the following:

- was there a group of particularly active or dangerous people in the 1977 sample, and if so;
- what were the characteristics of this group as of 1977;
- was there a special pattern in the criminal careers of the people in this group; and
- was this group responsible for a disproportionate amount of serious offenses committed *after* 1977?

## 1.3 Related research

Earlier research conducted at the WODC (see Van der Werff, 1978, 1979a, 1979b, 1981) presents detailed documentation of the Recidivism 77 dataset (Van der Werff and Block, 1986) and analyzes such questions as special



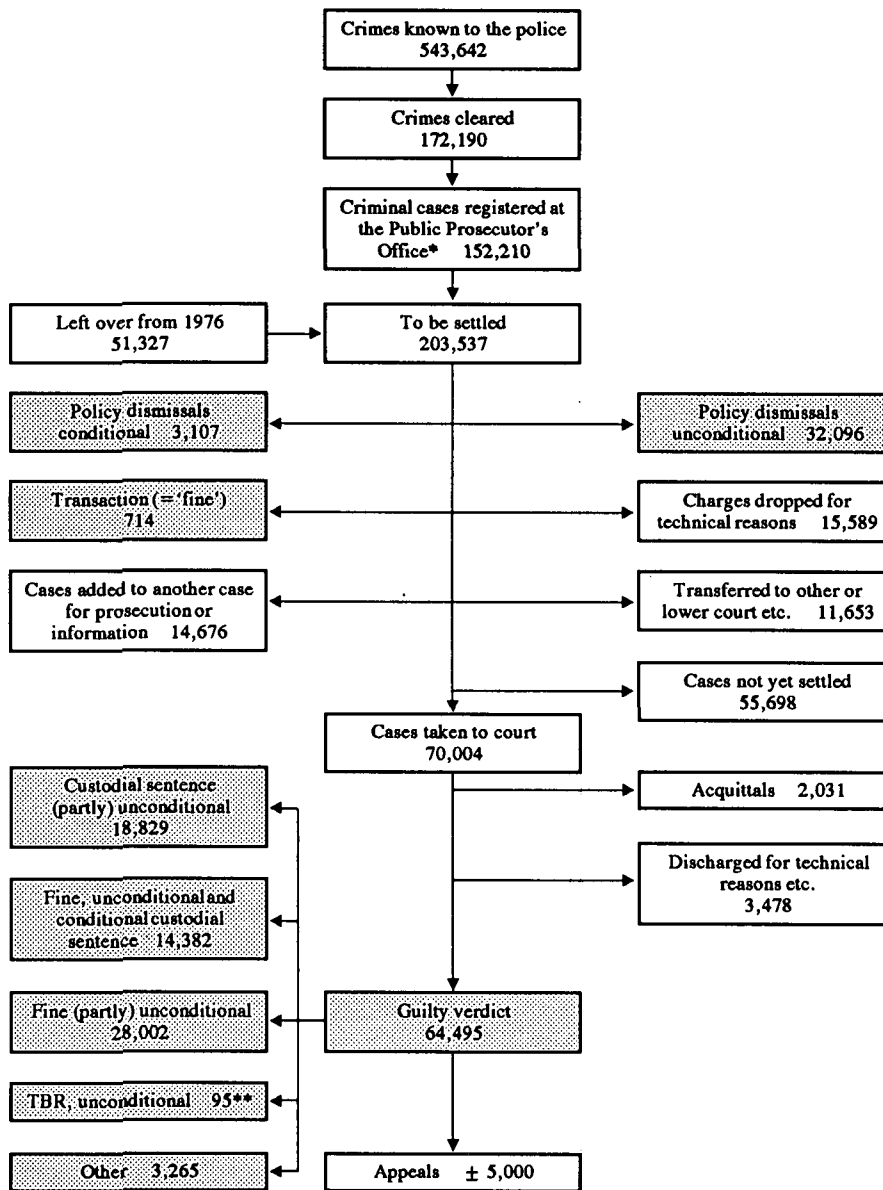
deterrence (Van der Werff, 1985, 1986a). recidivism among foreign residents of the Netherlands (Van der Werff, 1986b), and comparative recidivism of people whose 1977 cases were dropped (Van der Werff, 1989). In addition, the WODC conducted an earlier study of recidivism, a sample of cases adjudicated in 1966. Details of this 'Recidivism 66' study may be found in Van der Werff, 1979b.

Two other Dutch research studies also have analyzed recidivism. The first, conducted by Buikhuisen and Jongman (1968) studied all 21-year-old Dutch men who were convicted of a criminal offense in 1964 or 1965. Data included complete 'rap sheets', adult and juvenile. The central question of the research was whether or not offenders had a definite 'preference' for a specific type of offense. Offenses were categorized in four types: property offenses, violent offenses, sexual offenses, and traffic offenses. Buikhuisen and Jongman demonstrated that, for about half of the offenders, all of their offenses, or all but one, were of a single type.

The second piece of research, by Nijboer (1975), was directed at the prediction of recidivism. He analyzed psychiatric reports about male offenders, who had been submitted to the court in one judicial district of the Netherlands from 1948 through 1970. Whenever at least 75 percent of the offenses on the official criminal history (juvenile and adult) could be categorized as a single type, the offender was defined as a offender of that type. Three types emerged - property offenders (vermogensdelinquenten), offenders against morality (zedendelinquenten), and a group with a greatly varied criminal history. For each of these groups, Nijboer tried to find typical characteristics that might lead to prediction.

Outside of the Netherlands, in Denmark, Finland, Great Britain, and the United States, extensive research on criminal career and career criminals versus other offenders has been done. Although limited space prevents listing each of these, an overview of United States research may be found in publications of the U.S. Department of Justice (1983), and the National Institute of Justice (Morris and Miller, 1987), and in an edited review (Blumstein, *et al.*, 1986). A comprehensive overview of findings of career criminal research, with an emphasis on the evolution of 'criminal careers' from a concept to an analytical instrument, can be found, in Dutch, in Kommer (1988). Also in Dutch, Van de Bunt (1988) offers a more critical review of this body of research, pointing out that the 'career criminal' is an analytical construct that may seldom exist in real life, and further, that the multiple and varied aspects of criminal involvement over a lifespan are seldom taken into account in the typical 'career criminal' study. The present study attempts to overcome some of the difficulties outlined by Van de Bunt. In particular, we hope to avoid a simplistic answer to the criminal career question, and to take into account the many-sided aspects of involvement with the criminal justice system over a lifespan. At the same time, we hope to determine if it is possible to identify those offenders who will, in the future, become exceptionally active and dangerous.

Figure 1: Criminal case processing in the Netherlands, 1977



Sources: CBS; Maandstatistiek Politie, Justitie en Brandweer, mei 1978; Criminele statistiek 1977; Justitiële Statistiek 1977 en 1978; Ministerie van Justitie, Directie Delinquentenzorg en Jeugdinstellingen.

\* More crimes per case possible and more cases (=delinquents) per case possible.

\*\* Of which 78 also received a custodial sentence. Under TBR, a person determined to be dangerous can be held indefinitely. See Glossary.

▨ 'Guilty' cases analyzed in the present report.

## 2 Data and method

### 2.1 The sample

The data set analyzed in this report is part of a larger representative sample of four percent of the 147,839 cases of serious offenses (misdrijven; see Glossary) that were irrevocably disposed of in 1977 in the Netherlands (see Figure 1).<sup>2</sup> This data set will be referred to here as the 'Recidivism 77' data, in order to distinguish it from an earlier study of recidivism, conducted in the same way with a sample of people adjudicated in 1966. (For details of the Recidivism 1966 study, see Van der Werff, 1979b.)

The specific cases dealt with in this report (unless otherwise noted) are Sample 77 'Guilty'. These cases include only those offenders who most probably committed the offense(s) charged in the 1977 case (Figure 1). All 1977 cases declared guilty by a judge are represented in Sample 77 'Guilty'; of the cases dealt with by the public prosecutor (sepots), only the policy dismissals (beleidssepots) are included. A policy dismissal occurs when a case is dismissed for 'public policy' reasons by the prosecutor, even if the prosecutor determined that the evidence was sufficient for the suspect to be found guilty by a judge. In a policy dismissal, the prosecutor can dismiss the case outright, or propose to the defendant that the case will be dismissed if he or she for instance agrees to be put on probation. For more detail, see Figure 1, the 'Definitions' section below, and the Glossary.

People acquitted in 1977 by the judge (vrijspraak), dismissed from prosecution by the judge (ontslag van rechtsvervolging), or dismissed by the prosecutor because of lack of evidence (sepot geen bewijs) have been excluded in the analyses described in this report. Also, the sample analyzed here does not include people charged with committing an ordinance violation or other minor offense (overtreding)<sup>3</sup>.

<sup>2</sup> This total number includes 152,210 cases registered at the Public Prosecutor's Office, plus 51,327 cases left over from 1976 (=203,537), minus 55,698 cases continued to 1978. Because they were so frequent, drunken driving cases were sampled at two percent and weighted in the analysis.

<sup>3</sup> The original Recidivism 77 sample contained 95 cases in which the charge for the Sample 77 crime was overtreding, even though it is unusual for an overtreding case to be dealt with at the criminal court level. The oldest of these 95 defendants was 18. A detailed analysis of these cases showed that half had missing criminal history information (see Van der Werff and Block, 1986). Therefore, it was decided to remove from the sample all 95 cases in which the Sample 77 crime was overtreding. (For the cases remaining in the sample, any history of overtreding before or after the Sample 77 crime still remains in their criminal history record data.)

Drunken driving cases (section 26 sub 1 and 2 of the Road Traffic Act) were so frequent in the population that for this category the sample was confined to two percent. In the analysis and presentation of results, the difference has been balanced out by weighting.

In the random choice of four percent of cases adjudicated in 1977, 57 people were sampled twice. That is, the same person had two (or more) cases adjudicated in 1977, and two were sampled. Because we did not want to include the criminal histories of these 57 people twice, the second record was eliminated from the sample. To complete the four percent, these 57 were replaced by other randomly-chosen cases.<sup>4</sup>

The weighted Recidivism 77 sample totaled 5,943, and included 2,706 offenders convicted (veroordeeld) by a judge and 1,320 people whose criminal case was dismissed for policy reasons (in short: 'policy dismissal' or beleidssepot). This gave a sample of 4,026 people who, according to the judge or according to the public prosecutor, were 'guilty' of a criminal offense. In this report, this sample will be called *Sample 77 'Guilty'* (Figure 1). The results described hereafter always concern this *Sample 77 'Guilty'*, unless stated differently.

Comparing the composition of the Recidivism 77 sample with the total population of defendants in 1977 shows that the two are equivalent in several respects (see Van der Werff, 1986a). It may be assumed that the results from this sample are representative for the total group of offenders convicted by the judge and offenders whose case was dismissed for policy reasons (beleidssepots).<sup>5</sup>

Offense types that happen relatively seldom, of course, appear in the sample in relatively small numbers. These crimes are often very serious, and

<sup>4</sup> This points out a problem with the sampling procedure, which should be corrected in future analysis. When *Sample 77* offenders are weighted to equal 100 percent of all people adjudicated in 1977, the number of dispositions in 1977 exceeds the total of all 1977 dispositions. This occurs because the sample was a random sample of cases, not people. A person who had two or more cases adjudicated in 1977 had double or more chances to be chosen. Although the 57 people who were sampled twice, for two different 1977 cases, were not counted twice in the final sample, this does not correct a sampling bias. Extremely active people were more likely to be included among the *Sample 77 people*, even though the sample was random at the *case* level. To correct for this, each person in *Sample 77* should be weighted by the inverse of the number of 1977 adjudications. For example, a person with two 1977 adjudications (whether they were both sampled or not) should be weighted half. Note, however, that this sampling problem does *not* affect the career offender typology analysis in this report.

<sup>5</sup> Three percent of these offenders did not reside in the Netherlands at the time of the final decision concerning the *Sample 77* offense; these offenders were much less likely to recidivate within six years, according to ADR records, than Dutch residents (Van der Werff, 1986b). Because our intention in this report was to present a complete picture of offenders found 'guilty' in 1977, these offenders are included, even though their inclusion probably lowers the prevalence of recidivism in the results. (Of people residing in the Netherlands, Dutch versus foreign citizenship makes no difference in the chance of recidivism.)

therefore interesting, but unfortunately there would have been too few cases in the four percent sample for detailed analysis. In order to be able to give a reliable judgment on these categories, extra samples were taken, in addition to the four percent sample. Some of the analysis in this report is based on these additional samples (extra steekproeven). These extra samples, the number in each sample, and the percent sampled for each were the following:

Offense type	Sample	
	%	N
Robbery (diefstal met geweld), attempted robbery	25 %	131
Attempted murder/murder (doodslag/moord)*	100 %	187
Battery (gekwalficeerde mishandeling)	25 %	118
Public violence (bedreiging met geweld)	25 %	103
Offense against decency (schennis der eerbaarheid)	100 %	117
Rape (verkrachting), attempted rape	100 %	157
Other sexual assault (aanranding)	100 %	121
Child molesting (ontucht met kinderen of bewustelozen)	100 %	162
Drug offenses (Opiumwet)		
- hard	10 %	205
- soft	25 %	342
Total 'Extra Sample' cases		1643

\* In Dutch criminal records, both manslaughter (doodslag) and murder (moord) include attempts.

## 2.2 The data

The Recidivism 77 representative sample was chosen from a listing of the data set of the Netherlands Central Bureau of Statistics (CBS) that was provided to the Research and Documentation Center (WODC) of the Ministry of Justice. For each sampled case, data were obtained on the way the 1977 case was dealt with, the kind of crime of the 1977 case, and also on gender, nationality, marital status, and work situation in 1977. The latter information is collected by the CBS from the Information Records that the police fill out at arrest of a suspect. To this, WODC added data on the profession in 1977 (social class), for which the register in the public prosecutor's office was consulted.

Further, extracts (uittreksels) from the General Documentation Files of the Criminal Record Office (Algemeen Documentatieregister van de Justitiële Documentatiedienst) were utilized. Algemeen Documentatieregister (ADR) records contain information on every criminal case that has been registered by the police at the Public Prosecutor's Office (parket van de officier van justitie). ADR records are comparable to 'rap sheets' in the United States. As many as 102 arrests were mentioned on the ADR extract of one of the offenders in the sample. The oldest court case appearing on any extract was dated 1920.

In 1983, exactly six years after the Sample 1977 date of arrest (inschrijving) for each person in the sample, data were again gathered on every

criminal case in the ADR 'rap sheet'. Thus, Recidivism 77 data follow each defendant for exactly six years, to the day, after the arrest leading to the 1977 adjudication. Although a six-year follow-up does not necessarily constitute a lifetime history, a longer study (Kitchener, *et al.*, 1977) found that four-fifths of the people who would eventually recidivate within 18 years had already done so at the end of the fifth year. Also, Maltz and Markovic (1987) found that a two-year follow-up is long enough for a model that will give a reliable estimate of the percent who will eventually recidivate. Similarly, in the Recidivism 77 data, the proportion re-arrested drops rapidly over time. For example, of the 1,211 offenders who were convicted by a judge and recidivated within six years, 499 (41%) did so in the first year, and another 238 (20%) did so in the second year. By the third year, only an additional 190 (16%) recidivated for the first time, in the fourth year 119 (10%), in the fifth year 95 (8%), and in the sixth year 71 (6%).<sup>6</sup>

### 2.2a Criminal history information

The data on every criminal case mentioned on each sampled ADR extract were coded for this study, regardless of the disposition of the case. Thus, cases that resulted in acquittal, discharge or prosecution by the judge, cases added to another case, and cases dismissed by the public prosecutor on account of lack of evidence, were all included. However, most of the analysis in this report (unless otherwise noted) includes only those criminal history cases that were followed by a criminal justice disposition like a conviction by a judge or a policy dismissal by the public prosecutor or cases that were just added to another case (= 'disposition').

Sometimes different kinds of crime are registered in a single criminal case, for instance a theft and a traffic offense. In this kind of situation, data on each kind of crime was coded. It happens also that several crimes of the same sort (e.g., three thefts) might be registered as one case. In those situations, the number of these crimes (counts) was recorded. However, in the analyses described here, these additional crimes have not been taken into account.

The data recorded for each case in the criminal history were the following:

- the date of registration (inschrijving) at the public prosecutor's office;
- the kind of crime, according to the sentence and according to judgment of the police;
- whether or not pretrial detention was imposed;
- the date of irrevocable decision (final disposition, including any appeals);
- the kind of decision;
- the kind of imposed penalty;
- the length of the imposed prison sentence.

<sup>6</sup> The *chance* of a first re-arrest in the first year was 21 percent (499/2,375), while the chance of a first re-arrest in the sixth year was six percent (71/1,234). See note 18 below.

Other data were not directly available for coding from ADR files, but were calculated in the course of analysis. These included the following:

- seriousness of each offense;<sup>7</sup>
- date of release from each custody (datum ontslag uit detentie);
- age of onset (age at first arrest in criminal history);
- sequence of crimes in an offender's history;
- number of days pretrial detention (preventieve hechtenis).

### *2.2b Date-of-offense information*

The date of registration (inschrijving) of the criminal case at the public prosecutor's office plays an important role in the analyses reported here. It would have been more accurate had we used the date on which the crime was committed. However, this date is not mentioned on the ADR extract of the Criminal Record Office. Offense date information is available for the Sample 77 crime, but not for the other crimes in the criminal history.

Consulting the files concerned or the public prosecutor's register to trace the offense date for each crime would have been extremely time consuming. Therefore, only date-of-arrest information is available for criminal history cases. Analysis of the CBS data showed that in 1977, on the average, 74 days elapsed between commission of the crime and registration of it at the public prosecutor's office. This average varies by type of crime: for drug crimes it is 44 days, for serious traffic crimes 49, for violent (aggressive) crimes 62, for sexual crimes 65 and for property crimes 99 days.

### *2.2c ADR unknown cases*

The ADR data in the General Documentation Files are deleted when the person concerned dies or becomes eighty years old. This was known to have happened with 15 of the 5,943 people in the total Recidivism 77 sample. However, in addition, 253 people (4.3 percent) could not be found in the General Documentation Files (ADR) when they were searched in 1983. Because of the 1977 case, at least one case should have been in these files; therefore, all 253 people should have been 'known' to ADR in 1983.

There are several possible explanations for these 'ADR Unknown' cases. Between 1977 and the date of data collection, half of the ADR unknown group may have died. This can be derived from the results of a further study on a comparable group (see Van der Werff, 1979a:44). However, the 253 ADR-missing people were younger, not older, than the rest of the sample. Further analysis of the cases that were ADR-unknown in 1983

<sup>7</sup> The seriousness score for each crime is based on the maximum prison sentence that may be imposed on the crime according to penal law. For details of the calculation of these variables, see Van der Werff and Block (1986).

(Van der Werff and Block, 1986) showed that more foreign or stateless (11%) than Dutch (5%) offenders had missing ADR histories (see note 4 above), and that a missing ADR history was most common if the 1977 adjudicated offense was a minor violation (overtreding) (46%), arson (12%) or a soft drug violation (13%).

In general, ADR histories were *less* likely to be 'ADR unknown' in 1983 if the person had been convicted by a judge in 1977, and they were *more* likely to be missing in a combination of two circumstances - the person was a juvenile in 1977 and the crime was relatively less serious. For example, of the 556 ADR-known offenders who were arrested for simple theft, 21 percent were juvenile, compared to 33 percent of the 30 ADR-unknown offenders arrested for simple theft. Also, all of the 95 people charged with overtreding in 1977 were between ages 12 and 18, and half of the 95 were ADR-unknown (see note 2 above). (For more detail, see Van der Werff and Block, 1986.) As a partial correction of the problem, all 95 of the Sample 77 *overtreding* offenders were removed from the sample. The Sample 77 arson offenders were not removed, because there were only four missing cases (of a total of 33). The Sample 77 soft drug offenders were not removed for the present analysis, because the biggest problem was in the extra sample, not the four percent sample analyzed here.

The CBS data set from which the 1977 sample was originally chosen contains information from the same extracts as the General Documentation (ADR) Files. Of the 253 people who were unknown in ADR in 1983 (and neither charged with overtreding in 1977 nor known to be dead), ADR (rap sheet) information prior to 1977 was available for 107 (42 percent). Since among the people who were *known* in the ADR in 1983, ADR information prior to the Sample 77 crime was present for about the same percent (40 percent), we assumed that people with no pre-1977 ADR history actually had zero pre-1977 arrests. The data on 'dispositions' before 1977 of the people that were unknown in ADR in 1983 were, therefore, copied from CBS data and coded in our data set. However, CBS information concerns only the *convictions* before 1977, and not the dismissed cases or other dispositions. All the 268 people who were ADR-unknown in 1983 (including the 15 who were known to have died) were coded 'missing' for the post-1977 history.<sup>8</sup>

### 2.2d Summary of the data

The original Recidivism 77 sample of 6,094 people (which includes the extra samples), minus 57 'second' histories of people with two 1977 cases chosen by random sampling (and who would have been counted twice), and minus the 95 overtreding people, equals 5,943 people in the Recidivism 77 sample. Of these, 4,026 were in the four percent sample and were found

<sup>8</sup> Fortunately, such 'right censored' data can be handled in survival analysis.



*'guilty' either by the judge or just the public prosecutor; these people constitute the Sample 77 'Guilty'.*

For more information on the preparative manipulations that were carried out on the data set, refer to an internal WODC-report (Van der Werff and Block, 1986).

## 2.3 Definitions

An analysis of the Dutch criminal justice system, written in English, inevitably will have many problems of translation and interpretation. This is especially true of such a complex study as this one. Therefore, this report includes a detailed Glossary (page 127), contains numerous footnotes explaining definitional issues, and when necessary, includes both English and Dutch in the text. However, there remain several definitional issues that would be easy for the English-speaking reader to misunderstand, but which are vital to the interpretation of the analysis. These issues are discussed in this section.

### 2.3a Arrest

In the Netherlands, as in the United States, the determination that an arrest has taken place is not nearly as straightforward as it might seem at first glance. Has an arrest taken place when a person is questioned by the police, or when the person is taken to the police station, or when the person is 'booked' and not allowed to leave, or when the person is charged with a crime? Sherman and Glick (1984) found that United States cities vary greatly in their definition and counting of 'arrest'.

In the present study, *an arrest is defined as having occurred when the case is registered at the public prosecutor's office.* The criminal history records (ADR data) that form the basis of the Recidivism 77 data set begin with the registration of a case with a prosecutor ('inschrijving'). Cases in which a person was questioned by the police, but the case was not subsequently registered at the public prosecutor's office, are *not* counted as arrests and are not included in a person's criminal history. Except for the Sample 77 crime, the Recidivism 77 data set contains no information on the date a crime occurred or the date the person was taken into custody. In the Netherlands, a person may remain in custody for a few hours or even a few days without being formally charged (in verzekering, see Glossary).

### 2.3b Judge

In the Netherlands, the more serious cases are decided, not by a single judge, but by a tribunal of judges. In this report, 'judge' refers to a judge or a tribunal.

### 2.3c Conviction and policy dismissal

In the Netherlands, a person may be found guilty (schuldig) by a judge. The prosecutor may determine that — even considering the evidence, the defendant will be found guilty — the case should be dismissed for public policy reasons. This disposition is called a 'beleidssepot', which we will translate as 'policy dismissal'. In addition, the Public Prosecutor can add the case to another case already proceeding against the defendant, sometimes only to inform these other cases without officially charging the defendant. This is called *voeging ter behandeling* or *voeging ter informatie*.

In tracing offenses over a person's lifetime, it seems important to distinguish between arrests in which the evidence was not strong enough to indicate that the person actually committed the crime (vrijspraak and sepot geen bewijs) and arrests in which the person was found guilty by a judge (veroordeeling), the case was dismissed for policy reasons (beleidssepot) or cases added to another case (voeging ter behandeling, and voeging ter informatie).<sup>9</sup> Therefore, much of the analysis in this report refers to a 'guilty' finding at *either* the prosecutorial or judicial level, indicated as '*disposition*'.

### 2.3d Juvenile criminal history

Criminal history records in the Netherlands are as complete and open for juvenile offenses as for adult offenses. A person is not given a 'blank sheet' upon becoming an adult. Therefore, one of the most serious challenges to the validity of recidivism studies in the United States, is not a problem with the Recidivism 77 data set.

### 2.3e Career offenders

As Gottfredson and Hirschi (1986) point out, there are numerous, and often contradictory, definitions for a career criminal. The following definition by the U.S. Department of Justice (1983) takes into account the *number* of offenses and the *seriousness* of those offenses:

... a person having a past record of multiple arrests or convictions for serious crimes, or an unusually large number of arrests or convictions for crimes of varying degrees of seriousness.

However, because the Department of Justice definition does not distinguish between arrest and conviction, it does not take into account the *certainty* that the offender actually committed enough offenses to qualify as a career criminal. In addition, the definition neglects to take into account the *speed*

<sup>9</sup> When a judge finds a person guilty of a criminal offense (misdrijf), the person has been 'veroordeeld'. A not-guilty court disposition is called 'vrijspraak'. A final disposition at the prosecutorial level is called a 'sepot'. If the prosecutor dismisses the case for lack of evidence, the disposition is called a 'sepot geen bewijs'. See Glossary.

criminal. In addition, the definition neglects to take into account the *speed* with which the offenses were committed and the possibility of 'crime spurts' of related offenses. Therefore, the definition used in this report of a criminal career (and hence a career criminal) has the following criteria:

*Number.* It seems illogical to define a single crime, no matter how serious, as a 'career'. Therefore, a necessary condition for a criminal career is that it contains at least two offenses.

*Certainty.* We should be reasonably certain that these offenses were actually committed by the person in question. Therefore, our definition requires that the person was found 'guilty', either by the judge or just by the public prosecutor, of two or more offenses.

*Seriousness.* In identifying those offenders who are particularly active and dangerous, it is important to avoid including offenders who are active but not dangerous — those who are arrested frequently for petty offenses or misdemeanors, but never for a more serious offense. In this report, a 'serious' or 'non-trivial' offense is defined as an offense for which the *maximum* sentence allowed by law is at least 18 months.<sup>10</sup> This 18-month definition was chosen for two reasons. 1) Crimes such as disturbing the peace have shorter maximum legal sentences than 18 months. 2) There seems to be a 'natural break' in Dutch sentencing at about 18 months; few criminal offense types have maximum sentences of exactly 18 months.<sup>11</sup>

*Crime-free period.* Finally, a logical requirement for a criminal career would seem to be that it will be continued, and quickly. In other words, for a career offender, the period of time to an arrest for the *next* non-trivial offense should be significantly shorter (as measured by Survival Score; see Glossary) than for other offenders. Thus, for a group of offenders to be defined as career offenders, they must not only be more likely than others to continue their *career*, but must also be likely to do so within a significantly shorter time period.

Thus, a career offender, in this report, is an offender who has had a 'disposition' for at least two non-trivial offenses, and who is relatively likely to be re-arrested within a short period for another non-trivial offense.

<sup>10</sup> The reader should note however, that *actual* sentences are likely to be much shorter than the maximum allowed by law. For example, in the Recidivism 66 Sample, only 30% of the 1,701 convicted of a serious crime were sent to prison. Of these, only 7% were sentenced to a year or more (Van der Werff, 1978).

<sup>11</sup> Examples of offenses having shorter maximum sentences than 18 months are the following: disturbing the peace, leaving the scene of an accident, neglect or abuse of animals, driving without a valid licence, driving while intoxicated, verbally insulting someone, refusing to comply with the command of a police officer, possession of stolen property (receiving certain second-hand goods without verifying that they were not stolen).

## 2.4 Approach to the analysis of lifespan criminal careers

This report deals with the entire criminal history of a sample of offenders whose case ended in a conviction by a judge or a policy dismissal by the public prosecutor in 1977. It asks the following question: Of the people found 'guilty' of a crime in 1977, was there a group of particularly active or particularly dangerous people, people who would be responsible, over their lifetimes, for serious crimes out of proportion to their numbers?

The answer to this question is complex, because a lifetime criminal career has many aspects. The following issues, at minimum, must be considered:

- total number of crimes over the lifespan;
- the length and sequence of active periods and inactive (crime-free) periods over the lifespan;
- legal category of crimes (such as property, violent, drug, traffic), and change over a career from one legal category to another;
- seriousness, including patterns of increase or decrease in seriousness over the lifespan.

Because no single statistical analysis method can consider all of these aspects simultaneously, the analysis will concentrate first on one aspect and then on another. In the chapter that follows, we will consider the *establishment* of a criminal career. The offenders in our sample had all at least one 'disposition', but only a fraction of them continued to establish a criminal career pattern. The next chapter will ask whether such factors as age and age of onset (first 'disposition') determine the probability that a criminal career will continue after the first (or second or third) 'disposition'.

Chapter four will then address the question of the *continuation* of a criminal career by grouping Sample 77 'Guilty' offenders according to the length of their crime-free period after the Sample 77 crime. This yields five distinct types of offender, who differ in the *number* of crimes committed over a lifespan (chapter five), but not so much in the *types* of crimes committed over a lifespan (chapter six). Chapter seven analyzes in some detail the *dangerousness* of the three 'career criminal' offender types, as measured in three ways — by the prevalence of at least one arrest after the Sample 77 offense for specific types of crime, by the incidence of arrests (followed by 'disposition') for specific types of crime, and by the proportion of all Dutch offenses accounted for by career offenders.

Finally, in chapter eight, we will try to put all the pieces of the puzzle together, and answer the following questions:

- a. Was there a group of particularly active or dangerous people in the 1977 sample, and if so;
- b. What were the characteristics of this group as of the Sample 77 crime;
- c. Did their lifetime criminal careers follow a particular pattern; and
- d. Was this group responsible for a high proportion of serious offenses committed after the offense sampled in 1977?

### 3 Age and the establishment of a criminal career

In 1977, at the point at which each Sample 77 'Guilty' offender awaited for the case to be disposed of by the criminal justice system, the judge or prosecutor had available a limited amount of information on which to base the decision. However, the effect of certain basic characteristics on the likelihood of recidivism has been discussed at length in the literature - the characteristics of the current offense, the length and activity of the criminal history, and the offender's age. Did these characteristics affect the chance of recidivism for Sample 77 'Guilty' offenders?

The analysis in this chapter asks two questions:

1. For *first-offenders*, does age at offense differentiate between
  - people who were arrested and had a disposition one time, and one time only; and
  - people who went on to have more than one officially-recorded crime, with the possibility of establishing a criminal career?
2. For *repeat offenders*, does age at the current offense (controlling for prior offense history) differentiate between
  - people who will never again (within six years) be arrested for a non-trivial offense; and
  - people who will continue toward a career criminal pattern?

There are theoretical and practical reasons for making a distinction between first-offenders and others. A variety of studies seems to indicate that factors associated with a first offense are not the same as factors associated with continued offenses. For example, the Cambridge Study in Delinquent Development (Blumstein, *et al.*, 1988), found that the rank of a set of variables correlated with a first conviction was negatively correlated with the rank of variables correlated with reconviction. Among adults, Blumstein has found that race is correlated with the initial offense, but not with the continuation of offending.

Also, in an attempt to describe criminal careers, the question of age needs to be considered - both current age at the time of the Sample 77 crime and the age at which the criminal career began. Earlier analysis of the Recidivism 77 data (Van der Werff, 1986a) found the following:

1. the chance of recidivating varies by the offender's age at the time of the Sample 77 crime, for male offenders only;
2. age at the *first* crime in a man's official history was of slight but statistically significant importance in a multiple regression (including earliest age, Sample 77 age, and number of prior crimes) predicting re-arrest.

There are also methodological reasons for separating first-offenders from others in an analysis of age. Because of complex interrelationships between

Table 1: First-offender males' recidivism declines with age; first-offender females' recidivism does not

Gender	Percent of first-offenders re-arrested*							
	Age at occurrence of Sample 77 crime (in years)							
	to 15	16, 17	18, 19	20, 21	22-24	25-29	30-39	40+
Male (n=1456)	57 (215)	55 (203)	47 (169)	41 (138)	38 (169)	31 (173)	28 (213)	16 (176)
Female (n=253)	12 (17)	26 (19)	17 (18)	15 (13)	18 (17)	23 (17)	10 (60)	15 (66)

\* Percent arrested at least once within six years after the arrest date of the Sample 77 crime, for any type of crime, of any seriousness, whether followed by 'disposition' or not. First-offenders are people found 'guilty' of the Sample 77 crime, who had no previous arrest history.

current age, age at first crime, and number of earlier crimes, the results of a multiple regression are difficult to interpret. One major problem is that, if a person has no previous criminal history, the age at the earliest crime equals the age at the Sample 77 crime. Another problem is that the longer the previous criminal career (the longer the period between the first arrest and the current arrest), the greater the opportunity for additional arrests.

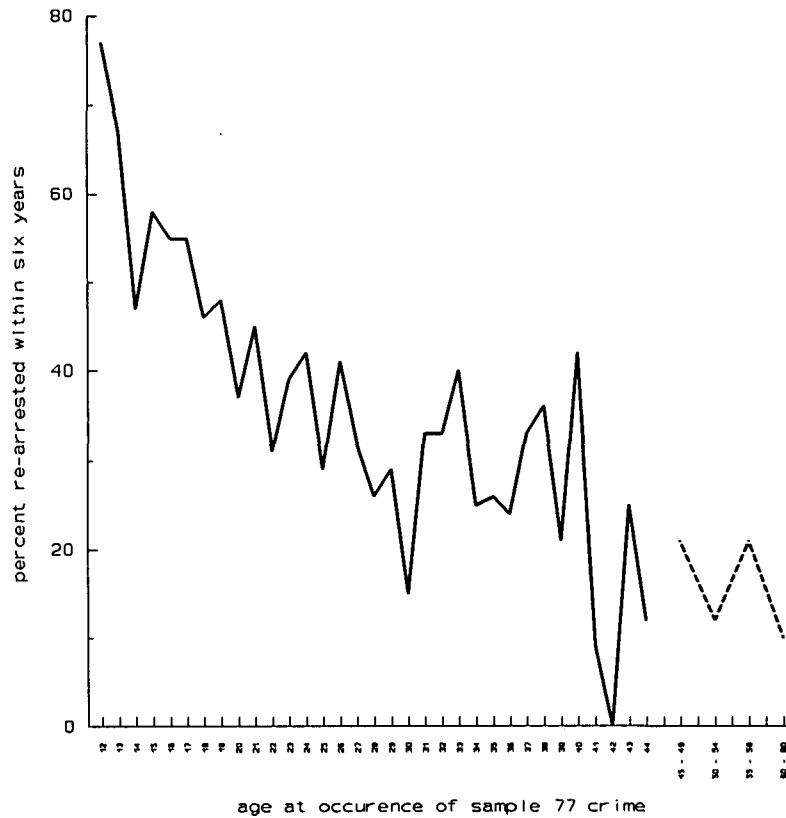
Because of these and other problems with confounded variables, which will be explained later in this section, crosstabulations separating first-offenders from others are a better way to make the relationship between age and recidivism apparent than a multiple regression analysis.

### 3.1 First-offenders

For the 1,709 first-offenders (people who had no official criminal history prior to the Sample 77 crime), current age (age at the occurrence of the Sample 77 crime) and age at first arrest (age of onset) are the same. Their first crime was also their Sample 77 crime. For most of these first-offenders (60% of the males and 84% of the females), their first crime would also be their last crime known to the Dutch police for at least six years. Were young first-offenders more likely to recidivate than older first-offenders? For males, the answer to this question is 'yes'. However, for females, the answer is 'no'.

Overall, 40 percent of the 1,456 male first-offenders who were found 'guilty' in 1977, recidivated. However, the older they were when the crime was committed, the *less* likely they were to be arrested again within six years (Table 1). Thus, for males, there is a strong age effect. The younger the age at which the Sample 77 crime was committed, the greater the chance of recidivism (chi square is significant at the .001 level). Overall, the chance that a female first-offender would recidivate in six years was only 16 percent, less than half the proportion of male first-offenders. However, for

Figure 2: Age (in years) and recidivism: first-offenders



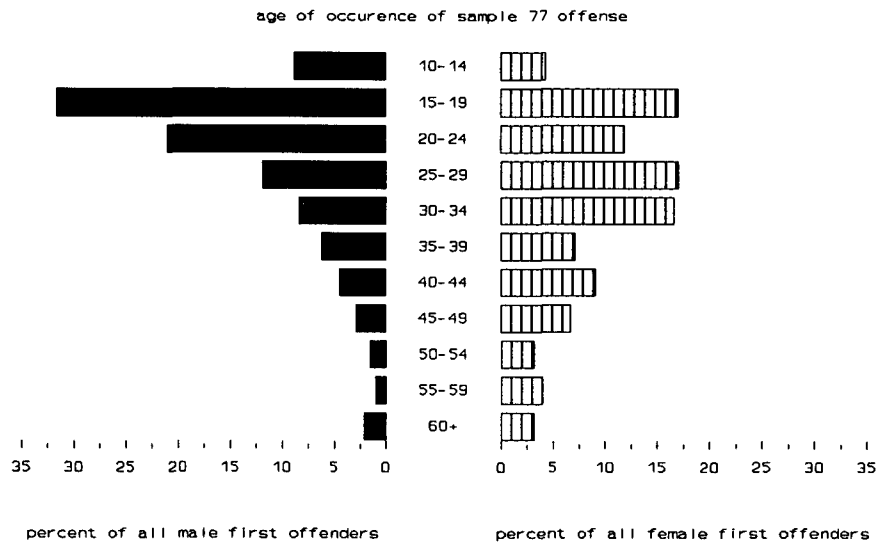
Note: The number of cases is too small at older ages to calculate percentages. For example, only two male first-offenders were aged 46. Therefore, the following aggregates have been used in this figure: age 45-49 ( $n=42$ ), age 50-54 ( $n=24$ ), age 55-59 ( $n=14$ ), and age 60-80 ( $n=31$ ).

females there is no age effect; the chance of recidivism (Table 1) is about the same at every age (chi square is not significant).

This strong relationship between age at offense and chance of recidivism for first-offender males is also seen very clearly in Figure 2, which graphs re-arrest percents of males for many more individual ages than are included in Table 1. Although there is some variation from year to year, the general trend is clearly a decreasing curve from a peak at age 12 to a low point for ages 60 to 80. For example, 77 percent of 12-year-old boys were arrested again within six years, but only 38 percent of 20-year-old men, 45 percent of 21-year-old men, and 10 percent of men aged 60 to 80.

Further, female first-offenders tend to be older than male first-offenders. For example, 29 percent of male first-offenders were aged 17 or younger at

Figure 3: Age distribution of male and female first-offenders (age in years)



the time of the offense, compared to only 14 percent of female first-offenders; only 12 percent of male first-offenders, compared to 26 percent of female first-offenders, were 40 or older (Figure 3). Thus, first-offender females, in contrast to males, are relatively evenly distributed across young and old age groups, and their chance of re-arrest is about 16 percent (on average) at each age.

In summary, among Sample 77 'Guilty' first-offenders, 40 percent of the males and 16 percent of the females were re-arrested within six years. For males, the chance of re-arrest was much higher for younger offenders.

Although a first offense may mark the beginning of a criminal career, once a career has begun, it may or may not continue. In the following section, we examine the effect of age on that continuation. In other words, does the offender's current age affect the chance of recidivism after the accumulation of one, two, three or more arrests in the official criminal history? Does the age at which their first crime was committed make a difference in future recidivism? To answer these questions, we must look at the chance of recidivism by current age, earliest age, and number of previous arrests.

### 3.2 Age at first arrest and current age

Studies of recidivism, most notably Wolfgang, *et al.* (1972), have found a correlation between the age at which the criminal career began and the probability of recidivism. For example, a study in Columbus, Ohio (Miller, *et al.*, 1982: 219) concluded that:



the younger the subject is when he first appears on an arrest ledger, the longer will be his career, ... the higher the velocity and the greater the seriousness.

Labeling theory explains such findings by arguing that a child who is labeled deviant at a young age has little chance of escaping that label at older ages. Labeling theory would predict that, of two offenders aged 25 with the same number of previous offenses, the offender whose criminal career began at the earlier age will be the most likely to recidivate. Hirschi and Gottfredson (1983), to the contrary, argue that any apparent correlation between age at first crime and later recidivism is merely an artifact of measurement. Thus, offenders with many crimes in their career are more likely to have committed a crime at any given age (including young ages) than offenders with few crimes in their career.

The interaction between recidivism, current age, and first age is confounded by the length of the career and the number of prior arrests. Given offenders who are arrested with equal frequency, someone who has had a 20-year criminal career, will have more prior arrests than someone who has had a one-year 'career'. Therefore, the analysis in this section determines the independent effects on the chance of recidivism of (1) age at first police contact, and (2) age at current crime. It does this separately for people who have had more active criminal careers and for people who (so far) have been less active. Because the chance of recidivism for first-offender females does not vary by age, the following analysis includes males only.

Given that a man has had a history of one, two, or more arrests prior to the Sample 77 crime, is his chance of re-arrest affected by his current age, the age at which he was first arrested, neither, or both? In Table 2, effects on recidivism of age of onset and current age are shown separately for males who have had only one or two previous arrests (Table 2a), those who have had three, four or five (Table 2b), and those who have had six or more (Table 2c). The effect of age at first arrest is seen by reading down each column; the effect of current age is seen by reading across each row. Of course, since the age at first arrest can never be older than the age at the Sample 77 arrest, the lower left corner of each chart is empty; all these situations are impossible. (This is another reason why multiple regression is inappropriate for these data.)

Age at first arrest (age of onset) was unrelated to the chance of recidivating within six years. There is no significant chi square for recidivism (percent re-arrested) by age at first arrest, regardless of the age at Sample 77 and regardless of the number of previous arrests.<sup>12</sup> In reading down each column, sometimes the re-arrest percentages increase as the age at first arrest increase, and sometimes they decrease. There seems to be no consistent pattern.

<sup>12</sup> Chi square was calculated on each of the 24 current age/prior arrest subtables of Table 2, except age-to-15, which had only two cells.

Table 2: Chance of recidivism varies by prior arrests and current age, not by age at first arrest: males found 'guilty' of Sample 77 crime (age in years)

Age at first arrest	Percent re-arrested**							
	Age at occurrence of Sample 77 crime							
	to 15	16, 17	18, 19	20, 21	22-24	25-29	30-39	40+
<b>Table 2a: One or two prior arrests</b>								
to 15	79%	69%	58%	*	*	*	33%	64%
16, 17	-	88%	82%	82%	76%	*	39%	*
18, 19	-	-	78%	66%	72%	50%	44%	*
20, 21	-	-	-	88%	59%	47%	31%	*
22 to 24	-	-	-	-	59%	54%	56%	11%
25 to 29	-	-	-	-	-	57%	48%	25%
30 to 39	-	-	-	-	-	-	44%	29%
40+	-	-	-	-	-	-	-	34%
<b>Table 2b: Three, four or five prior arrests</b>								
to 15	93%	97%	91%	80%	*	*	56%	38%
16, 17	-	100%	85%	79%	71%	55%	56%	*
18, 19	-	-	*	92%	69%	67%	80%	75%
20, 21	-	-	-	*	85%	81%	67%	*
22 to 24	-	-	-	-	*	82%	67%	48%
25 to 29	-	-	-	-	-	*	84%	68%
30 to 39	-	-	-	-	-	-	*	36%
40+	-	-	-	-	-	-	-	*
<b>Table 2c: Six or more prior arrests</b>								
to 15	*	100%	93%	94%	85%	88%	89%	
6, 17	-	*	94%	97%	94%	97%	84%	87%
18, 19	-	-	*	*	95%	75%	81%	64%
20, 21	-	-	-	*	*	85%	91%	*
22 to 24	-	-	-	-	*	*	71%	54%
25 to 29	-	-	-	-	-	*	90%	73%
30 to 39	-	-	-	-	-	*	*	*
40+	-	-	-	-	-	-	*	*

- Situation is impossible (person cannot be older at first crime than at current crime).

\* Total cases fewer than 10; therefore, percents were not calculated.

\*\* Percent arrested at least once within six years after the arrest date of the Sample 77 crime, for any type of crime of any seriousness, whether or not 'disposed', including such serious traffic offenses as drunken driving.

In some situations, the highest chance of re-arrest occurred when the earliest arrest was at a recent age, not at a young age (see columns for current ages 16, 17; 20, 21; 25 to 29 in Table 2a, and ages 16, 17; 20, 21; 22, 23, 24; 25 to 29; 30 to 39 in Table 2b). This supports a 'recency' argument, that several arrests occurring at the current age or close to the current age are more important in predicting future arrests than arrests that occurred long ago. While the data in Table 2 do not permit the calculation of individual crime rates (see Barnett, *et al.* 1987; Farrington, 1987), they do suggest that if prior arrests are more closely spaced over time, a future

arrest is more likely. For people with only one or two prior arrests, a first arrest that occurred long ago must have been followed by a long period with no officially-recorded criminal activity, a long 'crime-free period'.<sup>13</sup> This tendency for crimes to be committed in spurts is also seen in the United States (Rolph and Chaiken, 1987).

For example, for a man aged 25 to 29 at the occurrence of the Sample 77 crime there is, overall, a 50 percent chance of recidivation if he had had one or two prior arrests, a 70 percent chance if he had had three, four or five prior arrests, and an overall 88 percent chance if he had had six or more prior arrests. As can be seen in Tables 2a, 2b and 2c, these overall percentages did not vary by his age at first arrest. The chance of re-arrest for 25-to-29-year-old men with one or two arrests prior to Sample 77 ranged around 50 percent (from 47% to 57%); the chance of re-arrest for people with three, four or five prior arrests ranged around 70 percent (from 55% to 82%); the chance of re-arrest for people with six or more prior arrests ranged around 88 percent (from 75% to 97%). These percentages do not decrease with the age at first arrest. Even in the seven cases in which a 25-to-29-year-old man had been arrested only once or twice before and the first arrest had occurred at or before age 15, *none* recidivated after the Sample 77 crime.<sup>14</sup> Similarly, men aged 25 to 29 who had an arrest history of six or more were not likely to have had their first arrest after age 25, but of the five who did, *all* recidivated after Sample 77. This example lends some support to the immediacy argument, and no support at all to the early-age-of-onset argument.

*Current age* (age at the occurrence of the Sample 77 crime) was related to the chance of recidivism for males with a history of one to five arrests (Tables 2a, 2b). However, for males who had had six or more prior arrests, current age made hardly any difference in the chance of recidivating; it was high at every age (see Table 2c). Even in the oldest agegroups, the chance of re-arrest was high. Overall, 76 percent of men who had at least six arrests and were age forty or older recidivated.

In the above analysis (3.1) we saw that, for Sample 77 'Guilty' males, the chance of a first offender becoming a second offender, and possibly going on to a criminal career, was related to his age. Here, we have seen that current age (but not age of onset) continued to be important as people moved from a 'history' of one arrest to a history of five. However, after people have had six or more prior arrests, it appears that a criminal career has been established. The chance of re-arrest then approaches 100 percent. Age no longer makes much difference.

<sup>13</sup> These people probably were not in custody during the long crime-free period, because they were only first- or second-offenders at the time of the earlier arrest. Even assuming they had been convicted, it is quite uncommon for first-offenders in the Netherlands to be confined in jail or prison. Of the 1,886 Sample 77 'Guilty' people who were first-offenders, only 2 percent were detained in jail, and only 9 percent were sentenced to prison.

<sup>14</sup> This percentage is not included in Table 2, because the total cases are fewer than ten.

Table 3: Arrest history is more important than age in determining the chance of re-arrest

Number of previous arrests	Percent re-arrested* (n in parentheses) Age at Sample 77 occurrence (age in years)								% PD**: youngest & oldest
	to 15	16, 17	18, 19	20, 21	22-24	25-29	30-39	40+	
0	57% (215)	55% (203)	47% (169)	41% (138)	38% (169)	31% (173)	28% (213)	16% (176)	41
1, 2	79% (52)	81% (95)	76% (105)	74% (85)	65% (88)	50% (123)	44% (179)	32% (138)	47
3, 4, 5	93% (14)	98% (46)	88% (48)	85% (59)	75% (48)	70% (78)	70% (105)	52% (96)	41
6+	100% (8)	100% (31)	98% (60)	95% (78)	95% (111)	88% (129)	85% (156)	76% (101)	24
% PD**: 0 & 6+ arrests	43	45	51	54	57	57	57	60	

\* Sample 77 'Guilty' males; percent arrested at least once within six years after the arrest date of the Sample 77 crime, for any type of crime of any seriousness, whether or not 'disposed'.

\*\* Point difference.

### 3.3 Current age and arrest history

Since, as we have just shown, none of the chi squares of the first-age/recidivism relationship approaches significance, age at first arrest can be ignored. The overall chance of re-arrest for males with an official history of six or more prior arrests ranged from 100 percent for the youngest age group to 76 percent for the oldest age group. Although the chance of re-arrest at age group forty and older was less than the chance at younger ages, it was certainly not good. In fact, the number of previous arrests was more important than current age in differentiating the chance of re-arrest (see Table 3).

For males aged forty and over, the chance of re-arrest was 16 percent for first-offenders and 76 percent for those with a record of six arrests, a range of 60 percentage points. For age group 30 to 39, the percentage range was 57, at age group 25 to 29, it was still 57, at age group 22, 23 and 24, it was again 57, at ages 20 and 21, it was 54, at ages 18 and 19 it was 51, at ages 16 and 17, it was 45, and at ages 15 and under, it was 43. Therefore, the effect of arrest history was consistently strong, regardless of age.

However, the effect of current age, while consistently present regardless of arrest history, was greater for those who were first-offenders or had one to five prior arrests than for those with six or more prior arrests (Table 3). For first-offender males, the difference in the chance of recidivism between the youngest and the oldest age groups was 41 percentage points; for those with a history of one or two arrests, it was 47 percentage points; and for

Table 4: Effect of arrest history on re-arrest: females versus males\*

Number of previous arrests	Number of women	Percent re-arrested	Number of men	Percent re-arrested
0	253	16%	1456	39%
1, 2	98	41%	865	58%
3, 4, 5	32	66%	494	74%
6+	15	87%	674	89%

\* Sample 77 'Guilty'; percent arrested at least once within six years after the arrest date of the Sample 77 crime, for any type of crime of any seriousness, whether or not 'disposed'.

those with three, four or five previous arrests it was again 41 percentage points. In contrast, for males with six or more prior arrests, the chance of re-arrest was only 24 percentage points higher for the youngest group than for the oldest group.

Arrest history had the same effect on the chance of re-arrest of females as males (Table 4). Although current age was *not* related to recidivism for female first-offenders (see Table 1, above), arrest history *was* related to recidivism. The number of women in the sample who had long arrest histories was small, but those women who did have a long arrest history had just the same chance of re-arrest as males with a similar arrest history.

These results are remarkably similar to those obtained in a six-year follow-up of young parolees, aged 17 through 27, in the United States (Beck and Shipley, 1987). Within six years after their parole date, 92 percent of those with a record of six or more arrests prior to incarceration had been re-arrested. In contrast, only 59 percent of those parolees who had had no arrest, prior to the one that led to their incarceration, had been re-arrested by the end of the sixth year.

Therefore, people who had six or more prior arrests were very likely to be re-arrested at least once within six years, whether they were male or female and whether they were young or old. Current age also made a difference in the chance of re-arrest, but only for males, and the effect of current age was smaller than the effect of prior arrests.

### 3.4 Current age, arrest history, and type of current crime

Previous analysis (Van der Werff, 1986a) has shown that the type of offense of which the person was convicted in 1977 (property, violent or traffic) was related to the chance of re-arrest. In addition, analysis of the Recidivism 1966 Dutch data set (Van der Werff 1978, 1981) indicated that the relationship between current age and chance of recidivism was not the same for current traffic offenders as for current property or violence offenders. Although the likelihood of recidivism of the 1966 sample decreased after age 30 for traffic offenders as for others, the decrease was much more gradual; in fact, recidivism rates at each age group over 30

were highest for traffic offenders.<sup>15</sup> Did the Sample 77 'Guilty' offenders follow the same pattern as their 1966 counterparts?

The general conclusion — that the chance of re-arrest was higher for young male first-offenders than for older male first-offenders, but that age made very little difference once a criminal history had been established — is valid regardless of the type of crime that led to the Sample 77 case. This can be seen in Table 5, which shows the chance of recidivism for males of different ages and arrest histories, according to the type of current offense (Sample 77 crime).<sup>16</sup>

Sample 77 'Guilty' contains enough cases to analyze three sorts of offense: property crime (Table 5a), violent crime (Table 5b), and traffic crime (Table 5c). Property crime, a literal translation of 'vermogensmisdrijf', includes petty theft, shoplifting and pocket-picking, as well as armed robbery. Violent crime, a literal translation of 'agressief misdrijf', includes arson, cruelty to animals, damage to property, assault and murder (but not sexual violence). Traffic crime, a literal translation of 'verkeersmisdrijf', includes drunken driving.<sup>17</sup> Other offense types, such as sexual offenses, drug offenses, and firearm law violations, do not have enough cases for this analysis.<sup>18</sup>

Whether the Sample 77 offense was a property crime (Table 5a), a violent crime (Table 5b) or a traffic crime (Table 5c), the chance of recidivism for young first-offenders was higher than for older first-offenders. The percentage point difference between the youngest and oldest groups in their chance of re-arrest was about 40 for property or violent offenses, which was the same as for all first-offender males (see Table 3). However, this age effect was greater for traffic first-offenders (Table 5c). There was a 61 percentage point difference between the chance of re-arrest for the youngest traffic first-offenders and the oldest. The highest chance of re-arrest for any group of first-offenders was 76 percent, for 16- or 17-year-old traffic offenders.

In the same way, for males with an arrest history of six or more offenses, the chance of re-arrest was high at every age, whether the Sample 77 crime was a property offense, a violence offense, or a traffic offense. Thus, the percentage point difference between the youngest and oldest age groups in the chance of re-arrest was only 20 percent for Sample 77 property offenses (Table 5a), 23 percent for Sample 77 violence offenses (Table 5b), and 15 percent for traffic offenses (Table 5c). These figures are all similar

<sup>15</sup> For an analysis of recidivism among Dutch traffic offenders, also see Buikhuisen and Van Weringh (1968).

<sup>16</sup> Also see Appendix II.

<sup>17</sup> The minimum driving age is 18, which is, of course not the minimum age for traffic violations.

<sup>18</sup> For the specific coding of these offenses, see 'Variable V501' in the Recidivism 77 code book.

Table 5: Chance of recidivism is high for males with a long arrest history, regardless of age or type of crime in 1977

Number of previous arrests	Percent re-arrested* (n in parentheses) Age at Sample 77 occurrence (in years)								% PD**: youngest & oldest
	to 15	16, 17	18, 19	20, 21	22-24	25-29	30-39	40+	
<b>Table 5a: Sample 1977 crime a property crime (vermogensmisdrijf)</b>									
0	56% (160)	54% (123)	51% (63)	56% (32)	33% (27)	25% (28)	23% (43)	15% (26)	41
1, 2	76% (45)	83% (52)	70% (43)	82% (28)	87% (23)	46% (24)	43% (35)	20% (30)	56
3, 4, 5	90% (10)	97% (30)	96% (25)	93% (27)	72% (52)	82% (17)	59% (17)	33% (18)	57
6 +	*** (8)	100% (23)	100% (31)	98% (46)	96% (53)	92% (50)	82% (51)	80% (40)	20
% PD**: 0 & 6+ arrests	-	46	49	42	63	67	59	65	
<b>Table 5b: Sample 1977 crime a violent crime (agressief misdrijf)</b>									
0	65% (40)	60% (37)	51% (45)	62% (21)	43% (21)	27% (26)	25% (24)	23% (26)	42
1, 2	*** (5)	83% (52)	78% (27)	76% (21)	62% (16)	50% (28)	30% (37)	25% (24)	58
3, 4, 5	*** (2)	100% (12)	82% (11)	*** (6)	73% (11)	65% (17)	53% (17)	70% (10)	30
6 +	*** (0)	*** (5)	95% (19)	100% (21)	93% (28)	87% (23)	90% (31)	72% (18)	23
% PD**: 0 & 6+ arrests	-	-	41	38	50	60	65	49	
<b>Table 5c: Sample 1977 crime a traffic crime (verkeersmisdrijf)</b>									
0	*** (8)	76% (25)	48% (33)	33% (61)	44% (55)	35% (96)	33% (117)	15% (104)	61
1, 2	*** (0)	*** (9)	82% (27)	58% (26)	53% (38)	49% (51)	50% (100)	38% (68)	44
3, 4, 5	*** (2)	*** (2)	*** (9)	67% (15)	*** (9)	66% (35)	81% (57)	57% (60)	20
6 +	*** (0)	*** (1)	*** (4)	*** (7)	90% (20)	85% (40)	81% (53)	75% (32)	15
% PD**: 0 & 6+ arrests	-	-	-	-	46	50	48	60	

\* Percent re-arrested within six years: Sample 77 'Guilty' males.

\*\* Point difference.

\*\*\* Total cases fewer than 10. Percents were not calculated.

to the percentage point difference for all Sample 77 'Guilty' males with six or more prior arrests (Table 3), which was 24. If the man had been arrested previously six or more times, the chance of re-arrest was very high, even if he was aged 40 or over, and regardless of the type of current offense.

Serious traffic offenses (Table 5c) are particularly interesting. It is true, as previous analysis of these data has shown (Van der Werff, 1978), that those convicted of a serious traffic offense tend to be older than those convicted of a property offense or a violence offense. However, within categories of age and number of prior arrests, the chance of re-arrest was about the same. In general, people with a 'disposition' for a traffic offense followed the *same pattern of recidivism* as people with a 'disposition' for other offenses: the chance of recidivism was strongly related to the number of prior arrests. The chance of recidivism for males aged forty and over, for example, was only 15 percent if the traffic offense was their first offense, but 75 percent if they had six or more prior arrests, a difference of 60 percentage points. Therefore, people with a 'disposition' for traffic offenses are not different, in the chance of re-arrest, from people with a 'disposition' for other kinds of offense.

### 3.5 Summary and policy implications

What relationship does age have to the chance of being re-arrested within six years? The analysis in this section has shown that current age had a strong effect on the chance of recidivism for Sample 77 'Guilty' male offenders if the current crime was the first (officially-recorded) offense. Current age became less and less important as the number of officially-recorded prior arrests increased; for males who had a history of six or more arrests, the chance of recidivism was very high, regardless of age. For example, even among the oldest age group, people from forty to eighty, over three-fourths of those with a long arrest history were re-arrested within six years.

Age at first arrest (age of onset) had no relationship, independent of current age, to the chance of recidivism. In fact, among Sample 77 'Guilty' males, it sometimes seemed that the opposite was true - *late* age of onset was related to a greater chance of re-arrest. However, this tendency probably has nothing at all to do with the effect of age, and is only the reflection of immediacy. If an offender has been arrested for prior offenses *recently*, the chance of re-arrest is higher than if the prior arrests took place years ago. The important consideration may be the length of the crime-free period, not age.

There are two ways of looking at these results. If our purpose is to identify a group of particularly active or dangerous offenders who will be responsible for a disproportionate share of offenses in the six-year follow-up period, it is clear that past arrest history is likely to be very important in the identification of these 'career criminals'. Specifically, those who had been



arrested six or more times previously were very likely to be arrested again. This was equally true regardless of the type of Sample 77 offense (vermogensmisdrijf, agressief misdrijf or verkeersmisdrijf). It was also equally true for males and females, and for every age group.

Once we have taken past history into account, an offender's current age seems to make little difference. Therefore, if we are presented with a randomly-chosen group of offenders, such as Sample 77 'Guilty', and want to know who among them is most likely to be arrested again, the most important consideration is arrest history. For people with six or more prior arrests, age is, essentially, irrelevant.

However, there is a second way of looking at these data. This is to ask: which *first-offenders* will eventually go on to become career offenders? Among males who were first-offenders for the Sample 77 crime, 40 percent were re-arrested within six years. But, naturally, only these 40 percent have a chance of becoming a career offender.<sup>19</sup> For first-offenders, re-arrest is a necessary, if not a sufficient, step in the establishment of a criminal career, and as we have seen, the chance of taking this step is (for males) related to age.

This might seem to indicate that early intervention that is intended to prevent a criminal career would be more effective for young first-offenders than for older first-offenders. The actual policy implications of this are, however, dubious. Although we know that young first-offenders are more likely to be re-arrested than older first-offenders, the data give us no information on the effectiveness of intervention for younger versus older first-offenders. We do not know whether a given young first-offender is more or less likely to respond to preventive counseling or other intervention than a given older first-offender. Therefore, we have no way of knowing the number of re-arrests (and possible subsequent criminal careers) that a given amount of counseling or other intervention might have prevented. It is entirely possible that the resources required to prevent one re-arrest among young first-offenders would be the same as the resources required to prevent one re-arrest among older first-offenders.

If we had two groups, one in which 50 percent would probably recidivate and one in which 20 percent would probably recidivate, *and* if we had an equal chance of success in preventing recidivism in both groups, then it would make sense to concentrate our resources on the first group. The probable benefit per unit of cost would be greater. However, we *cannot* assume that the chance of success in preventing recidivism is the same for

<sup>19</sup> It is, of course, possible that someone could be re-arrested *after* six years, and subsequently begin a criminal career. This, however, does not occur often. For example, although 21% of the 2,375 Recidivism 77 offenders who were convicted by a judge recidivated within a year, only 6% of the 1,234 who had not yet recidivated at the end of the fifth year did so in the sixth. The proportion of new re-offenders in the seventh year would probably be smaller than 6%. (See Van der Werff, 1986a: 9.)

all age groups. In fact, it seems more reasonable to assume the opposite: the chance of success in preventing recidivism may be lower if a group recidivates at a high rate. Without further research, it is impossible to tell. Therefore, in order to allocate resources rationally in the prevention of crime we first need to answer the following question: What is the chance of success of different sorts of intervention programs with different age groups? The answer to this question should be the focus of future research.

The initial purpose of this section was to determine the effect of current age and age of onset on the establishment of a criminal career. However, in order to analyze the effect of age, it was necessary to control for the number of prior arrests. When this was done, it became apparent that the number of prior arrests was more important than current age in determining the likelihood of re-arrest. This should not be surprising, since many studies (see Maltz, 1984) have found a strong relationship between prior offenses and recidivism. Regardless of the type of current offense, and regardless of the offender's age or gender, the greater the number of past arrests, the greater the likelihood of a future arrest. In addition, there is some indication that the more *recent* the last prior arrest, the greater the likelihood of a future arrest.

There are many aspects to a lifespan criminal career. This analysis of age has demonstrated the importance of one of them, 'total number of crimes'. People with an arrest history of six or more crimes have a very high chance of re-arrest, a probability approaching 100 percent for all age groups. This, perhaps, can serve as the first piece of information in our puzzle. People who have been arrested six or more times are very likely to have established a criminal career, and it is therefore likely that they will be arrested again. The beginning of a definition of an 'Active, dangerous lifetime criminal career' is, therefore, possible. It is: people who have a minimum of six prior arrests.

## 4 The continuation of a criminal career

The previous section addressed the question of the *beginning*, the initial establishment, of the criminal career. This section will address *types* of already *established* criminal careers. Who are the most active and most dangerous offenders, not only before the Sample 77 offense but also in the years afterwards?

The analysis above (chapter 3) established that there is a relationship between age, arrest history, and chance of re-arrest among Sample 77 'Guilty' offenders. The effect of current age on recidivism diminishes with each arrest, until, after the sixth arrest, the likelihood of recidivism approaches 100 percent for every age group. Similarly, Blumstein and Moitra (1980), found that the probability of recidivism was constant after the third police contact. If the likelihood of re-arrest in Sample 77 'Guilty' does not vary after six prior arrests, then it becomes important to examine its variation among Sample 77 'Guilty' offenders with *fewer* than six prior arrests. For example, is there a relationship between the *types* of crime in a person's criminal history and the length of the crime-free period?

Our definition of a criminal career (section 2.3e) includes number, certainty and seriousness: a career offender must have had a 'disposition' for at least two non-trivial offenses. These requirements refer to a person's past, before the Sample 77 offense. However, there is also a fourth requirement, and this refers to a person's future. The period of time to the *next* arrest should be significantly shorter for career criminals as a group than for other offenders. Of people who had a 'disposition' for at least two non-trivial offenses, can we identify which ones will probably have a short crime-free period?

### 4.1 How is the crime-free period measured?

Survival analysis, which was originally developed for use in medical research, overcomes some of the statistical problems that accompanied most early studies of recidivism. The usual way in which the chance of recidivism was calculated in these studies was to divide the number who recidivated by the total number in the sample. Researchers now are in agreement that this produces incorrect and misleading answers to the question of probability of recidivism (see Maltz, 1984; Flanagan, 1982; Waldo and Griswold, 1979; Stollmack and Harris, 1974, Berecochea *et al.*, 1972). It is more accurate to measure recidivism by dividing the number who recidivated after a given number of months (or days) by the number who had survived (not recidivated) up to that month.

The hazard rate (also sometimes called the failure rate) calculates the chance (hazard) of recidivism in each month for the people who have *not* previously recidivated (who have 'survived') up to that month. In other words, people who have recidivated already or people who were dropped from the study for some reason (who were 'censored') are not included in the denominator of the hazard rate. The hazard rate for a given month is based *only* on those people who possibly could have recidivated in that month.<sup>20</sup> Aside from the hazard rate, there are a number of other results available in survival analysis. These include the 'D' statistic (Lee and Desu, 1972), which indicates whether the overall survival pattern of one group differs significantly from the overall survival pattern of another group.

A drawback of survival analysis is that it measures the length of the crime-free period *only to the first recidivation*. Thus, it does not describe an offender's entire criminal career, but only a part of it. However, this 'first recidivation' may be defined in any way the analyst wants. In this initial stage of analysis of the Sample 77 'Guilty' data, we decided to analyse 'non-trivial recidivism'. This was defined as the date of the first registration (*inschrijving*) for a crime (*misdrijf*) for which the maximum sentence possible by law could be 18 months or more, and which resulted in a conviction (*veroordeling*) or a 'policy dismissal' (*beleidssepot*). In other words, our definition of crime-free period is the period of time until the person is registered at the public prosecutor's office for a non-trivial crime that will lead to a guilty finding by a judge or a policy dismissal by a prosecutor. The crime-free period of someone never arrested and found 'guilty' for a non-trivial crime in the six year follow-up period is, therefore, at least six years long. However, as we will see, some groups in the sample had, on the average, a much shorter crime-free period.

Another necessary decision for survival analysis was when to begin the analysis of recidivism. The Recidivism 77 data set follows everyone in the sample for a period of exactly six years from the date of arrest (*inschrijving*) for the Sample 77 crime. However, for people who were held in custody after the Sample 77 crime, either jail (*preventieve hechtenis*) or prison (*gevangenisstraf*) or both, we decided to begin to measure recidivism from the estimated day they were released from custody. This we call 'Outdate',

<sup>20</sup> Survival analysis is, therefore, based on the same sort of 'life tables' used in demographic statistics. For an elementary review of survival analysis for the non-statistician, see Illinois Criminal Justice Information Authority (1986).

and for details of its calculation, see Van der Werff and Block (1986:18-22).<sup>21</sup>

A Survival Score ranks everyone in a group, relative to every other person, according on their crime-free period (given the length of time each person was followed). The Lee-Desu D compares the mean Survival Scores of two groups, to see if the difference in mean scores was likely to have been due to chance variation.

The analysis began by describing patterns of survival (crime-free period) in Sample 77 'Guilty' as a whole, and then went on to search for the group that had the shortest crime-free period overall. This search involved many survival analyses of subgroups in the Sample 77 'Guilty' data set, with calculations of the Lee-Desu D statistic for each pairwise comparison of subgroups. This exploratory analysis produced far too many detailed results for all of them to be reported here. However, in the end, we did identify two subgroups that seemed to have extremely short crime-free periods. In the following sections, we will review the results that led to this decision.

#### 4.2 Types of prior offenses and length of crime-free period

Our goal here was to identify a group of offenders, all with a 'disposition' before Sample 77, who differed from other offenders only in the *types* of crimes in their history, but who would have a significantly shorter crime-free period than the others. The crime-free period for this analysis was defined as the number of months from the Outdate<sup>22</sup> to the date of arrest (inschrijving) for a non-trivial offense, of which the person would later be found guilty by the judge or receive a policy dismissal by a prosecutor. Persons who were never re-arrested had a crime-free period of six years (72 months).

To establish a benchmark for comparison, we first conducted a survival analysis on the entire Sample 77 'Guilty' group, as well as on each additional

<sup>21</sup> The decision to measure recidivism from the estimated date of release from custody (Outdate) means, of course, that some people in the sample were followed for a period less than six years after Outdate. Fortunately, survival analysis is designed to take these varying follow-up periods into account. A second problem with measuring recidivism from Outdate is that some people were re-arrested *before* their Outdate. This occurred, usually, in one of two situations. Some people committed a 'spree' of offenses, the Sample 77 crime being one. If the person was later sent to prison because of the Sample 77 crime, the other crimes in the crime spree were, then, re-arrests before the Outdate. In addition, it is common for prisoners in the Netherlands to be released from prison for a temporary visit home, which provides an opportunity for re-arrest before Outdate. Even though there are problems with measuring recidivism from Outdate, there are also problems with measuring recidivism from the date of the Sample 77 crime. For those people who were sentenced to prison, the opportunity for re-arrest was obviously less while in prison. Also see note 25, below.

<sup>22</sup> Outdate is the date of arrest for the Sample 77 crime, or if the person served time in jail or prison, Outdate is the estimated date of release. See Glossary.

Table 6: Crime-free period and type of sample\*

Type of Sample**	Proportion who were crime-free		Median crime-free months	Survival Score
	≥ 12 months	≥ 72 months		
Sample 77 'Guilty'	79%	62%	over 72	247.9
Extra Samples:				
- robbery (diefstal met geweld)***	48%	28%	10.5	-2047.8
- rape (verkrachting)***	63%	37%	28.4	-1237.9
- public violence (bedreiging met geweld)***	68%	38%	40.5	- 983.9
- other sexual assault (aanranding)***	66%	43%	41.2	- 838.5
- battery (gekwalficeerde mishandeling)***	72%	45%	54.2	- 674.4
- drug offenses (opiumwet)***	71%	48%	55.9	- 541.3
- offense against decency (schennis der eerbaarheid)***	75%	54%	over 72	- 134.9
- murder/manslaughter (moord/doodslag)***	76%	55%	over 72	- 208.9
- child molesting (ontucht met kind./bew.)***	81%	60%	over 72	203.4

\* Survival analysis of months from Outdate to the first arrest (inschrijving) for a non-trivial offense of which the person was found guilty by the judge or had a policy dismissal. Outdate is the estimated date of release from custody-jail (preventieve hechtenis) or prison (gevangenisstraf) - or date of arrest (inschrijving) for Sample 77. A non-trivial offense has a possible sentence of at least 18 months.

\*\* For sampling percent and number of cases, see Section 2.1, above.

\*\*\* Attempt included

sample of specific offense types.<sup>23</sup> The results appear in Table 6. In the total Sample 77 'Guilty' group, 79 percent of the people were crime-free for at least 12 months after their Outdate, and 62 percent were crime-free for at least 72 months (6 years). Thus, half (the median) of the total sample was crime-free for 72 months or more (Table 6). After six years, over half (62%) had not been re-arrested for a non-trivial crime.

People with a 'disposition' for most of the serious extra-sample offense types had a shorter crime-free period than the Sample 77 'Guilty' group as a whole. Of the people in the extra robbery sample (Table 6), only 48 percent were crime-free for at least 12 months, and only 28 percent for six years or more. Half (the median) of this group had already recidivated by the end of the eleventh month. The group with the second shortest overall crime-free period was the verkrachting (rape) sample. The groups with the longest overall crime-free periods were the extra samples of people with a

<sup>23</sup> Additional samples were taken of certain types of offense that are serious but occur infrequently. See section 2.1 above.

'disposition' for murder/manslaughter (moord/doodslag), attempts included and sexual contact with children (ontucht met kinderen).<sup>24</sup>

The results of this exploratory analysis indicate that people who had been found 'guilty' of robbery or rape were especially likely candidates in the search for the most active and dangerous group. Compared to Sample 77 'Guilty' as a whole, both of these groups had short crime-free periods (Table 6). Half of the extra-sample people whose Sample 77 crime was robbery had recidivated by 11 months, and half of the extra-sample rape group had recidivated at the end of 28 months. The analysis described in the following sections attempts to determine the specific aspects of criminal history at the time of the Sample 77 offense that indicate a short crime-free period afterwards.

#### *4.2a Career Robbery (diefstal met geweld) offenders*

The additional sample of people with a 'disposition' for robbery in 1977 had a much shorter crime-free period than any other sampled group (Table 6). The speed with which they were re-arrested after Sample 77 for a non-trivial crime was fastest. However, the group of Sample 77 'Guilty' robbery offenders consists of two very different subgroups, one with an extremely short crime-free period, the other recidivating at about the same speed as the sample as a whole. The identification of this subgroup depends not only on the Sample 77 crime, but also on prior criminal history. Two characteristics, (1) a history of 'disposition' for robbery and (2) a Sample 77 crime category of robbery, are *both* important in the length of the crime-free period.

Offenders with a significantly short crime-free period (Table 7) are those with the following characteristics:

- History of robbery 'disposition', and current offense is robbery.
- History of robbery 'disposition', but current offense is not robbery.
- History of 'disposition' for any other type of crime, and current offense is robbery.

Each of the shaded areas in Table 7 encompasses the three groups that were *similar to each other in their crime-free period*. The people included in the shaded areas were significantly more likely to recidivate (be arrested and convicted or have a policy dismissal for a non-trivial crime) within a short period after Sample 77. The mean Survival Scores of the three groups were not significantly different from each other according to the Lee-Desu D statistic. However, they *were* significantly different from the mean Survival Scores of the other groups. This shows that a Sample 77 crime of robbery was not enough, by itself, to insure that the offender was likely to

<sup>24</sup> 'Moord' is murder and 'doodslag' is manslaughter. Both include attempts, in Dutch law.

Table 7: Establishment of a criminal career: robbery\*

Earlier 'disposition'	Crime-free proportion**				Median crime-free months**	
	≥ 12 months		≥ 72 months			
	1977 crime Robbery	Other	1977 crime Robbery	Other	1977 crime Robbery	Other
Robbery	29%	45%	19%	16%	4.6	9.8
Other	39%	71%	19%	52%	6.4	over 72.0
None	77%	93%	50%	84%	over 72.0	over 72.0

\* The mean Survival Scores of groups included in the shaded areas are significantly different from all other groups, but are not significantly different from each other (Lee-Desu statistic, pairwise comparisons, at the .001 level). Offenders in Table 7 include Sample 77 'Guilty' and the additional robbery sample.

\*\* Months from date of release from custody or date of arrest (inschrijving) for Sample 77 to first arrest for a non-trivial crime that was followed by a 'disposition'.

have a shorter crime-free period after the Sample 77 crime than other offenders. Criminal history prior to the Sample 77 crime was equally important.

Because of their significantly shorter mean crime-free period, people included in the shaded areas in Table 7 can be called 'Career Robbery' offenders. Only 29, 39 or 45 percent were crime-free for 12 months after their Out-date, only 16 or 19 percent were crime-free for 72 months (six years), and the median crime-free period was 4.6, 6.4 or 9.8 months. In contrast, 71, 77 or 93 percent of the other offenders were crime-free for 12 months, and the median crime-free period was over six years long. Those who had an earlier 'disposition', but whose Sample 77 crime was *not* robbery, had a significantly longer crime-free period (half were crime-free over 72 months) than people with the same 'disposition' history but a current crime of robbery (half had been re-arrested after only 6.4 months). However, people with *no* previous 'disposition', even if their Sample 77 offense was robbery, had a significantly longer crime-free period than others.

One way of looking at Table 7 is to see it as a description of the sequence of crime types in the establishment of a criminal career. People do *not* become a member of the Career Robbery group at their first 'disposition', even if their first offense is robbery. First-offenders, even robbery first-offenders, are not yet career offenders, though robbery first-offenders did have a slightly (and significantly) shorter crime-free period than other first-offenders. A robbery first-offender may have begun the transition from an ordinary offender to a Career Robbery offender, but the *establishment* of the criminal career is not complete unless this first-offender has again a 'disposition' for any non-trivial offense (not necessarily robbery). This agrees with the findings in the analysis of age, above. First-offenders, here defined as those having had no earlier 'disposition', are different from other groups, and must be analyzed separately.

Those who already had a history of robbery, and who then had a 'disposition' for an additional crime (the Sample 77 crime) were very likely to



have a short crime-free period, regardless of the type of Sample 77 crime. Those with a history of 'disposition' for other types of crime (not robbery) had a short crime-free period *only* if the Sample 77 crime was robbery. Conversely, if the Sample 77 crime was robbery and the person had had a previous 'disposition', the crime-free period was short regardless of whether the prior 'disposition' was for robbery or for some other crime. In sum, once a person has a 'disposition' for robbery, he or she has begun the transition to a serious and active criminal career.

The Career Robbery offender, then, is defined as follows:

1. History of 'disposition' for a robbery offense *and* a second 'disposition' (Sample 77),  
*or*
2. History of 'disposition' for another type of offense *and* Sample 77 crime is robbery.

By this definition, only 127 of the 4,026 Sample 77 'Guilty' offenders were Career Robbery offenders at the time of the Sample 77 crime. By the eighth month after the Sample 77 arrest, half of the 121 Career Robbery offenders on whom information is available had been arrested (followed by a 'disposition') of a non-trivial crime.<sup>25</sup> Only 12 percent were crime-free for the entire six year follow-up period.

	Career Robbery offenders	Sample 77 'Guilty' offenders
n =	121	3,887
Proportion crime-free $\geq$ 12 months	40%	79%
Proportion crime-free $\geq$ 72 months	12%	62%
Median crime-free months	8.1	over 72

#### 4.2b Career Sexual Assault (*verkrachting/aanranding*) offenders

The possible existence of a second type of career offender was first suggested by the initial analysis of the Recidivism 77 sample types (Table 6 above). Although the additional sample of robbery offenders had, by far, the shortest crime-free period, the additional sample of rape offenders had the *second* shortest crime-free period. Survival analysis (Table 8) identified a second type of criminal career: Career Sexual Assault. Sexual assault includes rape (*verkrachting*) and other violent sexual attacks (*aanranding*). Because the crime-free period (survival) of rape (*verkrachting*) offenders in Sample 77 'Guilty' was not significantly different from the crime-free period of other violent sexual assault (*aanranding*) offenders, the two were grouped together.

<sup>25</sup> Because six Career Robbery offenders and 139 total offenders were missing in the ADR registry in 1983 (see section 4.3), only 3,887 of the 4,029 total and 121 of the 127 Career Robbery offenders could be followed after 1977.

Table 8: Establishment of a criminal career: sexual assault\*

Earlier 'disposition'	Crime-free proportion**				Median crime-free months**	
	≥ 12 months		≥ 72 months			
	1977 crime		1977 crime		1977 crime	
	Sexual Assault	Other	Sexual Assault	Other	Sexual Assault	Other
Sexual Assault	62%	59%	21%	36%	20.0	25.5
Other	52%	71%	31%	52%	14.7	over 72.0
None	86%	92%	62%	84%	over 72.0	over 72.0

\* The mean Survival Scores of groups included in the shaded areas are significantly different from all other groups, but are not significantly different from each other (Lee-Desu statistic, pairwise comparisons, at the .001 level). Offenders in Table 8 include Sample 77 'Guilty' and the additional sexual assault sample.

\*\* Months from date of release from custody or date of arrest (inschrijving) for Sample 77 to first arrest for a non-trivial crime that was followed by a 'disposition'.

Like Table 7, Table 8 presents the results of three separate statistics representing a group's crime-free period: the proportion which was crime-free for at least 12 months from the day of arrest or the estimated day of release, the proportion which was crime-free for at least 72 months (six years), and the time it took for half the group to recidivate (median crime-free months). These three summary statistics are given for six groups, categorized by whether or not they had an earlier 'disposition' and by whether or not the Sample 77 'disposition' was for sexual assault (rape or other violent sexual assault). In order to obtain enough cases for analysis, the additional rape sample was included with Sample 77 'Guilty'.

The Survival Score for each person is based on the rank order of people, according to their crime-free days, taking into account the days they were followed. The D statistic determines whether the mean Survival Scores of two (or more) subgroups are significantly different. In sexual assault, as in robbery, the D statistic indicated that people with at least two offenses, one of which was sexual assault, are *not* significantly different from each other. However, they *are* significantly different from people with only one crime in their criminal history, even if that crime was sexual assault.

Career Sexual Assault offenders had a significantly longer crime-free period after Sample 77 than Career Robbery offenders. For example, 52, 59 or 62 percent of Career Sexual Assault offenders (Table 8) were crime-free for at least twelve months, compared to 29, 39 or 45 percent of Career Robbery offenders (Table 7). Half of the Career Sexual Assault offenders had been re-arrested by 15, 20 or 26 months after Outdate (Table 8), compared to 5, 6 or 10 months for Career Robbery offenders (Table 7).

The transition process to the establishment of a Sexual Assault career was remarkably similar to the transition process of a Robbery career. In the analysis of Career Robbery offenders, above, it was found that a *history* of robbery 'disposition' and a *current* robbery 'disposition' were both import-

ant in determining the speed with which a criminal career would be continued. This was also true for sexual assault (Table 8). A history of 'disposition' for sexual assault *and* a Sample 77 crime of sexual assault were both important in determining the continuation of a criminal career.

Robbery offenders and sexual assault offenders follow the same sequential process in the development of a criminal career. Even though the differences between the career and non-career groups were not as striking for Career Sexual Assault offenders (Table 8) as for Career Robbery offenders (Table 7), they were still highly significant, according to Lee-Desu pairwise comparisons. Only 52, 59 or 62 percent of the Career Sexual Assault offenders (circled in Table 8) had a crime-free period of at least 12 months, and only 21, 31 or 36 percent had a crime-free period of at least 72 months (6 years). Half of the Career Sexual Assault offenders had been arrested for a non-trivial crime (followed by a 'disposition') by the end of 14, 20 or 25 months. In comparison, first-offenders and people with no history of sexual assault (those outside the shaded areas in Table 8) had a much *lower* chance of continuing a criminal career. Fully 71, 86 or 92 percent of them were crime-free for at least 12 months, and 52, 62 or 84 percent for at least 72 months.

In summary, Career Sexual Assault offenders are defined as follows:

1. History of 'disposition' for a sexual assault offense *and* a second 'disposition' (Sample 77),  
*or*
2. History of 'disposition' for another type of offense *and* Sample 77 crime is sexual assault.

By this definition, there were only 76 Career Sexual Assault offenders in Sample 77 'Guilty' of which 75 could be followed after 1977. Career Sexual Assault offenders, as a group, had a longer crime-free period than Career Robbery offenders, as a group. Their median crime-free months were 15.5, for example, compared to 8.1 for Career Robbery offenders. However, compared to other Sample 77 offenders, they were unique.

	Career Sexual Assault offenders	All Sample 77 'Guilty' offenders
n =	75	3,887
Proportion crime-free $\geq$ 12 months	57%	79%
Proportion crime-free $\geq$ 72 months	28%	62%
Median crime-free months	15.5	over 72

Table 9: Four career patterns among Sample 77 'Guilty' offenders

	Career Sexual Assault*	Other	Total
Career Robbery**	11	116	127
Other	65	3,834	3,899
Total	76	3,950	4,026

\* For definition of Career Sexual Assault offenders, see page 39.

\*\* For definition of Career Robbery offenders, see page 37.

Table 10: Missing data by type of offender in 1977

Type of offender in 1977	Total number	ADR - missing in 1983 Number	Percent
Career Both	11	0	0.0%
Career Robbery	116	6	5.2%
Career Sexual Assault	65	1	1.5%
Other Prior 'Disposition'	1,948	42	2.2%
First 'Disposition'	1,886	90	4.8%

### 4.3 Characteristics of criminal career offenders

Of the 4,026 Sample 77 'Guilty' people, there were 127 Career Robbery offenders and 76 Career Sexual Assault offenders. Eleven of these offenders were categorized as *both* Career Robbery and Career Sexual Assault.<sup>26</sup> Thus, 116 people were Career Robbery offenders only, 65 people were Career Sexual Assault offenders only, and 3,834 people were neither type of career offender (Table 9).

In interpreting information on criminal offenses in the follow-up period, it is important to remember that information about some offenders is missing. Some of the people in the Recidivism 77 sample could not be followed after 1977, because their records did not exist in the ADR registry (see section 2.1.). This problem occurred for all offender types except Career Both (Table 10).<sup>27</sup>

The three groups of career offenders were responsible for a disproportionate number of the arrests (Table 11) recorded for the entire sample. In Sample 77 'Guilty' as a whole, 31,193 arrests (*inschrijvingen*) were recorded, counting from the first crime in each person's official history to any crime occurring up to six years after the Sample 77 crime arrest. Career Robbery offenders comprise 2.9 percent of the sample, but were responsible for 10.3

<sup>26</sup> These eleven 'Career Both' offenders had histories of at least one robbery offense and at least one sexual assault offense.

<sup>27</sup> Although the proportion of ADR-missing cases seems to be especially high for Career Robbery offenders, these six people did not have any unusual characteristic. All six were residents of the Netherlands, and only one was of foreign nationality.

Table 11: Career offenders are responsible for a disproportionate number of arrests over their lifespan\*

	Career Both	Career Robbery	Career Sexual Assault	Total Sample 77 'Guilty'
Number of people	11	116	65	4,026
% of Sample 77 'Guilty'	0.3%	2.9%	1.6%	100 %
Number of arrests	368	3,215	1,257	31,193
% of Sample 77 'Guilty'	1.2%	10.3%	4.0%	100 %
Ratio: % arrests/% people	4.0	3.6	2.5	1.0
Arrests per person	33.5	27.7	19.3	7.7

\* Total of all arrests from earliest arrest to 6 years after Sample 77 arrest date. If there were two or more offenses for one adjudication (zaken per beslissing), only the most serious is included in these counts.

Table 12: Crime-free period after Outdate\* by type of offender

Type of offender in 1977	Proportion who were crime-free			Median crime-free months
	n**	≥ 12 months	≥ 72 months	
Career Robbery	110	39%	12%	8.0
Career Sexual Assault	64	58%	31%	20.0
Other Prior 'Disposition'	1,906	71%	50%	over 72.0
First 'Disposition'	1,796	92%	79%	over 72.0

\* Estimated date of release from custody (jail or prison) or date of arrest (inschrijving), Sample 77.

\*\* The eleven people who qualified as having both kinds of criminal career are excluded from this table, because the number is too small for survival analysis. Post-Sample 77 data are missing for 6 Career Robbery offenders, for 1 Career Sexual Assault offender, 42 Other Prior 'Disposition' offenders, and 90 First 'Disposition' offenders.

percent of these arrests. Thus, their share of arrests was over three times their proportion of the sample. Career Sexual Assault offenders comprise 1.6 percent of the people, but their share of the arrests was 4.0 percent, over twice as great. The eleven people with *both* careers comprise only 0.3 percent of the people, but their share of the crimes was 1.2 percent, four times as great.

The 3,834 offenders who were *not* categorized as career offenders in 1977 (Other/Other in Table 9) can be divided into two groups, 1,948 who had had one or more prior 'disposition' (guilty finding by a judge or policy dismissal by a prosecutor) before Sample 77 but not for robbery or sexual assault, and 1,886 First 'Disposition' offenders. Career Robbery and Career Sexual Assault offenders should be compared to the 1,948 Other Prior 'Disposition' offenders.

### 4.3a Crime-free period and hazard of recidivism of career offenders

Table 12 shows survival analysis results for four kinds of offenders, depending on their status as of the Sample 77 crime - Career Robbery, Career Sexual Assault, Other Prior 'Disposition' and First 'Disposition' offenders. The eleven offenders who qualified for both Career Robbery and Career Sexual Assault are not in Table 12, because there were not enough of them for survival analysis.

Career Robbery offenders and Career Sexual Assault offenders were significantly different from each other in their crime-free period after Outdate (the date of Sample 77, or the date they were released from custody). In addition, each of the two career groups was significantly different in its crime-free period from the rest of Sample 77: the group of people who had a 'disposition' for another category of crime prior to Sample 77, and the group of people for whom Sample 77 was the first 'disposition'. The median crime-free period for Career Sexual Assault offenders (20.0 months) was over twice as long as the median crime-free period for Career Robbery offenders (8.0). That is, half of the Career Robbery offenders had already recidivated (been arrested for a non-trivial offense of which they would later be found 'guilty' by a judge or prosecutor) after only 8.0 months, but half of the Career Sexual Assault offenders had not recidivated until 20.0 months had passed. Only 12 percent of Career Robbery offenders were crime-free after 72 months (6 years), compared to 31 percent of Career Sexual Assault offenders, 50 percent of offenders with a previous 'disposition' for another type of crime, and 79 percent of First 'Disposition' offenders.

Taking all four groups together, the Survival Score rank-orders the people who recidivate more quickly or slowly after the Sample 77 crime, and gives each person a score according to this rank. (It pro-rates the crime-free periods of people who were not followed for the entire six years.) The average (mean) Survival Scores for the four offender types were the following:

Type of offender in 1977	Mean Survival Score
Career Robbery (n=110)	- 2177.1
Career Sexual Assault (n=64)	- 1372.4
Other Prior 'Disposition' (n=1,906)	- 499.6
First 'Disposition' (n=1,796)	+ 712.4

These average Survival Scores differ significantly from each other at the .0001 level (Lee-Desu D). In addition, all pairwise comparisons of mean Survival Score among the four groups in Table 12 are significant at less than the 5 percent level (Lee-Desu statistic). Clearly, these four types of offenders form a scale, according to the chance of re-arrest and the probable length of the crime-free period.

The significantly low average Survival Score for Career Sexual Assault offenders is largely due to those offenders who were re-arrested *before* their Outdate (see Appendix I).<sup>28</sup> This occurred very frequently for Career Sexual Assault offenders with six or more prior arrests, as the following figures show:

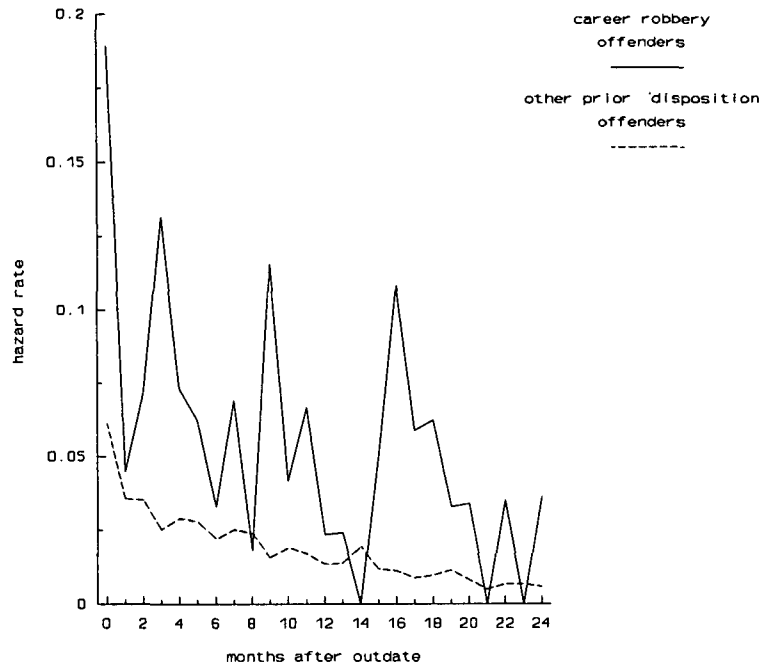
		Total n	Arrested before Outdate	Percent
Career Robbery	1-5 arrests	28	5	17.9%
	6+ arrests	82	14	17.1%
Career Sexual Assault	1-5 arrests	28	2	7.1%
	6+ arrests	36	11	30.6%
Other Prior 'Disposition'	1-5 arrests	1345	45	3.4%
	6+ arrests	561	67	11.9%
First 'Disposition'	0 arrests	1709	11	0.6%
	1-5 arrests	87	1	1.2%

Thus, about a third of Career Sexual Assault offenders with six or more prior arrests was re-arrested before their Outdate. However, Career Robbery offenders were much more likely to be re-arrested than Other Prior 'Disposition' offenders, in almost *every* month not only before but also after their Outdate (Figure 4).

For example, 19 (about 17 percent) of the 110 Career Robbery offenders were re-arrested before Outdate, four of the 91 'survivors' were re-arrested by the end of the first month, and six of the 87 who were crime-free through the first month had been re-arrested by the end of the second month. Because of the high hazard rate for re-arrest, the number still crime-free fell rapidly over the six-year follow-up period. By the end of the 24th month, only 27 remained who had not been re-arrested, about 25 percent of the original 110 Career Robbery offenders. By contrast, of the 1906 Other Prior 'Disposition' offenders, 1188 (over 62 percent) remained crime-free after 24 months.

<sup>28</sup> It was surprisingly common for Sample 77 'Guilty' offenders who were sentenced to jail or prison to be re-arrested before their Outdate (see note 19). A painstaking check of the accuracy of the data showed that these cases of 'early recidivism' had actually occurred, and were not artifacts of miscoding. In a case-by-case analysis of people who were re-arrested before their Outdate, it was discovered that most cases involved a string of offenses probably often committed before the registration of the Sample 77 crime at the Public Prosecutor's Office in which the arrest (inschrijving) occurred within a short time after the arrest for Sample 77 but before the person was sentenced to prison. Also, in the Netherlands, it is much more common than in the United States for a person in prison to receive a furlough for a weekend home. Some of these early re-arrests may have occurred during such leaves of absence. For detailed monthly hazard rates, see Appendix I.

Figure 4: The chance of recidivism per month is much higher for Career Robbery offenders than for Other Prior 'Disposition' offenders



The risk or 'hazard' of re-arrest during each month is called the 'hazard rate'.<sup>29</sup> Figure 4 shows the hazard rates for Career Robbery and Other Prior 'Disposition' offenders before Outdate, and for 24 months after Outdate. The hazard rate at month zero is the chance of recidivating *before* release from custody. Other hazard rates in Figure 4 represent the likelihood of recidivating during each month, given that the person has not recidivated so far. The hazard rate for re-arrest of Other Prior 'Disposition' offenders falls smoothly (because of the higher number in the sample), and is usually much lower than the Career Robbery rate. Between Month One and Month Twelve, the average (mean) Hazard Rate for Other Prior 'Disposition' offenders was .0240 compared to .0625 for Career Robbery offenders. From Month Thirteen through Month Twenty-four, the mean Hazard Rates were .0099 for the non-career offenders with a previous 'disposition' versus .0368 for the Career Robbery offenders. Even after a crime-free period of a year, a Career Robbery offender is more likely to recidivate than a non-career offender with a previous 'disposition' in the first months

<sup>29</sup> Hazard rates are calculated according to the following formula:  $\lambda_i = \frac{2q_i}{h_i(1+p_i)}$ , where  $q_i$  is the proportion who fail in a given month, of those exposed to risk;  $p_i$  is the proportion who 'survive' ( $1-q_i$ ), and  $h_i$  is the width of the interval (here, one month).



after release. This indicates that Career Robbery offenders not only are likely to be re-arrested more quickly than other offenders with two or more 'dispositions', but even if they manage to be crime-free (arrest-free) for a year or more, they still are more likely to be re-arrested.

#### *4.3b Social characteristics of career offenders*

In order to get an impression of the characteristics of the people in each of the five offender groups (Career Both, Career Robbery, Career Sexual Assault, Other Previous 'Disposition', First 'Disposition'), we used the CBS data on gender, marital status, work situation, nationality, and the country of residence at the time of the Sample 1977 crime. Some differences, though no striking differences, were found among Career Both, Career Robbery and Career Sexual Assault offenders, and between each of these three groups and the group previously found guilty by a judge or had a policy dismissal for another crime.

There was no significant difference (measured by t tests) among the five offender groups in the proportion of offenders who were born in the Netherlands. The highest proportion, for Other Prior 'Disposition' offenders, was 88 percent, and the lowest, for First 'Disposition' offenders, was 79 percent. The lowest percent who were Dutch citizens (86 percent) and the lowest percent who were Dutch residents (92 percent) were also found among First 'Disposition' offenders. Thus, it is possible that some of the First 'Disposition' offenders actually did not have a 'disposition' for the first time, but had had a previous 'disposition' in another country.

Career offenders were less likely than people in the other groups to be women. There was only one woman of the 116 Career Robbery offenders and none in the 65 Career Sexual Assault offender group. No women were among the eleven who were in both groups. In contrast, seven percent of the 1,948 people with a previous 'disposition' for another crime, and 15 percent of the 1,886 first-offenders were women.

As to marital status, the proportion of unmarried men was significantly higher in the Career Robbery group (64 percent) than in the group with a previous 'disposition' for another sort of crime (50 percent), and the proportion of married men was relatively low (19 percent). More of the Career Sexual Assault offenders (22 percent) were married. Further, the people in the Career Both group as well as those in the Career Robbery group were significantly more likely to be unemployed in 1977 (73 percent and 51 percent, respectively) than the group with a previous 'disposition' for another sort of crime (28 percent) or the Career Sexual Assault offenders (34 percent).

The five groups were *not* significantly different in their average age at the occurrence of the Sample 77 crime, which ranged from 25.3 for Career Robbery offenders to 29.2 for the group with a previous 'disposition' for

Table 13: Crime-free period by type of offender and age group in 1977

Type of offender/ Age at Sample 77 occurrence	Proportion who were crime-free		Median crime-free months	p* of mean Survival Score
	≥ 12 months	≥ 72 months		
<b>Career Robbery**</b>				
Age ≤ 21 (n=46)	21%	5%	4.4	} p=.02
Age 22 to 29 (n=40)	52%	10%	14.5	
Age 30 + (n=24)	50%	29%	10.0	
<b>Career Sexual Assault**</b>				
Age ≤ 21 (n=18)	39%	6%	6.5	} p=n.s.
Age 22 to 29 (n=22)	54%	27%	14.0	
Age 30 + (n=24)	75%	54%	over 72	
<b>Other Prior 'Disposition'***</b>				
Age ≤ 21 (n=618)	51%	28%	13.0	} p=.00
Age 22 to 29 (n=528)	72%	48%	64.5	
Age 30 + (n=760)	86%	70%	over 72	
<b>First 'Disposition'***</b>				
Age ≤ 21 (n=817)	86%	65%	over 72	} p=.00
Age 22 to 29 (n=421)	96%	89%	over 72	
Age 30 + (n=558)	96%	91%	over 72	

\* Significance of pairwise comparisons of mean Survival Score, Lee-Desu D statistic; n.s. = non-significant

\*\* For definitions of Career Robbery and Career Sexual Assault offenders, see pages 37 and 39. The 11 Career Both offenders are not included in this table.

another sort of crime. People within each career type were of a wide range of ages. The youngest person of the Career Robbery offenders was 14, and the oldest was 62. Of the Career Sexual Assault offenders, the youngest was also 14, and the oldest was 60.

#### 4.3c Age and the continuation of a criminal career

The discussion of age and recidivism in section 3 shows that, for people who had a long arrest history (6 or more arrests), age made little difference in the chance of re-arrest. The chance was high at every age. Did a 'career criminal' history act in the same way as a history of six or more arrests? In other words, for people who were career offenders, did their age affect the chance of re-arrest? Once a criminal career has been established, does age affect the likelihood that it will be continued?

The strongest and most consistently significant age differences in the probable length of the crime-free period, measured by the mean Survival Score, did not occur among the career offenders, but rather among the Other Prior 'Disposition' offenders (Table 13). For these people, the youngest group (21 and under) had a significantly shorter crime-free period than the middle group (22 to 29), and the middle group had a significantly shorter crime-free period than the oldest group (30 and over). For example, half of the Other Prior 'Disposition' offenders age 21 and under were re-arrested for a

non-trivial offense within 13 months after Sample 77, but it was not until 64.5 months after Sample 77 that half of those aged 22-to-29 had been re-arrested, and half of the 30-and-over group had not been re-arrested when the study ended 72 months after Sample 77.

First 'Disposition' offenders had, in general, a very long crime-free period, but the speed of re-arrest of those aged 21 and under was slightly (and significantly) faster than older first-offenders. Although those 21 and under tended to be crime-free for a very long time, and 65 percent were crime-free for the entire six-year follow-up period, older First 'Disposition' offenders had even better records. However, there was no significant difference in the average crime-free period of First 'Disposition' offenders aged 22 to 29 and those aged 30 and over.

Within the two career offender groups, age differences were less pronounced than for Other Prior 'Disposition' offenders. Career Robbery offenders tended to have a short crime-free period, whatever their age, but the crime-free period of those who were aged 21 and under was significantly shorter. Career Robbery offenders who were aged 21 or younger were likely to recidivate very quickly. Only 21 percent was crime-free for at least 12 months, and only 5 percent for at least 72 months. Half had already recidivated by the fifth month after Sample 77. Older Career Robbery offenders were crime-free for a significantly longer period than those aged 21 or younger, but there was no significant difference in the probable length of the crime-free period of Career Robbery offenders aged 22 to 29 versus those aged 30 and over.

Age also made a difference in the crime-free period of Career Sexual Assault offenders. In contrast to Career Robbery and First 'Disposition' offenders, however, the difference came at a later age. Career Sexual Assault offenders as a group tended to have a shorter crime-free period if their age was 29 or younger, compared to 30 or over.

In general, career offenders had a shorter crime-free period (lower mean Survival Score) than other offenders with a previous 'disposition', even taking into account for their age. However, the two *types* of career offender, robbery and sexual assault, did not necessarily differ from each other. The pairwise comparisons in Table 13 are all comparisons of age groups within type of offender. From the other perspective, looking at type of offender within age group, Career Robbery and Career Sexual Assault offenders had significantly shorter crime-free periods than Other Prior 'Disposition' offenders who were the same age, with one exception. There was no significant difference between the mean crime-free period of Career Sexual Assault offenders and Other Prior 'Disposition' offenders aged 30 and over.

Even though Career Robbery offenders as a whole had a significantly shorter crime-free period than Career Sexual Assault offenders as a whole, there is *no* significant difference between the crime-free periods of the two types of career offender groups within age categories. For example, Career Robbery offenders aged 21 and younger did not have a significantly shorter

crime-free period than Career Sexual Assault offenders aged 21 and younger.

This analysis was also done with four age categories, instead of three, dividing the 21-and-under offenders into 17-and-under and 18-to-21. However, there were too few Career Sexual Assault offenders for survival analysis using four age categories. Of the Career Robbery offenders, the 16 who were aged 17 and under at the Sample 77 offense were not significantly different from the 34 who were aged 18 to 21, in their mean crime-free period. Half of those aged 17 and under had been re-arrested after 7.3 months had passed; half of those aged 18-to-21 had been re-arrested after only 4.3 months. Similarly, the difference in mean Survival Scores of people 17 and under and 18-to-21 was small and insignificant for Other Prior 'Disposition' offenders and for First 'Disposition' offenders.

In summary, age at offense appears to have some effect on the crime-free period, but this effect depends upon the type of offender as determined by their criminal history. Age has the greatest effect for repeat offenders who have *not* ever had a 'disposition' for a robbery or a sexual assault. Similarly, analysis in section 3 showed that age has the greatest effect on re-arrest for those offenders who had *fewer* previous arrests. In the following chapter, we will look at the combined effects of type of offender and number of prior arrests on the crime-free period.

#### 4.4 Summary

Four types of Sample 77 'Guilty' offenders, defined according to the *number* and *types* of crime in their official criminal history, form a scale of degree of dangerousness, if dangerousness is measured by the likelihood and speed of re-arrest for a non-trivial crime of which they would later be found guilty by a judge or have a policy dismissal. Career Robbery offenders had the shortest crime-free period, followed by Career Sexual Assault offenders, Other Prior 'Disposition' offenders, and First 'Disposition' offenders.

Career Robbery and Career Sexual Assault offenders are defined according to the types of crime in their criminal history. They have had at least two 'dispositions' (convictions or policy dismissals), one for the Sample 77 offense and one for another offense prior to the Sample 77 crime. The Other Prior 'Disposition' offenders also had two 'dispositions', but they were much less likely to be re-arrested and had a much longer crime-free period than the Career Robbery or Career Sexual Assault offenders. The difference between them is the *type* of offense in the criminal history. For Career Robbery offenders, who were most likely to recidivate and who were likely to recidivate after the shortest time period, one of the two offenses was robbery. For Career Sexual Assault offenders, one of the two offenses was rape or other violent sexual assault.

Thus, analysis of the average crime-free period of Sample 77 'Guilty' offenders suggests that two groups, Career Robbery offenders and Career Sexual Assault offenders, had a significantly shorter period until re-arrest (inschrijving) for a non-trivial crime than did people who had had a previous 'disposition' for other sorts of crimes. First-offenders, even if the offense was robbery or sexual assault, had a significantly *longer* crime-free period.

The two types of career offenders are defined according to, perhaps, only one of the crimes in their criminal history. Career Robbery offenders, for example, may commit only one robbery over their lifespan. However, with their short crime-free period, they will be arrested for many crimes. Not all of these crimes will be robbery. Similarly, Career Sexual Assault offenders will generally have a long and varied criminal history. The following sections examine the number of crimes and the type of crimes in the history of career offenders, compared to other people who have had a previous conviction by a judge or a policy dismissal by a prosecutor.

## 5 Offender types and number of crimes over the lifespan

Now that two types of criminal career have been identified, this section returns to a discussion of the number of crimes known to the police that are committed during a person's lifetime. This second analysis of number of crimes builds on the initial analysis of age, number of prior arrests and likelihood of recidivism (section 3) and the information gained about criminal careers in the survival analysis of crime-free period (section 4).

Survival analysis identified five types of offenders, who differ from each other in the probable length of their crime-free period after the Sample 77 crime - Career Both, Career Robbery, Career Sexual Assault, Other Prior 'Disposition', and First 'Disposition' offenders. The analysis in this section asks whether these five types of offender differ in the number of crimes over a lifespan.

### 5.1 Number of criminal justice system contacts by type of offender

#### 5.1a *Contacts before the Sample 77 crime*

In addition to forming a scale according to their crime-free period *after* the Sample 77 crime (see Table 12), the five types of offender form a scale according to the number of arrests, 'dispositions' and sentences that occurred *before* the Sample 77 crime (Table 14). These differences in the number of prior crimes are not accounted for by age; the five groups do not differ significantly in mean age at the occurrence of the Sample 77 crime (section 4.3b).

In general, career offenders were significantly more active before the Sample 77 crime than Other Prior 'Disposition' offenders (people who had been previously found guilty by a judge or had a policy dismissal of some other type of crime).<sup>30</sup> Career Robbery offenders had been found guilty by a judge or had a policy dismissal of total, serious, very serious, and most dangerous offenses significantly more times before the Sample 77 crime than Other Prior 'Disposition' offenders.<sup>31</sup> Other analysis shows that half of the Career Robbery offenders had been found 'guilty' (by a judge or prosecutor) of ten or more offenses prior to the Sample 77 crime, and one had been found 'guilty' of 56 offenses. Although Career Sexual Assault

<sup>30</sup> Significance was measured by a two-tailed difference-of-means test (t-test), with  $p \leq .05$ .

<sup>31</sup>  $p \leq .0005$  in all comparisons.

Table 14: The number of criminal justice contacts over a lifespan is related to the type of career up to 1977

Types of criminal justice contact	Type of offender in 1977				
	Career Both	Career Robbery	Career Sexual Assault	Other Prior Disposition	First Disposition
<i>Before Sample 77</i>					
(n)	(11)	(116)	(65)	(1,948)	(1,886)
Mean arrests*	24.5	15.7	11.8	6.3	0.0
Mean serious 'dispositions'***	18.0	11.3	7.8	4.2	0.0
Mean very serious 'dispositions'**	8.6	5.8	3.6	1.7	0.0
Mean most dangerous crimes 'dispositions'**	5.2	2.3	2.7	0.7	0.0
Percent at least one prison sentence	91%	78%	65%	43%	0%
Mean prison sentences	6.3	3.4	2.6	1.3	0.0
Percent TBR***	27%	14%	11%	2%	0%
<i>After Sample 77</i>					
(n)	(11)	(110)	(64)	(1,906)	(1,796)
Mean arrests*	7.6	11.4	6.6	4.3	1.1
Mean serious 'dispositions'***	5.4	7.5	3.7	2.5	0.6
Mean very serious 'dispositions'**	2.7	3.7	1.5	1.1	0.3
Mean most dangerous crimes 'dispositions'**	1.7	1.6	1.1	0.5	0.2
Percent at least one prison sentence	55%	71%	45%	36%	9%
Mean prison sentences	1.6	2.3	1.1	0.9	0.2
Percent TBR***	0%	3%	8%	1%	0%

\* Arrest followed by 'disposition'. In cases of two or more *different* crimes per court case, every crime is counted in this table. In cases of two or more counts of the *same* crime in one court case (zaken per beslissing), only one crime is counted.

\*\* A 'serious disposition' is defined as a 'disposition' for a crime in which the maximum sentence by law is at least 18 months. A 'very serious disposition' is defined as a 'disposition' for a crime in which the maximum sentence by law is at least 6 years. 'Most dangerous' includes robbery, personal assault, murder, rape and sexual assault.

\*\*\* TBR is the confinement of a dangerous or mentally ill person for an indefinite period (see Glossary).

offenders were not quite as active, half of them had been found 'guilty' of at least seven crimes prior to the Sample 77 crime.

Career Sexual Assault offenders also had significantly more total offenses, most dangerous offenses, prison sentences, serious or very serious offenses. Career Robbery offenders were significantly more active than Career Sexual Assault offenders in total, serious and very serious offenses, but not in most dangerous offenses or prison sentences. The mean number of convictions or policy dismissals for very dangerous crimes (murder, personal assault, robbery, rape, sexual assault) was five for Career Both, two for Career Robbery, three for Career Sexual Assault, and one for Other Prior 'Disposition' offenders. Naturally, First 'Disposition' offenders

had no conviction or policy dismissal before the Sample 77 crime. Similarly, the average Career Both offender had significantly more prison sentences prior to the Sample 77 crime, than did the average career offender, and career offenders had more than the average Other Prior 'Disposition' offender.

The eleven people who are both Career Robbery and Career Sexual Assault offenders show themselves to be truly an extreme group. Before the Sample 77 crime, they were each arrested and later had a 'disposition' almost 25 times, on the average, and each received a guilty finding by a judge or a policy dismissal by a prosecutor for an average of 18 serious crimes, 8.6 very serious crimes and 5.2 'most dangerous' crimes. Further, the eleven received an average of over six prison sentences, and over one-fourth were confined under TBR at least once.<sup>32</sup> In each of these areas of comparison, Career Both offenders were more active (at levels ranging from .0001 to .039) than offenders classified as *either* Career Robbery *or* Career Sexual Assault, but not both.<sup>33</sup> In contrast, non-career recidivists (Other Prior 'Disposition' offenders) averaged 6.3 arrests followed by 'disposition', 4.2 for serious crimes, 1.7 for very serious crimes and only 0.7 for 'most dangerous' crimes. They had received only 1.3 prison sentences and only two percent had been confined under TBR.

The most striking difference in the pre-Sample 77 histories of the five offender types is in the proportion of offenders who had been committed for treatment as a dangerous or mentally ill person (TBR). Three of the eleven Career Both offenders (27 percent) had been confined under TBR, compared to 14 percent and eleven percent of the Career Robbery and Career Sexual Assault offenders, and only two percent of the offenders with another prior 'disposition'.

Each of the three types of career offender were significantly more active before the Sample 77 crime than Other Prior 'Disposition' offenders, and of course, more active than first-offenders, by all of the indicators of activity in Table 14 - total arrests (followed by 'disposition'), arrests for serious, very serious or 'most dangerous' crimes, history of prison or TBR, and number of prison sentences. In addition, the five types of offender are consistently ranged in the same rank order in most of these indicators of activity, from Career Both through First 'Disposition'. The difference between the prior activity of Career Robbery offenders and Career Sexual Assault offenders does not always reach statistical significance. The mean number of prison sentences is higher but not significantly higher ( $p=0.146$ )

<sup>32</sup> A person committed under TBR may be confined for an indefinite period 'at the pleasure' of the state. See Glossary, and Van Emmerik (1982; 1985).

<sup>33</sup> All these means were significantly different at  $p \leq .05$ , except for very serious 'disposition' for Career Both (8.6) versus Career Robbery (5.8), which was not significant ( $p = .104$ ), using a pooled variance estimate t-test. However, because the standard deviations are much higher for the Career Both offenders, the separate variance estimate is more appropriate. With the separate variance t-test, none of the means is significantly different.



for Career Robbery compared to Career Sexual Assault offenders, and the mean arrests for a 'most dangerous' crime are slightly lower.

Overall, these five types of offender, who differ according to the probable length of the crime-free period *after* their Sample 77 crime, also differ in the number of crimes, 'dispositions', and prison sentences *before* their Sample 77 crime. To this extent, then, the number of prior crimes is related to the establishment of a criminal career, and thus to the expected length of the crime-free period.

### *5.1b Contacts after the Sample 77 crime*

The number of crimes in the six years *after* the Sample 77 crime was somewhat differently related to the type of criminal career (Table 14). Before the Sample 77 crime, Career Both offenders were the most criminally active group, but *after* the Sample 77 crime, Career Robbery offenders were the most active group. They had, for example, an average of 7.5 'dispositions' for serious offenses compared to 2.5 for Other Prior 'Disposition' offenders and 5.4 for Career Both offenders. As a result, Career Robbery offenders were the most likely to receive at least one prison sentence for a crime committed in the six-year follow-up period.

Career Both offenders had more arrests followed by a 'disposition' than Career Sexual Assault offenders or Other Prior 'Disposition' offenders in the six years after their Sample 77 crime, these differences were not statistically significant.<sup>34</sup> They did have significantly more 'most dangerous dispositions' than Other Prior 'Disposition' offenders in the six years after their Sample 77 crime. However, Career Both offenders were not significantly more active than other career offenders.

Career Sexual Assault offenders were significantly more active than Other Prior 'Disposition' offenders in total arrests followed by a 'disposition' ( $p = .018$ ), and in 'most dangerous' arrests ( $p \leq .0005$ ), but not in serious or very serious 'dispositions' or in prison sentences. On the other hand, Career Sexual Assault offenders were more likely than any other group to be confined under TBR in the six years after the Sample 77 crime.

Why was the small Career Both group of offenders, who had been so extremely active before the Sample 77 crime, less active than Career Robbery offenders after the Sample 77 crime? One possible reason could be that Career Both offenders were confined in prison during most of the six-year follow-up period. However, Table 15 shows that this was not so, at least for the Sample 77 crime. All three career offender types were equally likely to be sentenced to prison for the Sample 77 crime, though much more like-

<sup>34</sup> Significance was measured by a two-tailed difference of means test (t-test), pooled variance, with  $p \leq .05$ .

Table 15: Outcome of sample 77 case by type of offender

Outcome of Sample 77 case	Career Both	Career Robbery	Career Sexual Assault	Other Prior Disp.	First Disp.	Total
(N)	(11)	(116)	(65)	(1,948)	(1,886)	(4,026)
<i>Pretrial detention</i>						
% 1 day or more	0%	34%	12%	7%	2%	5%
Mean number of days	0	27.9	8.4	4.2	1.5	3.7
<i>Sentence</i>						
Percent prison	45%	47%	37%	23%	8%	17%
	(5)	(54)	(24)	(450)	(153)	(686)
Mean time to be served (months)*	.2	3.4	.9	.4	.2	.5
Maximum time to be served (months)*	.7	97.8	9.0	24.4	48.9	97.8
<i>TBR</i>						
% receiving TBR	.0%**	.9%***	1.5%	.2%	.0%	.1%
	(0)	(1)	(1)	(3)	(0)	(5)

\* Estimated, taking into account the sentence, the actual time usually served for such a sentence, and the number of days pretrial detention (subtracted). Includes mean time served for TBR commitments (see Van der Werff and Block, 1986). Note that prison sentences in the Netherlands are much shorter than in the United States.

\*\* One Career Both offender, with a 'disposition' for rape, received a conditional dismissal because he was already confined under TBR for another crime.

\*\*\* One Career Robbery offender received a prison sentence *and* TBR.

ly than Other Prior 'Disposition' offenders. Furthermore, the mean sentence for the eleven Career Both offenders was very short — as short as the mean sentence of first-offenders — and none of them received pretrial detention or TBR. However, six of the 11 Career Both offenders were later sentenced to prison for a crime committed *after* the Sample 77 crime. The mean time to be served on these later sentences was 12 months, and the maximum time 2 years.

For most of the eleven, the Sample 77 crime happened to be a relatively minor crime. (See Appendix V for more detail.) Three offenders received policy dismissals. Of the eight convicted by a judge, four were convicted of minor traffic offenses. However, even the four Career Both offenders convicted of more serious crimes received short sentences. This is surprising in light of their serious criminal history. The one convicted of assault was sentenced to one week imprisonment, and the two convicted of burglary were sentenced to two weeks. The most serious Career Both offender, who had a 'disposition' for rape, was already confined under TBR for an earlier conviction.

Table 16: Crime-free period by type of offender in 1977, controlling for number of prior arrests

	Mean Survival Score
1 to 5 prior arrests (p=.001)	
Career Robbery (n=28)	- 650.1
Career Sexual Assault (n=28)	- 243.7
Other Prior 'Disposition' (n=1,345)	.9
First 'Disposition' (n=87)	273.9
6 prior arrests (p=.005)	
Career Robbery (n=82)	- 118.0
Career Sexual Assault (n=36)	- 69.1
Other Prior 'Disposition' (n=561)	21.7
First 'Disposition' (no cases)	-

## 5.2 Crime-free period, by type of offender and number of prior arrests

What was more important, type of offender or prior arrests, in determining the probable length of the crime-free period?<sup>35</sup> As the discussion of age and recidivism (Section 3) showed, people with a history of six or more arrests were almost certain to be re-arrested at least once within six years, regardless of their age. Was this also true regardless of their type of criminal career prior to the Sample 77 crime?

A survival analysis of the four types of offender (Table 16) shows that, indeed, the effect of criminal career is reduced when people with six or more arrests are separated from people with 1 to 5 arrests.<sup>36</sup> For the sample as a whole, mean Survival Scores ranged from -2177.1 for Career Robbery offenders to 712.4 for First 'Disposition' offenders (see page 42). In contrast, for those with fewer than six prior arrests, mean Survival Scores ranged from -650.1 to 273.9. However, the overall comparison of the four types of offender still forms a statistically-significant scale, whether the number of prior arrests is under or over six.

Survival analyses of offenders with similar criminal careers *and* arrest histories (Table 17) show that the six-prior-arrest Career Robbery group (82 people) had the shortest crime-free period. Half of them had already been re-arrested after only 6 months, and only 9 percent had not been arrested for at least one non-trivial crime after six years. However, the mean Survival Score of those Career Robbery offenders with one-to-five prior arrests was not significantly longer than the mean Survival Score of those

<sup>35</sup> 'Crime-free period' is the number of months without arrest, after the date of occurrence of the Sample 77 crime or the date of release from custody.

<sup>36</sup> Career Both offenders are not included here, because there are too few of them for survival analysis.

Table 17: Crime-free period by number of prior arrests, controlling for type of offender

Type of offender/ Number of prior arrests	Proportion who were crime-free		Median crime-free months	p* of mean Survival Score
	≥ 12 months	≥ 72 months		
<b>Career Robbery</b>				
6 + (n=82)	34%	9%	6.0	
1-5 (n=28)	50%	21%	11.0	p=n.s.
<b>Career Sexual Assault</b>				
6 + (n=36)	44%	22%	11.0	
1-5 (n=28)	75%	43%	34.5	p=.007
<b>Other Prior 'Disposition'</b>				
6 + (n=561)	48%	26%	12.1	
1-5 (n=1,345)	78%	60%	over 72	p=.001
<b>First 'Disposition'**</b>				
6 + (n=0)	-	-	-	
1-5 (n=87)	86%	77%	over 72	-

\* Significance of pairwise comparisons of mean Survival Score, Lee-Desu D statistic. n.s. = non-significant.

\*\* People who had never before been arrested are not included in this table.

Career Robbery offenders with six prior arrests.<sup>37</sup> Regardless of the number of prior arrests, offenders who had been found 'guilty' by a judge or prosecutor of at least one robbery recidivated much more quickly than other offenders.

The six-prior-arrest Career Sexual Assault offenders had the second shortest crime-free period of any group—together with the one-to-five prior arrest Career Robbery group—significantly shorter ( $p=.005$ ) than the crime-free period of Career Sexual Assault offenders with one-to-five prior arrests. Similarly, the number of prior arrests affects the mean Survival Score of Other Prior 'Disposition' offenders ( $p=.001$ ). Therefore, for Career Sexual Assault and Other Prior 'Disposition' offenders, prior arrests were important in predicting the length of the crime-free period.

Since, by definition, all types of offender except First 'Disposition' offenders had been arrested at least once prior to the Sample 77 crime, people who were never before arrested are not included in Tables 16 or 17. Only 87 of the 1,796 First 'Disposition' offenders had been previously arrested. As might be expected, the 1,709 first-offenders (never had a 'disposition' or had been arrested before the Sample 77 crime) were very unlikely to recidivate: 92 percent were crime-free for at least 12 months, and 79 per-

<sup>37</sup> The following pairwise comparisons of mean Survival Scores for the groups in Table 17 are *not* significant at less than the 5% level: Career Robbery versus Career Sexual Assault for 6+ arrests ( $p=.63$ ); Career Sexual Assault versus Other Prior 'Disposition' for either 1 to 5 arrests ( $p=.09$ ) or 6+ arrests ( $p=.18$ ); Arrests 1 to 5 versus 6 or more, for Career Robbery ( $p=.12$ ).

cent for six years. (For detailed Hazard Rates of first-offenders, see Appendix I.)

Even though the overall survival patterns (Tables 16 and 17) are just what we would expect if type of career and number of previous arrests were *both* independent determinants of the crime-free period, some of the pairwise comparisons of mean Survival Scores do not reach statistical significance (Lee-Desu statistic). If we analyze type of offender within the two prior-arrest groups (Table 16), the difference in the crime-free periods of Career Robbery offenders and Career Sexual Assault offenders with six or more prior arrests does not reach significance, although six-prior-arrest Career Robbery offenders are still significantly different from both other offender types. This is due, in part, to a measurement problem with Career Sexual Assault offenders with six or more prior arrests, many of whom had already been re-arrested *before* their date of release from custody (Outdate)<sup>38</sup> One reason for this may be that Career Sexual Assault offenders were much less likely (12%) to be held in pretrial detention after the Sample 77 crime than Career Robbery offenders (34%), and when they were held in pretrial detention, the length of stay was much shorter (8.4 versus 27.9 days, on the average) (Table 15). In other words, because they were not held in pretrial detention, Career Sexual Assault offenders had more opportunity to be arrested for another crime before they were sent to prison after conviction for the Sample 77 crime. Therefore, they had more opportunity to be re-arrested before their release from prison (Outdate). However, this was true *only* of Career Sexual Assault offenders with *six or more prior arrests*. Of Career Sexual Assault offenders with one to five prior arrests, the Hazard Rate of recidivism before Outdate was lower than for Career Robbery offenders with one to five prior arrests. Also, the Hazard Rate (Appendix I) in almost every month 1 to 72 is higher for Career Robbery than for Career Sexual Assault offenders.

In summary, the number of previous arrests appears to make a difference in the length of the crime-free period for the Career Sexual Assault group, but not for the Career Robbery group. The crime-free period of people with at least two convictions or policy dismissals, one of them for robbery, was significantly shorter than the crime-free period of people who had at least two convictions or policy dismissals for crimes other than robbery or sexual assault. This was true whether the number of previous arrests was one-to-five or six and over. In contrast, the crime-free period of Career Sexual Assault offenders was *not* significantly different from the group who previously had a 'disposition' for other crimes, *if* the number of previous arrests is taken into account.

<sup>38</sup> Also see notes 21 and 28, above.

### 5.3 Summary

It is not surprising that career offenders were more active than other offenders with at least two prior 'dispositions'. They had been arrested and had had a 'disposition' more often, both before and after the Sample 77 crime. Further, as we saw in Chapter 3, the number of prior arrests is important in the establishment of a criminal career - six arrests seems to be a threshold. After the sixth arrest, the chance of another approaches certainty. However, the analysis in this chapter shows that the effect of offense frequency is specified by the type of offender. Regardless of the number of prior arrests, Career Robbery offenders are much less likely to remain crime-free (arrest-free), and the next arrest is likely to occur very quickly. In contrast, for Career Sexual Assault, Other Prior 'Disposition' and First 'Disposition' offenders, the likelihood of recidivism depends upon the previous frequency of arrests (followed by 'disposition'). For these offenders, but not for Career Robbery offenders, offense frequency must be taken into account.

As a result, Sample 77 'Guilty' offenders can be ranked into five significantly different groups, in order of the probable shortness of their crime-free (arrest-free) periods. This ranking can be accomplished with only two pieces of information - the type of offender and the number of prior arrests. The five groups are the following:

1. Career Robbery offenders, regardless of the number of prior arrests.
  - median crime-free months = 8.0
  - 38% crime-free at least 12 months
2. Career Sexual Assault and Other Prior 'Disposition' offenders who had six or more prior arrests.
  - median crime-free months = 11.9
  - 48% crime-free at least 12 months
3. Career Sexual Assault and Other Prior 'Disposition' offenders who had one to five prior arrests.
  - median crime-free months = over 72
  - 78% crime-free at least 12 months
4. First 'Disposition' offenders who had one to five prior arrests.
  - median crime-free months = over 72
  - 60% crime-free at least 12 months
5. First 'Disposition' offenders who had no prior arrest.
  - median crime-free months = over 72
  - 92% crime-free at least 12 months

## 6 Crime categories over a criminal career

We have seen above (Table 14) that Career Robbery offenders and Career Sexual Assault offenders were very active, both before and after the Sample 77 crime. Compared to Other Prior 'Disposition' offenders, they were arrested and had a 'disposition' more often, especially for serious and dangerous offenses, and were sentenced to prison or confined under TBR more often.

What types of offenses were these? Were the Career Robbery offenders arrested mostly for property crimes, and the Career Sexual Assault offenders arrested mostly for violent crimes? Were their lifetime careers, compared to the careers of Other Prior 'Disposition' offenders, more or less likely to include drug offenses or traffic offenses? This section discusses the *variety* of offenses attributed to career offenders.

### 6.1 Category of any single offense in career

If one crime were chosen at random from a person's criminal career, what kind of crime would it be? The Sample 77 crime is, in a sense, representative of a typical crime in a criminal history. Is this typical crime different for the five types of offenders? Do career offenders tend to commit different types of offenses than Other Prior 'Disposition' offenders?

In fact, the Sample 77 crime of career offenders is often a less serious offense. Analysis of specific Sample 77 offense types shows that, for example, about three percent (2.5%) of the Career Robbery offenders had a 'disposition' for joyriding as the Sample 77 crime, and seven percent of the Career Sexual Assault offenders had a 'disposition' for simple theft. In addition, Career Robbery offenders do not confine their activity to property offenses, nor do Career Sexual Assault offenders confine themselves to sexual offenses. Although the most frequent single type of Sample 77 crime for Career Robbery offenders was robbery (diefstal met geweld), ten had a 'disposition' for simple assault in 1977 (eenvoudig mishandeling), one of murder or attempted murder (moord or doodslag)<sup>39</sup>, two of arson (brandstichting), four of extortion (afpersing), three of hit-and-run (doorrijden), five of hard drug offenses, and four of soft drug offenses.

In Table 18, which presents broader crime categories, it can be seen that more than 61 percent of the Sample 77 crimes of Career Robbery offenders

<sup>39</sup> Murder (moord) and manslaughter (doodslag) include attempts. See Glossary.

Table 18: The type of crime in 1977 varies widely for each type of offender

Category of Sample 77 crime*	Type of offender in 1977: Sample 77 'Guilty'				
	Career Both	Career Robbery	Career Sexual Assault	Other Prior Disposition	First Disposition
Robbery/extortion (diefstal met geweld/afp.)	.0%	19.8%	.0%	.0%	.7%
Burglary (inbraak)	9.1	19.8	4.6	9.5	7.3
Theft/fraud (eenv. diefstal/oplichting)	9.1	21.6	15.4	30.0	30.4
Personal assault** (agressie tegen personen)	27.3	12.9	16.9	11.2	8.6
Other assault** (vernieling, beschadiging)	.0	5.2	12.3	8.5	8.0
Violent sexual assault (verkrachting, aanranding)	18.2	.0	23.1	.0	.5
Child molesting (ontucht met kind/bew.)	.0	.0	1.5	.4	.5
Non-violent sexual crime (overige seks. misd.)	9.1	.0	3.1	.8	.9
Hard drugs	.0	4.3	1.5	1.8	1.5
Soft drugs	9.1	.9	-	1.3	1.3
Drugs not specified	.0	.0	.0	.0	.2
Serious traffic crimes***	.0	6.9	16.9	28.7	31.5
Other traffic crimes***	18.2	7.8	3.1	3.2	1.6
Firearm crimes (misd. Vuurwapenwet)	.0	.0	1.5	2.7	4.5
Other offenses****	.0	.9	.0	2.1	2.4
	100 %	100 %	100 %	100 %	100 %
Total crimes	11	116	65	1,948	1,886
Number of people	11	116	65	1,948	1,886

\* In situations of two or more crimes per court case (zaken per beslissing) the crime category of the most serious is given here (highest possible sentence). All crime categories include attempts.

\*\* Personal assault includes attacks and threatened attacks with or without a weapon, attempted murder, and murder. Other assault includes vandalism and destruction of property. See Glossary.

\*\*\* Serious traffic crimes include drunk driving and hit-and-run. Other traffic crimes include joyriding and unauthorized driving.

\*\*\*\* Other types of offenses include minor violations (overtredingen) of the Penal Code and Violations of other laws, such as economic, tax and military laws.

were a property crime, either robbery, theft or burglary. On the other hand, about 13 percent of their Sample 77 crimes were serious violent offenses, only slightly more than for the Other Prior 'Disposition' group. *None* of the Sample 77 crimes of Career Robbery offenders were sexual offenses.

Similarly, seven of the 65 Career Sexual Assault offenders had a 'disposition' for rape (verkrachting) in 1977, nine of violent sexual assault (aanranding) and one of child molesting (ontucht met kinderen), but ten had a 'disposition' for simple assault, five of simple theft, four of burglary, two of



hit-and-run, and 13 of various traffic offenses. Altogether (Table 18), only about 28 percent of the Sample 77 crimes of Career Sexual Assault offenders were violent or non-violent sexual offenses, and almost as many (20 percent) were property crimes. Thus, about 72 percent of the randomly-chosen crimes of a Career Sexual Assault offender were *not* sexual offenses. However, in the Sample 77 crime, Career Sexual Assault offenders were more likely to commit personal or other assault than were Other Prior 'Disposition' offenders.

Of the eleven Career Both offenders, the sampled case in 1977 was for the following types of offense: one each for theft and burglary, three for violence against persons, one for rape, one for indecent sexual assault, one for a non-violent sexual offense, one for a soft drug crime, and two for minor traffic crimes. None of the eleven had a 'disposition' in 1977 for robbery, but two had a 'disposition' for rape or sexual assault.

Thus, a career offender cannot be identified by the current crime only. The whole criminal history must be taken into account. This agrees with the general findings (Section 4, above) for first-offenders. A first offense of robbery or sexual assault does *not* make someone a career offender. The establishment of a criminal career requires a history of at least two 'dispositions' at least one of these for robbery or sexual assault. People who previously had had a 'disposition' for robbery or sexual assault and who had a 'disposition' again had the characteristics of career offenders, even when the Sample 77 crime itself was not serious. A career offender is identified by crime patterns over a lifetime, not just by a single crime.

## 6.2 Crime types over a lifespan

The five types of offender cannot be distinguished from each other simply on the basis of one of their crimes. If this is true, then it should not be surprising to find that the five types of offender are similar in the types of crimes they commit across their entire lifespan. Table 19 and Table 20 show that, indeed, this is true; the distributions of types of offenses for which Sample 77 'Guilty' offenders had a 'disposition' over their lifespan (Table 19) or during a six-year period after the Sample 77 crime (Table 20) are quite similar, regardless of the type of offender in 1977.<sup>40</sup>

For example, of the crimes for which Career Robbery offenders were arrested and had a 'disposition' over their lifespan, less than six percent were robberies, 22 percent were burglaries, and over 39 percent were other thefts (Table 19). Although the robbery and burglary figures are higher than for people designated Other Prior 'Disposition' offenders in 1977 (less

<sup>40</sup> In tables 18, 19, 20 and 21, 'disposition' includes judicial guilty findings, prosecutorial policy dismissals, and cases that were added to another case (voeging ad informandum and voeging ter behandelings/ter berechting). 'Lifespan' begins at the first arrest that resulted in 'disposition', and ends six years after the Sample 77 crime.

Table 19: Career offender activity over a lifespan\*; arrests followed by a 'disposition'

Crime category (attempts included)	Type of offender in 1977: Sample 77 'Guilty'				
	Career Both	Career Robbery	Career Sexual Assault	Other Prior Disposition	First Disposition
Robbery/extortion (diefstal met geweld/afp.)	4.3%	5.9%	.7%	.4%	1.2%
Burglary (inbraak)	16.8	21.6	11.5	15.7	10.9
Theft/fraud (eenv. diefstal/oplichting)	39.7	39.1	29.4	37.3	30.0
Personal assault** (agressie tegen personen)	14.1	9.2	12.3	10.3	10.3
Other assault** (vernieling, beschadiging)	6.0	7.9	11.8	8.4	8.2
Violent sexual assault (verkrachting, aanranding)	3.5	.2	8.4	.1	.4
Child molesting (ontucht met kind/bew.)	1.1	.1	1.7	.5	.4
Non-violent sexual crime (overige seks. misd.)	1.9	.2	2.5	1.3	.6
Hard drugs	1.1	2.5	2.1	1.9	1.9
Soft drugs	1.4	1.2	.3	1.1	.9
Drugs not specified	.0	.2	.4	.2	.3
Serious traffic crimes** (ernstige verkeersmisd.)	2.4	5.4	11.6	13.6	26.5
Other traffic crimes** (overige verkeersmisd.)	7.3	4.1	4.5	5.6	2.3
Firearm crimes (misd. Vuurwapenwet)	.3	1.3	1.9	1.8	3.1
Other offenses**	.0	1.3	0.9	1.9	2.8
	100 %	100 %	100 %	100 %	100 %
Total arrests	368	3,169	1,250	22,316	3,870
% Serious arrests***	72.0%	70.1%	63.3%	62.6%	54.1%
% Very serious arrests***	34.8	35.9	28.6	25.9	22.0
% Most dangerous arrests***	22.0	14.5	21.4	10.6	12.0
Number of people	11	116	65	1,948	1,886

\* Lifetime criminal career, from date of first arrest to any arrest(s) occurring within six years after the date of Sample 77 arrest, totaled for all offenders. Post Sample 77 arrests for some offenders are missing, because their post-Sample 77 criminal history was unavailable. See Table 10.

\*\* For definitions, see Glossary. 'Other' includes minor violations (overtredingen) of the Penal Code and violations of other laws, such as economic, tax and military laws.

\*\*\* 'Serious' includes offenses for which the maximum possible sentence is at least 18 months. 'Very serious' includes offenses for which the maximum possible sentence is at least 6 years. 'Most dangerous' includes robbery, personal assault, murder, rape, and sexual assault.

than one percent for robbery and 16 percent for burglary), the theft/fraud proportions are both close to 40 percent.

Table 20: Offender type in 1977 and crime types over six years; arrests followed by a 'disposition'\*

Crime category (attempts included)	Type of offender in 1977: Sample 77 'Guilty'				
	Career Both	Career Robbery	Career Sexual Assault	Other Prior Disposition	First Disposition
Robbery/extortion (diefstal met geweld/afp.)	3.6%	3.4%	2.1%	1.2%	1.8%
Burglary (inbraak)	13.1	21.4	11.8	16.4	14.4
Theft (eenv. diefstal)	39.3	36.1	28.4	33.3	29.6
Personal assault** (agressie tegen personen)	17.9	10.0	11.3	9.6	11.9
Other assault** (vernieling, beschadiging)	7.1	8.0	8.0	8.0	8.3
Violent sexual assault (verkrachting, aanranding)	1.2	.6	3.1	.3	.4
Child molesting (ontucht met kind/bew.)	.0	.0	1.0	.1	.4
Non-violent sexual crime (overige seks. misd.)	.0	.2	1.4	.5	.4
Hard drugs	2.4	4.4	5.4	3.1	2.3
Soft drugs	.0	1.2	.5	1.0	.5
Drugs, not specified	.0	.5	1.2	.5	.4
Serious traffic crimes**	4.8	6.7	16.1	16.0	21.7
Other traffic crimes**	9.5	4.0	5.9	6.0	2.9
Firearm crimes (misd. Vuurwapenwet)	1.2	2.2	2.6	2.0	1.8
Other offenses**	.0	1.6	1.2	2.0	3.2
	100 %	100 %	100 %	100 %	100 %
Total arrests*	84	1,254	423	8,269	1,984
% Serious arrests***	70.2%	65.9%	56.3%	57.8%	56.2%
% Very serious arrests***	35.7	32.2	23.4	25.5	25.5
% Most dangerous arrests***	22.6	14.0	16.5	11.1	14.1
Number of people****	11	110	64	1,906	1,796
Ratio arrests/people	7.6	11.4	6.6	4.3	1.1

\* Arrests followed by a 'disposition' from the first arrest after the Sample 77 crime to any arrest occurring within six years after the date of Sample 77 arrest, totaled for all offenders. In cases of two or more *different* crimes per court case, every crime is counted in this table. In cases of two or more counts of the *same* crime in one court case (zaken per beslissing), only one crime is counted.

\*\* For definitions, see Glossary. 'Other' includes minor violations (overtredingen) of the Penal Code and crimes of other laws, such as economic, tax and military laws.

\*\*\* 'Serious' includes offenses for which the maximum possible sentence is at least 18 months. 'Very serious' includes offenses for which the maximum possible sentence is at least 6 years. 'Most dangerous' includes robbery, personal assault, murder, rape, and sexual assault.

\*\*\*\* Some offenders are missing, because their post-Sample 77 criminal history was unavailable. See Table 10.

### 6.3 Crime type specialization of career offenders

Since offenders were categorized as Career Robbery offenders in 1977 because they had a 'disposition' for robbery, either in 1977 or previously, and offenders were categorized as Career Sexual Assault offenders because they had at one time a 'disposition' for a violent sexual offense, the comparison of crime types *after* 1977 (Table 20) is more interesting than a comparison of crime types before 1977.

Of the people who were not 'ADR missing' six years after the arrest for the Sample 77 crime, the 110 Career Robbery offenders were arrested and had a 'disposition' for more than eleven crimes per person, on the average, more than twice as many as the 1,906 Other Prior 'Disposition' offenders, who averaged a little over four arrests and 'dispositions' per person (Table 20, bottom row). The eleven Career Both and the 64 Career Sexual Assault offenders were arrested and had a 'disposition' about eight and seven times per person in the six-year period. In contrast, the 1,796 First 'Disposition' offenders were arrested (followed by a 'disposition') only once, on the average. Therefore, the *number* of post-Sample 77 crimes is very different for the five offender types. However, the *type* of those crimes is much more similar for the five groups.

In the six years after the arrest for the Sample 77 crime, about 25 percent of the arrests (followed by 'disposition') of the Career Robbery offenders, compared to 18 percent for the Other Prior 'Disposition' offenders, were for robbery or burglary (Table 20). This difference is real, but not large. Similarly, 36 percent of the arrests of Career Robbery offenders, compared to 33 percent of the arrests of Other Prior 'Disposition' offenders, were for simple theft - not a big difference. For all five groups, theft was the most frequent offense type, with burglary either second or third, and personal assault either third or fourth.

Despite the overall similarity, there are a few notable differences. The most intriguing of these, perhaps, is the relatively high proportion (18 percent) of the 84 offenses attributed to the eleven Career Both offenders in the six-year follow-up period that were violent assaults against people, including murder (Table 20). Also, compared to the post-Sample 1977 criminal histories of the four other types of offender, Career Both offenders had a higher proportion of robberies. The proportion of violent sexual assault arrests (followed by a 'disposition') of Career Both offenders was second only to Career Sexual Assault offenders. Perhaps because the post-Sample 1977 careers of these eleven offenders were distinguished by a relative frequency of violent attacks on people, Career Both offenders had the highest proportion of serious, very serious, and 'most dangerous' offenses.

On the other hand, another characteristic of the post-Sample 1977 careers of the Career Both offenders is the relatively small percent of all offenses that were drug offenses. The two percent of the 84 'dispositions' that were for all types of drug crimes is the smallest proportion of any of the five

offender types. In the same way, traffic and firearm offenses accounted for a smaller proportion of the post-Sample 77 arrests of Career Both offenders than of other groups. As we have seen above, Career Both offenders did not have significantly more arrests followed by a 'disposition' in the six years than did other offenders. They did, however, have a higher proportion of serious and dangerous offenses. Their criminal career was specified, not by a concentration of violent or property crimes, but rather by a concentration of serious and dangerous crimes.

Of the 423 arrests (followed by 'disposition') of the 64 Career Sexual Assault offenders in the six-year follow-up period, only 13 (3.1 percent) were for violent sexual offenses. This proportion, though small, was much higher than the proportion for any of the other four types of offender. In particular, the 8,274 post-Sample 1977 offenses of the 1,906 Other Prior 'Disposition' offenders, a group comparable to the Career Sexual Assault offenders in everything except a history of sexual assault, included only 0.3 percent violent sexual offenses. Thus, there were .20 violent sexual offenses 'per person' for the 64 Career Sexual Assault offenders, compared to .01 for the 1,906 Other Prior 'Disposition' offenders, in the six year follow-up period. In this sense, the arrests of Career Sexual Assault offenders are specialized, even though their offense types are as widely varied as those of other offenders.

## 6.4 Summary

The overriding impression in these distributions of types of crime is the *similarity* among the five categories of offenders, especially their similarity in the six years after the arrest for the Sample 77 crime. This agrees with an analysis of the Philadelphia juvenile cohort data (Barnett and Lofaso, 1985), which found that juvenile males with at least three arrests were arrested for the same proportion of 'serious' and 'very serious' crimes, regardless of the number of arrests (from three to 13).

The difference between the five types of offender is not so much a matter of the type of crimes they commit, but rather the number of crimes they commit. First 'Disposition' offenders were seldom arrested after the Sample 77 arrest; most of them were never arrested at all. However, the types of offense for which they were arrested were not greatly different from the types of offense for which career offenders were arrested.

When all the offenses attributed to career offenders are aggregated together as in Tables 19 and 20, serious offenses such as robbery and sexual assault do not seem to predominate much more than they do in the offense history of other types of offender. However, because career offenders, as a group, are responsible for so many more offenses of all types, they are also responsible for many more robberies, sexual assaults, and other serious crimes.

This high number of offenses was not the work of a small proportion of the 185 career offenders. As the survival analysis showed (Table 12), only 12 percent of the Career Robbery offenders and 31 percent of the Career Sexual Assault offenders escaped arrest for the entire six-year follow-up period. This suggests that career offenders are more dangerous than Other Prior 'Disposition' offenders, if dangerousness is defined as the likelihood to commit serious or violent offenses. The next section will examine in greater detail the relative dangerousness of career offenders.

## 7 Dangerousness of career offenders

The analysis so far has identified three types of offender who seem significantly more active and dangerous than other offenders with at least two 'dispositions'. However, we have not yet answered the central question: were Career Both, Career Robbery and Career Sexual Assault offenders more dangerous in the six-year follow-up period than Other Prior 'Disposition' offenders?

This section defines 'dangerousness' after the Sample 77 crime as the offender's relative position on four separate scales. Thus we analyze dangerousness in the post-Sample 77 period from four perspectives: prevalence (proportion committing *at least one* offense), incidence (proportion of all offenses for which career offenders were responsible), incidence rate (proportion of offenses relative to proportion of the population), and dangerousness over time (responsibility of Sample 77 career offenders for offenses in the Netherlands from 1970 to 1981). In addition, each of these analyses is conducted for specific categories of offenses.

A comparison of career offenders to Other Prior 'Disposition' offenders is more relevant to actual judicial, prosecutorial, and treatment decisions than a comparison of career offenders to First 'Disposition' offenders. To assess the accuracy of a classification scheme, such as this career offender typology, in predicting future behavior, it is necessary that the measurement of accuracy be calculated based on a sample that is representative of the population to which the actual predictive decisions might be applied in practice.

We can assume that decision-makers already know that offenders with a prior 'disposition' are poorer risks than First 'Disposition' offenders. This logic is borne out in the survival analyses above (Tables 7 and 8), which show that First 'Disposition' offenders had a significantly longer crime-free period than career offenders, even when that one 'disposition' was for a robbery or a rape or other sexual assault. Therefore, if risk of recidivism is a factor in a sentencing or treatment decision, First 'Disposition' offenders are not likely to be singled out as being extremely poor risks. The portion of Sample 77 that best represents the population relevant to actual policy decisions is not First 'Disposition' offenders, but rather career offenders and Other Prior 'Disposition' offenders. The distinction between career offenders and those with no previous 'disposition' is not as important as the distinction between career offenders and others with at least two 'dispositions'. The comparison between these two will be emphasized in this section.

### 7.1 Prevalence of arrest within six years after Sample 77

If, at the time of each person's adjudication in 1977, we had made a simple prediction based on career offender taxonomy - that he or she would or would not be arrested (with a 'disposition') within six years of each *particular* type of crime - how accurate would those predictions have been? Survival analysis, above, has already shown that career offenders are likely to be arrested more rapidly and are less likely to remain crime-free for the entire six-year period than Other Prior 'Disposition' offenders, when arrest is defined as registration at the public prosecutor for a non-trivial crime that would be followed by a 'disposition'. Is this also true if arrest is defined as arrest, followed by a 'disposition', for *every* individual type of crime? Are career offenders more likely than other offenders to commit at least one violent crime, serious crime, or dangerous crime within six years?

For almost every type of crime (Table 21), career offenders were much more likely to be arrested at least once within six years than were other offenders with two or more 'dispositions' (Other Prior 'Disposition' offenders). For example, 23 percent of Career Robbery offenders, compared to four percent of Other Prior 'Disposition' offenders, were arrested at least once for robbery or extortion; 14 percent of Career Sexual Assault offenders, compared to one percent of Other Prior 'Disposition' offenders, were arrested at least once for rape or other sexual assault (see Table 21).

For most types of crime, Career Both offenders were the most likely to be arrested within six years, followed by Career Robbery offenders, then Career Sexual Assault offenders, then Other Prior 'Disposition' offenders and finally First 'Disposition' offenders. This is most strongly true for all types of assault offenses. However, there are some exceptions: in particular, the arrest for at least one sexual crime, violent, non-violent, or child molesting, is much more prevalent among Career Sexual Assault offenders, almost to the exclusion of other offender types. In the same way, at least one robbery arrest is much more prevalent among Career Robbery offenders than among other offender types.

The relationship between type of offender in 1977 and prevalence of arrest after 1977 is, of course, not perfect. For example, 27 percent of the Career Both offenders did *not* commit at least one murder or personal assault for which they were arrested, followed by a 'disposition', while 21 percent of the Other Prior 'Disposition' offenders and eight percent of the First 'Disposition' offenders *did*. In fact, one Other Prior 'Disposition' offender was arrested 13 times for such assaults within the six-year follow-up period, more than any career offender. Similarly, one Other Prior 'Disposition' offender was arrested five times for robbery, the equal of the most active Career Robbery offender, and one Other Prior 'Disposition' offender was arrested three times for rape or other sexual assault, the equal of the most active Career Sexual Assault offender.



Table 21: Prevalence of recidivism\* (and maximum arrests for any person) within six years by type of offender in 1977

Category of recidivism (attempts included)	Type of offender at Sample 77 crime					
	Career Both (n=11)	Career Robbery (n=110)	Career Sexual Assault (n=64)	Other Prior Disposition (n=1,906)	First Disposition (n=1,796)	
Robbery/extortion (diefstal met geweld/afp.)	9% (3)	23% (5)	8% (3)	4% (5)	1% (3)	
Burglary (inbraak)	45% (6)	50% (35)	25% (14)	20% (35)	7% (26)	
Theft (eenv. diefstal)	73% (20)	64% (24)	36% (33)	35% (61)	12% (31)	
Personal assault** (agressie tegen personen)	73% (7)	51% (9)	31% (6)	21% (13)	8% (10)	
Other assault** (vernieling, beschadiging)	55% (1)	42% (9)	28% (8)	19% (14)	6% (9)	
Violent sexual assault (verkrachting, aanr.)	9% (1)	4% (3)	14% (3)	1% (3)	0% (2)	
Child molesting (ontucht met kind/bew.)	0% (0)	0% (0)	5% (2)	0% (1)	0% (2)	
Non-violent sexual crime (overige seks. misd.)	0% (0)	1% (2)	5% (4)	1% (23)	0% (3)	
Hard drugs	9% (2)	22% (6)	8% (8)	7% (9)	1% (7)	
Soft drugs	0% (0)	8% (3)	3% (1)	3% (4)	1% (1)	
Drugs not specified	0% (0)	5% (1)	6% (2)	2% (4)	0% (2)	
Serious traffic crimes**	27% (2)	39% (6)	39% (8)	29% (13)	15% (10)	
Other traffic crimes**	27% (6)	15% (18)	19% (4)	12% (16)	2% (6)	
Firearm crimes (misd. Vuurwapenwet)	9% (1)	19% (3)	12% (2)	6% (5)	2% (4)	
Other offenses**	0% (0)	15% (2)	6% (2)	6% (6)	2% (3)	
Any crime***	91% (28)	91% (63)	80% (47)	66% (78)	33% (49)	
Serious***	91% (23)	86% (48)	69% (37)	49% (52)	21% (33)	
Very serious***	64% (16)	67% (39)	53% (13)	30% (34)	11% (27)	
Most dangerous***	73% (7)	55% (10)	42% (6)	23% (14)	8% (13)	

\* Percent arrested at least once in the six-year follow-up period for the given crime. Arrest followed by a guilty finding by a judge, policy dismissal by a prosecutor, or being added to another case. The arrest must have occurred within six years of the date of the Sample 77 arrest.

\*\* For definitions, see Glossary. 'Other' includes minor violations (overtredingen) of the Penal Code and violations of other laws, such as economic, tax and military laws.

\*\*\* 'Any' crime includes all criminal violations. A serious crime is an offense for which the maximum imprisonment is 18 months or more; a very serious crime is an offense for which the maximum imprisonment is six years or more. A 'most dangerous' crime is robbery or personal assault (including murder) or rape or sexual assault.

By definition, however, the four percent of Other Prior 'Disposition' offenders and one percent of First 'Disposition' offenders who were arrested, followed by a 'disposition' for robbery within six years became, thereby, Career Robbery offenders. In the same way, the few Other Prior 'Disposition' and First 'Disposition' offenders who were arrested after the Sample 77 crime for rape or sexual assault would become, by that arrest (ending in a 'disposition') Career Sexual Assault offenders. Thus, many of the serious arrests, and much of the prevalence of arrest, among Other Prior 'Disposi-

tion' and First 'Disposition' offenders is accounted for by people who would become career offenders, but who had not yet been identified at the time of the Sample 77 crime adjudication.

### 7.1a Measurement of predictive accuracy

Crime, especially serious and violent crime, is not common. Even among career offenders, it does not occur with 100 percent probability. However, as Morris and Miller (1987) argue,

the concerns with the accuracy of explicit statistical predictions must be judged against a backdrop of the real world of reliance on inaccurate intuitive predictions.

Actually, 'intuitive' predictions are seldom completely inaccurate; like statistical predictions, they are accurate to a degree. The problem is to determine the degree to which a statistical prediction is more accurate than an intuitive prediction would be.

The statistical prediction in question here is a prediction based on the career offender classification. For example, the prediction implicit in the Career Robbery type is that all Career Robbery offenders but none of the Other Prior 'Disposition' offenders would commit a robbery. The intuitive prediction, for comparison, would be to predict at random among all offenders with at least two 'dispositions' (Other Prior 'Disposition' offenders). The following figures show arrests (followed by a 'disposition') within six years for at least one robbery, comparing Career Robbery and Other Prior 'Disposition' offenders. How does the Career Robbery classification improve predictive accuracy, compared to an intuitive prediction?

Type of offender in 1977:	Robbery arrest after Sample 77?		
	Yes	No	Total
Career Robbery	25	85	110
Other Prior 'Disposition'	77	1,829	1,906
	102	1,914	2,016

In this example, there are 25 true positives (people predicted to recidivate who actually did recidivate) and 1,829 true negatives (people predicted not to recidivate who actually did not). To calculate predictive accuracy, we need to know the Selection Ratio and the Base Rate. The Selection Ratio is the proportion of people selected by the prediction to recidivate, which is 110:2016 or .0546. The Base Rate is the proportion actually recidivating, which is 102:2016, or .0506. The overall accuracy of this statistical prediction based on the career typology is the sum of true negatives and true positives, divided by the total:  $(25+1829)/2016=91.96\%$ . However, an intuitive prediction, assuming the same selection ratio, would have yielded a random accuracy of  $90.04\%=(102/2016)(110/2016)+(1914/2016)(1906/$

2016).<sup>41</sup> Thus, the statistical prediction improves accuracy over an intuitive prediction by 1.92 percentage points. This is called Improvement Over Chance (IOC).

Because IOC has different meanings depending on the Base Rate and the Selection Ratio, Loeber and Dishion (1983) standardize it by expressing it as a percentage of total possible improvement. Since the total number of post-Sample 77 people arrested for robbery (the positive Base Rate marginal) is 102, the number of true positives could have been no more than 102. Similarly, there could have been no more than 1,906 true negatives. Thus, the maximum proportion of accurate predictions is  $(102 + 1906) / 2016 = 99.60\%$ . The possible improvement over chance is therefore  $99.60\% - 90.04\% = 9.56$  percentage points. The actual improvement, as a percent of the improvement possible, is  $1.92 / 9.56 = 20.1$  percent. Loeber and Dishion call this RIOC (Relative Improvement Over Chance). They find that RIOC is much less highly correlated with the Base Rate and the Selection Ratio than the raw IOC.<sup>42</sup>

### *7.1b Does the career offender classification improve predictive accuracy?*

The RIOC, the percent true positives, the PBR (positive base rate) and the percent true negatives are shown in Table 22 for the 110 Career Robbery offenders, the 64 Career Sexual Assault offenders, all the 185 career offenders (including eleven Career Both), compared to the 1,906 Other Prior 'Disposition' offenders.<sup>43</sup> These figures show the improvement in predictive accuracy of predicting that career offenders would be arrested (followed by a 'disposition') for at least one offense of each type and that Other Prior 'Disposition' offenders would *not* be arrested, versus predicting at random for the entire group.

The choice of Other Prior 'Disposition' offenders as a realistic intuitive prediction alternative appears to have been successful. Though the percent true negatives (see right-hand column labeled NEG) is very high for rare crimes such as robbery and rape, only 51 percent of Other Prior 'Disposition' offenders were not arrested for *some* serious crime and only 34 percent were not arrested for *any* crime within six years after the Sample 77 arrest. Were career offenders even more likely to recidivate than these other offenders with two or more 'dispositions'?

<sup>41</sup> There is really no need to assume that the intuitive Selection Ratio is the same as the predictive Selection Ratio. Rolph and Chaiken (1987) assume that the intuitive Selection Ratio equals the Base Rate, but Loeber and Dishion (1983) keep the marginals constant by assuming that the two Selection Ratios are equal. See Appendix IV.

<sup>42</sup> In a review of a large number of studies predicting delinquency, Loeber and Dishion (1983) found that 'the IOC correlated .54 and .38 and the RIOC correlated .13 and .22 with the base rates and selection ratios'.

<sup>43</sup> ADR-unknown cases are not included (those unknown to ADR in 1983). See table 10.

The Career Robbery classification versus Other Prior 'Disposition' improves the accuracy of predicting that the person will be arrested (followed by a 'disposition') for *any* crime by 86 percent, and improves the accuracy of the prediction of a 'most dangerous' crime by 41 percent. The improvement in predictive accuracy is less for individual types of crime, because the Positive Base Rate (PBR) is low. For individual crime types, the PBR ranges from only one percent for a violent sexual offense and five percent for robbery to 37 percent for theft. Loeber and Dishion (1983) find that prediction tables with a PBR under 30 percent are especially likely to have low RIOC scores. However, even when the PBR is much lower than 30, the Relative Improvement Over Chance (RIOC) of the Career Robbery classification is often considerable. For example, there is a 37 percent improvement (RIOC) in the prediction that Career Robbery offenders will be arrested (followed by a 'disposition') of personal assault, compared to other offenders with at least two 'dispositions'. Among other individual crime types, the RIOC is 43 percent for theft, and 36 percent for burglary. Robbery and violent sexual assault have RIOC scores of 20 and 17 percent, respectively, despite their low PBR's.

The RIOC for predicting violent sexual assault recidivism is higher for the Career Sexual Assault classification than for Career Robbery. Even though the PBR is only 1.3 percent, true positives are 17 percent, and the RIOC is 40 percent. On the other hand, the Career Sexual Assault classification does not produce much relative improvement in the prediction of recidivism for any other individual crime type. The Career Robbery RIOC is much higher than the Career Sexual Assault RIOC, not only for the property crimes robbery, theft, and burglary, but also for personal assault, other assaults, and drug offenses. Although the Career Sexual Assault classification does improve the prediction of recidivism for any serious, very serious, or most dangerous crime, the relative improvement of the Career Robbery classification is much higher in every case.

The improvement in predictive accuracy obtained by classifying all career offenders versus Other Prior 'Disposition' offenders reflects, as might be expected, the combined influence of the Career Robbery and the Career Sexual Assault classifications. However, the influence of the eleven Career Both offenders is also evident. For personal assault recidivism in fact, if we combine the Career Both with the Career Robbery offenders in comparison to Other Prior 'Disposition' offenders, the PBR is 22.9 percent, the true positives are 52.9 percent, and the RIOC is 39.0 percent. For recidivism in a 'most dangerous' crime, the RIOC is 42.7 percent for the combination of Career Both and Career Robbery.

In general, the Career Both and Career Robbery classifications, taken together or separately, provide a considerable improvement over chance in the prediction of many individual crime types and of serious, very serious, or most dangerous recidivism. Although the Career Sexual Assault classification produces quite a bit of relative improvement in the prediction of serious, very serious, or most dangerous recidivism, its greatest effect is on

Table 22: Percent improvement in accurate predictions, by type of offender in 1977

Criterion At least one arrest within 6 years years (followed by a 'disposition') for:	Career Robbery vs. Other Prior off.			Career Sexual Assault vs. Other Prior off.			All career off. vs. Other Prior off.			
	RIOC*	Pos	PBR	RIOC*	Pos	PBR	RIOC*	Pos	PBR	Neg
	Robbery	20%	23%	5%	4%	8%	4%	22%	17%	5%
Burglary	36%	50%	22%	6%	25%	20%	25%	41%	22%	80%
Theft/fraud	43%	64%	37%	1%	36%	35%	28%	55%	37%	65%
Pers. assault**	37%	51%	23%	12%	31%	21%	29%	45%	23%	79%
Other assault**	27%	42%	20%	11%	28%	19%	22%	38%	21%	81%
Rape/sexual assault/ Child molesting	17%	4%	1%	40%	17%	1%	49%	9%	2%	99%
Hard drugs	15%	22%	8%	1%	8%	7%	10%	16%	8%	93%
Soft drugs	9%	8%	3%	0%	3%	3%	8%	6%	3%	97%
Serious traffic**	14%	39%	30%	14%	39%	30%	12%	38%	30%	71%
Other traffic**	4%	15%	12%	8%	19%	12%	5%	17%	13%	88%
Firearm crime	13%	19%	7%	7%	12%	6%	13%	16%	7%	94%
Any crime	86%	91%	67%	39%	80%	70%	60%	87%	68%	34%
Serious***	72%	86%	51%	38%	69%	50%	60%	81%	52%	51%
Very serious***	52%	67%	32%	32%	53%	31%	44%	62%	33%	70%
Most dangerous***	41%	55%	25%	24%	42%	24%	35%	52%	26%	77%

\* RIOC= Relative Improvement Over Chance; Pos= True Positive percent; PBR= Positive Base Rate; Neg= True Negative percent. See Appendix IV for definitions.

\*\* For definitions, see Glossary.

\*\*\* Serious= maximum possible sentence at least 18 months. Very serious= maximum possible sentence at least 6 years. Most dangerous= robbery or personal assault (including murder) or rape or sexual assault.

the prediction of violent sexual offense recidivism (rape, sexual assault or child molesting). On the other hand, a classification of Career Robbery offenders and Career Both offenders versus other offenders with at least two 'dispositions' produces a prediction of recidivism within six years that consistently improves upon chance for a variety of crime types. This classification is particularly good at increasing true positives, and at increasing predictive accuracy for serious or dangerous crimes.

In summary, the prevalence of recidivism (arrest followed by a 'disposition') within six years was considerably higher for career offenders than for other offenders who had at least two previous 'dispositions'. Career Robbery and Career Both offenders were more likely to recidivate in almost any type of crime, while Career Sexual Assault offenders specialized more in sexual offenses. Thus, more of these offenders were arrested (followed by a 'disposition') for *at least one* offense of each type.

However, in total, the 185 career offenders comprise only 4.8 percent of Sample 77 'Guilty' offenders, and 8.8 percent of those 2,091 with at least two 'dispositions' at the time of the 1977 adjudication. For what proportion of all offenses was this relatively small group of people responsible? To answer this question, we need to examine not only the prevalence but the

incidence of recidivism within six years. The incidence of recidivism (frequency of crimes per offender) is the subject of the following section.

## 7.2 Incidence of arrest before and after the Sample 77 crime

At the time of the adjudication of the Sample 77 crime (Table 23), the eleven Career Both offenders had already had a 'disposition' for 284 offenses, or about 26 per person, of which 62 (5.6 per person) were the 'most dangerous' crimes murder, personal assault, rape, sexual assault or robbery. The 116 Career Robbery offenders had had a 'disposition' for about 17 offenses per person, of which 310 (2.7 per person) were the most dangerous crimes, and the 65 Career Sexual Assault offenders had had a 'disposition' for about 13 offenses per person, 199 of which (3.1 per person) were most dangerous. In contrast, other offenders with at least two 'dispositions' had had a 'disposition' for about seven crimes per person, of which 1,502 (0.8 per person) were most dangerous. Naturally, First 'Disposition' offenders had had a 'disposition' for only one crime per person, and only 185 (0.1 per person) were most dangerous.

These Most Dangerous offenses constituted 21.8 percent of all the offenses of Career Both offenders, 16.2 percent of all the offenses of Career Robbery offenders, 24.1 percent of all the offenses of Career Sexual Assault offenders, 10.7 percent of all the offenses of Other Prior 'Disposition' offenders, and 9.8 percent of the offenses of First 'Disposition' offenders.

Serious (defined here as 'non-trivial') offenses accounted for about half (52%) of all offenses of First 'Disposition' offenders, 65 percent of the offenses of Other Prior 'Disposition' offenders, 67 percent of the offenses of Career Sexual Assault offenders, and 73 percent of the offenses of both Career Robbery offenders, and Career Both offenders. However, despite their very active and serious criminal histories, the 192 career offenders had been responsible for fewer arrests (followed by a 'disposition') than other offenders. Although the Other Prior 'Disposition' offenders had had a 'disposition' for only about seven crimes per person, because there were so many of these offenders, the total of their offenses amounted to 14,047. First 'Disposition' offenders had had a 'disposition' only once, of course, but there were 1,886 of these 'dispositions'.

Even though the Other Prior 'Disposition' offenders had a much lower propensity to be arrested (followed by a 'disposition') compared to the career offenders, there were so many of them that they accounted for a large proportion of the total offenses at the time of the Sample 77 crime: 74 percent of the 18,959 total offenses, 75 percent of the 12,320 serious offenses, 72 percent of the 5,100 very serious offenses and 67 percent of the 2,258 'most dangerous' offenses. By definition, no Career Sexual Assault or Other Prior 'Disposition' offender had had a 'disposition' for robbery, and no Career Robbery or Other Prior 'Disposition' offender had had a 'disposition' for sexual assault or rape. However, Other Prior 'Disposition' offen-

Table 23: Offense frequency up to and including the Sample 77 crime, by type of offender in 1977

Crime category (attempts included)	Type of offender in 1977: Sample 77 'Guilty'									
	Career Both		Career Robbery		Career Sexual Assault		Other Prior Disposition		First Disposition	
	n	$\bar{X}$	n	$\bar{X}$	n	$\bar{X}$	n	$\bar{X}$	n	$\bar{X}$
Robbery/extortion (diefstal met geweld/afp.)	13	1.2	143	1.2	0	0.0	0	0.0	13	0.0
Burglary (inbraak)	51	4.6	415	3.6	94	1.5	2,149	1.1	137	0.1
Theft (eenv. diefstal)	113	10.3	785	6.8	247	3.8	5,563	2.9	574	0.3
Personal assault (agressie tegen personen)	37	3.4	167	1.4	106	1.6	1,502	0.8	162	0.1
Other assault (vernieling, beschadiging)	16	1.5	150	1.3	113	1.7	1,206	0.6	151	0.1
Violent Sexual assault (verkrachting, aanr.)	12	1.1	0	0.0	93	1.4	0	0.0	10	0.0
Child molesting (ontucht met kind/bew.)	4	0.4	4	0.0	17	0.3	107	0.1	9	0.0
Non-violent Sexual crime (overige seks. misd.)	7	0.6	4	0.0	25	0.4	238	0.1	17	0.0
Hard drugs	2	0.2	25	0.2	3	0.1	160	0.1	29	0.0
Soft drugs	5	0.5	22	0.2	2	0.0	154	0.1	25	0.0
Drugs not specified	0	-	0	-	0	-	0	-	3	0.0
Serious traffic crimes	5	0.5	86	0.7	77	1.2	1,719	0.9	595	0.3
Other traffic crimes	19	1.7	81	0.7	31	0.5	752	0.4	30	0.0
Firearm crimes (misd. Vuurwapenwet)	0	0.0	13	0.1	13	0.2	245	0.1	85	0.1
Other offenses	0	0.0	20	0.2	6	0.1	252	0.1	46	0.0
Any crime	284	25.8	1,915	16.5	827	12.7	14,047	7.2	1,886	1.0
Serious crimes	206	18.7	1,395	12.0	553	8.5	9,182	4.7	984	.5
Very serious crimes	98	8.9	734	6.3	258	4.0	3,663	1.9	347	.2
Most dangerous crimes	62	5.6	310	2.7	199	3.1	1,502	.8	185	.1
Number of people	11		116		65		1,948		1,886	

n = Total arrests (inschrijvingen) from the first recorded arrest to the Sample 77 arrests, that were followed by 'disposition'.

$\bar{X}$  = Average arrests, of all people within each offender type.

ders accounted for 107 (76 percent) of the child molesting offenses, and for 5,563 (76 percent) of the theft 'dispositions'.

After the Sample 77 arrest, the Sample 77 'Guilty' offenders had a 'disposition' for 12,014 offenses, 7,018 of which were serious, 3,146 very serious and 1,460 'most dangerous'. In this six-year period, Career Both offenders were arrested (followed by a 'disposition') of 84 offenses (7.6 per person), of which 19 (22.6 percent) were 'most dangerous'. Career Robbery offenders were arrested for 1,254 crimes (11.4 per person), of which 14 percent were most dangerous, and Career Sexual Assault offenders were arrested for 423 crimes (6.6 per person) of which 16.5 percent were most dange-

rous. In contrast, the Other Prior 'Disposition' offenders with at least two 'dispositions' were arrested for 8,269 crimes (4.3 per person) in the following six years, of which 11.1 percent were most dangerous, and First 'Disposition' offenders were arrested for 1,984 crimes (1.1 per person), of which 14.1 percent were most dangerous. This confirms the findings in section 6, that the difference between career offenders, and others is not so much that every crime they commit is serious or dangerous, but rather that they tend to commit more of *all* types of crime.

However, in calculating the incidence of arrests 'per person', it is not really fair to count those people who were *never* arrested in the six-year follow-up period. For these people, the incidence of arrest after Sample 77 was zero. Therefore, in Table 24, the mean incidence of arrest ( $\bar{X}$ ) indicates the average arrests (followed by 'disposition') for a specific crime of *people who were arrested at least once for that specific crime*.

We have seen above (Table 21) that Other Prior 'Disposition' and First 'Disposition' offenders were much more likely than career offenders to be 'disposition'-free for the entire six-year period after the Sample 77 arrest. In Table 24 we see that, in general, the number of 'dispositions' among those who *did* recidivate was likely to be higher for career offenders. Career Robbery recidivists had a 'disposition' almost twice as often, on the average, as Other Prior 'Disposition' recidivists for any offense (12.5 versus 6.6 per recidivist). Career Robbery offenders who recidivated with at least one robbery had a 'disposition' for about three per person over the six years, twice the number for Other Prior 'Disposition' robbery recidivists. Career Robbery recidivists also had a higher incidence of burglary (4.9) and theft (6.5) offenses than other offenders. The incidence of hard drug offenses was highest for Career Sexual Assault recidivists. On the other hand, the incidence of other assault (criminal destruction) offenses, non-violent sexual offenses, traffic offenses, and firearm offenses was about the same for career offender recidivists as for other recidivists.

In general, the average incidence of arrest (followed by 'disposition') was highest for Career Robbery recidivists and lowest for First 'Disposition' recidivists, regardless of the seriousness of the offense. Those Career Robbery offenders who were re-arrested, as 91 percent of them were, averaged 12.5 arrests followed by 'disposition'. This is remarkable, considering that half were sentenced to prison and two percent more confined under TBR for the Sample 77 crime (Table 15), and that 71 percent were sentenced to prison and three percent to TBR for an arrest occurring after Sample 77 (Table 14). Therefore, their 'street time' was probably less than other offenders.

Overall, Career Both recidivists recidivated less often (8.4 arrests for 'any' crime) than Career Robbery recidivists (12.5 arrests), about the same as Career Sexual Assault recidivists (8.3 arrests). However, of the Career Both arrests, a higher proportion were serious (70%), very serious (36%), or 'most dangerous' (23%) crimes than the arrests of other recidivists (see



Table 24: Offense patterns among those who recidivated after the Sample 77 crime, by type of offender in 1977

Category of recidivism (attempts included)	Career Both		Career Robbery		Career Sexual Assault		Other Prior Disposition		First Disposition	
	n	$\bar{X}$	n	$\bar{X}$	n	$\bar{X}$	n	$\bar{X}$	n	$\bar{X}$
Robbery/extortion (diefstal met geweld/afp.)	3	3.0	43	2.9	9	1.8	99	1.3	35	1.4
Burglary (inbraak)	11	2.2	268	4.9	50	3.1	1,353	3.5	286	2.4
Theft (eenv. diefstal)	33	4.1	453	6.5	120	5.2	2,753	4.1	588	2.7
Personal assault (agressie tegen personen)	15	1.9	125	2.2	48	2.4	790	2.0	236	1.6
Other assault (vernieling, beschadiging)	6	1.0	100	2.2	34	1.9	662	1.8	165	1.5
Violent sexual assault (verkrachting, aanr.)	1	1.0	7	1.8	13	1.4	28	1.5	8	1.3
Child molesting (ontucht met kind/bew.)	0	-	0	-	4	1.3	9	1.0	8	1.3
Non-violent sexual crime (overige seks. misdr.)	0	-	2	2.0	6	2.0	41	2.2	7	2.3
Hard drugs	2	2.0	55	2.3	23	4.6	258	1.9	46	1.8
Soft drugs	0	-	15	1.7	2	1.0	81	1.4	9	1.0
Drugs not specified	0	-	6	1.5	5	2.5	45	1.5	8	1.0
Serious traffic crimes	4	1.3	84	2.0	68	2.7	1,323	2.4	430	1.6
Other traffic crimes	8	2.7	49	2.9	25	2.1	494	2.2	58	1.7
Firearm crimes (misdr. Vuurwapenwet)	1	1.0	27	1.3	11	1.4	165	1.5	36	1.0
Other offenses	0	-	20	1.7	5	1.0	168	1.3	64	1.4
Any crime	84	8.4	1,254	12.5	423	8.3	8,269	6.6	1,984	3.4
Serious crimes	59	5.9	827	8.7	238	5.4	4,785	5.1	1,109	2.8
Very serious crimes	30	4.3	404	5.5	99	2.9	2,110	3.7	503	2.7
Most dangerous crimes	19	2.4	175	2.9	70	2.6	917	2.1	279	1.9
Number of people	11		110		64		1,906		1,796	

n = Total arrests (inschrijvingen) within six years after the Sample 77 arrest date, followed by a 'disposition'.

$\bar{X}$  = Average arrests, of those people arrested at least once for the given crime.

Table 20). As a result, the difference in average incidence of arrest among offender types was not as great for very serious and 'most dangerous' offenses as for total or for all serious offenses.

The crime-specific arrest incidence for Career Sexual Assault recidivists was not always higher than that for Other Prior 'Disposition' recidivists. Although only 30 percent of Other Prior 'Disposition' offenders, compared to 53 percent of Career Sexual Assault offenders, recidivated with at least one arrest (followed by 'disposition') for a very serious offense in the six-year follow-up period (see Table 21), those Other Prior 'Disposition' offenders who did recidivate had more 'very serious dispositions' per person than the Career Sexual Assault recidivists (Table 24). Even though Career Sexual Assault recidivists were arrested (followed by a 'disposition') for

more total crimes than Other Prior 'Disposition' recidivists, a slightly smaller proportion of these crimes were serious or very serious (see Table 20).

The 1,906 Other Prior 'Disposition' offenders accounted for 63 percent of the 'most dangerous dispositions' after Sample 77, and the 185 career offenders accounted for nine percent; Other Prior 'Disposition' offenders accounted for 67 percent of the very serious 'dispositions', and career offenders 17 percent; for serious 'dispositions', the proportions were 68 percent and 16 percent. Thus, despite the higher prevalence of recidivism and the higher incidence of 'dispositions' among those who did recidivate, the total number of offenses accounted for by career offenders was small, relative to other offenders, simply because their numbers were small.

Although Other Prior 'Disposition' offenders were not likely to recidivate with a serious offense, those who did were quite active. Their average incidence of serious, very serious and 'most dangerous' offenses in the follow-up period did not approach that of the Career Robbery offenders who recidivated, but it was about equal to that of the Career Sexual Assault recidivists. This seems to indicate that some Other Prior 'Disposition' offenders progressed, during the six-year period, from their earlier status of offenders who had been active (over seven 'dispositions' per person) but not involved in serious or dangerous crimes (see Table 23) to offenders who were active *and* dangerous. The pertinent question, then, is this: can we predict who, among those classified as Other Prior 'Disposition' offenders at the time of the Sample 77 arrest, will continue to have 'dispositions' for serious and dangerous offenses in the six years after the Sample 77 crime? Similarly, can we predict which First 'Disposition' offenders will become active and dangerous career offenders?

Fully 23 percent of the offenders labeled Other Prior 'Disposition' in 1977 were arrested (followed by a 'disposition') for at least one 'most dangerous' offense within six years (see Table 21). One of them was arrested (followed by a 'disposition') for 14 separate 'most dangerous' crimes, more than any Career Robbery, Career Both, or Career Sexual Assault offender. In Table 25, we see the percent of Other Prior 'Disposition' and First 'Disposition' offenders who were arrested (followed by a 'disposition') for a most dangerous offense within six years after Sample 77, according to their gender, age at the Sample 77 offense, *number* of arrests prior to Sample 77, and *type* of prior offenses.

The most striking differences in Table 25 are, as we have seen before, between the two types of offender - those who had a 'disposition' for the first time, and non-career offenders with two or more 'dispositions'. Of the First 'Disposition' offenders, only eight percent were later arrested (followed by a 'disposition') for a most dangerous crime, compared to 23 percent of the Other Prior 'Disposition' offenders. Further, none of the variables in Table 25 reveals a particularly dangerous type of first-offender. Not one of the First 'Disposition' offender categories contained as many as

Table 25: Who will become a dangerous offender within six years? Percent recidivating with at least one 'most dangerous' crime

Offender characteristics in 1977		Type of offender in 1977			
		Other Prior 'Disposition'		First 'Disposition'	
		n	% recidivating	n	% recidivating
		1,906	23.0%	1,796	8.0%
Gender:	Male	1,772	24.7	1,533	9.5
	Female	134	6.0	263	.8
Age at	12-15	73	39.7	235	17.4
Sample 77:	16, 17	157	43.9	224	17.0
	18, 19	189	39.2	197	11.7
	20, 21	199	26.1	161	6.8
	22, 23, 24	217	30.0	191	8.4
	25-29	311	21.5	230	3.0
	30-39	419	15.5	297	2.4
	40+		341	7.0	261.5
Prior arrests: (followed by 'disposition')	1	604	11.6	-	-
	2	321	16.2	-	-
	3	206	20.9	-	-
	4	152	31.6	-	-
	5	112	22.3	-	-
	6+	511	40.5	-	-
Prior 'disposition' (including Sample 77 crime) for at least one:					
Most dangerous offense		714	32.1	173	17.9
Very serious offense		1,031	32.2	315	16.2
Serious offense		1,667	25.6	836	11.8
Robbery		0	-	12	8.3
Burglary		680	36.0	129	18.6
Theft		1,376	27.3	544	7.5
Personal assault		714	32.1	152	19.7
Criminal destruction		669	33.9	144	16.0
Sexual assault		0	-	9	0.0
Child molesting		67	31.3	6	0.0
Non-violent sexual offense		41	19.5	17	5.9
Hard drugs		100	20.0	25	4.0
Soft drugs		70	18.6	23	8.7
Serious traffic		842	19.6	578	3.1
Other traffic		269	34.2	30	16.7
Firearm		170	31.8	82	0.0

one-fifth who were later arrested for a most dangerous crime. The first-offenders who had the highest risk of recidivating with a most dangerous offense were those whose Sample 77 crime had been personal assault (19.7%).

In contrast, many of the Other Prior 'Disposition' offender categories contained one-fifth or more who were later arrested for a most dangerous crime. The other prior offenders who had the highest risk of recidivating

Table 26: Distribution of offenses within six years among Sample 77 'Guilty' offenders

Offender type in 1977	Offenders		All offenses		Serious offenses		Very serious offenses		Most dangerous offenses	
	n	Cum %	n	Cum %	n	Cum %	n	Cum %	n	Cum %
	Career Both	11	0.3	84	0.7	59	0.8	30	1.0	19
Career Robbery	110	3.1	1,254	11.1	827	12.6	404	13.8	175	13.3
Career Sex. Ass.	64	4.8	423	14.7	238	16.0	99	16.9	70	18.1
Other Prior 'Disp.'	1,906	53.8	8,269	83.6	4,785	84.2	2,110	84.0	917	80.9
First 'Disposition'	1,796	100.0	1,984	100.0	1,109	100.0	503	100.0	279	100.0
<b>Total</b>	<b>3,887</b>		<b>12,014</b>		<b>7,018</b>		<b>3,146</b>		<b>1,460</b>	

with a most dangerous crime were those aged 16 or 17 (43.9%), those with six or more prior arrests (40.5%), and those who had had a 'disposition' for burglary (36.0%). In general, among Other Prior 'Disposition' offenders, males, offenders under 25 years old, those with six or more prior 'dispositions' for crime, or those with at least one prior 'disposition' for a very serious offense like burglary, personal assault or criminal destruction, were the most likely to be arrested for a most dangerous crime. Strangely, those arrested for a less serious traffic offense (see Glossary) were among the most likely to recidivate with a most dangerous offense (34.2%).<sup>44</sup> Of males under 25 with six or more prior arrests, 54.9% were arrested within six years for a most dangerous crime.

### 7.3 Relative dangerousness of career offenders

The analysis in the preceding two sections has shown that career offenders, in general, have a higher prevalence of arrest (followed by a 'disposition') within six years, and that they have a higher arrest incidence relative to Other Prior 'Disposition' offenders or to First 'Disposition' offenders. Career offenders are more likely to recidivate with at least one offense, especially for serious, very serious, or 'most dangerous' offenses. In addition, career offenders who recidivate do so more often than other offenders.<sup>45</sup> The inevitable result of higher prevalence and higher incidence is that career offenders must account for a high proportion of arrests, relative to their proportion of the population.

However, the two preceding sections also have shown that, because career offenders constitute such a small proportion of the population, they still account for a much smaller number of arrests than the Other Prior 'Dispo-

<sup>44</sup> Notice that Career Both offenders were arrested more often for a less serious traffic offense in Sample 77 (Table 18), prior to Sample 77 (Tables 19 and 23), and for six years after Sample 77 (Tables 20 and 21).

<sup>45</sup> However, Career Sexual Assault recidivists do not have a higher incidence of very serious arrests than Other Prior 'Disposition' recidivists.

Table 27: Distribution of offenses within six years among Sample 77 'Guilty' offenders with at least two 'dispositions'

Offender type in 1977	Offenders		All offenses		Serious offenses		Very serious offenses		Most dangerous offenses	
	n	Cum%	n	Cum%	n	Cum%	n	Cum%	n	Cum%
	Career Both	11	0.5	84	0.8	59	1.0	30	1.1	19
Career Robbery	110	5.8	1,254	13.3	827	15.0	404	16.4	175	16.4
Career Sexual Ass.	64	8.8	423	17.6	238	19.0	99	20.2	70	22.4
Other Prior 'Disp.'	1,906	100.0	8,269	100.0	4,785	100.0	2,110	100.0	917	100.0
<b>Total</b>	<b>2,091</b>		<b>10,030</b>		<b>5,909</b>		<b>2,643</b>		<b>1,181</b>	

sition' offenders. As Lyle Shannon (1985:162) argues about the Racine birth cohort data,

This group of serious offenders is so small, however, ... that while they produce a disproportionate share of the ... crime, their juvenile identification (even if they were to be incarcerated forever) would take only a modest bite out of crime.

The purpose of this section is twofold: first, to show the degree to which career offenders were responsible for a disproportionate share of all the arrests (followed by a 'disposition') within the six-year follow-up period, and second, to estimate the proportion of offenses that might have been prevented had the career offenders been dissuaded from committing any further offense after the Sample 77 arrest. How big of a 'bite' would the prevention of arrests by career offenders have taken out of crime?

### 7.3a *Did career offenders account for a higher proportion of offenses than their proportion of the population?*

Career offenders, in total, account for 4.8 percent of the Sample 77 'Guilty' offenders, but for 14.7 percent of all arrests (followed by a 'disposition'): 16.0 percent of serious arrests, 16.9 percent of very serious arrests, and 18.1 percent of 'most dangerous' arrests (Table 26). Thus, their proportion of arrests was 3.1 times their proportion of the Sample 77 'Guilty' population, and their proportion of most dangerous arrests was 3.8 times their proportion of the population. For Career Both and Career Robbery offenders combined, the degree of disproportionality was even greater. Together, they constitute 3.1 percent of the Sample 77 'Guilty' population, but their share of total arrests was 3.58 times that (11.1 percent), and their share of the 'most dangerous' arrests was 4.29 times that (13.3 percent). Thus, Career Sexual Assault offenders contribute somewhat less to the disproportionality than Career Both and Career Robbery offenders.

The degree of disproportionality of career offender arrests declines if we consider *only* those Sample 77 'Guilty' offenders who had at least one prior

'disposition' (Table 27). Career offenders, in total, constitute 8.8 percent of this group, but contributed 1.99 times that proportion of arrests (17.5 percent), and 2.55 times that proportion of 'most dangerous' arrests (22.4 percent).

In general, as the comparison group becomes selectively more 'serious', the degree of disproportion of the career offenders becomes less. If we had compared career offenders to all people adjudicated in 1977, whether or not they were found 'guilty', the disproportionality of career offender arrests would have been much more striking than that seen in Tables 26 and 27. However, the appropriate group for comparison with career offenders is other offenders with at least two 'dispositions'. For people who were *not* found 'guilty' of the Sample 77 crime, a sentence or fine is not, of course, an option open to the criminal justice system. For people who had their first 'disposition' in 1977, it is much too early to make a designation as to the person's potential to be 'active and dangerous' based only on official records (see Table 25, for example). If judges and prosecutors exercise discretion, that discretion will be used to distinguish among offenders who had at least one prior 'disposition' before the offense currently being adjudicated.

Of all the Sample 77 'Guilty' offenders, those with at least one prior 'disposition' accounted for over 80 percent of the arrests (followed by a 'disposition') within six years, although they were only a little over half of the offenders (Table 26). Of the offenders with at least one prior 'disposition', career offenders accounted for 20 percent of the very serious arrests, although they were less than nine percent of these two-'disposition' offenders (Table 27). In Table 28, we see that this disproportionality is crime-specific; it varies according to the type of offense as well as the type of career offender.

### *7.3b Crime-specific dangerousness*

Career Both and Career Robbery offenders were arrested (followed by a 'disposition') for about three times the proportion of 'most dangerous' offenses as their proportion of the population of all offenders with at least one prior 'disposition' (Table 28). Career Robbery offenders were arrested, within the six-year follow-up period, for 5.3 times as many robberies, 2.7 times as many rapes or sexual assaults, 3.1 times as many hard drug offenses, 3.0 times as many burglaries, and 2.5 times as many firearm offenses as their proportion of the offenders with a prior 'disposition'. For Career Both offenders, the disproportionality within six years was especially high for robbery (3.8), violent sexual offenses (4.0), and murder or personal assault (3.0).

However, the most disproportionate share of any type of offense was the share of sexual offenses accounted for by Career Sexual Assault offenders. Of the 49 arrests for rape or sexual assault offenses in the six year follow-

Table 28: Distribution of offenses within six years\* among Sample 77 'Guilty' offenders with at least two 'dispositions'

Category of recidivism (attempts included)	Type of offender in 1977								Total offenses
	Career Both		Career Robbery		Career Sex. Assault		Other Prior 'Disposition'		
	%	Ratio	%	Ratio	%	Ratio	%	Ratio	
Robbery/extortion (diefstal met geweld/afp.)	1.9%	3.8	27.9%	5.3	5.8%	1.9	64.3%	0.7	154
Burglary (inbraak)	0.7%	1.4	15.9%	3.0	3.0%	1.0	80.4%	0.9	1,682
Theft (eenv. diefstal)	1.0%	2.0	13.5%	2.5	3.6%	1.2	82.0%	0.9	3,359
Personal assault (agressie tegen personen)	1.5%	3.0	12.8%	2.4	4.9%	1.6	80.8%	0.9	978
Other assault (vernieling, beschadiging)	0.7%	1.4	12.5%	2.4	4.2%	1.4	82.5%	0.9	802
Violent sexual assault (verkrachting, aanr.)	2.0%	4.0	14.3%	2.7	26.5%	8.5	57.1%	0.6	49
Child molesting (ontucht met kind/bew.)	0.0%	-	0.0%	-	30.8%	9.9	69.2%	0.8	13
Non-violent sexual off. (overige seks. misd.)	0.0%	-	4.1%	0.8	12.2%	3.9	83.7%	0.9	49
Hard drugs	0.6%	1.2	16.3%	3.1	6.8%	2.2	76.3%	0.8	338
Soft drugs	0.0%	-	15.3%	2.9	2.0%	0.6	82.7%	0.9	98
Drugs not specified	0.0%	-	10.7%	2.0	8.9%	2.9	80.4%	0.9	56
Serious traffic	0.3%	0.6	5.7%	1.1	4.6%	1.5	89.5%	1.0	1,479
Other traffic	1.4%	2.8	8.5%	1.6	4.3%	1.4	85.8%	0.9	576
Firearm crimes (misd. Vuurwapenwet)	0.5%	1.0	13.2%	2.5	5.4%	1.7	80.9%	0.9	204
Total crimes	0.8%	1.6	12.5%	2.4	4.2%	1.4	82.5%	0.9	10,035
Serious crimes	1.0%	2.0	14.0%	2.6	4.0%	1.3	81.0%	0.9	5,909
Very serious crimes	1.1%	2.2	15.3%	2.9	3.7%	1.2	79.8%	0.9	2,643
Most dangerous crimes	1.6%	3.2	14.8%	2.8	5.9%	1.9	77.6%	0.9	1,181
Offenders:									
- Number		11		110		64		1,906	
- Percent		0.5%		5.3%		3.1%		91.2%	

% = Percent of total offenses (arrests followed by a 'disposition') of people with at least two convictions.

Ratio = Ratio of percent offenses to percent offenders.

\* Arrests (followed by 'disposition') occurring within six years after the Sample 77 arrest.

up period by all offenders who had had at least one 'disposition' prior to the 1977 adjudication, Career Sexual Assault offenders accounted for 13, which is 26 percent, or 8.5 times their proportion of the population. They also accounted for 31 percent of the 13 arrests for child molesting, or 9.9 times their proportion of the population, and 12 percent of the arrests for non-violent sexual offenses (flashing, pornography), 3.9 times their proportion of the population.

Among offenders with at least one 'disposition' prior to the Sample 77 'disposition' Career Robbery offenders were arrested within the follow-up period at least twice as often as their proportion of the population might indicate for every type of crime *except* traffic offenses and non-violent sexual

offenses. In contrast, Career Sexual Assault offenders were arrested twice as often as their proportion of the population *only* for sexual offenses and hard drug offenses.

We have seen above (Table 20) that people categorized as Career Sexual Assault offenders at the time of the adjudication of the Sample 77 crime were arrested (followed by a 'disposition') for a wide variety of offense types within six years. Almost thirty percent of their arrests after Sample 77 were for theft, and 22 percent were for traffic offenses, while only three percent (13 arrests) were for rape or sexual assault. An additional one percent (four arrests) were for child molesting. Thus, Career Sexual Assault offenders cannot be said to 'specialize' in sexual offenses. However, these 17 arrests constituted over 27 percent of the total arrests for rape, sexual assault or child molesting within the six year follow-up period, among people with a 'disposition' prior to Sample 77 (Table 28).

Career Sexual Assault offenders committed many types of crime in the follow-up period, just as did Other Prior 'Disposition' offenders. In contrast to Other Prior 'Disposition' offenders, however, they were responsible for a highly disproportionate share of the sexual offenses. On the other hand, Career Robbery offenders also committed many types of crime in the follow-up period, and were responsible for a disproportionate share of almost every type. In this limited sense, then, Career Sexual Assault offenders specialized more than Career Robbery offenders.

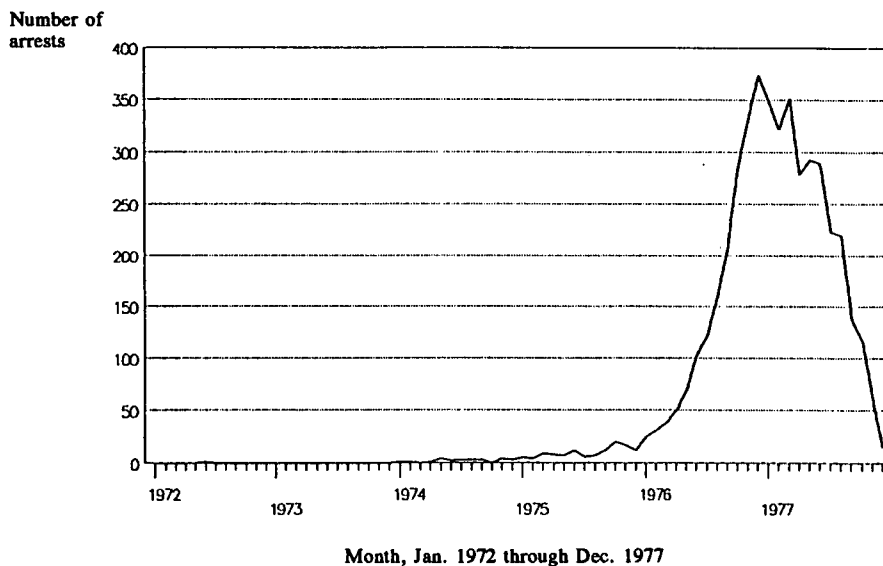
### *7.3c Effect of career offenders on the total number of crimes*

Although it is clear that career offenders, particularly Career Robbery offenders, were responsible for a disproportionate number of arrests (followed by 'Disposition') within six years after the Sample 77 arrest, it is also clear that career offenders comprise such a small proportion of the population that, in Lyle Shannon's words, a complete reduction of them 'would take only a small bite out of crime'. This section attempts to make a comparison between total adjudications in the Netherlands, and adjudications of Sample 77 'Guilty' offenders, for various calendar years.

How many offenses *per year* were accounted for by career offenders? To make this comparison, it is first necessary to determine the number of offenses in each calendar month that were attributed to Sample 77 'Guilty' career offenders. In total, Sample 77 'Guilty' offenders were arrested 12,014 times within the six year follow-up period (including all arrests followed by conviction by a judge or policy dismissal by a prosecutor). Because this was a random four percent sample, we can multiply that number by 25 to arrive at an approximate estimate of 300,350 arrests over six years attributed to offenders found 'guilty' in 1977. These years are not calendar years; the six-year follow-up for each person begins at the date of arrest (*inschrijving*) for the Sample 77 offense, and ends exactly six years later.



Figure 5: Sample 77 offenses by date of arrest

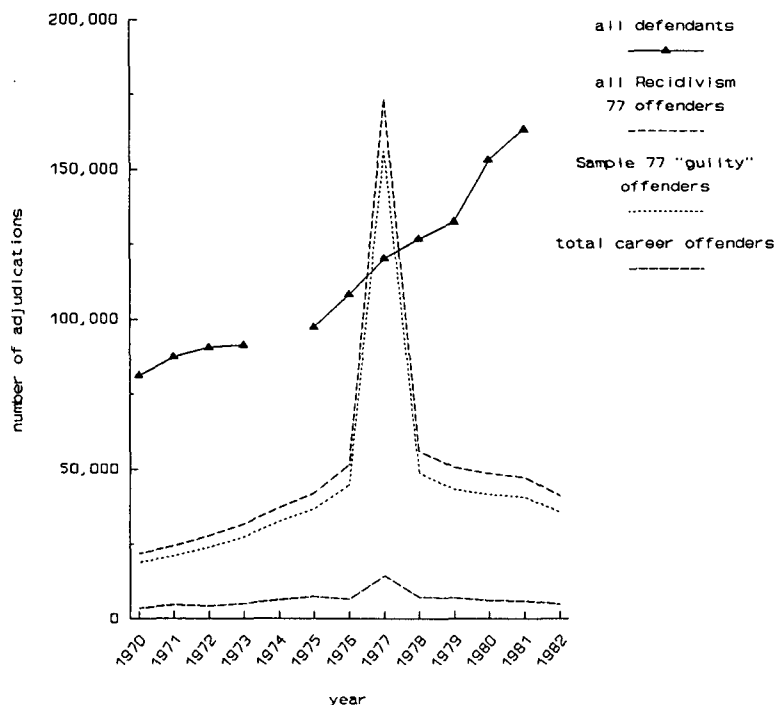


A precise count of the number of arrests of all the offenders in Sample 77 'Guilty' for each month from 1970 through 1983 was made by aggregating these arrests by month and year. Separate aggregate time series were thus created, not only for the total sample of those found 'guilty', but also for the five offender types in 1977 (Career Both, Career Robbery, Career Sexual Assault, Other Prior 'Disposition' and First 'Disposition'). The number of arrests in each month, when weighted to compensate for the four percent sample, yields an estimate of the number of arrests in that month that were attributable to the offenders adjudicated in 1977.

Many of the offenses adjudicated in 1977 began with an arrest in 1976, 1975 or even earlier. In fact, one of the sampled 1977 adjudications began with an arrest in June, 1972, and 25 began with an arrest in 1974 (Figure 5). The peak months were September, 1976 through August, 1977, with at least 200 arrests in each month. If an arrest took place on January 15, 1976, for example, the six year follow-up period would begin January 16, 1976 and continue through January 15, 1982. Arrests attributed to Sample 77 'Guilty' offenders within the six-year follow-up period were distributed, therefore, across more than six calendar years. For a few sampled offenders, the follow-up period began in 1974 and ended in 1980; for others, the follow-up period began in 1977 and ended in 1983. This is a span of ten calendar years, not six.

Unfortunately, data are not available on the total number of arrests (in-schrijvingen) per year for criminal offenses in the Netherlands. Neither are data available on the number of policy dismissals, or the number of judicial

Figure 6: Total adjudications in the Netherlands and adjudications of Sample 77 'Guilty' offenders, 1970 to 1982



guilty findings. However, data *are* available on the total number of final adjudications, including all judicial decisions, by the date of the adjudication. Fortunately, the Recidivism 77 data set contains adjudication information that is comparable to the definition for the Netherlands as a whole. If we multiply the number of adjudications attributed to sampled offenders by 25, and tally these adjudications for every year from 1970 through 1981, we can estimate the number of adjudications in each year that were accounted for by people adjudicated in 1977. By comparing this to the total number of adjudications in the Netherlands in each year, 1971 for example, we then will have an idea of the proportion of 1971 Dutch adjudications that was accounted for by people adjudicated in 1977.

The top line in Figure 6 shows the total number of adjudications (by judge or public prosecutor) for criminal offenses in the Netherlands in every year from 1970 through 1981.<sup>46</sup> The second line shows the total number of adjudications of all people in Recidivism 77 (convicted and not convicted),

<sup>46</sup> Data on the year 1974 are missing, because the CBS compiled the data over 1974 only concisely, so that a comparison with our sample is impossible.

and the bottom two lines show the total number of adjudications of all Sample 77 'Guilty' offenders, and of total career offenders. The latter three groups are weighted so that the original four percent sample now equals 100 percent of the 1977 cases. The peak in 1977 of Sample 77 adjudications reflects the problem with the sampling procedure discussed above (note 3, page 7). When Sample 77 defendants are weighted to equal 100 percent, the number of adjudications in 1977 exceeds 100 percent, because the sample was a random sample of cases, not people. Therefore, extremely active people were more likely to be included in the sample, even though the sample was random at the *case* level.

The total number of criminal adjudications in the Netherlands increased tremendously over the 12-year period, from 81,214 in 1970 to 163,333 in 1981, an increase of over 101 percent (Figure 6). Most of this increase occurred between 1975 (when there were 97,289) and 1981. In those six years, the increase was over 68 percent. The reason for this rapid increase is unclear. People who had a court case adjudicated in the Netherlands in 1977, and thus were part of the Recidivism 77 sample, were not only active in 1977 but also in every year before and after 1977 (Figure 6). Members of this 1977 cohort were also arrested (followed by a 'disposition') for example, in the years 1970 and 1980.<sup>47</sup> What proportion of all the adjudications in the Netherlands in each year was attributable to Sample 77 defendants?

The cohort of people adjudicated in 1977, by definition, accounted for all of the 1977 adjudications. In addition, however, the 1977 cohort accounted for a large proportion of the adjudications in every year from 1970 through 1976. Although this proportion is somewhat exaggerated due to the oversampling of active offenders, it is clear in Figure 6 that the number and the proportion increased over time from 1970 to 1976.<sup>48</sup> People who would later be adjudicated in 1977 for another crime accounted for 21,825 (27 percent) of the crimes adjudicated in the Netherlands in 1970, but the 1977 cohort accounted for 48 percent of 1976 adjudications. This indicates that the degree of dangerousness of the Recidivism 77 cohort as a whole, relative to all adjudicated offenders in the Netherlands, gradually increased from 1970 to 1976.

In 1977, the activity of the 1977 cohort peaked with a 'crime spurt'. One of these 1977 crimes led to their arrest, adjudication, and inclusion in the Recidivism 1977 sample. Naturally, there was a high number of adjudications among Sample 77 people in 1977, since a 1977 adjudication was the condition of being sampled. However, even if their Sample 77 crime is dis-

<sup>47</sup> 'Cohort' is a demographic term for a group of people who share a similar characteristic, such as being born in the same year (see Block, 1986). The '1977 cohort' refers to people who had a criminal case adjudicated in the Netherlands in 1977.

<sup>48</sup> See note 3 page 20 for a discussion of the sampling bias. Other solutions to this problem are suggested in Lehoczky (1986).

regarded, the Sample 77 cohort still was active in 1977 and shortly before. (See Figure 9 below.)

This pattern is exactly what would be expected given the way in which the sample was chosen and the characteristics of this sample. For people who were arrested more than once in their lifetime, the arrests usually occurred within a relatively short period of each other, not years apart (Table 2, section 3.2). Since all of the people in Sample 77 were adjudicated in 1977, any prior arrests and adjudications were, therefore, more likely to have occurred in a year closer to 1977 than in the more distant past. This accounts for the sharp increase in the adjudications of Sample 77 people over the period 1970 to 1976.

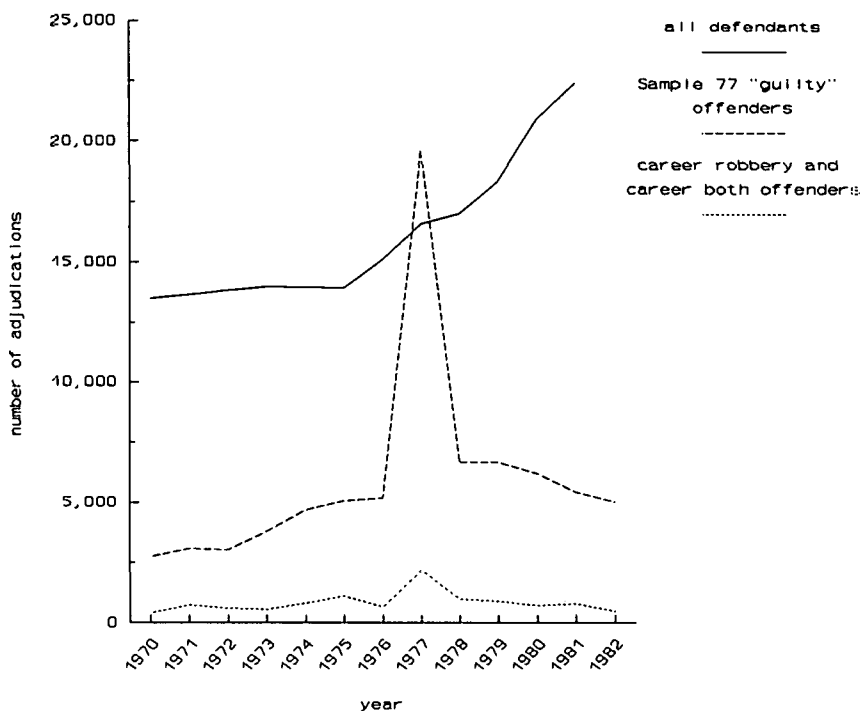
After 1977, the pattern is different: persons who had been adjudicated in 1977 accounted for a *decreasing* proportion of all adjudications (Figure 6). While the total number of adjudications in the Netherlands increased rapidly (20 percent) from 1978 to 1981, the total number of adjudications of the 1977 cohort declined. Adjudications of the total Recidivism 1977 sample declined 16 percent to 47,175 in 1981, adjudications of those found 'guilty' in 1977 declined 16 percent to 40,650, and adjudications of career offenders declined 17 percent to 5,950 in 1981.

Although the increase is unexplained, the decline would be expected. Overall, only 51 percent of those convicted by a judge, 38 percent of those whose cases were dismissed for policy reasons, 42 percent of those found not guilty, and 44 percent of those whose cases were dismissed for lack of evidence, were arrested again after Sample 77 crime (Van der Werff, 1986a). Further, the chance of a first re-arrest generally declined over time.<sup>49</sup> This would contribute to the decline in adjudications from 1978 to 1981 in Figure 6. In addition, some adjudications of Recidivism 77 defendants are not included in Figure 6, because they occurred as the result of an arrest (*inschrijving*) that took place *after* the six-year follow-up period. For example, someone might have been adjudicated in 1977 in a case stemming from an arrest that took place in June, 1975. The six-year follow-up would have ended in June, 1981. If that person were arrested again in July, 1981, that arrest and the subsequent adjudication would *not* have been included in Figure 6.

Since the rapid increase in final adjudications in the Netherlands between 1975 and 1981 was not accounted for by the cohort of people adjudicated in 1977 (Recidivism 77 defendants), what then, caused it? In 1976, Recidivism 77 defendants accounted for 48 percent of the 108,175 total adjudications; in 1981, total adjudications had risen to 163,333 and Recidivism 77 defendants accounted for only 29 percent of that total. Who accounted for the remaining 71 percent? Each person included in this 71 percent must have been one of the following:

<sup>49</sup> See Figure 4, page 44, and note 20, page 32.

Figure 7: Adjudications for 'most dangerous' offenses: 1970 to 1982



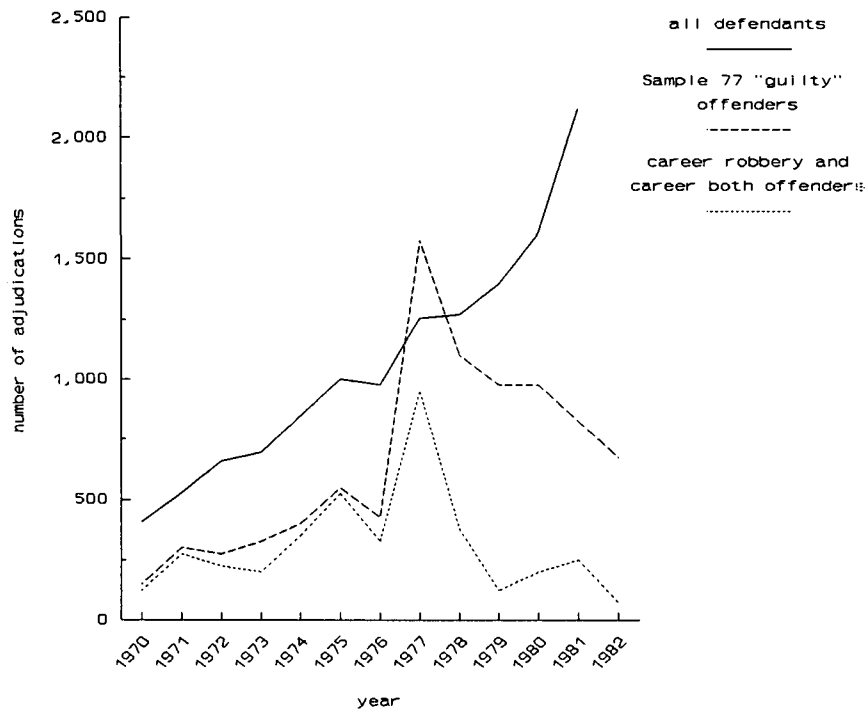
- An offender who had been active prior to 1977, but who was not adjudicated in 1977.
- A recidivism 77 defendant for whom the six-year follow-up period had already ended.
- A person arrested for the first time *after* 1977.

Total adjudications increased by 68 percent between 1975 and 1981 according to CBS figures. Adjudications for 'most dangerous' offenses increased 56 percent from 12,936 in 1975 to 20,290 in 1981 (Figure 7).<sup>50</sup> However, adjudications for robbery increased much faster. They more than doubled, from 999 in 1975 to 2120 in 1981 (Figure 8).<sup>51</sup> Thus, some of the increase in total adjudications in the Netherlands between 1975 and 1981 was caused by an extremely rapid increase in robbery offenses. How many of

<sup>50</sup> Figures 7 and 8 show only those arrests of Sample 77 offenders that were adjudicated by a judge, policy dismissed by a prosecutor, or cases added to another case.

<sup>51</sup> The 1981 figure for robbery does not include cases added to another case (*voeging ad informandum*). However, this is a minor problem because such serious crimes are seldom added to another case.

Figure 8: Adjudications for robbery: 1970 to 1982



these robbery adjudications were accounted for by Sample 77 'Guilty' offenders?

Sample 77 'Guilty' offenders were arrested (followed by a 'disposition') for 1,460 'most dangerous' offenses, of which 189 were robberies, within six years after the date of arrest for the Sample 77 crime (see Table 24). Since this was a four percent random sample, we can estimate that those found guilty in 1977 by a judge or policy dismissed by a prosecutor of a non-trivial offense were arrested for 36,500 ( $25 \times 1460$ ) 'most dangerous' offenses, of which 4,725 were robberies, within six years after their date of arrest (inschrijving). If we assume that these arrests were evenly distributed over seven calendar years, from January 1977 through December 1983, we would have about 675 robbery arrests in any given year. In 1978, however, there were actually 44 robbery *adjudications* of Sample 77 'Guilty' offenders, or an estimated 1,100 robbery adjudications of all people found 'guilty' in the previous year. This represents 87 percent of the 1,269 robbery adjudications in the Netherlands that year (including dismissals, no evidence, etc.). Thus, other offenders (recidivists who had not been active in 1977 and offenders with a first 'disposition') accounted for only about 13 percent of the robbery adjudications in 1978 (Figure 8).

Of the 189 robbery arrests (followed by 'disposition') attributed to all Sample 77 'Guilty' offenders within six years, 29 percent were committed by all career offenders, including 24 percent by Career Robbery or Career Both offenders (Table 24). Thus, of the estimated 4,725 robbery arrests in the six year follow-up period of all people found 'guilty' by a judge or prosecutor in 1977, about 1,148 were arrests of people who could have been categorized as Career Robbery or Career Both offenders in 1977. These 1,148 robbery arrests were *not* distributed equally over seven years. About a third of the adjudications stemming from these arrests (an estimated 375) occurred in 1978, but only about 125 in 1979 and 200 in 1980 (Figure 8).

Of the estimated 1,100 robbery adjudications in 1978 of people who had been found 'guilty' the year before, only 34 percent (an estimated 375) were adjudications of those who could have been categorized as Career Robbery or Career Both offenders in 1977. The rest were adjudications of people who would have been categorized as Other Prior 'Disposition' and First 'Disposition' offenders. As of the 1978 adjudication, however, the group that was responsible for the remaining 725 robbery adjudications in 1978 could have been classified as Career Robbery offenders, even though they had previously been First 'Disposition' or Other Prior 'Disposition' offenders. In this way, new recruits continually join the ranks of career offenders.<sup>52</sup>

Similarly, of the 1,460 arrests followed by a 'disposition' for 'most dangerous' offenses in Sample 77 'Guilty', 13 percent (194) were committed by Career Both or Career Robbery offenders (Table 26). Weighted to the total 1977 population, Career Both or Career Robbery offenders adjudicated in 1977 accounted for about 4,850 most dangerous arrests and 'dispositions' within six years. However, the distribution of 'most dangerous' adjudications over time (Figure 7) differed from the distribution of robbery adjudications (Figure 8). In 1978, offenders found 'guilty' in 1977 accounted for 87 percent of all robbery adjudications, but for only 39 percent of the 16,997 adjudications in the Netherlands for 'most dangerous' offenses (Figure 8). In general, recidivists previously adjudicated in 1977 accounted for a much higher proportion of Dutch robbery adjudications (Figure 8) than of most dangerous adjudications (Figure 7) or of total offenses (Figure 6) in the years from 1978 through 1981.

The number of robbery adjudications in the Netherlands more than doubled between 1975 and 1981 (Figure 8). In 1978, almost all (87%) of these adjudications were of offenders who had been adjudicated (or policy dismissed) in 1977. However, in 1979, only 975 (70 percent) of the 1,396 robbery adjudications were of the 1977 Cohort. As the total number of robbery adjudications increased even more rapidly in 1980 and 1981, the proportion accounted for by the 1977 Cohort declined. This increasing gap was filled

<sup>52</sup> If another four percent sample had been drawn of people adjudicated in 1978, about 29 new Career Robbery offenders would have been added to the 110 Sample 77 Career Robbery offenders (four percent of 725).

by *new* Career Robbery offenders, people who became a Career Robbery offender after 1977. Again, the important question for prevention is how to prevent First 'Disposition' offenders and Other Prior 'Disposition' offenders from becoming career offenders. (See Table 25.)

#### 7.4 Dangerousness over time

Of course, some of the Sample 77 Career Robbery offenders would desist, through reform, incarceration, illness or death. However, only nine percent of Career Both or Career Robbery offenders desisted for six years (Table 21). Even among Career Robbery offenders who were aged thirty or over at the time of the occurrence of the Sample 77 crime, only 29 percent desisted for at least six years (Table 13). Thus, Career Robbery and Career Both offenders seldom desist, and their ranks increase whenever another offender accumulates two 'dispositions' including one robbery. These offenders have an extremely short crime-free period, an extremely high propensity to recidivate, and a high frequency of offenses if they do recidivate. They are responsible for a disproportionate number of serious and dangerous offenses. Clearly, it would be advantageous to reduce the number of active offenders who become Career Robbery offenders.

Data based on criminals' self reports have suggested that the criminal career is characterized by spurts of activity followed by lulls, or as this report has described it, active versus crime-free periods. The active and crime-free periods of individual offenders, when aggregated together, produce a criminal offense pattern over time that seems to be smooth. The problem of how to separate the active versus crime-free patterns of individuals from patterns due to group characteristics has been discussed theoretically (Lehoczky, 1986), but there has been little analysis of real data. 'Time series specification' is a simple way to describe different lifetime active-versus-crime-free patterns of specific groups of the population.<sup>53</sup> In this section, we investigate the question of whether certain groups of offenders with similar characteristics have similar lifetime patterns of active versus crime-free periods. Earlier analysis of the Recidivism 1977 data (Van der Werff, 1985) described the individual criminal careers of selected offenders. With time series specification, we may be able to explain some of the great variety of individual patterns.

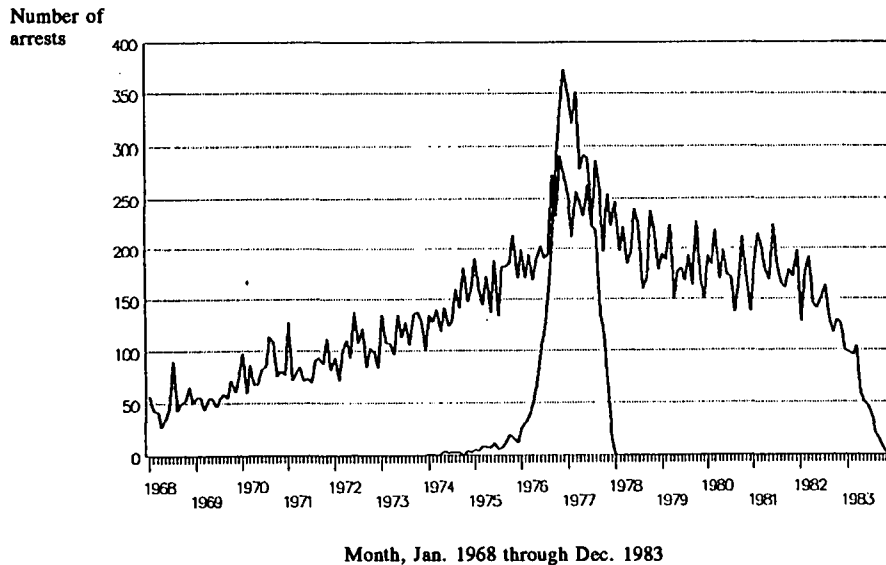
##### 7.4a Lifetime arrest pattern of Sample 77 'Guilty' offenders

Figure 5, 6, 7 and 8 show yearly final adjudication totals from 1970 through 1981, in order to compare Recidivism 77 patterns over time to patterns in the Netherlands as a whole. Information on criminal activity in the Netherlands as a whole is available only for *adjudications* per year from 1970

<sup>53</sup> For a discussion of the graphic method of time series specification, see Block (1983, 1985).



Figure 9: Arrests of Sample 77 'Guilty' offenders; Sample 77 vs. other offenses

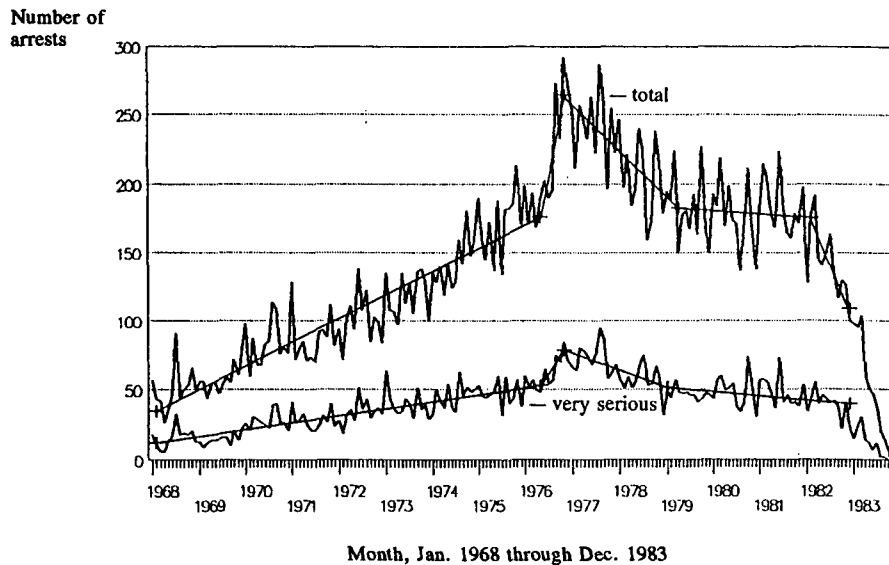


through 1981. In Figure 9, on the other hand, we see the number of *arrests* per month from January 1968 through December 1983 (arrest for a non-trivial crime, followed by conviction by a judge or policy dismissal by a prosecutor) for the entire group of Sample 77 'Guilty' offenders. Arrests for the Sample 77 offense and all other arrests have been graphed separately in order to determine whether the Sample 77 cohort really experienced a crime spurt in 1977, other than the crime that led to their being chosen in the sample. Thus, in Figure 9, we see the pattern of officially-recorded criminal activity from 1968 through 1983, of those people who would be adjudicated and found 'guilty' by a judge or prosecutor in 1977. Unlike the data in Figure 6, the number of arrests per month in Figure 9 have *not* been weighted to equal 100 percent of all arrests in the Netherlands.

The number of arrests of Sample 77 'Guilty' people in a typical month rose steadily from early 1968, when there were about 50 per month, to mid-1973, when there were about 115 per month. Then the rate of criminal activity increased even faster: at the end of 1975, there were about 180 arrests in a typical month. In 1976 and 1977, the number of arrests rose sharply. From 1978 through 1982, they steadily declined, but even in 1982, there were still 150 arrests in a typical month. (The decline at the end 1982 is due largely to the fact that the six-year follow-up period ended for many Sample 77 'Guilty' offenders.)

The 3,887 Sample 77 'Guilty' offenders were highly active in 1976 and 1977 (Figure 9), even if the arrests leading to the sampled adjudication are not included. For example, in November 1976, they accounted for 625

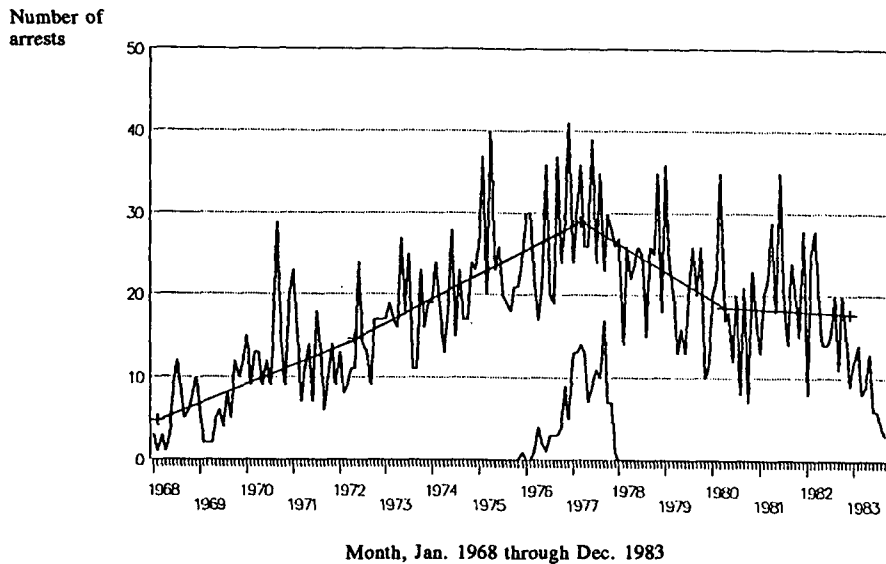
Figure 10: Arrests of Sample 77 'Guilty' offenders; total vs. very serious (except Sample 77)



arrests (.16 per offender), but only 333 of these were sampled in the Recidivism 77 study. Thus, Sample 77 'Guilty' offenders accounted for 292 arrests in November 1976 *in addition to* their sampled arrests. Similarly, in the peak month of December 1976, there were 647 arrests, 374 of which were in Sample 77 and 273 others. In fact, the number of these 'additional' arrests was 190 or higher in every month from July, 1976 through March, 1978 (about five or more arrests per 100 people per month).

In comparison to arrests for *all* kinds of offenses (Figures 6, 9 and 10), arrests for *very serious* offenses (Figure 10) neither increased as rapidly from 1968 to 1977 nor declined as rapidly afterward. Very serious arrests were relatively constant. From about 16 per month in 1968, they increased to 62 in 1976 and 73 in 1977. Very serious arrests constituted 32 percent of all non-Sample 77 arrests in 1968, 30 percent in 1977 and 26 percent in 1981. The lines superimposed on the arrest data in Figure 10 are 'line segment fits', calculated by spline regression, which provide a description of the general pattern of change over time of the number of arrests in each month (Block, 1983, 1985). Even if Sample 77 arrests are excluded, it is evident that both total arrests and very serious arrests peaked in February, 1977. Both increased gradually from January, 1968 through August 1976, and then sharply from August 1976 to February 1977. The speed at which they increased, measured by the slopes of the line segment fit, differs, however. The slope of the first segment is 1.4 for total arrests compared to 0.4 for very serious arrests. The slope of the second segment, defining the 'peak', is 14.7 for total arrests but only 4.3 for very serious arrests. Thus, general criminal activity, measured by arrests, of the cohort of people found

Figure 11: Arrests of Career Robbery offenders; Sample 77 and other; four-segment fit



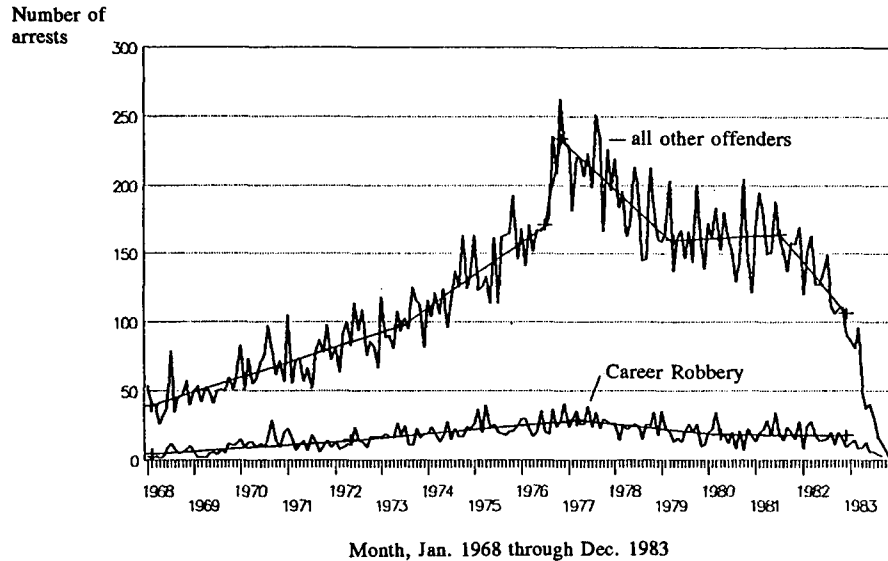
'guilty' in 1977 increased sharply from 1968 to 1977, but this increase was much sharper for less serious than for very serious offenses.

Career Robbery and Career Both offenders were even more active. In fact, the number of arrests *in addition to* the Sample 77 arrests was much larger than the number of arrests leading to the sampled adjudication, even in 1976 and 1977 (Figure 11). In contrast, for Sample 77 'Guilty' as a whole (Figure 9), Sample 77 arrests exceeded non-Sample 77 arrests in 1976 and 1977. The best pattern description of the non-Sample 77 arrests of Career Robbery and Career Both offenders is a four-segment line, peaking at 29 in a typical month in mid-1977, declining to about 19 in mid-1980, and remaining steady through 1982.<sup>54</sup>

When their arrests peaked in 1977, there were 22.8 arrests per 100 people per month for the 127 Career Robbery and Career Both offenders, not counting the arrest that led to the sampled adjudication. Counting all 1977 arrests, they were arrested 30.0 times per 100 persons per month, compared to 11.5 times for all 4,026 Sample 77 'Guilty' offenders. Unlike the total Sample 77 'Guilty' group, this extremely high rate of activity did not represent a sharp increase to a high plateau. Even in 1972, people who would

<sup>54</sup> The rapid decline in 1983 is a result of the follow-up period ending for sampled offenders whose Sample 77 arrest occurred prior to 1977 (see figure 5, above). Therefore, the line segment fit calculations shown in figures 10 and 11 take into account only data from 1968 through 1982.

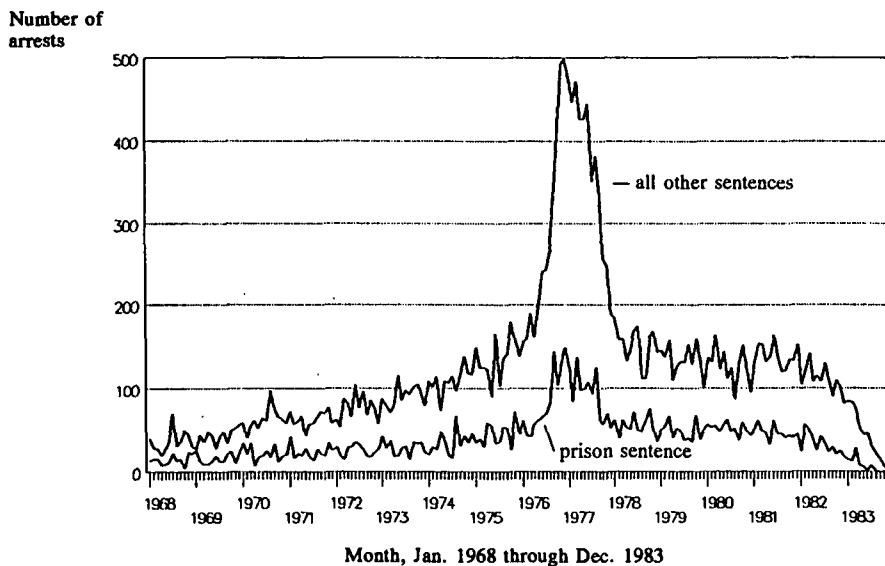
Figure 12: Arrests, Career Robbery and other offenders; total arrests, except Sample 77



be identified as Career Robbery and Career Both offenders five years later in 1977 were arrested about 15 times a month, or 11.9 arrests per 100 people, almost as high as the rate for the total Sample 77 'Guilty' at its peak.

Neither the increase before 1977 nor the decline afterwards was as rapid for Career Robbery offenders (Figure 11) as for all Sample 77 'Guilty' offenders (Figure 10). The best line segment fit for non-Sample 77 arrests attributed to all Sample 77 'Guilty' offenders shows a steady increase of 1.4 arrests per month from January 1968 through August 1976, and a rapid increase of 14.7 arrests per month between August 1976 and February 1977. In contrast, non-Sample 77 arrests attributed to Career Robbery offenders increased at a rate of only 0.19 arrests per month from January 1968 through August 1972 and only 0.25 arrests per month between August 1972 and June 1977. Career Robbery offenders appear to have a high degree of activity throughout their lifespan. Therefore, the spurt in 1977 is not as unusual for them as for other offenders. As Figure 12 shows, the pattern over time of non-Sample 77 arrests of Career Robbery offenders was much more stable than the pattern of all other Sample 77 'Guilty' offenders. While the increase for Career Robbery offenders was only 0.2 arrests per month between 1968 and 1977, the increase was 1.5 arrests per month for other offenders (and 2.0 per month between 1973 and 1976). Similarly, the decrease after 1977 for Career Robbery offenders was -0.3 from 1977 to 1980 and stable afterwards, while other Sample 77 'Guilty' offenders declined rapidly at a rate of -2.5 arrests per month between November, 1976 and April, 1979. Thus, Career Robbery offenders were

Figure 13: Arrests, Sample 77 'Guilty' offenders; prison vs. other sentence in 1977



not only extremely active, compared to other offenders, but this high level of criminal activity was maintained at a relatively constant pace over a long period of time.

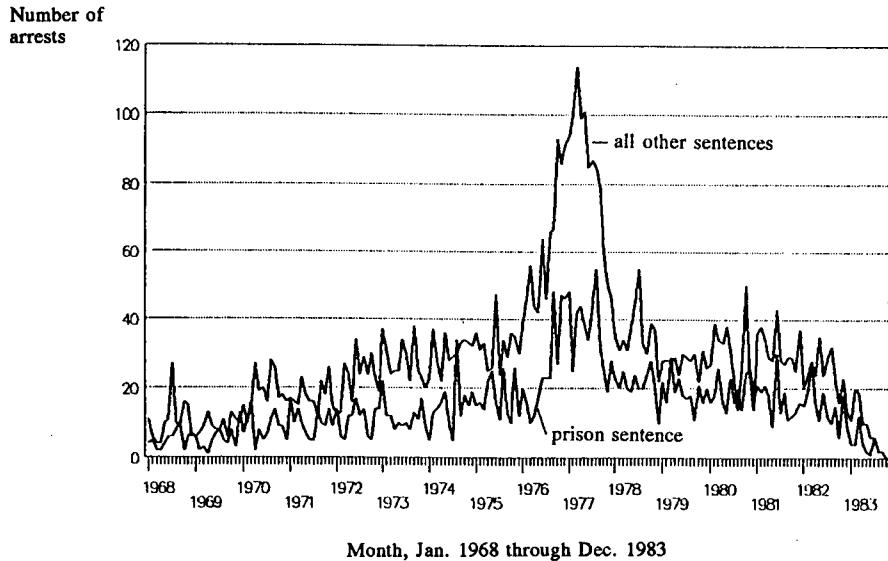
#### 7.4b Prison sentence and subsequent arrest rate

Overall, 17 percent of all offenders found 'guilty' in 1977 were sentenced to prison.<sup>55</sup> We would expect that the arrest rate of these offenders during the period immediately after the 1977 adjudication would be less than the arrest rate of offenders who were not sentenced to prison in 1977. Was this true?

For Sample 77 'Guilty' offenders as a whole (Figure 13), those who were committed to prison in 1977 (bottom line) were more active in earlier years than people not committed (top line). In 1970, for example, the 3,272 not committed were arrested 1.9 times per 100 persons per month, and the 754 later committed to prison were arrested 2.6 times per 100 persons per month. For those not committed in 1977, the rate was higher in 1981 (4.3 per 100 persons per month), and it was also higher for those sentenced to prison (6.2 per 100 persons per month). Thus, there is no evidence that sentencing offenders to prison decreased their arrest rate. Similarly, although

<sup>55</sup> This includes those few (0.1%) confined under TBR. See table 15, p. 55.

Figure 14: Total arrests for very serious offenses; prison vs. other sentence in 1977



the overall prison-versus-no prison arrest rates were similar to each other for *very serious* offenses (Figure 14), there is no evidence, again, of a difference in the arrest patterns after 1977.

Almost half of the 127 Career Robbery or Career Both offenders received a prison sentence for the Sample 77 crime; the rest received a fine or probation (see Table 15).<sup>56</sup> Surprisingly, the 59 offenders who received a prison sentence in 1977 (Figure 15) had been somewhat *less* active in the year prior to 'disposition', than the 67 offenders who were *not* sent to prison in 1977 (Figure 16). In 1976, those who received a prison sentence were arrested 23.4 times per 100 people per months, compared to 25.7 times for those who were not later sentenced to prison. In 1977, they were arrested 28.5 versus 31.2 times per 100 people per month. However, in every year from 1968 through 1975, those who were sentenced to prison in 1977 were arrested *more* times, on the average, than those who were not. As can be seen in Figures 15 and 16, Career Robbery and Career Both offenders sentenced to prison in 1977 had a steadily increasing number of arrests from 1968 to 1977, but those who were not sentenced to prison had a rapid increase in arrests from 1974 to 1977. The best line segment fit for the no-prison group (Figure 16) shows that the number of arrests increased sharply from early 1974, when there were 10.3 per 100 persons per month, to late 1976, when there were 28.9.

<sup>56</sup> One of the Career Robbery offenders received both TBR and a prison sentence at the 1977 adjudication.

Figure 15: Total arrests of Career Robbery offenders (Career Both offenders included), who received a prison sentence in 1977

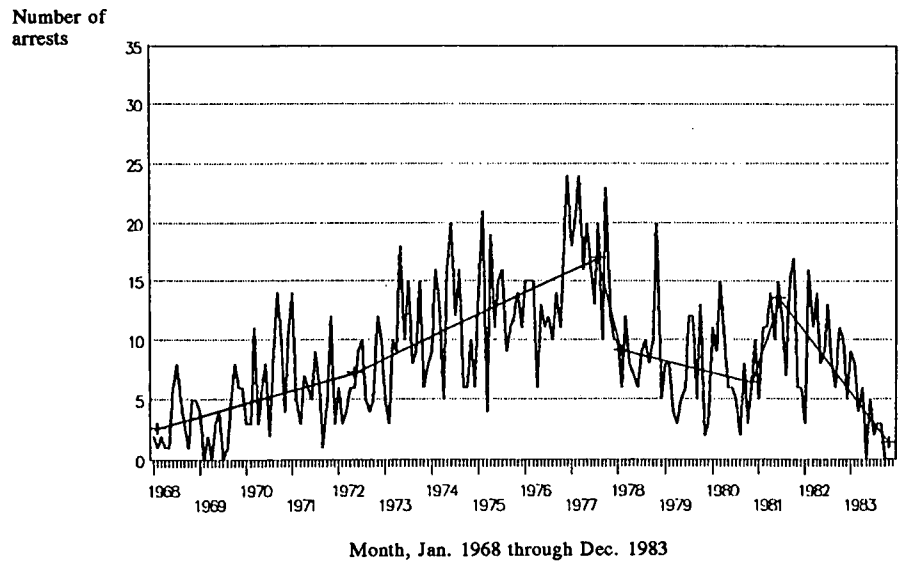
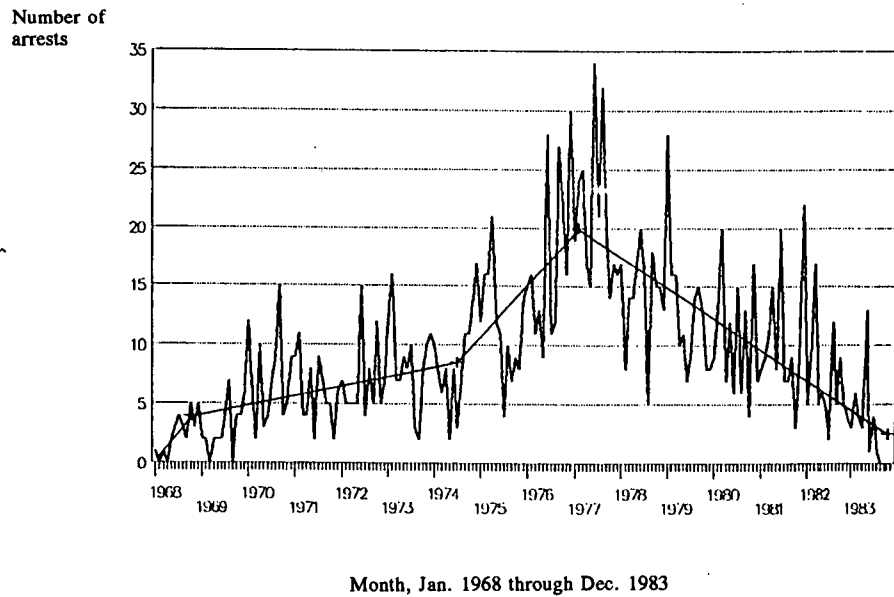


Figure 16: Total arrests of Career Robbery offenders (Career Both offenders included), who did not receive a prison sentence in 1977



As might be expected, the total number of arrests of those who were sentenced to prison falls after 1977 (Figure 15), from 28.5 per 100 people per month in 1977 to 11.8 in 1979. Average arrests of those *not* sentenced to prison (Figure 16) also fell, but not as rapidly. However, after four years, in 1981, those who had been sentenced to prison were arrested *more* often, on the average, than those who had not. The line segment fit for the prison group shows another peak in 1981, at a rate almost as high as the peak rate in 1977. Within six years after the Sample 77 arrest, those who were sentenced to prison had been arrested about as many times as those who were not sentenced to prison, an average of 10.1 versus 11.9 total arrests, 6.8 versus 7.8 serious arrests, 3.4 versus 3.8 very serious arrests, and 1.4 versus 1.8 most dangerous arrests.

#### 7.4c Summary

This descriptive time series analysis of the number of arrests per month from 1968 through 1982 of select groups of Sample 77 'Guilty' offenders suggests that the dangerousness of different groups of people changes over time following different patterns. For example, in the arrest patterns of Career Robbery offenders after the Sample 77 crime, there was apparently a spurt of activity several years after Sample 77, but only for those offenders who were imprisoned (Figure 15) and not for those offenders who were not imprisoned (Figure 16). However, it is only an exploratory analysis, and could be extended in several ways.

- The number of arrests is only a very rough measure of dangerousness. A better measure would be the number of arrests for non-trivial offenses that are followed by a 'guilty' finding.
- This analysis of the dangerousness of various groups over time should be extended to include groups other than Career Robbery offenders.<sup>57</sup> The most obvious group to be analyzed is, of course, Career Sexual Assault offenders. Were the people who had a history of sexual assault in 1977 arrested in the same cyclic pattern over time as Career Robbery offenders?
- The dangerousness over time of the cohort of Sample 77 offenders who were found guilty by a judge or policy dismissed by a prosecutor could be compared with a similar analysis of the Recidivism 1966 data set. This analysis would tell us whether or not people adjudicated in 1977 were more dangerous than people adjudicated in 1966. It would, perhaps, help to explain the rapid increase in crime in the Netherlands shown in Figure 6.

<sup>57</sup> Time series from 1968 to 1983 of arrests for very serious offenses (maximum sentence at least six years) have been created for four crime types and four offender types. These are ready for analysis. For documentation, see Van der Werff and Block (1986).



### 7.5 How dangerous are career offenders?

The preponderance of the longitudinal and the career criminal literature agrees that 'frequency, seriousness, and variety of offending are highly correlated' (Farrington, 1987: 60), and that, therefore, 'predictions of frequency tend also to be predictions of seriousness'. Was this true for offenders found 'guilty' in the Netherlands in 1977? The discussion of Crime Categories over a criminal career (section 6) showed that the three types of career offenders, indentified according to their official criminal record in 1977, committed, in general, the same *variety* of serious and less serious offense types in the six years after the 1977-adjudicated crime as did other offenders. However, the career offenders committed every crime type, including serious crime, much more *frequently*. The apparent correlation in other research between variety and frequency may be, as Hirschi and Gottfredson (1983) argue, an artifact of measurement: if frequent offenders and infrequent offenders differed only in the number of offenses, not the variety, then the frequent offenders would, in a given span of time, have committed more of the rare offenses.

In order to measure the rate at which infrequent offenders commit rare offenses, the measurement period must be correspondingly long (see Farrington, 1987). Otherwise, studies such as Barnett and Lofaso (1985) or Barnett, Blumstein and Farrington (1987) will find that the more frequent offenders tend to commit more serious (and rare) offenses. Fortunately, the large sample and long measurement period of the Recidivism 77 data enable us to separate variety and frequency. Although career offenders committed a high proportion of the 12,014 offenses committed by all Sample 77 'Guilty' offenders within six years after Sample 77, the variety of offense types was remarkably similar to the offense types of Other Prior 'Disposition' or First 'Disposition' offenders (see Table 20). Thus, in general, given a long enough follow-up period and a large enough sample, there does *not* appear to be a correlation between offense variety (including the more serious but rare offenses) and offense frequency.

On the other hand, there is some indication that the relationship (or lack of relationship) between variety and frequency varies according to the type of offender. In other words, the relationship differs for offenders designated as Career Robbery, Career Sexual Assault, or Career Both in 1977. Both the prevalence of recidivism (Table 21) and the incidence of recidivism (Table 24) were very high for Career Robbery offenders, compared to Other Prior 'Disposition' or First 'Disposition' offenders. However, of the 1,254 arrests (followed by a 'disposition') of Career Robbery offenders within six years, the proportion that were robberies, burglaries or thefts was only slightly higher, the proportion that were murders or personal assault was about the same, and the proportion that were violent sexual assaults was also about the same (Table 20), compared to non-career offender groups. When we compare Career Robbery to Other Prior 'Disposition' or First 'Disposition' offenders, then, variety and frequency are not correlated.

Career Sexual Assault offenders are another matter, however. Compared to Other Prior 'Disposition' offenders, the incidence rate of serious or dangerous arrests (followed by a 'disposition') within six years was *not* higher (Table 24). In the six year follow-up period, Career Sexual Assault offenders were arrested (followed by a 'disposition') for 99 very serious offenses (1.5 per person) and 70 most dangerous offenses (11.1 per person), compared to 2,110 (1.1 per person) and 917 (0.5 per person) for Other Prior 'Disposition' offenders. However, *of offenders who recidivated*, the incidence rates were 2.9 and 2.6 for Career Sexual Assault and 3.7 and 2.1 for Other Prior 'Disposition' offenders, respectively (see Table 24). In fact, arrests for violent sexual offenses, child molesting, and other sexual offenses were not more frequent for Career Sexual Assault recidivists than for others with at least two 'dispositions' (Table 24).

On the other hand, even though Career Sexual Assault recidivists were not arrested more frequently, they did specialize in a particular type of offense (Table 20). Of their 99 'very serious' arrests in the follow-up period, 13 percent were for rape or sexual assault, and another four percent for child molesting. In comparison, of the 2,110 'very serious' arrests of the Other Prior 'Disposition' offenders, only one percent were for rape or sexual assault, and half of one percent for child molesting. Therefore, in this case, frequency did not correlate with variety, because the prevalence of recidivism for one particular type of serious and generally rare offense (violent sexual offenses) was high for Career Sexual Assault offenders, but the prevalence of recidivism for other types of rare offenses was not particularly high compared to Other Prior 'Disposition' offenders (Table 21). Thus, the RIOC (Relative Improvement Over Chance) prediction was very high for sexual crimes, but low for other crimes (Table 22).

Career Both offenders, who had had a 'disposition' for at least one robbery and for at least one criminal sexual assault, had some of the characteristics of Career Robbery offenders and some of the characteristics of Career Sexual Assault offenders. Their frequency of arrest in the follow-up six years was, in general, somewhat lower than for Career Robbery offenders but still higher than for Other Prior 'Disposition' offenders (Table 24). The variety of crime types was very similar to the distribution for other offender types (Table 20), with one exception: the proportion of arrests for murder or personal assault was twice as high for Career Both offenders as for Other Prior 'Disposition' offenders. Recidivism for these personal assault offenses or for other 'most dangerous' offenses was also much more prevalent among the eleven Career Both offenders than for any other group (Table 21). Eight of them were arrested (followed by a 'disposition') for at least one murder or personal assault; one of these was also arrested for a rape, and another of these eight was also arrested for three robberies. Two more were arrested for other serious crimes. Only one of the eleven escaped arrest in the six years. Six received at least one prison sentence for a crime committed after the Sample 77 crime, and one was confined under TBR. These seven spent from two weeks minimum to three years maximum (an average of 10.2 months) of the six-year follow-up period in custody,

counting both jail and prison. One Career Both offender received five prison sentences in the follow-up period.

The subject of this section was the 'dangerousness of career offenders'. If we define dangerousness as being active (high prevalence of recidivism) *and* as committing officially-recorded serious and dangerous crimes (murder, personal assault, sexual assault or rape, and robbery), then the analysis in this section has shown that the career offenders in the Recidivism 77 sample were, indeed, dangerous. They were dangerous in comparison to all others adjudicated in 1977; they were dangerous in comparison to all others found 'guilty' in 1977; and they were dangerous in comparison to all others who had had a 'disposition' for at least two non-trivial offenses. Recidivism, especially for serious and dangerous offenses, was much more prevalent within a six-year period (Tables 21 and 22). Among those who recidivated, the frequency of offenses was higher (Table 24). Career Robbery and Career Both offenders accounted for 30 percent of the robbery arrests (followed by a 'disposition') in the six years; Career Sexual Assault and Career Both offenders accounted for 29 percent of the violent sexual assault arrests. Though their numbers were less than nine percent of the offenders with at least two 'dispositions', career offenders accounted for over 22 percent of the arrests for 'most dangerous' offenses (Table 27).

Almost all (91 percent) of the Career Robbery offenders recidivated, most within a very short period of time (the median crime-free period was eight months). Further, the *rate* at which they were arrested was very high, in comparison to others found 'guilty' in 1977. Career Robbery offenders were arrested at a peak rate of 26 arrests per 100 people per month in 1977, and as early as 1972 had been arrested at a rate of 12 per 100 people per month (not counting the 1977-adjudicated offense). Compared to other offenders, this high arrest rate declined less after 1977. For example, the 110 Career Robbery offenders were arrested at a rate of 17 per 100 per month in 1980, and a rate of 19.5 in 1981. However, they still were responsible for only a small proportion of all serious offenses in the Netherlands. Many of the serious offenses in the six years after Sample 77 were committed by first-offenders or active but non-career offenders who *became* career offenders.

Once career offenders are identified, they have already committed many serious and dangerous offenses. The average Career Both offender had been arrested (followed by a 'disposition') of 26 offenses (Table 23) at the time of the Sample 77 arrest, for example. However, if no career offender had committed any offense *after* the Sample 77 arrest, the effect on the total number of crimes in the Netherlands would have been small. The important considerations for crime prevention are, therefore, to prevent first-offenders and Other Prior 'Disposition' offenders from becoming career offenders, and to detect career offenders as early as possible, preferably as soon as they meet the criteria (two 'dispositions', at least one of which is for a robbery or rape or sexual assault).

## 8 Summary and policy implications

The results of the study presented in this report are based on the criminal histories of a sample of 4,026 people found guilty of a crime in 1977 in the Netherlands. This 'cohort' is indicated as *Sample 77 'Guilty'*. A main purpose of the analysis summarized in this report was to identify a particular type (or types) of offender who were active and dangerous, not only in their official criminal history before the Sample 77 crime, but also in the six-year follow-up period after the Sample 77 crime. The analysis established the following, for people found guilty of the Sample 77 crime:

- People with an official history of six or more arrests prior to the date of the Sample 77 offense had a very high chance, a chance approaching certainty, of continuing their criminal career with a subsequent arrest. This was true regardless of the offender's age or gender, and regardless of the type of Sample 77 crime.
- Of offenders with at least two 'dispositions', those who had had at least one 'disposition' for robbery (Career Robbery offenders) or sexual assault (Career Sexual Assault offenders) or both (Career Both offenders) were much more likely to be arrested (followed by a 'disposition' for a non-trivial offense within a short period of time after the Sample 77 'Outdate' than the rest. Half of the Career Robbery offenders had been arrested for such an offense within 8.0 months, and half of the Career Sexual Assault offenders within 20.0 months. Among the other offenders with at least two 'dispositions', half had not yet been arrested for such an offense by the end of the six-year period.
- Career Robbery offenders who were aged 21 or younger at the time of the Sample 77 offense had a shorter crime-free (arrest-free) period than other Career Robbery offenders. Half of these young offenders had been arrested for a non-trivial crime, which would result in a 'disposition', within 4.4 months. Only five percent was not arrested for such a crime within the six-month follow-up period.
- Among Career Sexual Assault and Other Prior 'Disposition' offenders, those with six or more arrests prior to Sample 77 had a shorter crime-free (arrest-free) period than those with five or fewer arrests. Half of the six-prior-arrest Career Sexual Assault offenders had been arrested for a non-trivial offense, which would result in a 'disposition', by 11.0 months; half of the six-prior-arrest Other Prior 'Disposition' offenders had been arrested for such a crime by 12.1 months.
- In general, the three types of career offenders had more arrests, more 'dispositions', and more 'dispositions' for serious and dangerous offenses, both before and after the Sample 77 crime, than did other offenders with at least two 'dispositions'. However, taken as a whole, the offense *types* of career offenders are not strikingly different from the offense

types of Other Prior 'Disposition' offenders. A career offender cannot be identified by one offense in a career, taken at random, no matter what kind of offense it is.

The original intention of this analysis was to answer the following questions:

- Are there one or more groups of particularly active or dangerous people in the 1977 sample, and if so,
- What are the characteristics of these groups,
- Did their lifetime criminal careers follow a particular pattern, and
- Is this group responsible for a disproportionate amount of serious offenses committed *after* 1977?

Have these questions been answered?

### 8.1 Can 'career criminals' be identified in the Netherlands?

Many researchers (Hirschi, 1986; Chaiken and Chaiken, 1985) argue that career criminals cannot be identified, using official record data, early enough in their careers to prevent them from committing a significant number of serious offenses. However, the research reported here has shown that if career criminals are defined as active and dangerous offenders who are responsible for a disproportionate number of serious offenses, the reliable identification of this group *is*, in fact, possible.

In the United States, Chaiken and Chaiken (1982; 1985) found it impossible to differentiate between career criminals and others based on official arrest histories. Their analysis determined that, looking backwards over the previous criminal activity of a sample of prisoners, career criminals who were identified through self-report data would not have been identified if the only data available had been officially-recorded arrest data. Since the Netherlands Recidivism 77 data set is based entirely on official records, the Chaiken's experience raises the following question: how do we know that the career offenders, who were identified through an analysis of official data, also would have been identified through an analysis of self-report data? In other words, if we had known about all offenses actually committed by the sample, would we still have identified the same groups of career offenders? Of course, such a question is impossible to answer. However, the unique qualities of the Recidivism 77 dataset, combined with the kind of statistical analysis used in this report, have produced a career offender taxonomy in which it is possible to have some confidence.

The Recidivism 77 dataset has several advantages. First, official criminal history data in the Netherlands include the criminal justice contacts that occurred when the person was a juvenile. This is a major advantage over official criminal history data in the United States. According to the Chaikens and others (see Greenwood, *et al.* 1980; Greenwood, 1986; Hirschi, 1986), the lack of accurate juvenile history data is a major stumbling-block to the identification of a career criminal. It is an especially difficult problem if the goal is to identify a career criminal early in his or her career,

while there is still time to intervene. However, in the Netherlands, where juvenile records are available in the same ADR (rap sheet) as adult records, this is not a problem.

That is not to say that ADR data are free of any problem. In fact, analysis indicates that ADR records are not necessarily complete. The Recidivism 1977 sample of 6,094 cases included 44 that were 'unknown' in the ADR records in 1983, all of whom were juveniles, for which the charge was a minor violation (overtreding). There were other cases in which the offense was minor, the defendant was juvenile, and the 1977 case had disappeared from ADR records by 1983. For details, see Van der Werff and Block (1986).

Secondly, the purpose and design of the Recidivism 77 study was not the same as most recidivism studies in the United States, including the Chaiken studies. Instead of gathering data on the past criminal activity of people who were currently in prison, the Recidivism 77 study sampled all cases disposed of during a given time period, regardless of the disposition or sentence. This design allows us to view the problem of crime from the actual point of view of the criminal justice decision-makers who must deal with that problem. These prosecutors and judges are never presented with a group of prisoners, but rather with defendants having the same variety of current offenses and criminal histories that are represented in Sample 77. With this design, the Recidivism 77 study is able to offer practical advice to those who make decisions in criminal justice.

In addition, in contrast to most other recidivism studies, the Recidivism 77 design included the future as well as the past. A prospective, longitudinal design has several advantages over data collected retrospectively, for example by asking prisoners to recall their previous offense rates (Blumstein, *et al*, 1988). Chief among these is that the data are more likely to be accurate. A prospective design also permits causal inferences that are not possible in a retrospective design. Because of its longitudinal information, it was possible to use the Recidivism 77 study to develop an improved definition of career offender, a definition that includes not only retrospective aspects (two 'dispositions' for non-trivial offenses), but also prospective aspects (a significantly shorter crime-free period).

Thus, the analysis was able to identify a group of people who not only were active and dangerous in the past, relative to other offenders, but who were expected to be particularly active and dangerous in the future. This is the situation from the point of view of criminal justice decision-makers. They are aware of the official criminal history of the past, and they want to prevent that official history (if not all criminal activity) from continuing in the future.

## 8.2 What are the characteristics of career offenders?

Three groups of people – the eleven who followed both careers, the 116 who followed a Robbery Career, and the 65 who followed a Sexual Assault Career – differed significantly from the 1,948 people who had a previous ‘disposition’ but who were not one of the career groups. The most important characteristic that distinguishes the career offender groups is their degree of activity, in particular, the *number of arrests* in their official arrest history, the speed with which they were arrested again for a non-trivial offense after the Sample 77 crime (*short crime-free period*), and the propensity to be arrested (followed by a ‘disposition’) for at least one serious or dangerous crime within six years (*prevalence of recidivism*).

These characteristics of the career groups cannot be explained by differences in their age, relative to the Other Prior ‘Disposition’ group. Although the mean age of Career Robbery offenders was slightly younger (25.3) than the mean age of the Other Prior ‘Disposition’ offenders (29.2), the range of ages is huge, and age has little effect on the length of the crime-free period. For Career Robbery offenders, the number of prior arrests makes no difference in the crime-free period. However, Career Sexual Assault offenders with six or more prior arrests were likely to be re-arrested sooner after the Sample 77 crime than those with fewer prior arrests.

The difference in number of arrests is clearest for the Career Both group and Career Robbery offenders, who were more often arrested (followed by a ‘disposition’) both before and after the Sample 77 crime, than Other Prior ‘Disposition’ offenders. In addition, Career Robbery offenders had a much shorter crime-free period regardless of their number of previous arrests, and a much higher prevalence of recidivism.<sup>58</sup> In contrast, although Career Sexual Assault offenders were also arrested (followed by a ‘disposition’) more often than Other Prior ‘Disposition’ offenders, when the number of prior arrests was held constant they did not have a shorter crime-free period, and only recidivism for sexual offenses was especially prevalent.

Although the degree of activity over a lifetime career is much higher for the career groups than for the Other Prior ‘Disposition’ offenders, the *mixture of types of crime* is very similar for all groups. For example, theft is the most common single crime type over a lifespan for every group. True, it forms a slightly higher proportion (39 percent) of the lifespan arrests of Career Robbery offenders, but it also forms a high proportion (37 percent) of the arrests of Other Prior ‘Disposition’ offenders. Therefore, the identification of a career offender cannot be made from a single crime, no matter how serious. It is necessary to take into account the pattern of recorded criminal activity over many years.

<sup>58</sup> For the Career Both group, no data on the crime-free period are available, as survival analysis was impossible because of the small number (eleven people).

The likelihood is high that Career Both, Career Robbery and Career Sexual Assault offenders will be re-arrested within a short time for a serious offense. Half of the Career Robbery offenders were re-arrested for a non-trivial crime within eight months. Within the six year follow-up period, 23 percent was arrested for at least one robbery. Half of the Career Sexual Assault offenders were re-arrested within 18 months; within six years, 14 percent was re-arrested for at least one rape or other sexual assault. The likelihood of re-arrest for murder or assault against persons was relatively high among all three career groups, especially among the Career Both group, 73 percent of whom were arrested for at least one of these offenses within the six year period. In addition, the prevalence of arrest for a hard drug offense was especially high among Career Robbery offenders.

A criminal career is established through a sequence of events. There must be at least two 'dispositions', and one 'disposition' must be for a very serious violent crime - robbery, rape or sexual assault. *Before* these two events have occurred, factors such as the offender's age may be related to the continuation of the sequence of criminal events. For Career Sexual Assault offenders, a minimum of six arrests increases the certainty and the speed of recidivism. However, once a criminal career has been established, neither age nor gender is related to the likelihood of continuation.

### **8.3 Lifetime career patterns: can career offenders be identified at an early stage of the career?**

This analysis did, indeed, identify a group of offenders who were 'particularly active or particularly dangerous people who would be responsible over their lifetimes for serious crimes out of proportion to their numbers.' People who have had two or more 'dispositions', at least one of which was for robbery or rape or sexual assault, were much more likely to be re-arrested and were re-arrested much sooner than any other group of Sample 77 'Guilty' offenders.

In addition to being active, career offenders were also dangerous. Although Career Robbery offenders accounted for less than three percent of the Sample 77 'Guilty' offenders, they were responsible for over 28 percent of the arrests (followed by a 'disposition') for robbery and over 16 percent of the arrests for hard drug offenses. Although Career Sexual Assault offenders accounted for less than two percent of the Sample 77 'Guilty' offenders, they were responsible for 26 percent of the arrests followed by a 'disposition' for rape or other sexual assault, and 31 percent of the arrests for child molesting.

Clearly, career offenders were active and dangerous, out of proportion to their numbers. Does it follow that, if it had been possible to identify and 'incapacitate' them early in their career, all of these crimes might have been prevented? A fundamental problem with such a policy is the issue of false positives and false negatives (Chaiken and Chaiken, 1985; Petersilia



and Turner, 1985). A false positive occurs when someone who is predicted to be active and dangerous is, in fact, not. For Career Robbery offenders, because of their extremely high degree of activity and extremely short crime-free period, the chance of a false positive would have been small. Almost all of them (91 percent) were arrested (followed by a 'disposition') at least once after the Sample 77 crime for a non-trivial offense, and the majority (55 percent) was arrested (followed by a 'disposition') at least once for a 'most dangerous' offense. However, the chance of a false negative would appear to be high. Two-thirds of the Other Prior 'Disposition' offenders were arrested (followed by a 'disposition') for at least one non-trivial offense in the follow-up period, 23 percent of them for a most dangerous crime.

In the analysis of crime-free (arrest-free) period, we determined that transition from an ordinary offender to a career offender requires a history of at least two 'dispositions', one of them for robbery, rape or sexual assault. Some of the 1,948 Other Prior 'Disposition' offenders would commit robbery, rape or sexual assault as their next offense, and thus establish a criminal career. Similarly, some of the 1,886 First 'Disposition' offenders would go on to establish a criminal career. In addition, it is quite possible that other types of career offenders are represented in Sample 77 'Guilty,' types that have so far been ignored in our analysis. In general, the issue of false positives and false negatives has not been adequately addressed in the Netherlands recidivism studies, and should be a high priority of subsequent analysis.

Assuming that career offenders could have been positively identified at their adjudication in 1977, the number of crimes that might have been prevented at that point is, again, questionable. Career offenders were treated more severely in the sentence for the 1977 case (table 15), even though many of their Sample 77 crimes were for trivial offenses (table 18). In particular, career offenders were more likely to be sentenced to prison and their sentences were likely to be longer. This suggests that career offenders are already 'incapacitated' as much as is possible under Dutch law.

In addition, as Cook (1986) points out, a change in sentencing policy may not generate the expected incapacitation effect, because 'Mechanical models of crime determination generate clear results, but these results are not reliable if criminals and victims do not behave in a mechanical fashion.' In particular, Cook argues that the effect of deterrence (the tendency of potential offenders to change their behavior following a change in sentencing policy) is ignored by incapacitation theorists. If deterrence is taken into account, then selective sentencing may actually have no effect on the number of offenses.

Although career offenders account for a large proportion of the arrests of the Sample 77 cohort, relative to their numbers, it remains true that their numbers, and thus the absolute number of arrests for which they were responsible, is very small. About 34 percent of the adjudications for robbery in the Netherlands in 1978 were offenses attributed to people who could

have been categorized as a Career Robbery or Career Both offender in 1977. However, in 1980 this proportion fell to 12.5 percent. New recruits to the career offender ranks filled the gap.

A criminal career consists of a series of events. Certain of these events constitute a landmark occurrence. After such a landmark event, desistance from a 'life of crime' is much less likely and the establishment of a criminal career is much more likely. This analysis has shown, first, that it is not possible to identify a future career offender at the time of the first 'disposition', regardless of the age of the offender and regardless of the kind of crime for which he or she had a 'disposition'. However, at the second or subsequent 'disposition', the identification of a future career offender begins to be possible.

There is little encouragement here for a policy of intervention in a criminal career *after* the career has been established, that is, after an offender has had at least two 'dispositions', with at least one 'disposition' for robbery or sexual assault. This returns us full circle to the discussion that began this report - the initial establishment of a criminal career. Some people have already become a career offender after the second 'disposition'. Many other two-'disposition' offenders will continue to be criminally active, but only a small proportion will commit serious and dangerous crimes. Is it possible to intervene in the lives of people who are highly 'at risk' of establishing a criminal career, and prevent that career from being established? With this question, the perspective of career criminal intervention changes from the incapacitation of those who are already career offenders to the preventive treatment of those who are likely to become career offenders.

The identification of these offenders has been only briefly discussed in the present analysis. This report has concentrated on the task of *defining* career offenders in the Netherlands, not on predicting who will become a career offender or on establishing the relative effectiveness of alternative intervention strategies. Now that the problem has been defined, the next task will be to find a solution.

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## Appendix I: Probability of re-arrest (hazard rate) by type of offender and prior arrests

Months to arrest for a non-trivial crime	Type of offender at the Sample 77 crime Number of prior arrests							
	Career Robbery		Career Sexual Assault		Other Prior 'Disposition'		First 'Disposition'*	
	1-5	6+	1-5	6+	1-5	6+	0	1-5
(N)	(28)	(82)	(28)	(36)	(1345)	(561)	(1709)	(87)
Before Outdate	19.6%	18.7%	7.4%	36.1%	3.4%	12.7%	0.6%	1.2%
Month 1	0.0%	6.1%	0.0%	0.0%	2.7%	5.6%	0.5%	0.0%
Month 2	4.4%	8.1%	0.0%	4.1%	2.3%	6.9%	0.5%	2.3%
Month 3	9.5%	14.5%	3.9%	8.7%	1.6%	5.2%	0.6%	1.2%
Month 4	0.0%	10.3%	0.0%	0.0%	2.1%	5.2%	0.9%	2.4%
Month 5	0.0%	9.1%	0.0%	4.6%	1.5%	6.6%	0.8%	1.2%
Month 6	5.1%	2.4%	0.0%	4.9%	1.8%	3.6%	0.5%	0.0%
Month 7	5.4%	7.6%	8.3%	0.0%	1.6%	6.4%	0.6%	0.0%
Month 8	5.7%	0.0%	0.0%	10.5%	1.4%	5.6%	0.7%	1.3%
Month 9	12.5%	11.1%	4.4%	0.0%	1.0%	3.6%	1.1%	1.3%
Month 10	0.0%	6.1%	0.0%	0.0%	1.6%	2.7%	0.7%	0.0%
Month 11	6.9%	6.6%	0.0%	0.0%	1.3%	3.1%	0.6%	0.0%
Month 12	0.0%	3.5%	4.6%	11.8%	1.2%	1.8%	0.3%	1.3%
Month 13	0.0%	3.6%	0.0%	0.0%	0.8%	3.6%	0.3%	2.6%
Month 14	0.0%	0.0%	0.0%	6.4%	0.9%	5.7%	0.2%	0.0%
Month 15	0.0%	7.7%	4.9%	6.9%	1.0%	2.0%	0.4%	0.0%
Month 16	7.4%	12.8%	5.1%	0.0%	0.7%	2.8%	0.6%	0.0%
Month 17	8.0%	4.6%	0.0%	0.0%	0.9%	0.8%	0.2%	0.0%
Month 18	0.0%	10.0%	5.4%	0.0%	0.8%	2.1%	0.6%	1.3%
Month 19	0.0%	5.4%	0.0%	0.0%	1.1%	1.7%	0.2%	0.0%
Month 20	0.0%	5.7%	0.0%	0.0%	0.7%	1.7%	0.5%	0.0%
Month 21	0.0%	0.0%	0.0%	7.4%	0.6%	0.0%	0.4%	0.0%
Month 22	8.7%	0.0%	0.0%	0.0%	0.3%	2.7%	0.7%	0.0%
Month 23	0.0%	0.0%	0.0%	0.0%	0.5%	1.4%	0.4%	0.0%
Month 24	0.0%	6.1%	0.0%	0.0%	0.5%	0.9%	0.4%	0.0%
Mean 1-12	4.1%	7.2%	1.8%	3.7%	1.7%	4.7%	.6%	.9%
Mean 13-24	2.0%	4.7%	1.3%	1.7%	.7%	2.1%	.4%	.3%

\* There was no case of a First 'Disposition' offender who had six or more prior arrests.

## Appendix II: Crime-free period by Sample 77 crime and age group in 1977

Sample 77 crime* Age at Sample 77 occurrence	Quartile crime-free months	Median crime-free months	Mean Survival Score
<b>Property</b>			
Age ≤21	2	10	-99**
Age 22 to 29	2	19	-19
Age 30+	10	over 72	170
<b>Violent</b>			
Age ≤21	4	11	-104**
Age 22 to 29	11	42	-2
Age 30 +	60	over 72	110
<b>Traffic</b>			
Age ≤21	9	over 72	-132**
Age 22 to 29	42	over 72	-31
Age 30 +	over 72	over 72	51
<b>Drug</b>			
Age ≤21	2	7	-7***
Age 22 to 29	5	15	4
Age 30 + (8 cases)	-	-	-

\* Coded as for 'Variable V501' in the Recidivism 77 codebook. There were too few Sample 77 sexual or firearm offenses for analysis in this table.

\*\* All three pairwise comparisons of age group mean Survival Scores are significant at  $\leq .001$ .

\*\*\* The pairwise comparison of the two age group mean Survival Scores is not significant.

### Appendix III: Median number of arrests over life-span by type of offender in 1977\*

Crime category* (attempts included)	Type of offender in 1977: Sample 77 'Guilty'				
	Career Both	Career Robbery	Career Sexual Assault	Other Prior 'Disposition'	First 'Disp.'
Robbery (vermogensmisdrijf met geweld)	1.0	1.0	0.0	0.0	0.0
Theft, burglary (vermogensmisdrijf zonder geweld)	13.0	14.0	4.0	2.0	0.0
Murder, assault (agressief misdrijf tegen personen)	3.0	2.0	1.0	0.0	0.0
Criminal destruction (agressief misdrijf tegen dieren, zaken, of openbare orde)	1.0	1.0	1.0	0.0	0.0
Violent sexual crimes (verkrachting, aanranding, ontucht met kinderen)	1.0	0.0	1.0	0.0	0.0
Non-violent sexual crimes (overige sexuele misdrijven)	0.0	0.0	0.0	0.0	0.0
Drug crimes (Opiumwet misdrijven)	0.0	0.0	0.0	0.0	0.0
Serious traffic crimes (verkeersmisdrijven)	1.0	1.0	1.0	1.0	0.0
Firearm crimes (Vuurwapen misdrijven)	0.0	0.0	0.0	0.0	0.0

\* 'Lifespan arrests' is the total number of arrests from the earliest arrest in a person's official criminal history (ADR) to exactly six years after the arrest date of the Sample 77 crime.

## Appendix IV: Relative improvement over chance (RIOC)

The Relative Improvement Over Chance (RIOC) statistic, developed by Loeber and Dishion (1983), will seem familiar to people who have used chi-square. It improves upon a basic detriment of previous measures of the efficiency of a predictive instrument, the fact that the base rates and selection ratios affect the results of the measures. Because RIOC is less sensitive to the base rate and selection ratio, predictive efficiency can be compared over situations having dissimilar 'marginals.'

$RIOC = \% IOC / (\% MC - \% RC) \times 100$ , where:

IOC (improvement over chance) is the difference between the percent of predictions that are accurate (true positive plus true negative), and the percent accurate predictions expected by chance.

MC (maximum correct) is the maximum percent of accurate predictions, given the marginals, and

RC (random correct) is the expected accurate predictions, given the marginals.

For example, if the marginals of a prediction table were as below, the maximum number of true positives would be 110, and the maximum number of true negatives would be 1,213. Therefore,

$MC = (110 + 1213) / 2016 = 65.62\%$ . The expected percent correct is

$RC = (803 / 2016)(110 / 2016) + (1213 / 2016)(1906 / 2016) = 59.06\%$ .

Thus, the maximum amount of increase possible in predictive accuracy over chance is

$MC - RC = 65.62\% - 59.06\% = 6.56$  percentage points.

Predicted number	Actual number		
	Yes	No	
Yes	true positive		110
No		true negative	1906
	803	1213	2016

### *Utility Value of Risk*

Although, in this example and in the analyses in this report, the accuracy of positive and negative predictions are weighted the same, Loeber and Dishion, following Duncan *et al* (1953), point out a way of assigning 'utility values' to the risk associated with a false positive versus the risk of a false negative. In most policy decisions, one or the other kind of error is more important. For example, if our task were to reduce prison crowding by releasing early those offenders who would be least likely to recidivate, then false negatives would be more important than false positives. As Morris and Miller (1987) argue, predictions of *non*-dangerousness can have important policy implications.

In contrast, the purpose of this analysis of Recidivism 77 data was to identify offenders who would be 'active and dangerous' within a six-year period, compared to other offenders. This implies an emphasis on maximizing the proportion of true positives. Although it would have been possible to have included a calculation of predictive utility weighted in favor of true positives, it seemed a cumbersome and subjective exercise for the present analysis. However, such a calculation could be done, given some idea of the 'cost' of false positives. See Loeber and Dishion (1983:91), Gottfredson (1987) and Duncan, *et al* (1953).

#### *Choice of Selection Ratio*

The calculation of RC (the expected predictive accuracy) assumes that both the base rate and the selection ratio are known. The base rate (the proportion who succeed or fail) usually is known, but the 'expected' selection ratio is not. If we are comparing an actual prediction to a chance or 'intuitive' prediction, there is no reason to assume that our hypothetical intuitive predictor would randomly select cases to succeed or fail in the same proportion as the actual prediction.

Several investigators (Fisher, 1984; Petersilia & Turner, 1985; Chaiken & Chaiken, 1987; Rolph & Chaiken, 1987) assume that the expected selection ratio (not the actual selection ratio) equals the base rate. Thus, their calculation of RC in the example above would be:

$$RC = (803/2016)^2 + (1213/2016)^2 = 52.07\%.$$

Neither of these is a particularly realistic choice. Without prior knowledge of the six-year recidivism behavior of offenders with two or more 'dispositions', it might have seemed logical in 1977 to have chosen a selection ratio of 20 percent instead of the actual selection of Career Robbery offenders, which was 5.5 percent ( $110/2016 = 5.46\%$ ). If we do assume a 20 percent expected selection ratio, then RC would equal:

$$RC = (803/2016)(403/2016) + (1213/2016)(1613/2016) = 56.10\%.$$

The choice of expected selection ratio affects RC, and RC affects the RIOC score. In this example (theft and burglary recidivism for Career Robbery offenders), there were actually 79 true positives and 1,182 true negatives. Given three choices of selection ratio, RIOC would be the following:

	RC	RIOC
Expected selection ratio = Actual selection ratio (5.5%)	59.06	53.2%
Expected selection ratio = 20%	56.10	67.8%
Expected selection ratio = Base rate (39.8%)	52.07	77.3%

The higher the criterion selection ratio, the higher the RIOC score.

## Appendix V: Time spent in detention in the six-year follow-up period by Career Both offenders

Time spent in detention (=prison sentences) in the six-year follow-up period by Career Both offenders (n=11)

Sample 77 offense	Length of prison sentence(s) (in weeks)			Total number of prison sentences
	For Sample 77 offense	For arrests after Sample 77 offense	Total	
1. Drugs offense	none	not arrested	-	-
2. Traffic crime	3	22	25	4
3. Traffic crime	2	2	4	2
4. Non-violent sexual crime	none	none	-	-
5. Aggravated assault	1	40	41	6
6. Shoplifting	dismissed**	75	75	4
7. Burglary	2	none	2	1
8. Non-violent sexual crime	1	4	5	4
9. Public violence	none	none	-	-
10. Rape	dismissed**	156	156*	1
11. Simple assault	dismissed**	dropped**	-	-
<b>total</b>			<b>308</b>	

\* TBR since before Sample 77 offense  
 mean of total length = 308:7 people = 44 weeks = 10.2 months

\*\* Policy dismissals, case 10 'conditionally'

# Glossary

## Sample

**Sample 77 (1977 Sample):** The 4 percent random sample, *not including* the extra sample of less common offenses. Those accused of traffic offenses in 1977 were sampled at 2 percent, and are weighted in the analysis.

**Sample 77 Crime:** The crime that formed the basis for the offender being chosen as part of the sample.

**Sample 77 'Guilty':** Those people in the 4 percent random sample who were found guilty of the Sample 77 crime by a judge or judicial tribunal, or who received a policy dismissal by a prosecutor. Does *not* include a judicial finding of not guilty (vrijspraak) or a prosecutorial dismissal for lack of evidence (sepot geen bewijs).

**Extra steekproef:** Extra samples of less common 1977 cases. See table on page 9.

**Recidivism 77 Sample:** Sample 77 plus the Extra Samples (extra steekproeven).

## Dispositions

**Criminal justice contacts** include all arrests, regardless of outcome or disposition. See Figure 1.

'Disposition' = criminal (justice) disposition, in this report refers to a conviction by a judge, a policy dismissal or a case added to another case for trial or to inform the judge. Note that Sample 77 'Guilty' only includes convictions and policy dismissals. However the pre- en post-follow-up cases include criminal justice dispositions as defined here.

**Geseponeerd:** Disposed of by the prosecutor, for example beleidssepot and sepot geen bewijs.

**Sepot:** A criminal case disposed of by a prosecutor.

**Sepot geen bewijs:** A prosecutorial disposition: insufficient evidence.

**Beleidssepot (policy dismissal):** A criminal case in which the prosecutor dismisses the case for public policy reasons.

**Veroordeeld or Veroordeling:** A court disposition: convicted in court, by a judge or a tribunal of judges, of a criminal offense.

**Vrijspraak:** A court disposition: not guilty.

**Gevangenisstraf:** Prison sentence.

**TBR:** Terbeschikkingstelling van de Regering, literally 'at the pleasure of the government.' Confinement of a dangerous or mentally ill person for an indefinite period. See Van Emmerik (1982) for a review in English. In 1988 the law on TBR

has been changed and the abbreviation 'TBR' has been replaced by the term 'TBS' (see Van Emmerik, 1989).

### **Types of crime (delictscategorieën)**

**Misdrijven** (singular = misdrijf): Serious offenses, including what would be considered felonies *or* more serious misdemeanors in most states of the U.S. For example, simple assault and simple theft are misdrijven in the Netherlands, through they are misdemeanors in most states.

**Overtreding**: A minor offense, equivalent to a lesser misdemeanor or an ordinance violation. For example - trespassing.

### **Property crimes (vermogensmisdrijven)**

**Robbery** (diefstal met geweld): Includes armed and strongarm robbery, and extortion (afpersing)

**Burglary** (diefstal met braak): Includes burglary, breaking and entering, attempted breaking and entering, aggravated auto theft (breaking into car and/or with two or more people).

**Theft/fraud** (eenvoudig diefstal/oplichting): Includes simple theft, miscellaneous thefts, fraud (oplichting), shoplifting, pocketpicking, fencing (heling), embezzlement (verduistering), and auto theft.

### **Assault (agressieve misdrijven)**

**Homicide** (doodslag/moord): Includes murder (moord), manslaughter (doodslag), and attempted murder. In Dutch official records, it is seldom possible to separate attempted murder from other homicide. Zoomer (1981) found that, of offenders found guilty by a judge of moord or doodslag from 1973 through 1976 in 12 of the 19 Dutch courts, 75% (135) were convicted of *attempted* murder. Of the remaining 45 cases, 9 were convicted of aggravated homicide, 13 of murder, and 23 of manslaughter.

**Against people** (tegen personen): Includes murder (moord), attempted murder (poging tot moord), homicide (doodslag), attempted homicide (poging tot doodslag), aggravated assault (gekwalficeerde mishandeling), simple assault (eenvoudige mishandeling), abusive or offensive language (eenvoudige belediging). Of the 5,817 personal assault cases coded in all Recidivism 77 criminal histories, 388 (7%) were 'doodslag/moord'.

**Against animals, businesses, property, public order**: Includes arson (brandstichting), cruelty to animals (dierenmishandeling), criminal (serious) destruction of property, public violence or threat of violence, incitement to riot (optreden tegen het openbaar gezag).

### **Sexual crimes**

**Violent**: rape (verkrachting) - force a woman by violence or threat of violence to have extra-marital sexual intercourse.



**Other sexual assault (aanranding)** - force someone by violence or threat of violence to commit or endure lewd actions (aanranding).

**Child molesting (ontucht met kind of bewusteloze):** sexual abuse of a child or an unconscious or powerless adult.

**Non-violent (schennis der eerbaarheid):** pornography, flashing (no physical contact).

### **Drug crimes**

**Hard drugs:** possession or selling.

**Soft drugs:** possession or selling.

### **Traffic crimes**

**Serious:** Drunk driving, hit-and-run.

**Other:** Joy riding, unauthorized driving.

### **Weapons (Vuurwapenwet)**

**Includes:** Unlawful use or possession of weapon, brandishing.

### **Other criminal justice terms**

**Schuldig:** guilty.

**Inschrijving bij het parket van de officier van justitie (in short: 'inschrijving'):** Registration of a case with the prosecutor.

**Voorlopige hechtenis:** Pretrial detention. This is possible from the day the case is officially registered with the prosecutor (inschrijving). It is also possible for a person to be held in custody (in verzekering) *before* the case is officially registered with the prosecutor. When this happens, 'inschrijving' occurs within a few days.

### **Terms used in this report**

**Criminal career:** A criminal history consisting of, at minimum, one 'disposition' (in 1977) and one previous 'disposition' for a non-trivial crime.

**Non-trivial:** A crime for which the maximum legal penalty is a sentence of at least 18 months.

### **Survival analysis terms**

**Crime-free period:** Period of time in someone's life in which there was no officially-recorded criminal activity. In this report, crime-free period is measured as the number of months from Outdate (see below definition) to date of arrest (inschrijving) for a non-trivial crime that will be followed by a guilty finding. The survival analysis in this report uses crime-free period as its measure of survival time.

**Outdate:** Date of release from custody for the Sample 77 crime, or if not sentenced to custody then date of arrest. Outdate estimate includes pretrial detention (voorlopige hechtenis) and prison sentence.

**Survival Score:** A rank order of survival times (crime-free period) of all the people in a sample or subsample. A negative mean Survival Score indicates that the offenders in a subgroup recidivate faster than the group as a whole; a positive score means that the offenders recidivate slower, relative to the total sample or subsample.

**Hazard rate:** The number re-arrested within a given number of months after an offense or an arrest, as a proportion of the number who had been followed to that month, but had not been re-arrested up to then.

# Lijst van verschenen rapporten in de reeks ONDERZOEK EN BELEID van het Wetenschappelijk Onderzoek- en Documentatiecentrum

*Uitgave: Staatsuitgeverij*

1. Behandeling van verslaafden aan heroïne  
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