CRC 7/98-9

256170

SENTENCING THE MULTIPLE OFFENDER IN VICTORIA: AN EMPIRICAL STUDY OF JUDICIAL PRACTICE

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Final Report to the Criminology Research Council, August 2001

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ACKNOWLEDGMENTS

The present work could not have proceeded and been completed successfully without considerable support and assistance. As the researcher and author, it is my pleasure to acknowledge at the outset those to whom I owe a debt.

Research assistance for the data collection and preliminary analysis was generously funded by grants of $7,000 from the Australian Research Council and $10,597 from the Criminology Research Council.* This money was also used towards secretarial and administrative support.

Much appreciation is due to the Director of Public Prosecutions, Mr G. Flatman QC, for making the case files available. I should also like gratefully to acknowledge the staff of the Office of Public Prosecutions – particularly Mr B. Gardner, the Manager for policy and Court of Appeal business – for organising and cheerfully undertaking the time-consuming tasks of identifying and retrieving relevant files, and for providing a workspace in the Office.

The Victorian Government Reporting Service transcribed the tape recordings of sentencing judgments. To Mr Michael Francis, General Manager, and to his staff, this project is indeed indebted.

Santina Perrone oversaw the data collection and preliminary analysis. To these tasks she applied herself conscientiously and always responded to my various requests with good grace.

Special appreciation is due to Jean Rodrigues of the Criminology Department who, often under trying conditions, typed the early drafts of the manuscript so diligently. Then there is Helene Richards who used her considerable editorial skills to bring the manuscript to completion.

* The views expressed are the responsibility of the author and are not necessarily those of the Council.

INTRODUCTION

This is a report of an investigation into the approach of Victorian judges to the determination of sentence for an offender convicted of multiple offences considered jointly for the purposes of sentencing. Of particular interest is the case comprising multiple offences, each properly regarded as a separate transaction and of itself warranting a term of imprisonment. Judges, in sentencing an offender in this type of case, fix a sentence for each of the comprising offences and determine a sentence for the case. As an example, consider an offender who commits an armed robbery and two burglaries, all on separate occasions, and upon whom the court imposes respective sentences of imprisonment of four years, one year, and one year for these offences and a sentence for the case of five years. Under investigation here is the determination of this case sentence in the light of the individual sentences; specifically, the degree to which there is cumulation of the individual sentences. This case sentence should accord with what is known as the totality principle: it should be appropriate to the seriousness and circumstances of the case viewed as a whole.

The first part of this study offers a quantitative description of the way judges apply the totality principle. It does this by means of an analysis of archival sentencing data and showing the relationship between the sentence determined to be appropriate to a case and the sentences fixed for the individual component offences. The sample, selected from cases heard primarily in the Victorian County Court in 1995 and 1996, comprises rape, armed robbery and burglary as principal offences. Each of these three offence types is analysed separately. The resulting quantitative picture of judicial practice can be viewed as a form of detailed sentencing statistics. However, since it shows the relationship between case particulars (sentences for offences comprising a case) and the sentence for

the case, this quantitative description can also be regarded as a numerical decision aid for assisting judges to determine, according to current practice, a sentence for a case from the sentences considered appropriate to the offences comprising the case. To date, there is no satisfactory system of statistical guidance available to judges for the sentencing of multiple offenders. A feature of the present analysis is that the raw sentencing data are not analysed around the structure of a standard statistical model. Rather, they are analysed in terms of a framework representing a decision model. This model, developed by Lovegrove in a previous study using a protocol analysis, takes the form of a decision strategy – a set of working rules – more or less followed by Victorian judges as a means of approach to this sentencing problem. The advantages of this analytic strategy compared with the conventional one are twofold: the quantitative description represents a more complete and less distorted picture of actual practice, and it can be used more accurately and readily as a means of guidance.

What is offered here, then, is description and guidance. Understanding how judges apply general sentencing principles is important, since it is a prerequisite to the evaluation of the soundness and fairness of sentencing practice. Moreover, judges cannot be confident of sentencing according to current practice unless they have reliable information on what that practice is. Guidance, too, is of value. Individualised sentencing, as in Victoria, places extraordinary demands on the cognitive capacity of judges. One would be surprised if at least occasionally the cross-currents of aggravating and mitigating factors characterising a case did not overwhelm the sentencing judge; when this occurs the outcome will be unreliable sentencing. Simply, in the absence of description and guidance, there is the danger of unjust, idiosyncratic and incoherent sentencing. (See Lovegrove, 1989, 1997a.)

This first part of the present study, then, describes how judges apply an important sentencing principle – namely, the totality principle – to the sentencing of the multiple offender. But are the case sentences imposed according to the totality principle appropriate? In the thinking of many academics a sentence should not be regarded as appropriate if its severity exceeds what is proportionate to the seriousness of the offence, incorporating the harm to the victim and the offender's culpability (see for example, von Hirsch, 1993). This is, of course, the principle of proportionality. Moreover, a number of jurisdictions around the world have given statutory recognition to this view (see for example, Clarkson and Morgan, 1995). Victoria is one such jurisdiction, although, along with other jurisdictions, the law provides, in certain circumstances, for disproportionately harsh sentences in the interests of public protection (see Fox and Freiberg, 1999). While the principle of proportionality seems most commonly to have been thought about in regard to single offences, it has obvious relevance to the multiple-offence case. This is what the second part of this study is about. It begins with Lovegrove's recent prescriptive analysis aimed at setting up a numerical standard for proportionality in this type of case. The product of this work is a formula for calculating what quantum of sentence should be regarded as proportionate for a particular case, the formula taking account of the sentences considered appropriate to the individual offences comprising the case. This numerical analysis is based on the work of two English academic lawyers – David Thomas and Andrew Ashworth – who, relying on legal analyses, attempted to discern appellate thinking on this matter. Their interpretation is that under the totality principle the severity of the case sentence should be proportionate to the seriousness of the class of crime of the offences comprising the case: thus, for example, a common burglar should not receive a sentence of a degree severity appropriate to a rapist, though there be,

respectively, multiple burglaries and a single instance of rape. In order to calibrate the numerical standard, based on this idea, Lovegrove made reference to the sentences for single offences, using the official Victorian statistics. Following the presentation of this prescriptive analysis, the second part of the present study then investigates whether sentences determined according to the totality principle, as described in the first part, accord with the principle of proportionality as it is operationalised in the numerical standard. In view of the importance attributed by many to proportionality as a criterion of just sentencing, this question deserves an answer. And it should be regarded as a pressing question. For it would appear that in Australia, in contrast to England, what is regarded as an appropriate case sentence may exceed the levels of sentence considered proportionate to the class of offence comprising the case.

To appreciate this, it is necessary to understand what Australian courts have said about the totality principle. According to Fox and Freiberg (1999), there are two underlying considerations – proportionality and mercy. Mercy as a concept is clear enough – amelioration of a deserved sentence's harshness, regard being had to the offender's rehabilitation prospects and other circumstances such as state of health – although how the degree of mercy considered appropriate is determined in a particular case is left open. In any case, mercy is not the focus of the present study. Proportionality for the multiple offender requires commensurability between sentence severity and the seriousness of the offences considered singly and together. But this interpretation is critically vague: in respect of the present discussion, it would allow a level of sentence considered appropriate to a case above that which is proportionate to the class of offence comprising the case. Wells (1992), in her Western Australian study, entertained the same possibility when she asked rhetorically why the sentence considered proportionate to a

case comprising a number of unrelated offences should be constrained by the level of sentence proportionate to the most serious of those offences as a class of crime. Certainly, Australian appellate courts have not expressed the view that they feel so constrained. Indeed, in Victoria at least, the idea of the effective sentence not crushing the offender appears historically to have been the express policy consideration limiting cumulation. Not surprisingly, then, proportionality as a component of the totality principle appears in Fox and Freiberg's 1999 edition – the reference is to an unreported 1991 decision of the Victorian Court of Appeal – but not in their 1985 edition. In light of all this, in the sentencing of multiple offenders, there is a real possibility of the sentence imposed in a case lying on the harsh side of proportionality as represented by the seriousness of the class of the individual offences. What is somewhat curious is that in Australia clear expression has not been given to the idea of the seriousness of classes of offence as a basis for constraint on cumulation. For the High Court in the leading case of Mill (1988) cited with approval and without apparent qualification Thomas (1979) on the totality principle. In doing this the Court quoted the section in which Thomas makes it apparent that the totality principle may require a case sentence less than the sum of the individual sentences; yet the Court made no reference to adjacent passages in which Thomas introduces the standard for constraint as the seriousness of classes of offence. Indeed, the High Court in its judgment in Postiglione (1997) seemed primarily to rely on the concept of the crushing sentence as a basis for constraining cumulation.

Against the background of this general introduction, this report now turns to the first part of the study.

PART 1: THE TOTALITY PRINCIPLE IN JUDICIAL PRACTICE

Background

Some time ago Lovegrove developed a decision model describing how judges in Victoria attempt to apply the totality principle to determine sentences for cases in which offenders are convicted of multiple offences. In this the first part of the present study, this model is used as a framework to analyse archival sentencing data in order to show the quantitative relationship between the sentence imposed for a case and the sentences fixed for its comprising offences. The analysis is done separately for cases in which rape, armed robbery and burglary are principal offences. This work offers (1) a description of current sentencing practice for the multiple offender, and (2) a prototypal numerical decision aid for judges determining, according to current practice, the sentence in a case from the sentences considered appropriate to its comprising offences. Before proceeding with these analyses, however, it will be helpful to give a brief overview of the multiple offender as a sentencing problem, of the development and content of Lovegrove's decision model, and of previous attempts to describe judicial practice and develop numerical guidance, especially in regard to the sentencing of multiple offenders. Each of these matters is considered in turn.

The Multiple Offender as a Sentencing Problem[1]

The multiple offender considered here is one who has been convicted of at least two offences (counts) at the one hearing. The offences may be of the same kind (e.g. three burglaries) or different in kind (e.g. an armed robbery and a burglary). In Victoria, the judge fixes a sentence for each of the offences comprising the case and a sentence for the case; the latter sentence is known as the effective sentence. The sentence for each offence should reflect its seriousness and be appropriate. The present analysis is restricted

to considering cases of multiple offending in which the sentences for the comprising offences have been determined by the court to be ones of imprisonment. In order to determine the effective sentence for a case, regard must be paid to the relationship between the circumstances of the offences. If the comprising offences are part of a single transaction (e.g. three counts of resisting arrest relating to the offender's being tackled by three people at the one time) then the sentences for the three offences are served concurrently. Under these circumstances the effective sentence is the sentence for the most serious of the offences. However, if the comprising offences constitute separate transactions (e.g. three armed robberies, each one committed on a different day and against a different victim) then the sentences for the three offences should in principle be served cumulatively. It is to this situation that what Thomas (1979) has called the totality principle applies. This principle states that the effective sentence should be of a degree of severity appropriate to the seriousness of the offender's criminality in the circumstances of the case viewed as a whole; it thus allows considerations of proportionality and mercy to be brought to bear in determining an effective sentence. The High Court of Australia has in its decisions referred to the totality principle with approval (see the leading case of Mill, 1988, and the recent judgment in Postiglione, 1997). Effective sentences imposed by Victorian judges in accordance with this principle are normally less, sometimes very much less, than the sum of the sentences for the comprising offences as separate transactions. This is achieved by making some of these sentences – sentences which in principle should be fully cumulative – fully or partially concurrent; indeed, in some cases, the circumstances will call for full concurrency as appropriate. However, the Victorian Court of Appeal has given only limited guidance to sentencing judges as to how they should apply the totality principle when determining effective sentences in

multiple-offence cases. In Grabovac (1997), the trial judge had first determined the effective sentence he thought was appropriate to the case and, then, in the light of this, set sentences for the individual comprising offences so as to achieve that result. The Court criticised this approach, one reason being that it is all too easy for a sentencing judge to ignore or to underestimate the seriousness of one or more of the comprising offences; therefore, the correct approach is first to fix a (proportionate) sentence appropriate to each comprising offence and only then, in the light of these sentences, fix an effective sentence for the case. Almost certainly the trial judge was, at the time, not alone in his approach to the sentencing of multiple offenders. Moreover, one would not be surprised if this approach still found favour among sentencing judges, for the following reason. The trial judge's approach described above represents holistic thinking and is a product of intuitive thought. By way of comparison, the above appellate approach is analytic and requires more deliberative thought. The latter would present a difficulty for some sentencing judges, since intuition is well entrenched as a mode of thought for Victorian judges (see Lovegrove, 1997a).

In view of the limited appellate guidance in regard to this sentencing problem, clearly what is correct by way of approach has been left largely to the individual judge. Have the judges responded to this challenge? Is the determination of effective sentences characterised by an absence of detailed thought? Or is there evidence of a decision strategy – working rules – for the application of the totality principle in particular cases?

Sentencing the Multiple Offender: A Decision Model

Lovegrove (1997a)[2] attempted to identify how judges determine effective sentences for multiple offenders according to the totality principle. What follows is a summary of the decision model and its development.

There are two significant contributions to our understanding of the sentencing of the multiple offender, these being by the English academic lawyers Thomas (1979) and Ashworth (1983, 1992, 1995), who analysed judgments of the English Court of Appeal in an attempt to identify an implicit decision strategy. These contributions are fairly characterised as qualitative and limited in scope. To take these analyses further, Lovegrove considered possible implications of them, including aspects not covered directly by them, and in this way generated a detailed and comprehensive hypothetical decision model. This, then, was used to derive predictions regarding how judges would determine sentence according to the totality principle in multiple-offence cases.

For this purpose approximately sixty hypothetical cases were especially formulated and presented singly or in pairs, these representing various potentially critical aspects of the sentencing of the multiple offender. The cases in this exercise were presented in the form of skeleton descriptions; for example, in one pair of cases, one case comprised an armed robbery for which the appropriate sentence was four-and-a-half years and a three-year arson, and the second case comprised a four-and-a-half-year burglary and a three-year arson. (In each case, the assumption was to be made that the offender had a serious relevant criminal record and little if anything by way of mitigation.) The point of these two cases, of course, was to investigate whether the degree of cumulation of the sentence for a secondary offence is greater where the legal category of the principal offence is more serious.

Eight experienced County Court judges participated; they individually were required to determine effective sentences for the cases and to provide a detailed record of their thinking as they determined a sentence for each case. The County Court is at the intermediate level in the court hierarchy. Of the more serious criminal matters, most – all

except a few very serious matters – are determined in the County Court. The analysis of the judges' responses showed the hypothesised decision model to be untenable. Nevertheless, in these responses it was possible to discern an alternative decision model describing a strategy for the sentencing of the multiple offender.

This decision strategy for the determination of effective sentences seems best represented as a three-stage process. In the first stage, the scene is set for the cumulation – the offences comprising the case are sorted into separate transactions, and sentences imposed for these offences; in the second stage, attention is directed at the effect on cumulation of the sentence for the principal offence (transaction); and the third stage deals with the treatment of the sentences for the secondary offences (transactions). This following strategy should be seen as underlying the judges' attempts, when imposing effective sentences in multiple-offence cases, to moderate what otherwise would be an effective sentence equal to the sum of the sentences for the separate transactions. The idea behind this is the minimisation of the potentially crushing effects of imprisonment. These decision processes are now elaborated.

Stage 1. The judge must first group the offences into separate transactions, and impose an appropriate sentence for each of these offences. Where a single offence constitutes a separate transaction, the sentence for that offence represents that transaction. Where two or more offences form a single transaction and together constitute a separate transaction, the highest sentence fixed for those offences represents that transaction. Once this is done, the judge identifies the principal offence (transaction); the principal transaction is the transaction with the highest sentence or, when two or more transactions have equally high sentences, any one of these. The sentence for the principal offence (transaction) is regarded as the foundation for the cumulation in the sense that the

effective sentence is built upon this sentence. Consider, for example, a case comprising three armed robberies and an aggravated burglary, for which the respective sentences were five, three, three, and four years; assume also that the first armed robbery and the aggravated burglary formed a single transaction, and that the second and third counts of armed robbery were separate transactions. The former two offences would constitute the principal transaction and there would be two secondary transactions – the latter two offences. The sentences of five and four years would be served concurrently and the two sentences of three years in principle would be served cumulatively. How the judge determines the extent to which these latter two sentences should be served partially cumulatively on the sentence of five years so as not to offend the totality principle is the subject of the next two stages of the decision model.

Stage 2. The effective sentence is treated as comprising the full measure of the sentence for the principal offence (transaction) and a proportion (component) of the sentences representing each of the secondary offences (transactions). It follows from this that the sentence for the principal offence (transaction) governs what scope is left for the quantum cumulated upon this sentence to reflect the seriousness of the secondary offences (transactions). Where the sentence for a principal offence (transaction) is higher, so the quantum of sentence cumulated to allow for the seriousness of the secondary offences (transactions) in the effective sentence is a smaller proportion of the sentences appropriate to these other transactions. This stage of the strategy can be illustrated numerically. Consider a case comprising an armed robbery and ten counts of burglary, all separate transactions, for which the respective sentences are ten years and one year each; little of the ten years of sentences for the burglaries should be added on to the sentence for the armed robbery (say, two years – 20 percent of the ten years for the burglaries,

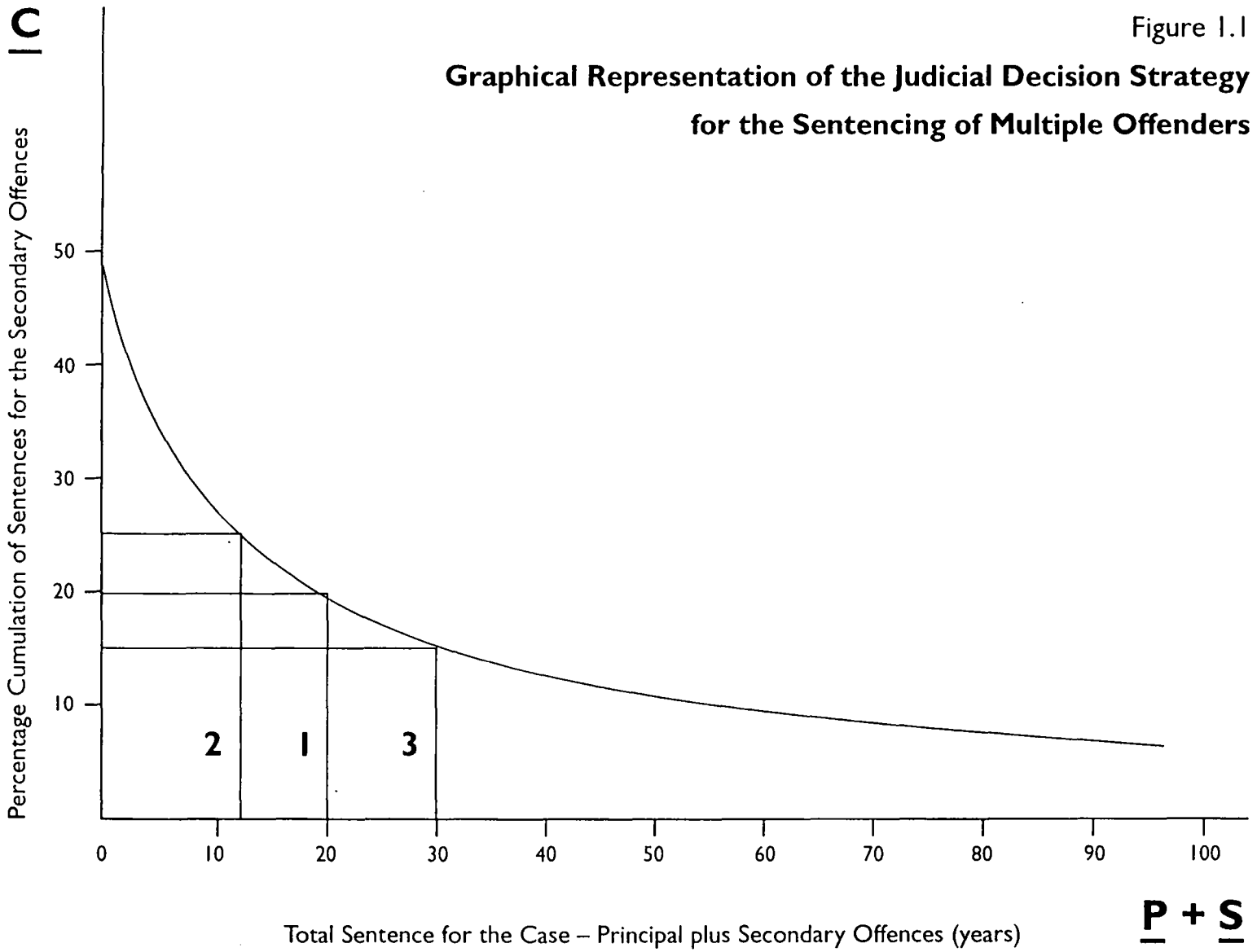
giving an effective sentence of twelve years) because its sentence of ten years already presents a daunting prospect to an offender. But was the sentence for the armed robbery only three years, then a greater proportion of the ten years of sentences for the burglaries would be made cumulative (say, two years six months – 25 percent of these ten years) because concern over the crushing effects of the potential effective sentence would carry less weight.

It is but a small step from these examples to a numerical representation of the process for taking account of the sentence for the principal offence (transaction) in the determination of effective sentences. This can be done by way of a graph, and is shown in Figure 1.1. It is a plot of the total of the sentence appropriate to the principal offence (transaction) (P) and the sum of the sentences appropriate to the secondary offences (transactions) (S) (in years) against the percentage of these latter sentences made cumulative on the sentence for the principal offence (transactions) (C). The preceding two examples are entered in this graph, and labelled '1' and '2', respectively. (The reason for plotting C against P+S and not against P will be given later.)

Stage 3. The scope for cumulation having been determined by the sentence for the principal offence (transaction), it is then possible to determine the proportion of the sentences for the secondary offences (transactions) to be added on to the sentence for the principal offence (transaction). As the sum of the sentences for the secondary offences (transactions) becomes higher, so the quantum of sentence cumulated to represent the seriousness of these transactions in the effective sentence must be a smaller proportion of their appropriate sentences. Nevertheless, this progressive decrease in the proportion cumulated must be tempered to ensure that the quantum cumulated is greater where the sum of the sentences for the secondary offences (transactions) is higher. For a numerical

Figure 1.1

Graphical Representation of the Judicial Decision Strategy for the Sentencing of Multiple Offenders



example, recall the previous illustration of a case comprising an armed robbery and ten counts of burglary, for which the respective sentences were ten years and one year each; the point was made that little of the ten years of sentences for the burglaries should be added on to the sentence for the armed robbery, because of the concerns about a crushing effective sentence. (In fact, 20 percent or two years of these sentences were cumulated, making an effective sentence of twelve years.) But if the sum of the sentences for the burglaries was twenty years, then an even lesser proportion of the (twenty years of) sentences for the burglaries would be made cumulative (say, 15 percent of these twenty years – three years, making an effective sentence of thirteen years), because concern over the crushing effects of the potential effective sentence would carry greater weight. Nevertheless, in this latter case this lessening of the proportion of these sentences for the secondary offences cumulated had to be moderated to ensure that the quantum actually added on to the sentence for the principal offence was greater and, hence, the effective sentence reached was higher, since it was more serious, there being twenty (cf. ten) years of sentences for the burglaries. This third example is also entered in Figure 1.1, and labelled '3'. The curve in Figure 1.1 describes a process of cumulation in which the increase in sentence is progressively less and less the more serious the case.

The representation of this second factor - the sum of the sentences for the secondary offences (transactions) (S) – and the first factor – the sentence for the principal offence (transaction) (P) – on the same curve requires the assumption that the functions describing their effects on percentage cumulation (C) are for practical purposes the same. This assumption appears to be reasonable for two reasons. First, both must provide for cumulation by way of decreasing gains. Secondly, the range on the sentence for the principal offence (transaction) in a representative sample of cases will be but a fraction of

the range on the sum of sentences for the secondary offences (transactions). For example, in the sample of cases used in Lovegrove's (1998) subsequent archival study – summarised below – the sentence for the most serious principal offence (transaction) was 11.3 years, whereas the highest sum of sentences for the secondary offences (transactions) was 246.5 years. Consequently, even if the curves representing the effects of P on C and S on C were different, the error associated with the assumption of equivalence would necessarily be negligible. This concludes the statement of the decision strategy.

What must be appreciated is that this decision strategy was no more than adumbrated in the eight judges' thinking as they approached the sentencing exercise. Across the cases, its applicability was not always recognised by the judges and, when it was recognised, it was expressed in varying detail and completeness, and the sentences fixed were not always in accordance with it. Indeed, only two of the judges demonstrated a more than superficial understanding of this sentencing problem, but even they appeared to a significant extent to be formulating on the spot what seemed appropriate by way of approach. It is, therefore, a largely intuitive process. Nevertheless, the judges' statements of the strategy as a general approach were largely coherent when and to the extent it was used to determine an effective sentence for a case. Other decision strategies (actually, part-strategies) were adopted by the judges to determine effective sentences in particular cases; however, these strategies were specific to those individual cases. The decision strategy presented here was the only discernible strategy offering a general approach in this type of case.

It will be apparent from this summary of the character of the judges' responses that they have not developed an explicit and systematic approach to determining effective

sentences for multiple offenders according to the totality principle. Accordingly, the above decision model should be seen as an ordered and rounded-out statement of the judicial decision strategy in this type of case. It is a strategy of which the judges have varying awareness and comprehension and which, despite its apparent precision, cannot be said to more than loosely govern their thinking.

The development and content of Lovegrove's decision model having been outlined, the scene is set to illustrate its application in the context of the present study. It will be recalled that the aim here is to develop a method for analysing archival sentencing data in order to show numerically the relationship between the sentences fixed for the offences comprising a case and the sentence determined to be appropriate to the case. In order to be consistent with the decision model, what is required is a graph of the relationship between the percentage cumulation of the sentences for the secondary offences (transactions) (C) and the total of the sentence appropriate to the principal offence (transaction) (P) and the sum of the sentences appropriate to the secondary offences (transactions) (S), together with a curve providing for decreasing returns, as shown in Figure 1.1. This figure represents a reciprocal function. For illustrative purposes, it was calibrated on the basis of one of the eight judges' responses to (a different) set of hypothetical cases. In this, the second part of the study, these cases were presented not in the form of skeleton descriptions, but as comprehensive summary descriptions for which the judges determined effective sentences and sentences for the comprising offences. What this demonstrates is a numerical representation of the relationship between the effective sentence and the sentences for the comprising offences, it being based on a descriptive decision model of the judges' strategy for determining sentences in multiple-

offence cases. In view of this, the numerical representation can be said to be faithful to the structure of judicial thought.

In a subsequent study, Lovegrove (1998) used archival sentencing data to test the validity of the general form of the decision model and, in doing this, showed the relationship between the effective sentence determined for a case and the sentences fixed for each of its comprising offences. The 69 cases in the sample had all been heard in the Court of Criminal Appeal in Victoria between 1985 and 1994, and armed robbery was the principal offence in each instance. As required by the model, the percentage cumulation of the sentences for the secondary offences (transactions) was the dependent variable and the total of the sum of the sentences appropriate to the secondary offences (transactions) and the sentence appropriate to the principal offence (transaction) was the independent variable. Again, the algebraic model representing these data was found to be the reciprocal function.

This strategy for describing judicial practice – the fitting of data to a decision model determined independently of these data and consistent with the structure of judicial thought – offers a new approach, which has implications for description and guidance. It is, therefore, appropriate to review past research on these two matters.

Research on the Sentencing of Multiple Offenders: Judicial Practice and Numerical Guidance

Empirical research relevant to the present study covers both attempts to describe judicial practice and to develop guidance for practice. Although this body of research does not fall neatly in two categories, it will be considered separately for the present purpose.

Studies of judicial practice. Traditional empirical criminological research has greatly increased our knowledge about the general and specific legal factors (for example, respectively, offence seriousness and value of the money stolen in a crime of dishonesty) determining sentence (see for example, Ebbesen and Konečni, 1981; Palys and Divorski, 1984). But this extensive body of research has left many matters without firm answers. Indeed, in respect of the multiple offender, it has little to offer. Rare are studies examining the relationship between the seriousness of the offences comprising a case and the sentence imposed in that case. Moreover, when multiple offending is recognised as a part of the sentencing decision, case seriousness is often represented by only one factor, such as the number of offences comprising the case. Finally, these sentencing studies of the multiple offender provide no explanation of how the relevant elements of case seriousness are put together to determine an effective sentence. The reason for the third aspect is the reliance of these studies on standard descriptive statistical techniques as a means of representing the relationship between sentence severity and case seriousness. In this work, the representation is in accordance with the structure inherent in the particular statistical technique applied to the data. Consider, by way of example, the use of the common linear multiple regression to study the sentencing of the multiple offender; and assume that the independent variables are as in the author's decision model above. Such an analysis would represent the determination of the effective sentence as a process in which the linear effect of the sentence for the principal offence and the linear effect of the sum of the sentences for the secondary offences are, as it were, simply added together. Clearly, this represents a quite different and, indeed, much simpler, decision structure than that underlying the judges' approach to the determination of effective sentences, as described in the preceding section. Of course,

valuable is the finding by researchers both in Victoria (Polk and Tait, 1988) and in England (Moxon, 1988) that the greater the number of comprising offences the more likely a prison sentence or a longer sentence, not least because it demonstrates the importance of this sentencing problem. However, it tells us little about judicial reasoning or the structure of judicial thought. Moreover, these studies identify correlates of sentence, not necessarily determinants of decisions. For example, if the sum of the sentences for the secondary offences is a determinant but the number of offences is not, the latter included in an analysis would be found to be significant, nevertheless, because of its correlation with the former.[3]

The development of numerical guidance. Typically, official sentencing statistics provide little guidance, especially for the sentencing of multiple offenders. As an example, take Victoria, where official statistics for the higher courts are produced annually (see for example, Department of Justice – Victoria, 1997).[4] One table of especial relevance to judges sentencing individual offenders is Table 4. It classifies offences according to the principal offence of individual offenders and, for each of the legal categories of offence (e.g. armed robbery), shows the distribution of sentences imposed on the individuals for this offence as principal. There is no equivalent table for effective sentences, although in 1996 a table was introduced giving indices (median, etc.) relating to the effective sentence, classified by principal offence (Table 11). Unfortunately, the guidance is but rough and incomplete. In Table 4 no distinction is drawn between sentences relating to all offences (full concurrency) and those relating to just the principal offence; and in regard to both, an approximate quantum for the upper limit of each range could be ascertained by aggregating the distributions across several years for a principal

offence, but these data would provide no measure for making gradations within each range.

Work has been done to make sentencing statistics more detailed. These information systems aim at showing how the distributions of sentence for the various categories of offence (e.g. robbery) are affected by particular offence and offender characteristics of the cases underlying each of the distributions. In the classificatory schemes of these systems, therefore, distinctions are drawn, first, between legal categories of offence (or closely related offences) and, secondly, between the factors (e.g. value of the theft) and their associated categories (e.g. monetary amounts) thought to be relevant to sentence. Once the offence categories and the case factors have been agreed on, it is necessary to compile a large data base of cases from archival records and to file each case according to its description in the scheme. For this, the legal category appropriate to a case is determined by its principal offence. This system is computer based. To use the data base for a particular case, the sentencer enters the case description in terms of the classificatory scheme, and the output is the sentences previously imposed in the jurisdiction for cases in that offence category and with that particular combination of offence and offender characteristics. The system incorporates only the more common case factors. In systems characterised by individual justice as in Australia and in the United Kingdom, where numerous factors are of potential relevance to sentence, it will therefore almost always be necessary for the judge to take account of additional factors in order to do justice in a particular case. In these instances, the system's output – a distribution of sentences – becomes a reference point against which the judge will exercise discretion to allow for the effects on sentence of these other aggravating and mitigating factors. There are two major well-developed information systems, one in

Scotland (see Hutton, Tata and Wilson, 1994; Hutton, Paterson, Tata and Wilson, 1996; Tata, Hutton, Wilson, Paterson and Hughson, 1998), the other in New South Wales (see Chan, 1991; Potas, 1997; Potas, Ash, Sagi, Cumines and Marsic, 1998).

In evaluating these systems for the present research, there are two general issues. The first concerns how well their general approach to classification copes with the description of cases comprising multiple offences. 'Not well', must be the conclusion. These systems represent case seriousness as a pattern of offence and offender characteristics; this is the source of the problem. While this works for single offences, it becomes strained to breaking point in many cases of multiple offending. To illustrate this, it is convenient to distinguish between offences as a part of the one incident and those arising from separate incidents as well as between multiple offences of the same type and those differing in character.

Consider the Scottish system. For single incidents where the offences differ in character (e.g. an assault resulting in injury associated with an armed robbery) the approach is conceptually sound and can be made to work in some instances. In regard to this example, what is required is a factor of injury in the classificatory scheme for robbery. There are, however, practical limitations. One is that it falls short to the extent of there being associated offences for which their constituent behaviour cannot be brought within the scope of a factor; false imprisonment of the victims of a robbery may be one. A second limitation is that with more than a handful of factors, many offence-offender combinations will have few cases, rendering their data unreliable. For this reason, where there is individualised justice, the variations in seriousness of one type of offence often cannot be adequately represented, let alone various combinations of different types of offence. Then, there are separate incidents where the offences are of the same type (e.g. a

series of robberies committed over a number of weeks) or single incidents where the offences are of the same character (e.g. the wounding of multiple victims on the one occasion). When applied to these circumstances the approach is on unsteady ground, again. For example, each of the individual factors in the scheme must represent, with respect to harm, the seriousness associated with the case in the aggregate. Now, while this can be readily envisaged for some factors (e.g. the total value of the theft) it seems problematic for others (e.g. personal injury). Finally, this approach cannot cope with cases comprising offences differing in character and related to separate incidents (e.g. a robbery and an unrelated assault). The reason is simple: offence factors and the elements of offence factors vary across legal offence categories; for example, injury is relevant to robbery but not to theft, while organisation considered in specific terms differs between robbery and theft.

In New South Wales, where an offender has been sentenced for more than one offence, only the principal offence, generally determined by sentence severity, is included in the data base. Cases for which cumulative sentences have been imposed are excluded from the data base, on the ground that they would distort the statistics. There is the facility for judges to distinguish between cases in which there is one count of the principal offence and those in which there is more than one. Now, in many multiple-offence cases, the comprising offences represent separate transactions and, on this basis, there is cumulation of sentence. How many cases are excluded from the data base for this reason is anyone's guess, but the number may be substantial. Clearly, there may be a serious gap in the information provided by the system about sentences for multiple offenders. And what about the sentencing data in the system? In general, where the sentence imposed is for a case comprising offences regarded as separate transactions it

will overestimate the seriousness of the principal offence. This is because the sentence for the principal offence will have been inflated to cover the additional seriousness associated with the secondary offences. The exception is for offences constituting one incident and differing in character, and the principal offence covers the full seriousness of the case (e.g. the false imprisonment is treated as a part of the seriousness of the robbery). In all other types of multiple offending, the sentence for the principal offence must be seen as the sentence appropriate to the seriousness of the case, not that of the principal offence.

The contribution of this system specific to the multiple offender is the option relating to the case factor of the number of counts of the principal offence. But in this it offers little to the discrimination between offences. When the option of one count is selected, it will call up cases comprising one offence, one incident (offences differing in character), and separate incidents (offences differing in character). And when the option of more than one count of the principal offence is exercised, in incidents where the offences differ in character there will be multiple counts of the principal offence and one or more other offences. In the former, no distinction is drawn between one or numerous other offences; in the latter, no distinction is drawn between two or numerous counts of the principal offence. This is a significant shortcoming in the system, since multiple offences, especially where serious, can add years on to what otherwise would be the appropriate sentence. Moreover, there are other factors differentiating the seriousness of cases of multiple offending (e.g. the seriousness of the comprising offences) but not included in the scheme. Of course, the reason for only one factor, and for two and not more divisions on this factor, is, as already explained, that with numerous distinctions the cases representing each pattern will be few and the data, accordingly, unreliable. In

regard to this discussion, it must be said that in cases where there are large numbers of serious offences cumulative sentences would almost certainly be imposed and, accordingly, these cases would not be included in the data base. Nevertheless, for the present purpose, it is the difference between no guidance and virtually no guidance.

The approach of the Scottish and New South Wales' systems to the classification of cases by way of patterns of case characteristics leaves the seriousness associated with cases of multiple offending inadequately represented. As a result, at least in regard to the multiple offender, these systems fail to achieve their stated goal of detail in the sentencing statistics. Accordingly, for the purpose of guidance to the sentencing judge, they offer little information on past practice over and above what is to be found in the current official sentencing statistics; indeed, since the number and nature of the offences underlying the distribution of sentences are largely unspecified, the information on sentencing practice has the potential to mislead. In the present study, a different approach is taken to the representation of cases of multiple offending with the result that there is the potential to take account of fine differences in seriousness between cases. It treats the problem for what it is: the cumulation of seriousness across offences, the seriousness of each offence being considered individually, and it does this by way of an aggregation rule reflecting a decision model representing how judges approach the sentencing of the multiple offender.

The second issue in the evaluation of these information systems concerns how well the information it provides on past practice can be used by the sentencing judge to determine sentence in a particular case. To consider this, it will be helpful first to examine the approach of the present study. In this the role of the decision model is also crucial.

The distinctive contribution of the present study to the problem of quantifying the relationship between the effective sentence imposed for a case and the sentences fixed for the offences comprising the case is that the sentencing data are to be analysed in accordance with a decision model faithful to the structure of judicial thought, rather than in relation to the structure inherent in a standard descriptive statistical technique and incompatible with that thought. One advantage of this approach, illustrated in the above section on judicial practice, is that it provides for a more accurate and complete description of judicial decision making. A second advantage is that it facilitates the sentencing judge's use of the statistics as a guide to what is appropriate by way of sentence in a particular case. The fact is that no guideline, including numerical guidance, can be expected to take account of the less important and less common factors and relationships. Accordingly, numerical guidance as a decision aid is to be regarded as providing no more than a standard or reference sentence against which the sentencer must, by way of a discretionary judgment, allow for the additional influence on this quantum of punishment of the rare and less significant matters and of possible new policy considerations bearing upon the particular case. It would be expected that necessary adjustments to the reference sentence when allowing for the effects of these other matters would be made by judges more accurately and readily where the decision aid's statistical information was compiled in a way consistent with the logic underlying their own thinking. (See Lovegrove 1989, 1995, 1997a.)

The point has already been made that information systems can show the effect on sentence of only a relatively small number of case factors. As a result, in an individualised system of justice where numerous factors are at once of potential relevance to sentence, the sentencer is left with a wide discretion when using the system. Moreover,

as these systems do not organise the representation of the relationship between case fact and sentence around a model of judicial decision making – indeed, they are avowedly atheoretical with respect to combination (see Weatherburn, Crettenden, Bray and Poletti, 1988) – the sentencer is left without a logic – a framework – for estimating the effect on the reference sentence of the factors relevant to sentence in the particular case but not taken account of in the guidance.

In summary, the development of detailed sentencing statistics for the sentencing of multiple offenders requires that a quantitative relationship be established between the effective sentence and the sentences for the comprising offences. Moreover, the representation of this relationship must be compatible with the judicial approach to the determination of effective sentences. The present study attempts to satisfy these two requirements.[5]

The Study

This quantitative description of the judicial approach to the sentencing of multiple offenders covers, separately, the offences of armed robbery, burglary and rape. These offences were chosen for two reasons. First, for these offences high effective sentences of imprisonment are often appropriate, either because of the number of comprising offences or the seriousness of these offences. Secondly, these three offence types vary in terms of their seriousness as categories of offence – rape and armed robbery are very serious, burglary is of moderate seriousness – and in terms of the nature of the offending – armed robbery is violent property, rape is violent sexual, and burglary is non-violent property. It might be that these characteristics are determinative of the degree of cumulation. Armed robbery is included in the present study, even though it was used in Lovegrove's (1998) study. Towards the end of the period covered by that study – 1985-

1994 – judges were required by s.10 of the Sentencing Act 1991 (Vic) to adjust the levels of sentence they would have previously thought appropriate as a means of allowing for the abolition of remissions.[6] In regard to the cumulation of sentence, it was apparent to the author in his personal communications with judges at about this time that some believed there was a mood in the community for harsher sentences for multiple offenders. This aside, s.8 of the Sentencing (Amendment) Act 1993 (Vic) introduced the presumption of cumulation for certain types of case: of particular relevance to the present study is the strong presumption of cumulation for serious sexual offenders, this in practice applying principally to offenders convicted of three or more sexual offences. Also of significance is s.5 of the same Act, which allows disproportionately harsh sentences of imprisonment for serious sexual offenders.[7] Indeed, these factors were responsible for the courts declaring that in general greater effective sentences were appropriate to multiple sexual offenders. (See for example, the judgments of the Victorian Court of Appeal in Lakeland, 1993, Cowburn, 1994, Higham, 1997, and Mantini, 1997.)

The Data Base

The sample comprised individual multiple offenders upon whom, at the one hearing, sentences of imprisonment had been imposed for at least two offences, each representing a separate transaction, one of the sentences being made to some extent cumulative.[8] The study's focus gives these sample characteristics their relevance.

To determine whether the principal offence was one of armed robbery, burglary or rape, the following criteria were invoked, as required, in order: length of the term of imprisonment; number of instances of the offence; seriousness of the category of offence, according to the statutory maximum penalty.

Only offenders whose sentence was passed in 1995 or 1996 in one of the higher courts (i.e. Supreme or County Court) in Victoria were included in the sample. Nevertheless, an appeal against sentence by the prosecution or defence subsequent to this period did not disqualify the offender. Most were sentenced in the County Court, although for a few sentencing was in the Supreme Court.

Where two or more offenders were sentenced for the same offences arising from a common enterprise, each individual could be included in the sample as long as either their sentences for the individual offences or their effective sentences were different. And where two or more presentments were determined jointly, but related to the one individual, the present analysis treated them as a single instance. But where an individual was sentenced while still serving a sentence, only information relating to the offences and sentences in the later (i.e. present) presentment were included in the study. Finally, in some instances it was clear from the judge's remarks that one or more of the sentences imposed on the offender were not appropriate to the immediate facts of the case. The reason given for this was to do justice in the case, having regard to matters lying outside the immediate circumstances; for example, when sentencing for one or more of a series of closely related offences crossing interstate boundaries, the sentence of imprisonment imposed may be less than it would have been otherwise, to allow for the time spent in custody interstate. Clearly, such instances could not be included in the sample, since for the purposes of the present study requires the assumption that the sentences for the individual offences are appropriate to the seriousness of those offences and that the effective sentences were determined according to the totality principle.

Both quantitative and qualitative data were recorded in relation to the sentencing of each of the offenders in the sample. The former included a list of the offences in the

presentment, the sentences imposed for the individual offences, the concurrency orders and the effective sentence, as well as a list of other offences, if any, admitted and taken into account in determining the effective sentence. Included, to the extent available, in the qualitative data were: a description of the circumstances of the offences sufficient to determine for each offence whether it should be regarded as a separate transaction or as a part of a single transaction with one or more of the other offences; the judge's view of the relatedness of the offences; the reason given by the judge for the degree of cumulation ordered; comments by the judge on the appropriateness of the sentences for the individual offences; any other information relevant to the above.

Sentencing judgments were the primary source of information. For most offenders in the sample, they were from the court sentencing in the first instance; however, where there was an appeal the primary source was the appellate court judgment. Sometimes relevant information, particularly details necessary to determine the relatedness of the offences, was not covered fully in the judgments. In these instances, the data were taken from other documents on the file; for example, the formal statements of the particulars of the offences.

The information on each of the offenders in the sample came from their case files. The principal means of identifying potentially relevant files was case lists generated from computer records held in the Office of Public Prosecutions. These lists showed cases involving one of the three offences of interest – not necessarily being the principal offence – and determined in the time frame of the study. There was a separate list for each of the offences of armed robbery, burglary and rape. One or more offenders could be listed for each case. (Although, often, a co-offender would be listed as a separate case.) For each offender there was a record of offences, sentences, and hearing dates

relating to that case. An offender's file was traced by means of the case number on the list. It should be noted that each of the three lists generated a very large number of cases; to make the study manageable, only every third case was followed up. An inspection of the more up-to-date case cards and, particularly, the files themselves revealed that many of the cases did not satisfy the selection criteria. Sometimes this was due to errors or gaps in the case lists; other times it was because some of the selection criteria could not be applied in the absence of detailed information contained only in the files.

For many of the cases, a transcript of the sentencing judgment was not in the file. This document, of course, is essential to the study. For appellate judgments this was easily made good, because unreported and reported appellate judgments are readily available. However, in regard to the first-instance judgments, their unavailability was generally because one had never been made. Fortunately, for those cases heard in Melbourne – the vast majority – a tape recording was available from which a transcript could be made by the Victorian Government Reporting Service.

Every attempt was made to obtain the files which were not available when they were first requested.

Just prior to the analysis of the data and once due time had elapsed for any appeal to be determined, the cumulative index of Current Criminal Cases Supreme Court of Victoria (1997), together with the Victorian Reports and the Australian Criminal Reports were checked to ensure that account had been taken of the results of all successful appeals.

Matters of general importance to an understanding of the data base having been outlined, information specific to each of the three offences is presented now.

Armed robbery. On application of the selection criteria the sample comprised sentencing data for 27 offenders, all were male. One female did qualify, but was excluded because she was a part of a common enterprise with a male offender who was charged and sentenced similarly.

Following Lovegrove (1998), each individual's data were classified according to the circumstances of his offending. There are four categories in the classification, cases across the categories appearing to differ in character and in a way that might be thought to affect the degree of cumulation considered appropriate. In this way, the classification provides a description of the sample. The categories are: single event (n = 8); escapade (n = 4); multiple event (n = 6); single-multiple event (n = 9). The following definitions vary only slightly from the original classification.

The single event was sub-divided into two categories: simple (n = 5); complex (n = 3). The simple and complex are alike in that there is only one armed robbery, with one or more victims, but in the former the one or more connected offences are committed at the same time as the robbery (e.g. a false imprisonment), whereas in the latter, one or more of the connected offences occur some time before or after the robbery (e.g. the theft of a motor car for the robbery, or the offender's resisting arrest in respect of the robbery), the location and victim/s being different. An offence is connected in the sense that it is committed to further the enterprise.

To qualify as an escapade, there has to be at least two separate armed robberies (one offence may be an attempted armed robbery) and (normally) locations/victims, or at least one armed robbery and a separate unconnected offence (e.g. an armed robbery and a separate burglary), it being immaterial whether or not there are connected offences, and, for both, all the offences have to be committed on the one day and/or night.

For multiple events, there are two sub-divisions. They share the characteristic of offence separateness for at least two of the offences in respect of days and victims/locations, and in both there are no offences connected with the armed robberies. The distinction is that in one sub-group there are only armed robberies (one may be an attempted armed robbery) ($n = 3$) and in the other sub-group there is at least one armed robbery and one unconnected offence ($n = 3$).

The definition of a single-multiple event follows from the above: offences satisfying the 'multiple event' category except that at least one armed robbery, if considered alone, would fall in either the 'simple' or the 'complex' sub-category.

In most instances the character of the set of circumstances was clear so that there was little opportunity in the application of the rules for unreliability to have distorted the picture pained by the classificatory scheme.

It is important to stress that these categories are no more than a convenient means of describing the circumstances of the offences comprising the cases in the sample. They are not definitions with legal significance.

Burglary. On application of the selection criteria the sample comprised sentencing data for 13 offenders, all were male; there were no eligible females.

As for armed robbery, each individual's data were classified according to the circumstances of the offences comprising the case. Again, the categories are: single event ($n = 2$); escapade ($n = 0$); multiple event ($n = 7$); single-multiple event ($n = 4$). The following definitions vary only slightly from those for armed robbery.

The single event was sub-divided into two categories: simple ($n = 1$); complex ($n = 1$). The simple and complex are alike in that there is only one burglary, with one or more victims, but in the former the one or more connected offences are committed at the same

time as the burglary (e.g. a false imprisonment), whereas in the latter, one or more of the connected offences occur some time before or after the burglary (e.g. the theft of a motor car for the burglary, or the offender's resisting arrest in respect of the burglary), the location and victim/s being different. An offence is connected in the sense that it is committed to further the enterprise (e.g. obtaining property by deception in realising the value of the stolen goods).[9]

To qualify as an escapade, there has to be at least two separate burglaries (one offence may be an attempted burglary) and (normally) locations/victims, or at least one burglary and a separate unconnected offence (e.g. a burglary and a separate theft), it being immaterial whether or not there are connected offences, and, for both, all the offences have to be committed on the one day and/or night.

For multiple events, there are two sub-divisions. They share the characteristic of offence separateness for at least two of the offences in respect of days and victims/locations, and in both there are no offences connected with the burglaries. The distinction is that in one sub-group there are only burglaries (one may be an attempted burglary) ($\underline{n}$ = 1) and in the other sub-group there is at least one burglary and one unconnected offence ($\underline{n}$ = 6).

The definition of a single-multiple event follows from the above: offences satisfying the 'multiple event' category except that at least one burglary, if considered alone, would fall in either the 'simple' or the 'complex' sub-category.

In most instances the character of the set of circumstances was clear so that there was little opportunity in the application of the rules for unreliability to have distorted the picture pained by the classificatory scheme.

Rape. On application of the selection criteria the sample comprised sentencing data for 24 offenders, all were male; there were no eligible females.

As before, each individual's data were classified according to the circumstances of the offences comprising the case. Again, the categories are: single event (n = 17); escapade (n = 0); multiple event (n = 2); and single-multiple event (n = 5). The following definitions, although based on those for armed robbery and burglary, nevertheless vary in significant respects, so as to reflect differences in the circumstances surrounding the commission of these offences.

The single event was sub-divided into two categories. Both involve only one incident. The difference lies in whether there is one victim or two or more victims. In the former there will be one offence of rape and at least one other (associated) offence, including rape, other sexual offences (e.g. indecent assault), and non-sexual offences (n = 17). In the latter there will be at least one rape of each victim or at least one rape of one victim and another sexual offence and/ or a non-sexual offence against the other victim/s (n = 0).

In these cases non-sexual offences generally relate to the sexual offence either directly (e.g. false imprisonment of the victim) or indirectly (e.g. assaulting an associate of the victim) or to the sex offender's modus operandi (e g. burglary).

To qualify as an escapade, there has to be at least two separate incidents involving different victims and (normally) locations, and all the offences have to be committed on the one day and/ or night. In one incident there will be at least one rape; this incident may involve offences other than rape and more than one victim. In the other incident/s there will not necessarily be a rape.

For multiple events, there are two sub-categories. Both involve at least two separate offences on different days and/ or nights and (normally) locations. In each incident there will be only one offence and one victim. On one of the occasions the offence will be a rape, but the other incident/s may involve offences other than rape. The difference between the two 'multiple event' categories lies in whether all the offences relate to the same victim (n = 1) or at least one of the offences involves a second (different) victim (n = 1).

The definition of the single-multiple event follows from the above: offences satisfying one of the two 'multiple event' sub-divisions except that at least one incident, if considered alone, would fall in one of the 'single event' sub-categories. In respect of the two 'multiple event' categories, the ns for single victims and multiple victims were 0 and 5, respectively.

In most instances the character of the set of circumstances was clear so that there was little opportunity in the application of the rules for unreliability to have distorted the picture painted by the classificatory scheme.

The Analysis of the Data

Armed robbery. Before examining the relationship between the effective and the individual component sentences, for each of the 27 offenders in the sample, it was necessary to determine whether each of the offences associated with an effective sentence should be treated as a separate transaction or as a part of a single transaction with one or more of the other comprising offences. It is only sentences relating to separate transactions for which in principle there should be some degree of cumulation and, consequentially, to which the court is required to apply the totality principle.

Herein lay a problem. The courts in sentencing judgments do not routinely express a view on the relatedness of comprising offences. Nor can the concurrency orders alone be used to address this problem, since there are numerous examples where, for a series of patently separate offences, only one or two of the sentences are made (to some degree) cumulative; this is done, of course, as a means of satisfying the totality principle. Moreover, there is not a body of appellate principle ready to be applied. Indeed, Fox and Freiberg (1999), in a review covering Australian jurisdictions, could no more than conclude thus: concurrency should be ordered when the offences relate largely to the '...same act, circumstances, or series of occurrences' (p.714); cumulation is to be preferred when the offences relate to '...truly two or more separate incursions into criminal conduct' (p.719). Yet, as Fox and Freiberg comment in regard to the former rule, there appear to be as many cases illustrating as negating it. Of course, a part of this incoherence may be to some extent apparent rather than real, and arise because the two rules are so general and the analysis is not offence or jurisdiction specific.

Lovegrove (1998) faced this problem in his archival study of multiple offenders whose principal offence was armed robbery. For that study to proceed there was no alternative but to draft rules for the purpose of determining the relatedness of comprising offences. They were formulated from the author's examining cases in the sample. To this end, he read the factual circumstances surrounding the comprising offences relating to each effective sentence in the sample, noting the court's concurrency orders and any views expressed on the relatedness of the offences. In this respect, rules were able to be formulated where one of two conditions held. First, where a court expressly stated that it regarded an offence as a separate transaction or as a part of a single transaction, the circumstances surrounding the offence/s were taken as a basis for defining relatedness.

Secondly, where a court had ordered at least some degree of cumulation for an offence the reasonable assumption was made that the court had treated it as a separate transaction. In this, appellate decisions were given precedence over first-instance judgments. Where the court had ordered full concurrency and not commented on the relatedness of the offences, it was not possible to use the circumstances as a basis for rule formulation. For the purpose of this exercise, some cases did not present any clues; other cases provided clues, but only for some of the comprising offences. Nevertheless, there was a sufficient number of indications under one of the above two conditions to permit an apparently comprehensive set of rules to be formulated. These rules were then used to interpret the relatedness of offences where full concurrency had been ordered and the court had not stated whether they were separate or a part of the one transaction. The rules derived from this analysis represent what appeared to be common practice; nonetheless, there were certainly a few instances of apparent disparate behaviour. Of course, since it was not possible to test the rules in all instances in the sample – concurrency being far more common – and cumulation for at least one offence was a criterion for selection in the sample, real doubt must hang over their validity as a description of current practice. Clearly, the analysis here was legal and qualitative, in the manner of Thomas's (1979) approach to his review of judgments for the purpose of formulating the underlying principle. A quantitative analysis was neither profitable nor warranted: not profitable, in view of the courts' failure to rule on the relatedness of the offences in many instances; not warranted, because these rules were offered as draft policy and, in this sense, their validity does not turn on their accuracy as a description of current practice, but rather awaits judicial authority. Finally, let it be appreciated that no rule's content can be fully appreciated independently of the set/s of factual circumstances from which it was

derived. As a consequence of this, a particular rule is not necessarily valid in all the circumstances to which it apparently applies. With these explanatory and cautionary remarks, the transaction rules formulated in Lovegrove's (1998) study are presented, with only minor modification for greater clarity. These rules are as follows.

1. Offences arising from the one act, whether there be one or more victims (e.g. two injury offences when two victims are injured from the firing of one shot; offences of armed robbery and aggravated burglary relating to a break-in immediately followed by an armed robbery at a private house) were regarded as one transaction.
2. Offences arising from separate acts of the same nature done at more or less the same time and location and on the same victim/s (e.g. multiple offences of armed robbery or false imprisonment covering several victims of the one armed robbery; three offences of resisting arrest relating to the offender's being tackled by, say, three people at the one time) were regarded as one transaction; however, an exception was made to this rule for personal injury, so that two offences relating directly to the infliction of injury, whether they be on the same victim or on two victims, were regarded as separate transactions.
3. Offences arising from separate acts of a different nature done at more or less the same time and location and on the same victim/s (e.g. offences of armed robbery and false imprisonment of the victim) were regarded as separate transactions; however, where an offence immediately followed or preceded the armed robbery and could be regarded as coming within its scope (e.g. theft), the two offences were regarded as one transaction.
4. Offences arising from separate acts of a different nature done at different times (usually not the same day) and (normally) different locations, the victim/s being

(normally) different, whether the offences be connected (e.g. offences of armed robbery and theft, the latter being of a motor car used in the armed robbery) or unconnected (e.g. offences of armed robbery and burglary), were regarded as separate transactions.

5. Offences arising from separate acts of the same nature done at different times (usually not the same day) and (normally) different locations, the victim/s being (normally) different, whether the offences be connected (e.g. two offences of reckless conduct endangering life as the offender was attempting to escape after the armed robbery) or unconnected (e.g. multiple offences of armed robbery), were regarded as separate transactions.

The sample in Lovegrove's (1998) study, in which these rules were formulated, and the sample relating to the present data, both comprise multiple offenders whose principal offence is armed robbery. Accordingly, the above rules were applied to the present data in order to determine whether an offence relating to an effective sentence should be treated as a separate transaction or as a part of a single transaction with one or more of the other offences. Even though the scope and detail of these rules were not greater than that required to deal with the circumstances arising in the original sample, they were readily applied to the current data. And in most if not all instances the correct classification of the relatedness of offences according to the rules seemed apparent. Disparity between the application of these rules and the approach of the court occurred in two cases. In one, two sentences for the false imprisonment of two victims in the one armed robbery were both made cumulative and, in the other, the sentence for an aggravated burglary preceding the armed robbery in the victim's home was made cumulative. In these two cases, for the purpose of determining the relatedness of

offences in the following analysis, the judge's orders, not the author's rules, were followed.

It is now appropriate to turn to the analysis of the quantitative relationship between the effective sentences and the sentences for the individual component offences for the 27 offenders in the armed robbery sample. So as to be consistent with Lovegrove's (1997a) decision model, the relationship between the effective and component sentences was examined by investigating how the percentage of the sentences for the secondary offences (transactions) made cumulative on the sentence for the principal offence (transaction), as the dependent variable, is affected by the sentence for the principal offence (transaction) and the sum of the sentences for the secondary offences (transactions), as the two independent variables. Accordingly, for the comprising offences associated with the effective sentence for each offender in the sample, it was necessary to:

1. identify the offences constituting separate transactions and those forming a part of a single transaction with one or more of the other comprising offences;
2. determine the principal (armed robbery) offence (transaction) on the basis of sentence severity – the sentence for this offence (transaction) is the value of the first independent variable;
3. sum the sentences for the secondary offences (transactions) – one sentence (the most severe) for each group of offences forming a single transaction and one sentence for each single offence constituting a separate transaction – this is the value of the second independent variable;
4. find the difference between the effective sentence and the sentence for the principal offence (transaction);

5. calculate the result in '4' as a percentage of the result in '3' – this is the value of the dependent variable.[10]

Figure 1.2 is the graphical representation of the relationship between the dependent variable – the degree of cumulation of the sentences for the secondary offences (transactions) (C), as a percentage – and the sum of the independent variables – sentence for the principal offence (transaction) (P) and the sum of the sentences for the secondary offences (transactions) (S), in years – for the 27 offenders.

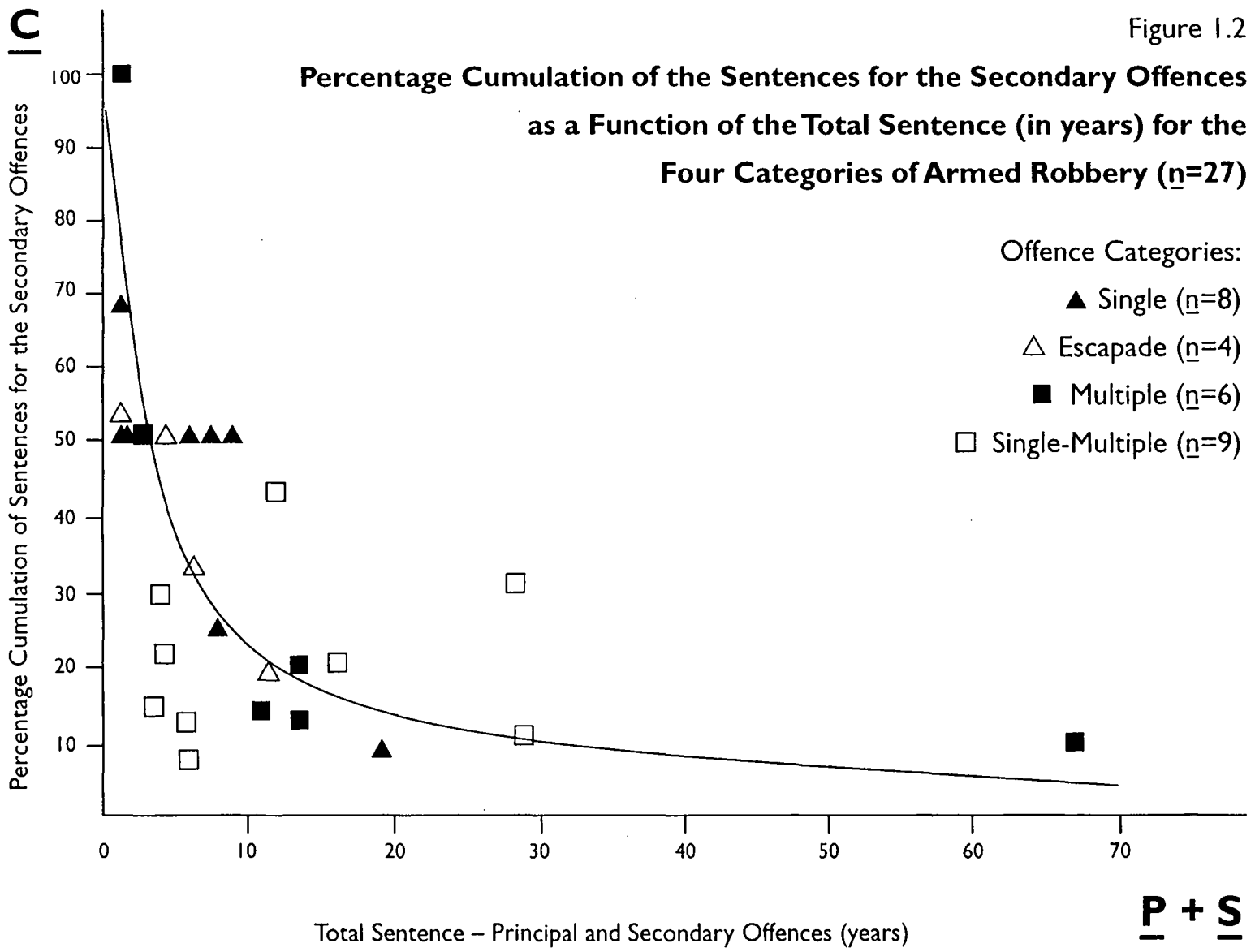
The data are differentiated according to the circumstances of the comprising offences. It would not have been unexpected to find that this factor affected the degree of cumulation and, in particular, that there was a lower degree of cumulation where there was one armed robbery and the secondary offences were all connected (i.e. the 'single event' category), or where at least one of the secondary offences, itself perhaps being an armed robbery, was unconnected to the (principal) armed robbery, but all the offences occurred on the same day/night (i.e. 'escapade' category). Figure 1.2 shows evidence of something different. The points representing the 'single event' and 'escapade' categories are, as would be expected, at the lower end of the composite independent variable but, compared with the points representing the other categories and falling in the same range (i.e. $\leq$ 10 years), clearly tend to a higher (mean) degree of cumulation (47.8 cf. 34.0).

The line in Figure 1.2 is the curve best fitting these data. To accord with the above theoretical analysis, this curve had to be consistent with Lovegrove's independently determined decision model. In respect of this, it had to:

1. be asymptotic on the P+S axis, so that there is always some degree of cumulation of sentence for the additional seriousness associated with extra secondary offences (transactions);

Figure 1.2

Percentage Cumulation of the Sentences for the Secondary Offences as a Function of the Total Sentence (in years) for the Four Categories of Armed Robbery (n=27)



2. provide for cumulation by way of decreasing gains to ensure that the additional cumulation under the preceding point is moderated; and

3. cross the $\underline{C}$ axis at a value of not more than 100 percent, since the effective sentence cannot exceed the sum of the sentences for the comprising offences.

An algebraic model with the potential to satisfy these three theoretical criteria is the reciprocal function, defined by the following formula:

$$\underline{C} = \frac{\underline{a}}{1 + \underline{b}(\underline{P} + \underline{S})}$$

where:

$\underline{C}$ is the proportion of the (sum of the) sentences appropriate to the secondary offences (transactions) made cumulative on the sentence for the principal offence (transaction), as a percentage;

$\underline{P}$ is the sentence appropriate to the principal offence (transaction), in years;

$\underline{S}$ is the sum of the sentences appropriate to the secondary offences (transactions), in years; and

$\underline{a}$ and $\underline{b}$ are constants, determined in the process of fitting the model to the data.

This model was fitted to the data points in Figure 1.2 with the constraint $\underline{C} \leq 100$;[11] for this, the values of the constants $\underline{a}$ and $\underline{b}$ were found to be 96.3 (standard deviation = 25.9) and 0.334 (standard deviation = 0.175), respectively. The measure given of R-square showed that the curve accounted for 49 percent of the variance; accordingly, this curve could be said to provide a moderate fit to the data.[12]

There is in this process a sense in which the data are fitted to the model (cf. the model discovered in the data). It is proposed that this is a necessary strategy for the veridical representation of decision making where there are a priori (data-independent) grounds for regarding a factor as relevant, its relationship taking a particular form, and

the data are seriously limited (Lovegrove, 1997a; 1999b). Now, these conditions hold here: sentencing is policy based; the principle judges are attempting to apply to the present sentencing problem is known; and the application of this policy by judges is subject to the limitations of human information processing. Put another way, the archival data here are being used not to discover a decision strategy but rather to quantify a decision model for which there is independent empirical support.

There is potential for error in the data in Figure 1.2 for some of the offenders. It is where all or some of the offending comprised a single event and the sentence for a separate transaction connected with an armed robbery (e.g. false imprisonment) was made concurrent with the sentence for the armed robbery. Under these circumstances, it is not clear whether concurrency was ordered to avoid excessive cumulation or because the seriousness associated with the connected offence was taken account of in the sentence for the armed robbery. Where the latter alternative represents the judge's thinking, the sentence/s for the connected offence/s should not be incorporated in the calculation of the sum of the sentences for the secondary offences. This will affect the values of both $\underline{C}$ and $\underline{P} + \underline{S}$. Since in none of the relevant instances did the sentencing judge remark on this aspect of sentence determination, it cannot be known whether the data carry this error. Accordingly, the calculations for the points in Figure 1.2 were redone for those offenders whose sentences are potentially subject to this error. (The adjustment could apply to one or more connected offences and one or more armed robberies for a particular offender.) There were eight such offenders; see Table 1.1. First to be noted is that the absolute values of $\underline{P} + \underline{S}$ remain largely unchanged; this would be expected since the sentences imposed for connected offences tend to be low. In contrast, for five of the offenders, the value of $\underline{C}$ increases significantly, markedly so in two of

these instances. (These five are indicated by an asterisk in Table 1.1.) The effect of this on Figure 1.2 is that three of the four most extreme points in the bottom left-hand corner move towards the body of the distribution; with this change the curve represents a somewhat better overall fit to the data, and the points falling in the 'single event' and 'escapade' categories now just tend to a higher (mean) degree of cumulation (48.6 cf. 45.7).

In examining the relationship between the effective sentence and the sentences for the component offences, also of relevance is the effect of the seriousness (as reflected in the mean) of those individual sentences. It might be that the degree of cumulation is greater where this mean is higher. To this end, offenders were divided into two categories in respect of the mean of their individual sentences: < 2 years, ≥ 2 years; this particular cut-off point was chosen because it resulted in an approximately equal number in each category ($\underline{n}$ = 14 and $\underline{n}$= 13, respectively) (see Table 1.2). The mean for the former category is 1.1 years, for the latter 3.7 years – a difference appropriate to a significant variation in offence seriousness – and the overall mean is 2.3 years. Figure 1.3 shows that the (mean) degree of cumulation tended to be greater for those offenders whose mean individual sentence was higher, for that part of the range on $\underline{P}$ + $\underline{S}$ common to the two categories (i.e. 2.5 – 20.0 years) (31.3 cf. 24.6); however, this difference does not hold if the recalculated (mean) values of $\underline{C}$ from Table 1.1 are substituted (32.1 cf. 33.7).[13]

Burglary. Before examining the relationship between the effective and the individual component sentences, for each of the 13 offenders in the sample, it was again necessary to determine whether each of the offences associated with an effective sentence

Table 1.1

The Effects on C and P + S of Potential Errors in S for Armed Robbery (n = 8)

Values		Recalculated Values	
C	P + S	C	P + S
25	8.0	33*	7.0
31	28.5	33	27.0
20	16.3	21	15.5
11	29.0	11	28.0
15	3.7	25*	3.0
22	4.3	33*	3.5
30	4.2	54*	3.4
13	6.0	50*	4.5

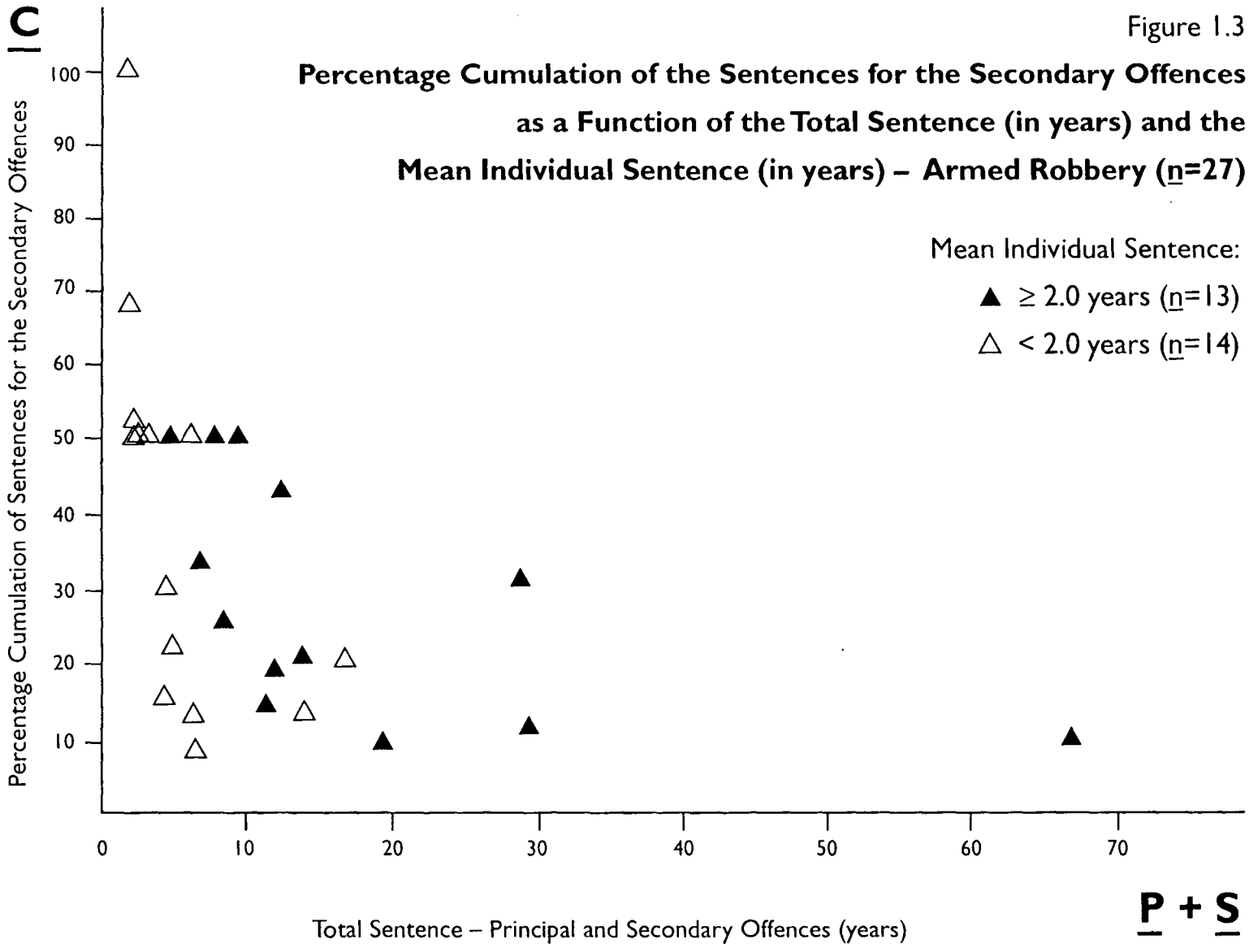
Table 1.2

Distribution of the Means for the Offenders' Individual Sentences for Armed Robbery (n = 27)

Mean Individual Sentence (years)	Frequency
< 0.5	1
≥ 0.5	5
≥ 1.0	4
≥ 1.5	4
≥ 2.0	2
≥ 2.5	1
≥ 3.0	3
≥ 3.5	3
≥ 4.0	1
≥ 4.5	2
≥5.0	
≥5.5	1
≥6.0	

Figure 1.3

Percentage Cumulation of the Sentences for the Secondary Offences as a Function of the Total Sentence (in years) and the Mean Individual Sentence (in years) – Armed Robbery (n=27)



should be treated as a separate transaction or as a part of a single transaction with one or more of the other comprising offences.

The rules used for this purpose for the burglary sample are largely based on those formulated above for armed robbery. Variations between the two almost exclusively lie in the examples, and arise from differences in the circumstances surrounding the commission of armed robbery and burglary. The rules are as follows.

1. Offences arising from the one act, whether there be one or more victims (e.g. two injury offences when two victims are injured from the firing of one shot; two theft offences arising from the theft of a motor vehicle and its contents) were regarded as one transaction.
2. Offences arising from separate acts of the same nature done at the more or less the same time and location and on the same victim/s (e.g. multiple offences of false imprisonment covering several victims of the one burglary; three offences of resisting arrest relating to the offender's being tackled by, say, three people at the one time) were regarded as one transaction; however, an exception was made to this rule for personal injury, so that two offences relating directly to the infliction of injury, whether they be on the same victim or on two victims, were regarded as separate transactions.
3. Offences arising from separate acts of a different nature done at more or less the same time and location and on the same victim/s (e.g. offences of burglary and false imprisonment of the victim; offences relating to the kidnapping of one victim and the false imprisonment of another) were regarded as separate transactions; however, where an offence immediately followed or preceded the burglary and

could be regarded as coming within its scope (e.g. theft), the two offences were regarded as one transaction.

4. Offences arising from separate acts of a different nature done at different times (usually not the same day) and (normally) different locations, the victim/s being (normally) different, whether the offences be connected (e.g. offences of burglary and theft, the latter being of a motor car used in the burglary) or unconnected (e.g. offences of burglary and an unrelated theft), were regarded as separate transactions.

5. Offences arising from separate acts of the same nature done at different times (usually not the same day) and (normally) different locations, the victim/s being (normally) different, whether the offences be connected (e.g. two offences of reckless conduct endangering life as the offender was attempting to escape after the burglary) or unconnected (e.g. multiple offences of burglary), were regarded as separate transactions. Separate drug-related offences were treated as separate transactions whether they could be thought of as the same in nature (e.g. trafficking relating to different substances) or not (offences relating to cultivation and possession of the same substance).

When applying these rules to the burglary sample, in most, if not all instances, the correct classification of the relatedness of offences seemed apparent. Disparity between the application of these rules and the approach of the court occurred in four cases. In one, the sentence for a robbery as a part of a residential burglary was made cumulative on the burglary sentence and, in the other three, sentences for thefts as a part of a burglary were made cumulative. In these four cases, for the purpose of determining the relatedness of offences in the following analysis, the judge's orders, not the author's rules, were followed.[14]

It is now appropriate to turn to the analysis of the quantitative relationship between the effective sentences and the sentences for the individual component offences for the 13 offenders in the burglary sample. For this, and as for armed robbery, following Lovegrove's decision model, Figure 1.4 is the graphical representation of the relationship between the dependent variable – the percentage of the sentences for the secondary offences (transactions) made cumulative on the sentence for the principal offence (transaction) (C) – and the sum of the independent variables – sentence for the principal offence (transaction) (P) and the sum of the sentences for the secondary offences (transactions) (S), in years – for the 13 offenders.

The data are differentiated according to the circumstances of the comprising offences. It would not have been unexpected to find that this factor affected the degree of cumulation and, in particular, that there was a lower degree of cumulation where there was one burglary and the secondary offences were all connected (i.e. the 'single event' category), or where at least one of the secondary offences, itself perhaps being a burglary, was unconnected to the (principal) burglary, but all the offences occurred on the same day/night (i.e. the 'escapade' category). Figure 1.4 shows a hint of this, but the numbers are too small to be of significance.

The line in Figure 1.4 is the curve best fitting these data, yet consistent with Lovegrove's decision model. Again this was done by fitting a reciprocal function with the constraint $C \leq 10$;[15] for this, the values of the constants a and b were found to be 100 and 0.282 (standard deviation = 0.084), respectively. The measure given of R-square showed that the curve accounted for 56 percent of the variance; accordingly, this curve could be said to provide a moderate fit to the data.

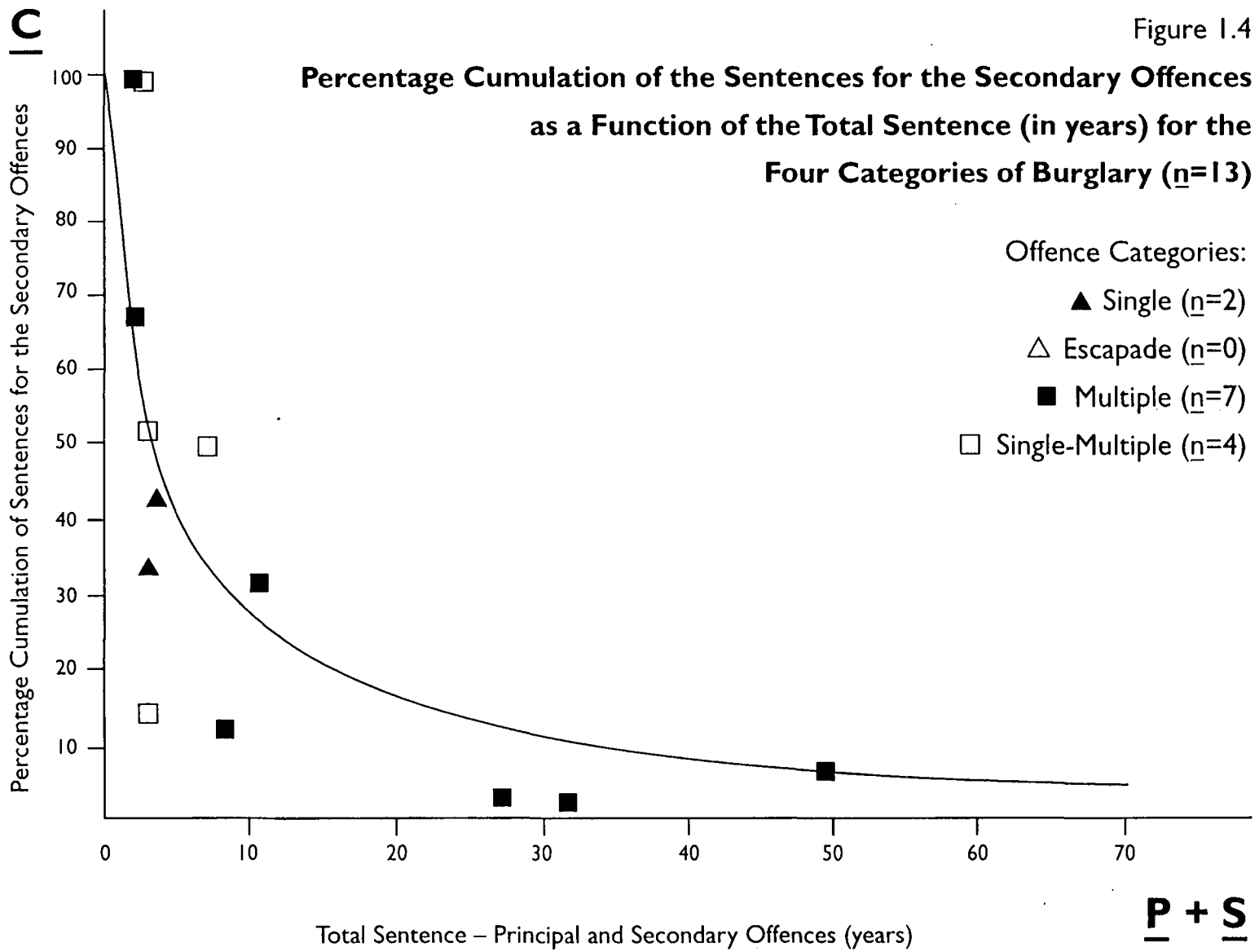


Figure 1.4

Percentage Cumulation of the Sentences for the Secondary Offences as a Function of the Total Sentence (in years) for the Four Categories of Burglary (n=13)

There is potential for error in the data in Figure 1.4 for some of the offenders. It is where all or some of the offending comprised a single event and the sentence for a separate transaction connected with a burglary (e.g. false imprisonment) was made concurrent with the sentence for the burglary. As explained for armed robbery, under these circumstances it is not clear whether concurrency was ordered to avoid excessive cumulation or because the seriousness associated with the connected offence was taken account of in the sentence for the burglary. Where the latter alternative represents the judge's thinking, the sentence/s for the connected offence/s should not be incorporated in the calculation of the sum of the sentences for the secondary offences. This will affect the values of both C and P + S. Since in none of the relevant instances did the sentencing judge remark on this aspect of sentence determination, it cannot be known whether the data carry this error. There was one offender whose sentences were potentially subject to this error. The effect of this on Figure 1.4 is that the point (43, 3.4) would become (100, 2.8).

In examining the relationship between the effective sentence and the sentences for the component offences, also of relevance is the effect of the mean of those individual sentences. It might be that the degree of cumulation is greater where this mean is higher. To this end, offenders were divided into two categories in respect of the mean of their individual sentences: < 2 years, ≥ 2 years; this particular cut-off point was chosen to accord with that for armed robbery (see Table 1.3 for the distribution). The mean for the former category is 0.9 years, for the latter 2.5 years, and the overall mean is 1.2 years. The points for the two offenders whose mean individual sentences were higher (10.5, 31; 7.0, 50) were not consistent with this expectation, but the numbers are too small to be reliable (see Figure 1.4).

Table 1.3

Distribution of the Means for the Offenders'

Individual Sentences for Burglary ($n = 13$)

Mean Individual Sentence (years)	Frequency
< 0.5	2
≥ 0.5	3
≥ 1.0	5
≥ 1.5	1
≥ 2.0	1
≥ 2.5	1
≥ 3.0	

Rape. Before examining the relationship between the effective and component sentences, for each of the 24 offenders in the sample, it was again necessary to determine whether each of the offences associated with an effective sentence should be treated as a separate transaction or as a part of a single transaction with one or more of the other comprising offences.

The rules used for this purpose for the rape sample are largely based on those formulated above for armed robbery and burglary. Variations between the two almost exclusively lie in the examples, and arise from differences in the circumstances surrounding the commission of armed robbery and burglary as against rape. The rules are as follows.

1. Offences arising from the one act, whether there be one or more victims (e.g. two injury offences when two victims are injured from the firing of one shot) were regarded as one transaction.
2. Offences arising from separate acts of the same nature done at more or less the same time and location and on the same victim/s (e.g. three offences of resisting arrest relating to the offender's being tackled by, say, three people at the one time) were regarded as one transaction; however, an exception was made to this rule for sexual or injury-related offences, so that two offences of rape whether they be on the same victim or on two victims, were regarded as separate transactions.
3. Offences arising from separate acts of a different nature done at more or less the same time and location and on the same victim/s (e.g. offences of rape and false imprisonment; rape and indecent assault of the victim; rape and burglary relating to a break-in immediately followed by a rape at a private house; the rape of one victim and the indecent assault of another) were regarded as separate transactions.

4. Offences arising from separate acts of a different nature done at different times (usually not the same day) and (normally) different locations, the victim/s being (normally) different (e.g. offences of rape and theft) were regarded as separate transactions.

5. Offences arising from separate acts of the same nature done at different times (usually not the same day) and (normally) different locations, the victim/s being (normally) different (e.g. two offences of rape) were regarded as separate transactions.

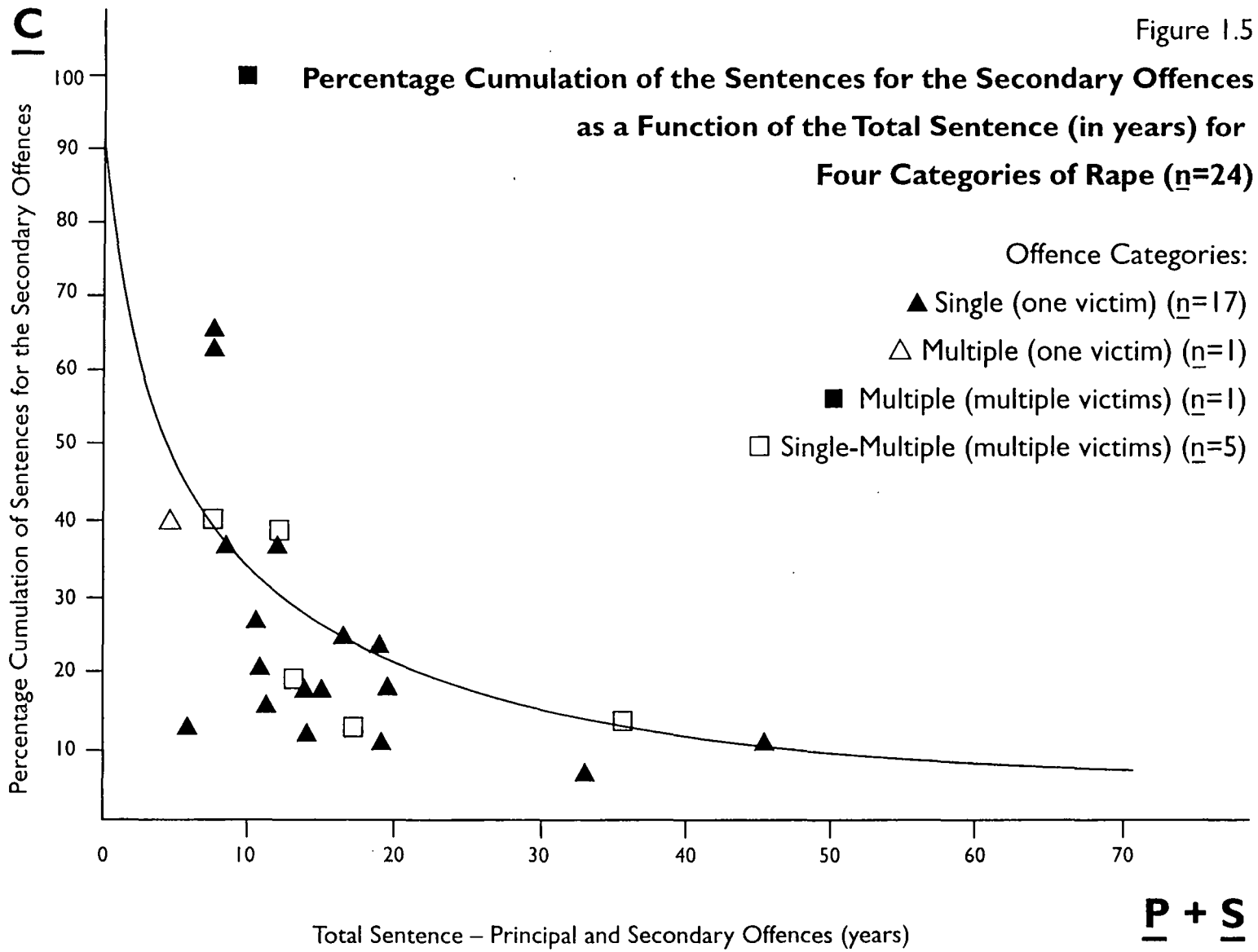
When applying these rules to the rape sample, in most, if not all instances, the correct classification of the relatedness of offences seemed apparent. There were no instances of disparity between the application of these rules and the approach of the court.

It is now appropriate to turn to the analysis of the quantitative relationship between the effective sentences and the sentences for the individual component offences for the 24 offenders in the rape sample. For this, and as for armed robbery and burglary, following Lovegrove's decision model, Figure 1.5 is the graphical representation of the relationship between the dependent variable – the percentage of the sentences for the secondary offences (transactions) made cumulative on the sentence for the principal offence (transaction) (C) – and the sum of the independent variables – sentence for the principal offence (transaction) (P) and the sum of the sentences for the secondary offences (transactions) (S), in years – for the 24 offenders.

The data are differentiated according to the circumstances of the comprising offences. It would not have been unexpected to find that this factor affected the degree of cumulation and, in particular, that there was a lower degree of cumulation where there

Figure 1.5

Percentage Cumulation of the Sentences for the Secondary Offences as a Function of the Total Sentence (in years) for Four Categories of Rape (n=24)



was one incident involving one victim (i.e. the 'single event' category). Figure 1.5 shows evidence of this. The points representing the 'single event' category are distributed across the composite independent variable and, compared with the points representing the other categories, clearly tend to a lower (mean) degree of cumulation (24.0 cf. 37.6).

The line in Figure 1.5 is the curve best fitting these data, yet consistent with Lovegrove's decision model. Again this was done by fitting a reciprocal function with the constraint $\underline{C} \leq 100$;[16] for this, the values of the constants $\underline{a}$ and $\underline{b}$ were found to be 90.4 (standard deviation = 71.5) and 0.176 (standard deviation = 0.223), respectively. The measure given of R-square showed that the curve accounted for 27 percent of the variance; accordingly, this curve could be said to provide no more than a poor fit to the data.

There is potential for error in the data in Figure 1.5 for some of the offenders. It is where all or some of the offending comprised a single event and the sentence for a separate transaction associated with the (principal) rape (e.g. false imprisonment) was made concurrent with the sentence for that rape. As explained for armed robbery and burglary, under these circumstances it is not clear whether concurrency was ordered to avoid excessive cumulation or because the seriousness associated with the connected offence was taken account of in the sentence for the rape. Where the latter alternative represents the judge's thinking, the sentence/s for the connected offence/s should not be incorporated in the calculation of the sum of the sentences for the secondary offences. This will affect the values of both $\underline{C}$ and $\underline{P} + \underline{S}$. Since in none of the relevant instances did the sentencing judge remark on this aspect of sentence determination, it cannot be known whether the data carry this error. Accordingly, the calculations for the points in Figures 1.2 and 1.4 were redone for those offenders whose sentences are potentially subject to

this error. For these two data sets, it was the case that if only one of two or more connected offences was made concurrent, the adjustment was made for this one sentence. In fact, in only one instance was the sentence for one connected offence made cumulative when the sentence for a second connected offence associated with the same armed robbery (or burglary) was made concurrent; overwhelmingly, where there were multiple offences connected to an armed robbery (or burglary), either all or none of the sentences were made concurrent. This is probably due to the nature of the offending for these offences: typically, one armed robbery (or burglary) per incident with few, if any, connected offences. Not so for rape, whose character is often very different. For an incident involving a single victim there will often be multiple offences (possibly, multiple rapes) and it is common for only one or some of the sentences for these associated offences to be made cumulative on the sentence for the (principal) rape. Under these circumstances it would seem quite reasonable to assume that concurrency of sentence was ordered for the other associated offences to avoid excessive cumulation, not because their seriousness had been taken account of in the sentence for the (principal) rape. If this be correct, concern about this potential error for rape is better left to those instances for which none of the sentences for the associated offences (including rapes other than the principal rape) was made cumulative. Accordingly, the calculations for the points in Figure 1.5 were redone for those offenders whose sentences satisfied this criterion. There were three such offenders; see Table 1.4. First to be noted is that the absolute values of P + S remain largely unchanged. In contrast, for two of the offenders, the value of C increases markedly. (These two are indicated by an asterisk in Table 1.4.) The effect of this on Figure 1.5 is that the curve takes on a more definite form in the top left-hand

Table 1.4

The Effects on C and P + S of Potential Errors in S for Rape (n = 3)

Values		Recalculated Values	
C	P + S	C	P + S
40	7.5	67*	6.5
13	35.5	14	33.5
38	12.2	57*	9.2

corner. Moreover, the lower (mean) degree of cumulation for the points representing the 'single event' category is maintained (24.0 cf 44.3).

In examining the relationship between the effective sentence and the sentences for the component offences, also of relevance is the effect of the mean of those individual sentences. It might be that the degree of cumulation is greater where this mean is higher. To this end, offenders were divided into two categories in respect of the mean of their individual sentences: < 2 years, ≥ 2 years; this particular cut-off point was chosen to accord with that for armed robbery (and burglary) (see Table 1.5 for the distribution). The mean for the former category is 1.4 years, for the latter 4.2 years – a difference appropriate to a significant variation in offence seriousness – and the overall mean is 3.4 years. Figure 1.6 shows, contrary to expectation, that the (mean) degree of cumulation tended to be less for those offenders whose mean individual sentence was higher, for that part of the range on $\underline{P} + \underline{S}$ common to the two categories (i.e. ≤ 20.0 years) (35.7 cf. 28.0); this difference holds if the recalculated (mean) values of $\underline{C}$ from Table 1.4 are substituted (38.4 cf. 29.9).[17]

Concurrency and the Multiple Offender:
A Parallel Study

A quantitative description of the way judges apply the totality principle was the focus of the preceding study. The critical defining feature of the samples of sentences used there is that for each of the offenders in these samples there was at least two sentences of imprisonment of which one was made to some extent cumulative on the other. And, it will be recalled, when this along with the other criteria were applied in the selection process, the number of offenders in each of the three samples of armed robbery, burglary and rape was, respectively, 27, 13 and 24. These offenders were, of course, the

Table 1.5

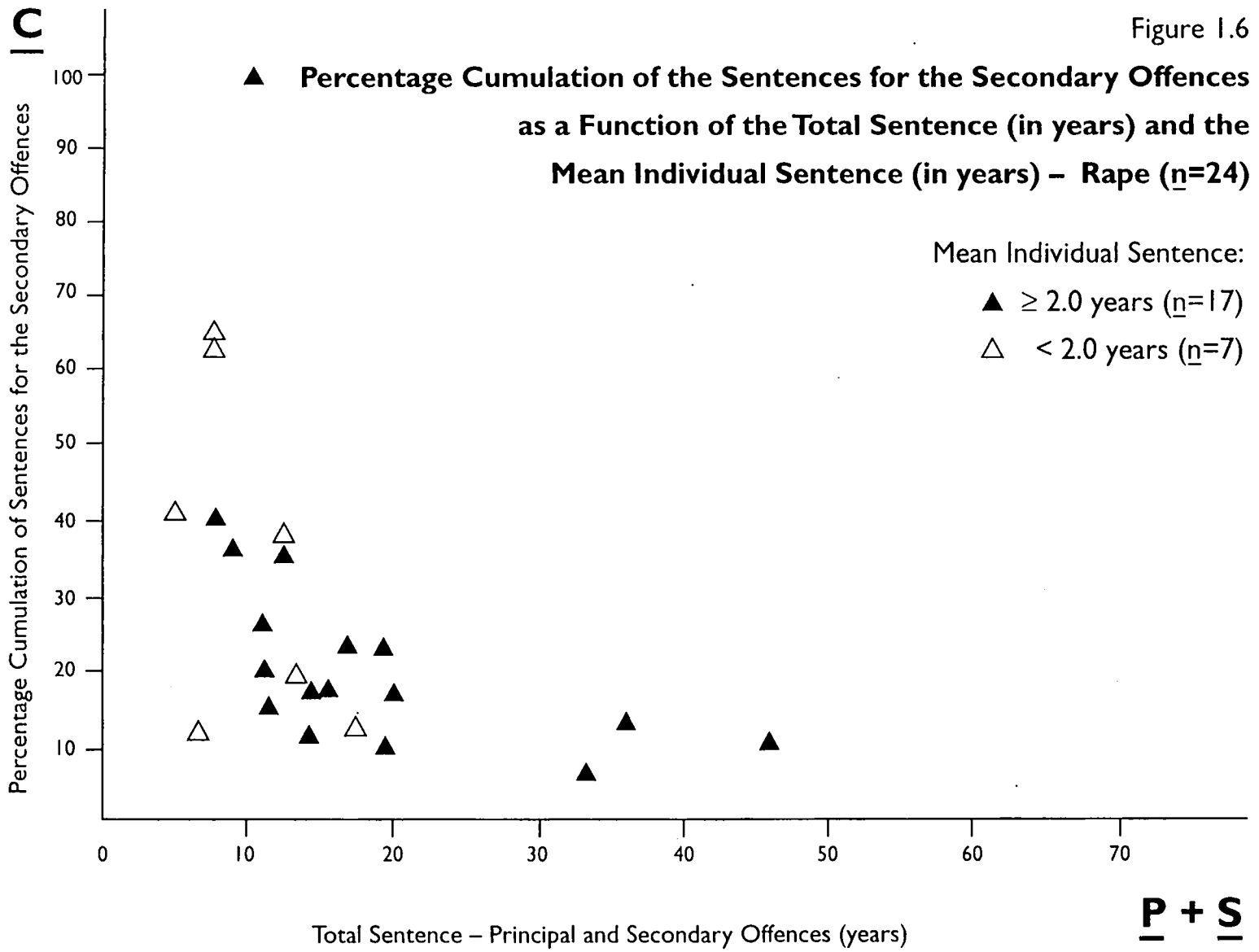
Distribution of the Means for the Offenders' Individual Sentences

for Rape (n = 24)

Mean Individual Sentence (years)	Frequency
< 0.5	
≥ 0.5	1
≥ 1.0	3
≥ 1.5	3
≥ 2.0	3
≥ 2.5	3
≥ 3.0	
≥ 3.5	1
≥ 4.0	1
≥ 4.5	3
≥5.0	2
≥5.5	2
≥ 6.0	1
≥ 6.5	
≥ 7.0	
≥ 7.5	1
≥8.0	

Figure 1.6

▲ Percentage Cumulation of the Sentences for the Secondary Offences as a Function of the Total Sentence (in years) and the Mean Individual Sentence (in years) – Rape (n=24)



primary subject of the present research. Yet a study of judicial practice in respect of the multiple offender would be deficient indeed if it did not examine cases for which full concurrency had been ordered. Accordingly, at the time of selecting the above three samples a second set of three – one each for armed robbery, burglary and rape – was constituted. This was done by putting to one side those offenders who met the same selection criteria as the first set save that their two or more sentences of imprisonment had been made fully concurrent. Comparatively few offenders might have been expected to satisfy this modified set of criteria, since in each case at least two of the sentences of imprisonment were for offences representing separate transactions. Of interest, therefore, are the number and offence circumstances of cases characterised by concurrency. This information is given in Table 1.6.

Comprising the three samples of armed robbery, burglary and rape, in which the individual sentences were made fully concurrent, were 54 offenders. This is to be contrasted with the 64 offenders in the three samples for which cumulation was a criterion. Contrary to expectation, therefore, it is to be observed that full concurrency of sentence for separate transactions is very common. Indeed, of a total study sample of 118, this group represents almost one-half, a proportion quite constant across the three offences.

The second point to be observed is that for armed robbery and rape, of the offenders whose sentences were made fully concurrent, most fell in the 'single event' category and comparatively few fell in the 'multiple event' and 'single-multiple event' categories; for burglary, however, offenders are almost equally divided in respect of this contrast. Of course, how reliable these figures are in view of the small numbers must be regarded as uncertain.

Table 1.6

Relationship (in Frequencies) between the Type of Concurrency Order and the Four Categories of Offence Circumstances for Armed Robbery, Burglary and Rape

Offence	Type of Concurrency Order	Single	Escapade	Multiple	Single-Multiple	Sub-total
Armed Robbery	Cumulation	8	4	6	9	27
	Concurrency	18*	3	2	0	23
Burglary	Cumulation	2	0	7	4	13
	Concurrency	6	2	4	1	13
Rape	Cumulation	17	0	2	5	24
	Concurrency	15	1	1	1	18

Note. 'Cumulation' includes full and partial cumulation; 'Concurrency' means full concurrency.

* Includes two female offenders.

Finally, some degree of cumulation is generally to be expected where the comprising sentences relate to separate transactions. This expectation would be particularly strong for those offenders in the 'multiple event' and 'single-multiple event' categories. Yet, putting these two categories together for the 'cumulation' and 'concurrency' samples, it can be seen that this expectation was not met for 9 of the 42 offenders. This is a not-insignificant proportion, especially since for only three of these offenders was a reason given for concurrency or did circumstances acting to lessen the expectation of cumulation arise. In one case – an armed robbery – the judge determined that the presumption of cumulation was outweighed by the demands of mitigation; and each of the two other cases involved several offences of rape by a relative against the one child over a period of time, perhaps for this reason better dealt with globally. For the 'escapade' category there too would be an expectation of cumulation, although perhaps less strong than for the previous two categories, since some judges may be inclined to deal with seriousness globally where the circumstances of the offending can be construed as a spree. Yet full concurrency was the courts' approach in a majority (six) of the ten cases. In two instances, the judge gave reasons for the orders of concurrency. One of these cases involved matters pre-dating the offender's last sentencing hearing; had these matters been dealt with then, the judge believed, they would have been dealt with by way of concurrency. In the other case, the judge offered two grounds for concurrency. One was that it was not appropriate to fix a head sentence and a non-parole period since the offender was unlikely to be released on parole; the other was that the time the offender had spent in custody due to a breach of parole could not be reckoned as having been served. Circumstances justifying concurrency were not apparent in any of the four other cases.

Description, Guidance and the Cumulation of Sentence:

A Discussion of the Analysis

What has been offered here is a quantitative description of the way Victorian judges applied the totality principle to the sentencing of multiple offenders in the mid-nineties. It is based on an analysis of archival data and shows the relationship between the sentence of imprisonment determined to be appropriate to a case and the sentences (of imprisonment) fixed for those comprising offences constituting separate transactions. In order to do this, the author had to formulate a set of rules for determining whether each of the offences in the cases should be regarded as a separate transaction or a part of a single transaction. All this was done separately for armed robbery, burglary and rape as principal offences. For these offences, Figures 1.2, 1.4 and 1.5, respectively, are the quantitative representations of the three relationships between the effective and individual component sentences. Moreover, the equations describing the curves of best fit for these three sets of data can be used to calculate the sentence to be considered appropriate for an offender from the sentences imposed for the offences comprising the case. These products of the analysis can be regarded in two ways. Viewed as descriptions of judicial practice, they can be treated as detailed sentencing statistics for the use of judges who want to consider the appropriateness of a contemplated sentence against those considered appropriate to similar cases in the past. Considered as a numerical decision aid, they can be used as a device for assisting judges in aggregating relevant component case information (here, sentences considered appropriate to the offences comprising a case) in a coherent manner and consistent with the general judicial approach to this sentencing problem (i.e. the decision model outlined in the introduction and the product of earlier research by the author – Lovegrove, 1997a, 1997b). Both are important outcomes, since

the review of the literature revealed that past research has not dealt adequately with description and guidance in regard to the sentencing of the multiple offender. This discussion now turns to reflect on the study from these two perspectives.

The Description of Sentencing

The present description is of the Victorian judges' application of the totality principle to the determination of effective sentences. It is specifically in terms of the relationship between the sum of the sentences for the component (principal and secondary) offences and the percentage of the sentences for the secondary offences made cumulative on the sentence for the principal offence. (The effective sentence being the sum of the sentences for the principal offence and of the quantum of sentence which is the percentage.) The description in each of Figures 1.2, 1.4 and 1.5 showing this relationship takes two forms. The first is a plot of points, each point representing the judgment in respect of this relationship for one of the offenders in the sample. The second is the line best fitting these points; it crudely could be regarded as the average degree of cumulation considered appropriate across the various levels of the sum of the sentences for the secondary offences and consistent with a curve providing for progressively decreasing gains in cumulation. In the following discussion, matters relating to the substance and nature of the description are followed by those relating to the problems attending it.

Substance and nature of the description. These three lines of best fit all belong to a family of curves known as the reciprocal function. Their general effect in this context is one of rapidly decreasing cumulation with small increases in the sum of the individual component sentences until a comparatively low degree of cumulation is reached, at which level the decrease in cumulation moderates substantially with moderate increases in the

sum of sentences, and thereafter declines gradually. Accordingly, for example, for two three-year armed robberies, burglaries, or rapes, the determined degree of cumulation would be 32, 37, and 44 percent, making for effective sentences of 4.0, 4.1, and 4.3 years (see, respectively, Figures 1.2, 1.4 and 1.5). By way of comparison, for five three-year armed robberies, burglaries, or rapes, the degree of cumulation would be 16, 19, and 25 percent, the corresponding effective sentences being 4.9, 5.3, and 6.0 years. (See Table 1.7.)

As Figures 1.2, 1.4 and 1.5, and Table 1.7, show, cumulation is manifestly greatest for rape, clearly the most serious of these three offences as categories of crime, whether the criterion be the statutory maximum[18] or the average (mean) court sentence.[19] In line with this, the mean of the individual component sentences was found to be substantially less for the burglary (1.2 years) and the armed robbery (2.3 years) samples than for the rape (3.4 years) sample (see, respectively, Tables 1.2, 1.3 and 1.5). The lower degree of cumulation for burglary and armed robbery, therefore, could have been due to the difference in intrinsic seriousness (as reflected in legislation and court practice) or the difference in the seriousness of the actual component offences (as reflected in the present data). Then, perhaps the circumstances of burglars and armed robbers as offenders raise more mitigatory matters or have greater potential to be seen as mitigatory in the context of their offending. Finally, greater weight may be given to mitigation in the concurrency orders because of the less serious nature of burglary and armed robbery. Behind at least three of these four factors – intrinsic seriousness, mean sentence and weight of mitigation – lies the concept of proportionality defined in terms of the seriousness of classes and sub-classes of offence. Accordingly, differences in the degree of cumulation for rape as

Table 1.7

Comparative Percentage Cumulation as a Function of the Sums of Sentence

for Armed Robbery, Burglary and Rape

Offence	Sums of Sentence (years)						
	0	4	8	15	30	60	90
Armed Robbery	96.3	41.2	26.2	16.0	8.7	4.6	3.1
Burglary	100	47.0	30.7	19.2	10.6	5.6	3.8
Rape	90.4	53.1	37.5	24.8	14.4	7.8	5.4

against burglary and armed robbery, particularly for high levels of the sums of sentence, in part may be evidence of proportionality in one way or another acting as a powerful limiting factor on cumulation.[20] By way of contrast, in the development of the author's decision model based on judges' accounts of how they approached the sentencing of the multiple offender (Lovegrove, 1997a, 1997b), it will be recalled that their justification for constraint was the need to minimise the potentially crushing effects of imprisonment on offenders. Of course, the two justifications are not incompatible. In fact, both are relevant considerations under the totality principle (see Fox and Freiberg, 1999).

Also worthy of comment in regard to Figures 1.2, 1.4 and 1.5 is the variation of the points around the curves of best fit for armed robbery, burglary and rape. For each offence the variation is significant but is manifestly greater for rape than for armed robbery and burglary. These observations are reflected in the percentage of the variance accounted for by each of the curves, the values for the armed robbery, burglary and rape samples being, respectively, 49, 56 and 27. In respect to this, the legislative changes in the early nineties providing for harsher sentences applied to the last of these offences. Now, if there was disparity between the judges in their preparedness to depart from (then) current practice – and from the observations of the Victorian Court of Appeal in O'Rourke (1997), this may have been so – then these figures would not come as a surprise. In any case, substantial variation around the lines of best fit is to be expected. The reason is simple. The curve represents an algebraic model not incorporating a number of aggravating and mitigating factors potentially material to the degree of cumulation considered appropriate. In respect of aggravation, these may include, the commission of a series of offences over a prolonged period of time, the presence of serious offences, and variation in the nature of the criminality of the offences (for

example, variation in the type and circumstances of a series of sexual offences); and in regard to mitigation, multiple offences committed as a part of a spree, and an offender's rehabilitation prospects (see Lovegrove, 1998).

Nevertheless, even if all of these matters were incorporated in the decision model underlying the quantitative description, it cannot be assumed that the variance in the three figures would be significantly lessened. For the complexity of the often competing considerations bearing upon sentence is so great as to almost certainly overwhelm the judges' thinking, the inevitable result being sentences characterised by noise and hidden systematic error. Indeed, there is some evidence in the present data favouring this line of thinking. To describe the circumstances of the offending of the individuals comprising each sample, it will be recalled, four categories were created: namely, 'single event', 'escapade', 'multiple event', and 'single-multiple event'. Cases falling in the first two categories could be described as sprees and what could be regarded to a greater or lesser extent as campaigns of offending would come within the latter two categories. This potential mitigation and aggravation might be expected to be reflected in less cumulation in the former categories and greater in the latter. The evidence adduced showed that this was so for the rape sample but not for armed robbery. Similarly, the degree of cumulation for those individuals for whom the mean of their individual component sentences was low was compared with those cases for which it was high. Now, cases comprising serious offences would fall in the latter category, and with this aggravating feature would be expected greater cumulation. But the evidence tended against this: the figures were consistent with the expectation for armed robbery[21] but not for rape. This evidentiary digression was made to investigate whether a more complex decision model incorporating these potentially aggravating and mitigating factors might account for a

greater percentage of the variance in each of Figures 1.2, 1.4, and 1.5. From the present analysis, this would appear unlikely.[22] This conclusion is intended to apply to the more usual variation in respect of these factors across cases.[23] However, where the comprising offences were uncommonly serious or the period of offending particularly protracted (or there was striking variation in the constituent criminality), cumulation might actually be greater and demonstrably so. But such instances are by definition rare and, consistent with this, judges in their reasons for sentence appear not often to think of these factors as worthy of comment. Not so for rehabilitation prospects. Matters at the heart of this factor are commonly canvassed in judgments, and from judges' sentencing remarks the stated allowance for it is sometimes substantial.[24] If, in fact, this is reflected in practice, the inclusion of this mitigating factor in the model might pay dividends.

What, then, can be said about this description of judicial practice when these two aspects of quantitative description – curve of best fit and plotted points – are considered together? This question is best answered in the light of several considerations. As has already been stated, the model underlying the curve of best fit does not incorporate a number of aggravating and mitigating factors potentially material to the degree of cumulation. Some of these factors may have been taken into account by a majority of judges in a largely principled manner and, accordingly, be systematically represented in the distribution of points. Others of these factors might not have been taken into account properly and be represented in the distribution as systematic error (e.g. a predilection for excessive cumulation) or unsystematic (random) error (e.g. information overload). The balance between the two is unknown but may well favour error. In respect of the former, considering the cases as a whole, there may be a preponderance of aggravating or mitigating factors. In respect of the latter, the error variance is unknown. All this has a

number of consequences relevant to the description of judicial practice. One is that the curve may not represent the degree of cumulation appropriate to cases where either there is no aggravation and mitigation or the two are in balance. A second is that the plot cannot be assumed to show the appropriate upper and lower limits on cumulation. Nevertheless, it may well be that an imaginary, smooth band covering the denser areas of the plot would represent the normal limits on cumulation according to practice. (In view of the very substantial variation in the plot of points for rape, this latter consequence may not apply to this offence.)

But there is more to this description of judicial practice. What has been illustrated here is a quantitative description built upon and expressed in terms of an independently formulated qualitative description. And just as this quantitative description is essential to the full description of judicial practice so is the underlying qualitative description. This qualitative description refers, of course, to the author's decision model covering how judges attempt to apply the totality principle. It takes the form of a series of systematic steps to be followed and matters to be considered when determining what is appropriate by way of cumulation. What are incorporated in the model are not only major relevant factors but also a framework for aggregating them in a coherent fashion. It covers, therefore, process, content, and structure. Ideally, this model should be derived from sentencing policy as it is to be found in sentencing law. But in the absence of such policy, its source is data from the author's empirical study of what judges understood to be their approach to this sentencing problem. For the purposes of the present study, this decision model provided the foundation for the algebraic model used to analyse the archival data on judicial practice. However, considered independently of this study, the model can be

seen as offering an orderly approach to thinking about the sentencing of the multiple offender.

To the qualitative description there is a second aspect. It is a set of rules for determining whether each of the offences in a multiple-offence case should be regarded as a separate transaction or as part of a single transaction along with one or more of the other offences. Since sentencing law does not provide the necessary detail in this respect, their derivation was imperative, the data source being archival. The original set was formulated from Lovegrove's (1998) armed robbery sample, and these were fine-tuned here using the present armed robbery sample, and then modified in the light of the data for the burglary sample and, following this, for the rape sample. Considered in detail, these rules are offence specific, but share much in common, being distinguished largely by the offence-specific circumstances used to illustrate each set. These rules are of significance because the totality principle applies only to the cumulation of sentences for offences constituting separate transactions. Clearly, without these rules, the present study could not have proceeded. Considered more generally, they, along with the decision model, are the qualitative elements essential to describing a rational and consistent approach to the sentencing of the multiple offender.

Problems attending the description. The strength of this quantitative description of judicial practice is that it is by way of a statistical model consistent with the structure of judicial thought, this being reflected in the independently derived qualitative decision model. As a consequence, the quantitative representation of the relationship between the degree of cumulation and the sentences for the secondary offences accords with the judicial approach to this sentencing problem. And it has the potential to offer a more accurate and comprehensive description of that approach with respect to process and

content. This strategy is and remains fundamental to the strength of the present description of judicial practice. Nevertheless, as the strategy has been executed here, there are potential theoretical and empirical problems.

The theoretical matters relate to the qualitative decision model underlying this quantitative description. There are four: one bears on the decision model's development; the three others are relevant to the model's content as a statement of principle. To the first: this strategy for the quantitative description of practice ideally requires that the model be derived from sentencing policy as sentencing law, a policy known and understood by judges, and which they accept and attempt to apply. Now, if all judges applied the one policy coherently and consistently, then policy and practice would be one, and the model as quantified on the basis of practice would be a true quantitative representation of sentencing policy. The strategy as implemented here necessarily fell short of this ideal. The difficulty arises because there is not a comprehensive stated policy for judges to apply to this sentencing problem. There was no alternative, therefore, to the source of the model being an empirical study of judges' thoughts as they sentence multiple offenders. In respect of this, the potential problem is to be found in the summary of this study given in the introduction: most of the judges – but not all – appeared to have no more than a superficial understanding of this sentencing problem, their expressions of what they thought to be correct by way of a general approach lacking detail and being incomplete; moreover, other strategies (actually, part-strategies) were adopted by the judges in particular cases, and these varied across judges. These features represent a substantial departure from the ideal, but not sufficient to invalidate the strategy, for there are saving graces. The judges' stated approaches were largely consistent with the model, when and to the extent their thoughts represented a general approach; and the disparate

part-strategies had limited applicability, tending to be case specific in their relevance. More importantly, the judicial decision strategy represented in the model was the only discernible one offering a general approach to the sentencing of multiple offenders. Thus the judges could be said to be applying a more-or-less common and general policy badly. As a result, data generated in the application of that policy (i.e. sentencing practice) will be noisy. For the purpose of the present project, this is a nuisance, but not fatal to validity. By way of contrast, it would have been fatal to the integrity of the present approach to the quantitative description of judicial practice had the judges been reliably applying different approaches to the sentencing of multiple offenders. This is so because the line of best fit – the quantitative manifestation of policy – is generated by an averaging process. Averaging (disparate) practice generated by the application of a common policy can be used as a quantitative estimate of that policy. But if collective practice represents the application of disparate policies, it makes no sense to think of average practice as a reflection of (a common) policy.

Now to the first of the three theoretical matters representing limitations bearing on the content of the decision model as a basis for description. Whether a sentence of imprisonment is appropriate in a multiple-offence case depends on the seriousness of the comprising offences considered individually and in the aggregate, so said the Victorian Court of Criminal Appeal in Tutchell (1979). Yet the decision model does not have the concepts to handle the aggregation of seriousness across offences individually not warranting a term of imprisonment, as required by this prescription. How many cases are not covered by the model because of this theoretical hole is not clear, but it maybe significant, especially for offences of moderate seriousness (e.g. burglary), spanning, as they do, the boundary between custodial and non-custodial sentences. Let it be clear, this

omission was not due to an oversight, nor can it readily be made good. For it raises the vexed and yet-to-be-solved problem of how to scale sanction severity within and across non-custodial sanctions and between these and the sanction of imprisonment.[25]

Further, by way of limitations, there are those factors, alluded to already, of potential relevance to the degree of cumulation considered appropriate. Judges, in their sentencing remarks, are given to devoting much thought to matters broadly bearing on an offender's rehabilitation prospects and are, so they say, prepared to give them substantial weight in some circumstances. If this is indeed a true reflection of their practice, then the factor of rehabilitation prospects should be formally incorporated in the decision model. This is because the model represents a statement of what judges understand to be correct by way of approach to the sentencing of the multiple offender. What is being envisaged here is allowance being made for this factor with a degree of precision approaching that of the rest of the model. Lovegrove's (1989) attempt to assess rehabilitation prospects is one approach. He identified individual case factors thought to be relevant to rehabilitation, and these were then aggregated as they applied to a particular case to determine the offender's rehabilitation potential. But the validity of what is an analytic approach is open to question. In particular, it may be that for this judgment the significance of case factors is better considered holistically as indicative of strong, weak or no rehabilitation potential. This, of course, would have implications for how the evaluation of an offender's prospects is related to those factors already in the model.[26]

Finally – this matter also relates to factors of potential significance – the finding in the current results of greater cumulation for rape than for armed robbery and burglary, at first blush might be taken as evidence of the seriousness of the legal category of offence as relevant to the degree of cumulation and, accordingly, a factor that should be

incorporated in the decision model. This, of course, could be readily handled by there being a separate curve for each offence distinguishable by way of the degree of cumulation. But, recall from the above discussion, the matter is not so clear-cut. For the seriousness of the category of offence and the seriousness of the individual component offences were confounded in the present samples, the consequence being that the greater cumulation may not have been for the greater seriousness of the offence category per se but for the greater seriousness of the comprising offences independent of offence type. However, the findings in the present study must be regarded as against this alternative proposition; recall, across the three categories of offence the mean individual sentence of the offences comprising a case did not appear to be a determinant of the degree of cumulation. In any case, whether or not one or both of these exercised the minds of the judges here, the latter would appear to offer a sounder justification as a basis for policy. This is based on the view, illustrated as follows: two-and-a-half-year sentences of imprisonment imposed on a burglary and an armed robbery indicate that the two are seen as equally serious, with the former being a more serious instance of a less serious offence category and the latter a less serious instance of a more serious offence category. Against this, is not a case comprising (say) three five-year armed robberies to be treated more seriously than a case comprising one five-year armed robbery and ten one-year thefts? If this be so, then, as a matter of principle, separate curves would not be required for the various legal categories of offence (i.e. there would not need to be a separately calibrated model for each offence type). Nevertheless, there would have to be in the decision model a modifier to adjust the degree of cumulation to accord with the seriousness of the individual component offences as indicated by the sentences considered appropriate to them.

Having considered the theoretical problems associated with the approach to describing judicial sentencing practice, and formulated for the present study, this discussion now turns to the attendant potential empirical problems. These relate to both the decision model used to represent judicial practice (what constitutes the qualitative description) and the graphical representation of judicial practice (what constitutes the quantitative description). In addition, there is the question of the validity of the rules for determining the separateness or otherwise of offences as transactions.

Since the quantitative description of judicial practice is structured around the qualitative decision model, the validity of this model is pivotal to the validity of that description. The answer to the question of validity lies, of course, in an evaluation of the methods used to develop the model. These matters have been canvassed in detail in Lovegrove (1997a). From that discussion, the principal threats to validity emerged as the absence of a cross-validation study and the unavailability of standardised techniques for tapping judges' thoughts on what is correct by way of approach to the multiple offender.

The problem of cross-validation arose in the following circumstances. The hypothesised decision model was formulated on the basis of a legal analysis, as explained in the introduction. Its validity was tested in the light of the judges' responses to hypothetical cases representing critical aspects of this decision model. This showed the model to be untenable. Nevertheless, in the judges' responses it was possible to discern an alternative general decision strategy. This was the model used in the present study. Clearly, its derivation cannot be said to be rigorous. For it is based on the judges' thoughts on the relevance and effects of factors not necessarily represented or isolated in the hypothetical cases. In these circumstances the scope and generality and even relevance of the matters raised in the judges' responses must be regarded as somewhat

uncertain. Moreover, matters considered by judges to be relevant as a matter of principle may nonetheless be overlooked and not find their way into their responses. What is required ideally, then, is a second set of hypothetical cases, specifically formulated to represent critical aspects of the alternative model as it applies to the multiple offender.

In any case, before the decision model can be used as a basis for describing practice, it must be accepted by the judiciary as a valid representation of what is appropriate by way of approach to this sentencing problem. Herein lies the second threat to validity relating to the unavailability of standardised techniques. This arises because for this decision problem there cannot be external and independent criteria against which to validate the model, for the following reason. To the extent that there is a sentencing policy, it is what judges hold it deliberatively and intuitively to be. The problem of validity, therefore, turns on whether this policy is distorted or not fully elaborated by the techniques used to elicit it. Herein lies the present difficulty. There are suggested protocols for obtaining records of thinking in relation to problem solving, but their validity is far from firmly established, they do not come with an error theory, and, in any case, they may – as in the present study – require adaptation to the particular requirements of the empirical problem.

How, then, in the light of these considerations, is the validity of the decision model used here for the description of practice to be regarded? With a more complex model – complexity indicated by numerous constituent factors and their detailed application – so the threat to validity is greater. Since the present model can be regarded as simple, there can be considerable confidence in it within its present limited scope and detail. Nevertheless, it almost certainly requires the incorporation of other factors for completeness.

The quantitative description of judicial practice also suffers from potential empirical problems specific to the present study. Remember, there are two aspects of the quantitative description – one is the plots of the points in the figures showing the relationship between the degree of cumulation and the sum of the (principal and secondary) sentences, each point representing a judgment in respect of this relationship for one individual; the other is the lines of best fit for these sets of points.

Data for the years 1995 and 1996 provide the basis for the present description, which, therefore, can be regarded as a snapshot of the courts' approach to cumulation of sentence at that time. Two questions arise: how true a picture is it of then? and is it of now? First, 'then'; followed by 'now'.

Small numbers lessen the confidence which can be had in the accuracy of the description. Across offences this applies particularly to burglary, and within offences this applies particularly to high levels on the sums of sentences for the three offences. With respect to the line of best fit, it probably falls near the true path for armed robbery and rape, but may well not for burglary. In regard to the distribution of points, the true variation around the line of best fit – i.e. what should be regarded as the appropriate upper and lower limits on cumulation – must be regarded as problematic for all three. What strengthens this latter uncertainty in light of the small numbers is the wide variation around the curves of best fit.

There is the possibility of error in the accuracy of the description to the extent that judicial practice departed from principle. Of particular concern, in regard to this, is the critical assumption underlying the present analysis: namely, the sentences imposed for the offences comprising a case be appropriate to those offences considered individually. However, evidence – albeit weak – casting doubt on this is to be found in the second part

of the author's study in which the decision model was developed (again, see the introduction). There judges imposed sentences for fictitious cases presented in the form of comprehensive summary descriptions; some of the cases were single-count cases of armed robbery or burglary and others were multiple-count cases comprising combinations of these single offences. The data were open to the interpretation that there might have been a tendency among some judges to attempt to offset the potentially crushing effects arising from the cumulation of sentence not only by means of orders of partial cumulation but also by imposing somewhat less than appropriate sentences for the individual component offences. Now, if this practice was common among the judges whose sentences comprise the present three samples, then the description of judicial practice offered by this study would be seriously in error. The effect would be to elevate the curve; showing cumulation to be greater – the points being perhaps significantly greater in some instances - than it would be were the sums of sentences for truly appropriate sentences. (This assumes that the effective sentences in these samples are appropriate; at a crude level this is reasonable, since the analysis incorporates the results of appeals.)

A second source of error may arise from judges not giving full and clear accounts of their reasoning relevant to the degree of cumulation. One concern here is of a case being included in the sample when fuller reasons for sentence would have revealed that it did not satisfy the criteria. These reasons will be for matters lying outside the immediate circumstances of the case; for example, the ordering of a lesser degree of cumulation because the offender was currently undergoing a sentence of imprisonment. Certainly, reasons of this type are given in judgments, and it is perhaps reasonable to assume that their omission, when they are seen as relevant, is the exception.

The final threat to the validity of the quantitative description of the judicial approach to cumulation relates to the rules formulated for determining the separateness or otherwise of offences as transactions. This too arises from the possibility of judges not always giving a full account of their reasoning when determining sentence. Where the sentences for offences are falsely assumed to represent one transaction, the sum of sentences will be an underestimate of the true value and, hence, the degree of cumulation an overestimate. Similarly, where an offence is incorrectly treated as a separate transaction, the sum of sentences will be overestimated and cumulation underestimated. Uncertainty, it will be recalled, does not arise from those sentences made to some extent cumulative, since this may be taken to imply separateness. Nor does it centre on all instances of full concurrency, because it may reasonably be assumed that many of these were thought of as separate, as for armed robberies of different victims and well separated in time. The real uncertainty lies where the offences are more closely related, for example, the false imprisonment of multiple victims during the one armed robbery. It is this sub-set for which the author's rules may be in error, but probably not in a significant number of cases. Recall, the claim to validity for the rules lies in their source. They were formulated so as to comport with the Court of Appeal's general principle for what constitutes separateness, although for some, contrary interpretations would not have been unreasonable, such is the generality of the Court's principle from which they were derived. Moreover, they were based on what appeared to be common practice and, in line with this, held in most instances where cumulation had been ordered and the offences could be assumed to be separate. To the extent that within and between cases there is systematic error in the rules as applied, the effect will be on the line of best fit and it will be to misplace it somewhat. In fact, the major impact will be on the degree of cumulation,

and this may be significant particularly for low values of the sum of sentences.[27] To the extent that this error is unsystematic, the effect will be on the plot of the points, each representing a judgment about cumulation, and it will be to greater error variance. The balance in error might be expected to lie with the latter. It is for these reasons, the effect of this potential error on the validity of the current description of the judicial approach to cumulation of sentence would not be expected to be great. However, the point has already been made in this present discussion of the results that these rules are an integral part, along with the decision model, of the qualitative description of judicial practice. In regard to the rules viewed from this perspective, the comments made about the decision model's validity and its validation process apply here also: the rules as policy must be what judges hold them to be. What is required, therefore, is that the judges reflect on these empirically derived rules, treating them as a draft statement of what is appropriate by way of policy; the validity of the product of this process as a representation of this policy, then, will turn on whether this policy is distorted or not fully elaborated by whatever techniques are used in assisting the judges to reflect on the draft rules.

But would the present picture of the judicial approach to the cumulation of sentence be expected to apply today? The answer is, 'probably', for the following reasons.

In recent years, there have been no statutory changes applying directly to what is considered appropriate by way of concurrency or cumulation for rape, armed robbery and burglary. Nevertheless, legislative amendments having the potential to affect the sentencing of these multiple offenders have been passed in recent years. Changes to statutory maximum penalties fall in this category. This is because a significant increase (or decrease) in a maximum may lead the courts to conclude that current sentencing levels should be raised (or lowered) for that offence. For cases involving multiple

instances of the offence, this may mean higher effective sentences by way of greater cumulation. (See for example, the judgment in the Victorian Court of Criminal Appeal of Cummins, J. in Ramage, 1993.) In fact, there have been changes to the statutory maximum penalty for two of these three offences – armed robbery, up from 20 to 25 years, and burglary, down from 12½ to 10 years.[28] The courts probably regarded the latter change as insignificant, no more than fine-tuning, and not a parliamentary prompt. This conclusion is less clear for armed robbery, but would be expected to apply also, since the change was to an-already high level. Consistent with this, the Court of Appeal has not intimated that it has modified its approach to sentencing for these offences. Although for rape, sentencing law has remained unchanged, there may be some tendency to harsher sentences. This is because around the end of the period of the present study the Court of Appeal was still attempting to impress on some judges the need for more severe sentences in the light of the legislative changes in the early nineties (see the judgments in O'Rourke, 1997, and Higham, 1997.) Unfortunately, since there are no current official sentencing statistics, reference cannot be made to recent practice.[29] Also of relevance here is the newly created statutory category of the continuing criminal enterprise offender, for it has the potential to apply to multiple offenders whose principal offence is armed robbery.[30] The legislation provides for higher maximum penalties – but not in effect for armed robbery, in view of its 25-year level – and by this means can be taken to give a clear signal to the courts that sentences should be more severe for this type of offender. However, the qualifying monetary value is so high, few cases would be expected to qualify; in fact, it appears none has to date.

Guidance for Sentencers

The present quantitative description of the Victorian judges' application of the totality principle to the sentencing of multiple offenders was to an end, namely, the development of guidance. This has been done separately for offenders whose principal offence was armed robbery, burglary or rape. Lovegrove (1989) used the term detailed sentencing statistics for this when archival data are analysed in terms of case characteristics and sentence. In the present study the analysis is of the relationship between the sum of the sentences for the component (principal and secondary) offences (case characteristics) and the percentage of the sentences for the secondary offences made cumulative on the sentence for the principal offence (sentence). This takes two forms. One is of a plot of the points representing judgments in regard to this relationship for individual offenders. The other is of the line best fitting these points. The algebraic equation describing this line can be used to calculate the effective sentence considered appropriate according to current judicial practice and in the light of the sentences imposed for the offences comprising the case. In these two ways the description can act as a decision aid. Two conclusions from the discussion of the results as description apply also to their use as guidance: the curve may not represent the degree of cumulation appropriate where there is no (or there is a balance of) aggravation and mitigation; an imaginary, smooth band covering the denser areas of the plot may be taken roughly to represent the upper (and lower) limits on cumulation where there is a preponderance of aggravating (or mitigating) factors, and in the absence of exceptional circumstances. In view of the small sample sizes, particularly for burglary, the guidance provided by the present analyses must be regarded as weak, little more than indicative. Since the degree

of cumulation considered appropriate varied across the three categories of (principal) offence, each of the data sets cannot be applied outside the offence category it represents.

The strength of the present quantitative description of judicial practice as a basis for guidance is that it is by way of a decision model consistent with the structure of judicial thought, this being reflected in the independently derived qualitative decision model (see Lovegrove, 1997a, 1997b). By this means, what it offers as guidance is not a degree of cumulation necessarily to be considered in isolation. Rather, the guideline cumulation is presented within a structure determined by the major relevant factors affecting cumulation and, in this way, framing the appropriate effect on cumulation of relevant factors not a part of that structure. This is important since judges must use the guidance as a standard against which to consider the effects on cumulation of factors not incorporated in the decision model. Accordingly, it has the potential to offer more accurate and ready guidance. (See generally, Lovegrove, 1989, 1997a.)

What the guidance states to be correct by way of cumulation is not without threats to its validity. These threats are, of course, the very same ones besetting the description; the discussion in regard to these, other than the conclusions, need not be rehearsed here. There were several factors, probably unsystematic in their effects, each of which would be expected to increase error variance somewhat. These were not thought to be a cause for concern, although, in conjunction with the small numbers, they render the plots of points an uncertain description of the normal limits on cumulation. None of this, however, seriously undermines the integrity of the description as a source of guidance. Nevertheless, there is one matter for concern. It is that there may be a tendency among at least some judges to impose somewhat less than appropriate individual component sentences in the sentencing of multiple offenders. If this was in fact the case in the

present samples, and it was widespread, then the curve of best fit as a guideline would represent an overestimate of what in effect is appropriate by way of cumulation for truly appropriate sentences. Clearly, the description as guidance should not be regarded as otherwise than unsatisfactory unless it is largely based on truly appropriate sentences for the individual component sentences.

Concluding Observations

The present study has produced a description of judicial practice in the sentencing of multiple offenders according to the totality principle. For this, the goal was that the numerical picture be accurate and complete, and lend itself to ready and precise guidance. In order to achieve this, so it was proposed, the data reflecting that practice (case facts and sentences) should be analysed according to the structure of judicial thought. For this it will be how judges attempt to aggregate sentences fixed for offences comprising a case in order to determine the effective sentence for that case, and this will include the rules for determining which comprising offences are to be treated as separate transactions. What follows is that the quality of the quantitative description of practice is limited by the level of the judges' current understanding of this sentencing problem. (This is, of course, a theoretical upper limit, because there will be research errors in ascertaining that policy, judicial errors in applying that policy, and further research errors in capturing that practice.) Since in the development of the author's decision model (Lovegrove, 1997a, 1997b), it will be recalled, judicial policy with respect to the multiple offender was found to be wanting – it being characterised by disparity, incompleteness and a lack of detail – steps must be taken to rectify this before there can be any improvement in the quantitative description of practice. Consequently, the present description should be seen

as little more than a first step towards detailed sentencing statistics as a means to guidance, showing how they should be compiled and what they would look like.

But policy, as formulated to date and reflected in the decision model (and as practised), weighs heavily on description in another respect. To the extent policy is poorly founded and unjust, so these flaws will be reflected in the description and in the guidance. Indeed, a number of problematic matters are raised in the present study. Cumulation as described was influenced by the seriousness of the legal category of the principal offence, but not apparently by the seriousness of the individual component offences as reflected in their sentences. One may ask whether it should be like this. A serious attempt to answer this question would raise matters non-numerical in character, and hence falls outside the scope of the present analysis. Nevertheless, how the seriousness of the individual component offences as determinants of cumulation could be incorporated in the decision model is taken up in Part 2 of the present study.

Another matter raised in the present study relates to the upper limit on cumulation. In the development of the author's decision model, the stated judicial policy consideration found to be applying there, it will be recalled, was that the effective sentence be not crushing upon the offender. As a matter of practice, this applied not just at the upper levels of imprisonment, but was said to act as a moderating influence on the cumulation of all sentences of imprisonment. A question relating to justice is thereby raised: do these sentences as constrained explicitly in the interests of mercy, also comport with the requirements of proportionality? This does raise matters in keeping with the character of the present analysis: namely, formulating a numerical standard of what may be regarded as a proportionate quantum of cumulation; and applying this as a criterion to test whether the effective sentences are proportionate. Part 2 of the present study

addresses these matters, the effective sentences being those in the description in this first part of the study.

But before this, there is a brief discussion of the results of the parallel study on the incidence of concurrent sentences in the samples of armed robbery, burglary and rape.

The Phenomenon of Concurrency

In cases where two or more sentences of imprisonment are imposed for offences representing separate transactions there is in appellate policy a general presumption of some degree of cumulation for at least one of these separate offences. Yet in just under half of the cases – a proportion reasonably constant across the armed robbery, burglary and rape samples – all the sentences were made fully concurrent.

This is a significant percentage, indeed. In view of this it is important to attempt to identify the reasons underlying this high use of full concurrency. Do they largely represent clearly sound or at least arguable justifications? Or do they reveal a significant flouting of sentencing policy, or perhaps bad practice in the interests of lazy thought?

As a means of addressing this issue, the classification used to describe the circumstances of the offending constituting a case is most helpful. Table 1.6 shows that concurrency was ordered in 39 of the 66 cases[31] falling in the 'single event' category. In this type of case, the offending lends itself to being seen as a single incident and, accordingly, a secondary offence can be thought of as representing behaviour aggravating the principal offence. By way of illustration, in an armed robbery the false imprisonment of a second victim, and in a rape a second count of rape of the one victim, can be treated as a part of their respective principal offences. This represents global sentencing. In this approach the sentence for the principal offence is made appropriate to the full circumstances of the case (i.e. the circumstances relevant to the principal offence together

with those relevant to the secondary offence) and the sentence for the secondary offence is therefore necessarily made fully concurrent. This is to be contrasted with analytic sentencing. In this approach sentences individually appropriate to the principal and secondary offences are fixed and the latter sentence is cumulated on the former sufficient to achieve an effective sentence appropriate to the full circumstances of the case. Of course, the two approaches should achieve the same result, but they may not. The global approach may leave the judge's decision open to the error of not giving sufficient weight to the various component circumstances of seriousness. By way of contrast, in the analytic approach there is the danger of the judge giving too much weight to the aggravating circumstances charged and sentenced. If (say) a sentence of two-and-a-half years is fixed for an armed robbery and one year for the false imprisonment of the victim of the armed robbery, and six months of the latter sentence is made cumulative, it is easy to understand how this could be. Which of these two approaches is less susceptible to its attendant potential error appears an open question. In respect of this discussion the conclusion must be thus: for cases falling in the 'single event' category, full concurrency cannot be taken necessarily to indicate that the sentence has not been enhanced to cover the multiple offending or that the judge has adopted a sloppy approach to sentence determination.

Nevertheless, there are grounds for preferring cumulation in certain circumstances constituting a single event. One is where cases involve multiple victims; for example, an armed robbery and the prior theft of a motor vehicle. Another is where the case involves several serious offences committed against the one victim; for example, the victim's being raped and indecently assaulted as a part of a single incident. This makes it clear to the victims that the court has recognised the separate wrongs against them. Moreover, in

such cases it may be appropriate that the additional seriousness count for more because it involves multiple victims. The analytic approach would appear to lend itself to this outcome. In regard to the utility of cumulation but the not infrequent use of concurrency, the Victorian Court of Appeal in O'Rourke (1997) – a case involving rape and other violent and sexual offences against the one woman – observed that cumulation was necessary to recognise the individual contribution of the multiple offences to the trauma of the victim; the Court also was inclined to the view that not infrequently judges had been remiss in this regard in the past.[32]

That some judges would favour a global approach for cases falling in the 'escapade' category is to be expected. This is because the circumstances of the offending can be construed as a spree, representing a single incident. And, true to expectation, six of the ten cases falling in this category were dealt with by way of full concurrency (see Table 1.6); the percentage here being similar to that for the 'single event' category. But, as a general approach in this type of case, there would appear to be an error in this construction of the case circumstances. For although the offending can be seen as a single incident in the life of the offender, the offending as a series of offences does not represent a single incident, not least because there are multiple victims separated in time and location. Thus, it is suggested, the additional offending should be reflected in an enhanced sentence; and it should be seen to be enhanced by way of a degree of cumulation, although it may well be less than otherwise would be considered appropriate so as to allow for the limited period of the offending.[33] This would appear to strike a balance between the interests of the community and victim as against those of the offender.

In regard to the main point of the discussion, then, for cases falling in the 'escapade' category, full concurrency represents bad practice, unless this approach can be justified by the circumstances of the case. Accordingly, a judge adopting this course should give express reasons for this decision. Indeed, the analysis of the results showed that in two of these six instances this was the case. But in the four others, no express reasons were given. Moreover, it was not possible to discern in the circumstances of these four cases factors warranting full concurrency. Certainly, there was an arguable reason in two of the cases for full concurrency, namely, the offender was currently in custody. But, if this was the reason, a better approach would have been to construct the current sentence properly, whether or not it be made partially cumulative on the sentence being served at the time. Consequently, in four of the ten cases in the 'escapade' category, the sentencing approach and the explanation of the decision making is a cause for concern. (It does not necessarily follow, of course, that these effective sentences were wrong, since they may have been enhanced to cover the multiple offending.)

The remaining two categories in the classification of offending – the 'multiple event' and the 'single-multiple event' categories – can be considered together for the purposes of the present discussion, since they both involve offences separated across time, locations and victims. Few, if any, of these cases would be expected to lend themselves to a global approach, since generally the circumstances would not be able to be construed as a single incident from the perspective of either the offence or the offending.[34] As a consequence, the additional seriousness associated with the multiple offences should be dealt with by way of cumulation of sentence. In fact, Table 1.6 shows that for 9 of the 42 cases falling in the 'multiple event' and 'single-multiple event' categories there was full concurrency. This represents about 20 percent of cases, well

down on the 60 percent levels for the 'single event' and 'escapade' categories, yet not an insignificant level. This, then, prompts the question: did the circumstances of these nine cases justify full concurrency against the general presumption of cumulation? The answer, from the analysis of the results, is that in one instance the judge justified full concurrency – namely, the strength of the offender's mitigation – and that in two cases the circumstances of both cases – namely, multiple sexual offences against the one child – offered what could be regarded as a reasonable justification for a global approach. Again, there was an arguable reason in two of the cases for full concurrency, namely, the offender was currently in custody, and the presentment covered 35 separate transactions involving burglaries. The inappropriateness of the first has been dealt with above. In regard to the second, awkwardness in the making of cumulation orders does not hold weight in a case deemed by the court to warrant an effective sentence of four years. In regard to the use of concurrency, then, there is a cause for concern in 6 of the 42 cases in the 'multiple event' and 'single-multiple event' categories.

Overall, full concurrency was ordered for 54 of the 118 offenders in the present study; of these 54 instances, there was no stated or apparent justification in 10 of them, a not-insignificant proportion in view of the generally serious nature of the offending and, because of its importance, warranting further investigation. These ten, of course, are in addition to the likely inappropriateness of concurrency in cases in the 'single-event' category, perhaps particularly for rape.

This analysis is not apparently subject to significant error arising from the method. One possible error lies in the determination of whether or not the offences comprising the cases were properly regarded as separate transactions. Yet this decision seemed wholly uncontentious in the ten cases for which the sentencing approach seemed to be either

sloppy or erroneous. There is a second error, of greater potential significance. It is possible that in some of these cases the circumstances of the offender warranted full concurrency but they were not either elaborated by the judge or expressly stated to be determinative. While this would not be expected to be a general problem across the sample, since the judgments tended to be well reasoned, its actual significance among these ten cases must remain open.

NOTES

1. See generally, Fox and Freiberg (1999).
2. For a less detailed and non-technical account, see Lovegrove (1997b).
3. For a comprehensive review of the study of judicial practice, see Lovegrove (1989, 1999b).
4. The last year for which they were published is 1996.
5. For a comprehensive review of statistical information systems for sentencing, see Lovegrove (1999a).
6. For details of these statutory changes, see Fox and Freiberg (1999).
7. For details of these provisions, see Fox and Freiberg (1999).
8. A sentence of imprisonment for a summary offence could satisfy this criterion. Sentences of youth training and fully or partially suspended sentences of imprisonment were not taken to be sentences of imprisonment for this purpose.
9. A charge of theft arising from the stealing of money or goods from premises in a burglary was disregarded for the purposes of this classification. One reason is that there is not always a charge of theft even though property has been stolen in the burglary. A second reason is that no cases in which theft also was charged could qualify for the 'multiple event' category. Finally, a theft (compared with, say, an assault) is typically, and is usually thought of as, the point of a burglary and, consequently, coming within its scope.
10. For two offenders included in this armed robbery sample, the judge lessened the degree of cumulation otherwise considered appropriate to allow for the time which had been spent in custody but, due to the offending involving a breach of parole, was not able to be reckoned as having been served. However, in each case, the

judge specified what the sentences would have been had this factor not been a relevant consideration. The otherwise appropriate sentences were used in the present study.

For another offender, the court took into account admitted but unprosecuted offences. This is a formal procedure where an offender, having been convicted of one or more offences, requests the court when determining sentence for the offences of conviction to take into account pending charges filed in court by prosecution (see generally, Fox and Freiberg, 1999). In this case, these other offences comprised six separate transactions – five armed robberies and one attempted armed robbery. Included in the offences of conviction were seven armed robberies. A reading of the circumstances surrounding the prosecuted and admitted robberies showed them to be substantially similar. Moreover, the judge described them in equal detail, made no attempt to distinguish between them in his description of their gravity and, in fact, imposed equal sentences for the seven prosecuted armed robberies despite some potentially significant differences in their circumstances. Accordingly, it was considered a reasonable assumption that the sentences fixed for the prosecuted robberies were also considered by the court to be appropriate to the unprosecuted offences. In sentencing, the judge remarked that the effective sentence must be more severe than it would have been had these other offences not been taken into account but that any increase must be moderated in accordance with the totality principle. It seemed, therefore, not invalid to include the sentences for this offender in the data base and, in doing this, treat the prosecuted and unprosecuted armed robberies alike. This offender is represented in Figures 1.2 and 1.3 by the point $\underline{C} = 10$, $\underline{P} + \underline{S} = 67$. To the extent that the assumed

seriousness of the unprosecuted robberies overestimates the judge's view, so the calculated percentage cumulated is an underestimate; however, in view of the high value of P + S, the percentage error in C would be small.

11. This curve was fitted by Professor Pip Pattison, Department of Psychology, University of Melbourne, using least squares and the modified Gauss-Newton algorithm in the BMDP 3R programme; see Dixon (1990).

12. The negative exponential is the other algebraic model with the potential to satisfy the three theoretical criteria listed above. However, it provides a much poorer fit to the data than the reciprocal function. The main reason for this is that the curve approaches the P + S axis too steeply; this appears to be its inherent weakness as a mathematical representation of the judges' decision strategy for the sentencing of the multiple offender. (See Lovegrove, 1997a, 1998.)

13. The values of the mean individual sentences also change, but not so as to affect their membership of these two categories.

14. In two of the latter three exceptions, the sentence for only one of multiple thefts was made cumulative – in fact, this sentence was the only one made cumulative. For these two instances all of the thefts constituting a part of a burglary were treated as separate transactions in this analysis, it being presumed that concurrency for the other thefts related to considerations of totality.

15. See note 11.

16. See note 11.

17. See note 13.

18. At the time of the study, the statutory maxima for armed robbery, burglary and rape were, respectively, 20, 12½ and 25 years. See Schedule 1 of the Sentencing and Other Acts (Amendment) Act 1997 (Vic).

19. See Table 2.1 for armed robbery and rape and the equivalent figures for burglary in the official sentencing statistics of the Department of Justice – Victoria (1994, 1995, 1996, 1997).

20. In the present study there was either no relevant data or not sufficiently reliable data to discriminate between these factors as they relate to proportionality.

    In this discussion no distinction has been drawn between the degree of cumulation for armed robbery and burglary, even though it was apparently greater for burglary. To have done so would have been hazardous, in view of the small numbers, especially for burglary, and the difference between armed robbery and burglary not being substantial. In respect of this, as an aside, let it be noted that only a minority of burglaries are determined in the higher counts and these will typically be the more serious cases; in such cases, features (e.g. poor rehabilitation prospects) favouring more rather than less cumulation may predominate.

21. This was true for the unadjusted figures but not the adjusted figures.

22. The empirical tests underlying this conclusion were not as rigorous as would be desirable. In each of these two comparisons, the variances were substantial and the numbers small. Moreover, although the sum of the sentences for the secondary offences was controlled, due to small numbers, offence circumstances and mean individual component sentence were unavoidably confounded. Finally, in respect of the second comparison, average sentence might be thought of as too crude a

measure in those cases characterised by marked variation in the seriousness of the comprising offences.

23. The factor of variation in the nature of the offending does not lend itself readily to operationalisation and, accordingly, was not tested.

24. Information relating to an offender's rehabilitation prospects was not routinely recorded in the present study.

25. For a view on the scaling of sanction severity and which could handle the aggregation of the seriousness of offences not individually warranting imprisonment, see Lovegrove (2001).

26. For the purpose of building the qualitative decision model based on the judges' responses to hypothetical cases, the factor of rehabilitation prospects, it will be recalled, was held constant, it being set at 'little if anything by way of mitigation'; it, therefore, did not have the opportunity to emerge as a relevant factor.

27. See Tables 1.1 and 1.4 and the associated discussion.

28. Sentencing and Other Acts (Amendment) Act 1997 (Vic); see Schedule 1.

29. See note 4.

30. The Confiscation Act 1997 (Vic) introduced this amendment to the Sentencing Act; see s.148.

31. i.e. in about 60 percent of the cases.

32. For other grounds favouring cumulation, see Fox and Freiberg (1999).

33. See Lovegrove (1998).

34. But see Fox and Freiberg's (1999) review of case law.

PART 2: PROPORTIONALITY IN JUDICIAL PRACTICE

Background

The first part of this study offered a quantitative picture of judicial practice in Victoria for the sentencing of multiple offenders according to the totality principle. What is shown is the relationship between the effective sentence imposed for a case and the sentences fixed for the individual offences comprising the case. This second part of this study investigates whether the judicial practice observed in the first part accords with the principle of proportionality as it applies to the multiple-offence case. As intimated in the general introduction to this study, this is a significant matter. This is because the appellate courts in Australia have not articulated a standard for proportionality as it applies to the sentencing of multiple offenders. Moreover, the idea underlying proportionality of commensurability between seriousness and severity not particularised in respect of the multiple offender allows a level of sentence above that which is proportionate to the class of offence constituting the case. Yet this idea is fundamental to Thomas's (1979) statement of the totality principle and appears to be entrenched in the English courts' understanding of it (see Ashworth, 1995). To achieve this aim, it is first necessary to develop a numerical prescriptive standard for what is a proportionate effective sentence in a particular case involving multiple offending. 'Numerical', because the essence of a sentence is a quantum of severity, and quanta are the domain of numbers; 'prescriptive', because it states what ought to be, at least to the extent that it represents legal principle. Fortunately, there was some legal principle which could be used to give the present analysis a jurisprudential foundation. Thomas (1979) and Ashworth's (1983, 1992, 1995) legal analyses of the English Court of Appeal's practice gives meaning to the idea of proportionality as it relates to the multiple offender. According to Ashworth, elaborating

on Thomas's work, the core of the problem is how to integrate the seriousness of two or more offences of the same or of a different kind into a system of proportionality based on the seriousness of single offences. Their analyses represent an interpretation of the Court's practice. But the principle they discern is neither specific in its expression nor precise in its application. Because of this, as it stands, the legal judgments necessary to operationalise the principle are not apparent, and there is no standard with which to test empirically to what extent courts apply this principle as a matter of practice. Accordingly, on the basis of this legal work alone, any evaluation of the principle underlying their idea of proportionate sentencing for the multiple offender and of its application in a particular case cannot be rigorous. Hence the need for Thomas and Ashworth's contribution to be extended and, with this, to be translated into quantitative terms. Recently, Lovegrove (2000) tackled this problem; what follows is a summary of his work, comprising the framework underpinning the quantitative standard defining proportionality, a justification of its formulation, and the potential limitations of this approach. The framework applies to multiple offenders where the offences comprising the case represent separate transactions and each of itself would warrant a term of imprisonment; and the calibrating data are taken from the official sentencing statistics for the jurisdiction of Victoria, Australia, for the years 1993-1996.[1] Since the framework defining proportionate effective sentences is founded on what are considered to be appropriate sentences for individual offences, the numerical standard derived from it is jurisdiction specific and may vary over time within the jurisdiction. Accordingly, the framework as calibrated here represents a standard for Victoria at the time of this study. Once the framework has been outlined, justified and evaluated, it is used to investigate empirically whether sentences imposed under the totality principle as appropriate can be regarded as proportionate. For

this purpose what is evaluated is the judicial practice described in the first part of this study.

The Numerical Standard of Proportionality

Outline of the Framework

In multiple-offence cases, for the purpose of cumulation, one of the offences is regarded as the principal offence and the other counts are classified as secondary offences. The purpose of the framework is to provide an answer to the following question: for a particular offender, for those offences properly regarded as separate transactions, what proportion of the sentences appropriate to the secondary offences should be added to the (whole of the) sentence appropriate to the principal offence so that the sentence for the case is proportionate to the seriousness of that case viewed as a whole? In the framework, two factors are considered to determine the answer, namely, the sum of the sentences for the secondary offences and the average of the sentences for these offences.

The numerical framework for the proportionate sentencing of multiple offenders is represented in Figure 2.1. It shows the relationship between the sum of the sentences for the secondary offences in years (S) and the percentage of this sum to be added to the sentence for the principal offence (C). Actually, this relationship is shown for three levels of seriousness of the secondary offences – where the mean of these individual sentences is 1.2 years (Curve 1), 3.0 years (Curve 2) and 10.8 years (Curve 3). These curves no more than illustrate the effect on cumulation of variations in the average individual sentence for the secondary offences; they are three of a potentially infinite number of curves, since each level of seriousness of the secondary offences requires its own representation. (To the significance and interpretation of the curves illustrating this –

Figure 2.1

Frame work for the Proportionate Sentencing of Multiple Offenders: Relationship between the Percentage Cumulation and the Sum of the Secondary Sentences by Mean Individual Sentence

second – factor, this discussion will return. First, to the sum of the sentences for the secondary offences.)

Although the framework may at first blush seem daunting, its application is quite simple. Consider a case comprising an armed robbery and ten thefts, for which the appropriate sentences are 5 years and 1.2 years (approximately 14 months) each, respectively. According to Curve 1 in Figure 2.1, 14 percent of the (twelve years of) sentences for the thefts (i.e. 1.7 years) should be added to the sentence of five years for the armed robbery, making an effective sentence for the case of 6.7 years. But if the case had comprised not ten but fifty 1.2-year thefts, then 4.3 percent of these sentences (i.e. 2.6 years) would have been added to the five years for the armed robbery. Two points should be noted about the second example compared with the first: there was a smaller percentage cumulation, but a larger quantum of sentence cumulated so as to reflect greater seriousness; the additional forty offences added only 0.9 years to the 1.7 years for the first ten secondary offences. (The quantum of sentence to be cumulated, $\underline{Q}$, for a particular sum of sentences for the secondary offences is shown in Curves 1, 2 and 3 of Figure 2.2; they are derived directly from the corresponding curves in Figure 2.1.)

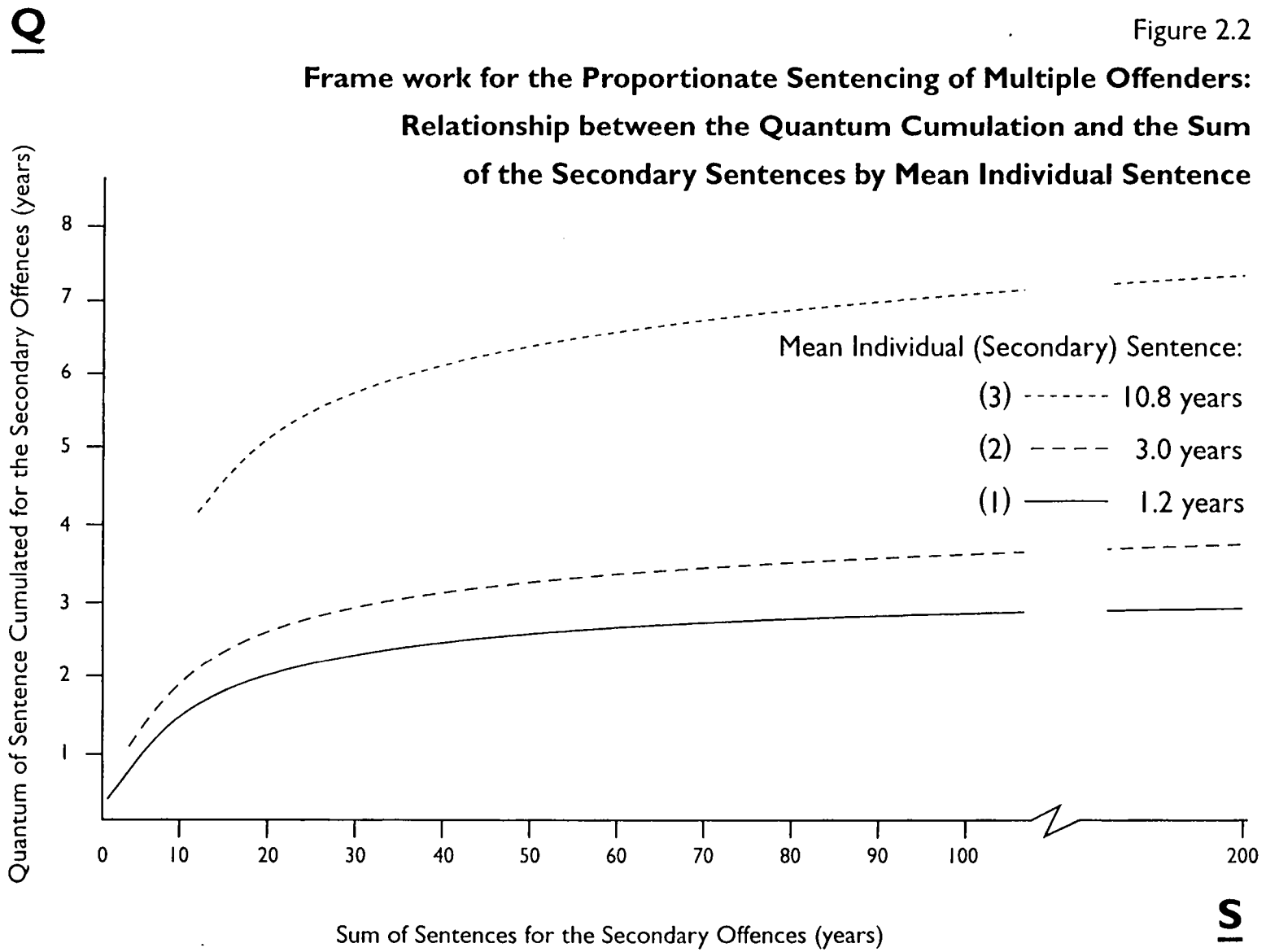
In fact, the percentage cumulation proportionate to a given sum of sentences for the secondary offences, where the average of these sentences is 1.2 years, can be calculated using the equation defining Curve 1; the equation, representing a reciprocal function, is:

$$\underline{P} = \frac{31.1}{1 + 0.104\underline{S}}$$

where $\underline{P}$ is the percentage cumulation for the sum of the sentences for the secondary offences, and $\underline{S}$ is the sum of the sentences for the secondary offences (in years). The features of Curve 1 – and, indeed, each of the other two curves – in Figure 2.1 are that it

Figure 2.2

Frame work for the Proportionate Sentencing of Multiple Offenders: Relationship between the Quantum Cumulation and the Sum of the Secondary Sentences by Mean Individual Sentence



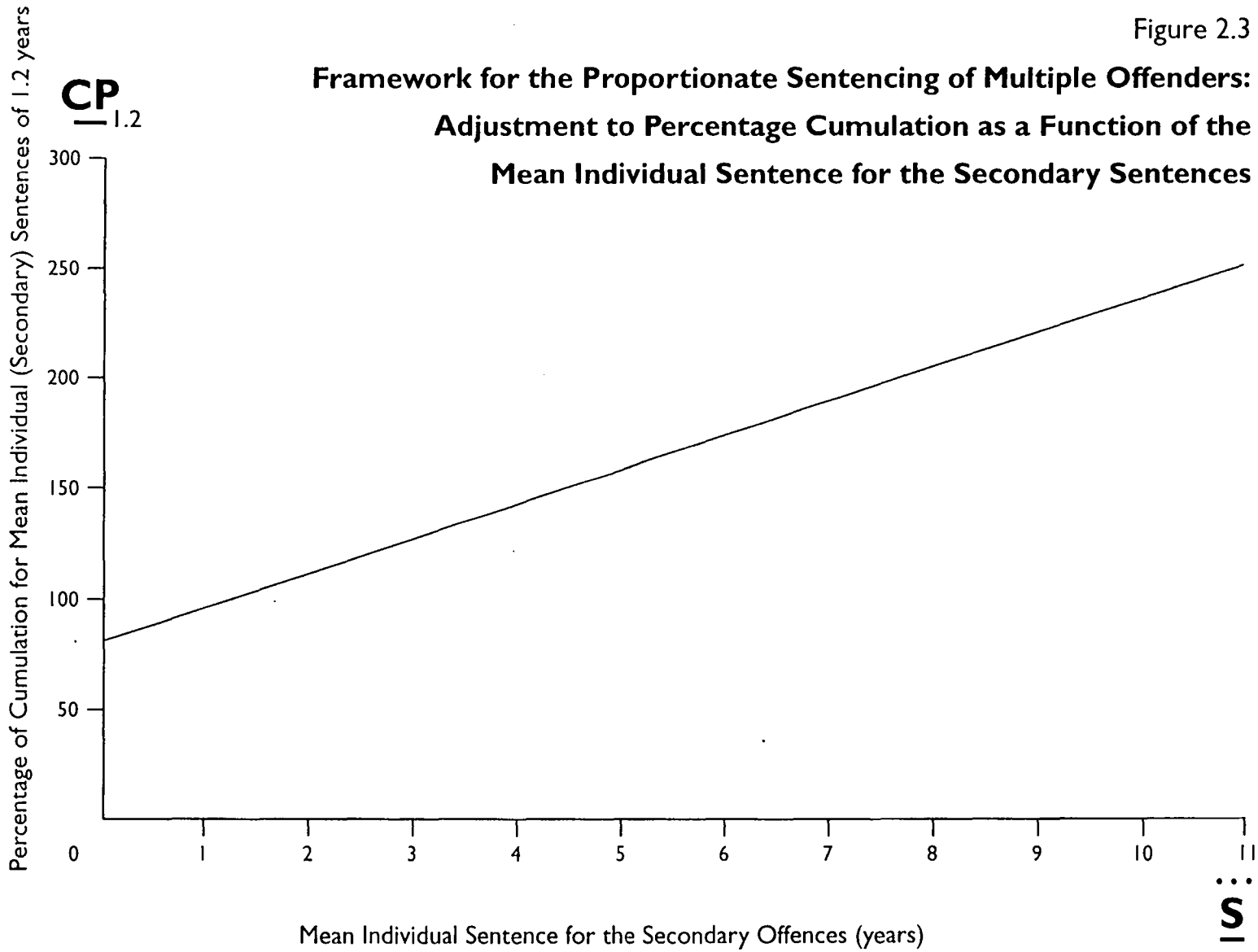
is a curve of decreasing returns. Accordingly, as the sum of the sentences for the secondary offences increases so there is a progressive decrease in the percentage cumulation, this decrease being tempered so that the quantum cumulated will always be greater. Moreover, the curve ever approaches but never reaches a value of zero percent cumulation; as a result, for additional secondary offences there will always be some increase, however small, in the sentence for the case.

To date, what has been dealt with is the effect on cumulation of the sum of the sentences for the secondary offences. This description of the framework now turns to the second of the two factors, namely, the mean individual sentence for the secondary offences. In regard to this, the relevant question is: using as the touchstone the degree of cumulation appropriate to secondary offences of mean individual sentence 1.2 years (Curve 1 in Figure 2.1), what percentage increase (or decrease) in the degree of cumulation is necessary to maintain proportionate cumulation where the mean individual sentence for the secondary offences is greater (or lesser)? The answer is to be found in Figure 2.3. It shows the relationship between the relevant dependent and independent variables. The former is the degree of cumulation as a percentage of the degree of cumulation considered proportionate for secondary offences of mean individual sentence 1.2 years ($\underline{CP}_{1.2}$); the latter is the mean individual sentence for the secondary offences (in years) for which the degree of cumulation is to be determined ($\underline{\ddot{S}}$).

Consider now an illustration of its application. Take the first example above as the starting point: the case of the armed robbery and ten thefts for which the appropriate sentences were 5 years and 1.2 years each; the sum of the sentences for the secondary offences is 12 years and the degree of cumulation for these offences was shown by Curve 1 in Figure 2.1 to be 14 percent, giving a quantum of cumulation of 1.7 years. But if

Figure 2.3

Framework for the Proportionate Sentencing of Multiple Offenders: Adjustment to Percentage Cumulation as a Function of the Mean Individual Sentence for the Secondary Sentences



instead of ten 1.2-year secondary offences there were four 3-year secondary offences (note, these again sum to 12 years), what would be the proportionate degree of cumulation? Figure 2.3 shows that it would be 130 percent of the degree of cumulation considered proportionate where the secondary offences averaged 1.2 years (14 percent), i.e. 18 percent, giving a quantum of cumulation of 2.2 years. In comparing the first and second examples, the effect of the greater mean sentence for the individual secondary offences is an increase in the degree of cumulation reflecting the greater seriousness of those offences; the greater mean seriousness of 1.8 years increased the degree of cumulation by 4 percent, adding an extra 0.5 years to the quantum cumulated for a sum of sentences for the secondary offences of 12 years.

Putting this comparison aside, turn back to the second of the original two examples above: the case comprising not ten but fifty 1.2-year thefts, the sum of the sentences for the secondary offences being 60 years, and the degree of cumulation determined from Curve 1 in Figure 2.1 to be 4.3 percent, giving a quantum of cumulation of 2.6 years. Now, instead of fifty 1.2-year secondary offences let there be twenty 3-year secondary offences. Again, the degree of cumulation for proportionality will be 130 percent of the cumulation where the secondary offences averaged 1.2 years (4.3 percent), i.e. 5.6 percent, giving a quantum of cumulation of 3.4 years. Three points should be noted in regard to the preceding two pairs of comparisons. First, the percentage increase in the degree of cumulation corresponding to the mean individual sentence for the secondary offences increasing from 1.2 to 3.0 years is constant across all sums of sentence for the secondary offences; this, of course, must be so, since it is not a function of this factor. Secondly, where the sum of sentences for the secondary offences is 12 years the difference in the percentage cumulation is 4 percent (18 cf. 14), but where this sum of

sentences is 60 years the percentage difference is only 1.3 percent (5.6 cf. 4.3). Thirdly, the difference in the quantum to be cumulated actually increases with greater sums of sentence for the secondary offences, the difference being 0.5 years (2.2 cf. 1.7) at 12 years and 0.8 years (3.4 cf. 2.6) at 60 years; this is because the decrease in cumulation with greater sums of sentence is tempered to ensure a greater quantum of cumulation.

In fact, these sets of calculations demonstrate how Curve 2 in Figure 2.1 was derived, and how curves representing other values of the second factor could be derived (Curve 3 representing a mean individual sentence for the secondary offences of 10.8 years is an instance). Instead of referring to Figure 2.3, the change in the percentage cumulation as a function of the mean individual sentence for the secondary offences can be calculated using the equation defining the line. It is:

$$\underline{CP}_{1.2} = 16.6\,\underline{\ddot{S}} + 80.1$$

where $\underline{CP}_{1.2}$ is the degree of cumulation as a percentage of the degree of cumulation considered proportionate for secondary offences of mean individual sentence 1.2 years and $\underline{\ddot{S}}$ is the mean individual sentence for the secondary offences (in years) for which this degree of cumulation is to be determined.

The feature of the effect of the line in Figure 2.3 on the curves in Figure 2.1 is that as the mean sentence for the secondary offences increases (i.e. as the seriousness of the secondary offences as individual offences increases) so there is a directly proportional increase in the percentage adjustment to cumulation. Now, this proportion is constant across the variation in the sums of sentence for the secondary offences. However, since with increasing sums of sentence there is a decreasing percentage cumulation, the difference in the percentage cumulation between the curves diminishes. But recall, this decrease in percentage cumulation is tempered so that the quantum cumulated will

always be greater; hence the difference in the quantum cumulated increases with increasing sums of sentence.

Legal Justification of the Framework

The numerical framework defining proportionality in multiple-offence cases is represented in Figures 2.1 and 2.3 (Figure 2.2 containing no new information, being derived directly from Figure 2.1 by way of Figure 2.3). In respect of Figure 2.1, it will be recalled that each curve has the following consequential features for cumulation: (1) as the sum of the sentences for the secondary offences increases so there is a progressive decrease in the percentage of these sentences added to the sentence for the principal offence; (2) notwithstanding this, with greater sums of sentence the quantum actually cumulated will be greater to reflect the greater seriousness; (3) the curve is asymptotic with respect to the sum of sentences, thus providing for some cumulation, however small, for additional secondary offences: To what extent do these characteristics comport with Thomas's (1979) and Ashworth's (1983, 1992, 1995) interpretation of appellate court practice? To a brief summary and review of their work, this justification turns.

It was Thomas (1979) who introduced the idea of proportionality in multiple-offence cases as cumulation within limits set by the ranges of sentence proportionate to classes and sub-classes of single offences. Ashworth (1995) extended this concept with his observation along the lines that no number of certain less serious offences (say, car thefts, each warranting a sentence of four months) together should be regarded as reaching a level of seriousness corresponding to that of a four-year rape. Ashworth's second contribution came in his consideration of how the individual sentences for the comprising offences in a multiple-offence case are in effect cumulated in order to arrive at the sentence for the case. The problem for the sentencer is at once to maintain

proportionality between sentence severity and the seriousness of different classes of crime but to impose greater punishment for the additional seriousness associated with multiple offences of a particular class of crime. His solution: each additional offence adds a quantum of sentence to the running case sentence, but the cumulative effect of each successive offence's sentence is less than that made by the preceding one. The features of the curves in Figure 2.1, outlined above, meet the second part of Ashworth's interpretation of what is the proper approach to the sentencing of multiple offenders. But do they satisfy the first part, namely, the maintenance of proportionality between classes of offence? Clearly, they do constrain cumulation, but to a greater or lesser degree than is required by Ashworth's standard? In truth, an answer cannot be found in Ashworth's work, because it is not sufficiently developed. From his contribution follows no more than the general form of the curves in Figure 2.1. To calibrate these curves as they are to be found in Figure 2.1, it was necessary to deal with the following three matters: selection of pairs of classes/sub-classes of offence to be used as a basis for establishing proportionality; determination of quanta of sentence to represent their seriousness; and operationalisation of the term 'no number of' (offences) in the statements of proportionality between the pairs of offences.

Before proceeding with these matters, the justification for the role of Figure 2.3 – the second part of the framework defining proportionality in multiple-offence cases – requires a brief explanation. As the mean seriousness of the secondary offences as individual offences increases, so there is a directly proportional increase in the percentage cumulation for these offences; this is the effect of Figure 2.3 on Figure 2.1. Ashworth ignores this potential feature of proportionate cumulation. What is the argument for its relevance? The following two cases illustrate the underlying thinking: one comprises a

serious armed robbery and thirty six-month thefts, the other case consists of a similar armed robbery and three five-year armed robberies. In each instance, there is fifteen years of sentences to be cumulated on the sentence for the (principal) armed robbery. One's sense of justice would seem to require that a much greater percentage of the sentences for the secondary offences be added on in the second case than in the first, since in respect of these offences, the former offender is a petty thief and the latter a serious robber. Figure 2.3 takes care of this.

With this legal background to the justification of the proposed numerical framework for constraining cumulation of sentence according to the principle of proportionality, this discussion now turns to the calibration of the line in Figure 2.3 and the three curves in Figure 2.1. To this end, the above matters left open or ignored by Ashworth (1995) are taken up and developed.

First, Curve 1 in Figure 2.1. Consider the selection of the pairs of offence. For this, Ashworth uses, apparently arbitrarily, rape as the touchstone for the constraint on cumulation of sentences for car theft. But this choice without a rationale must be regarded as an uncertain foundation. The problem is thus: if the two offences lie close together on the scale of seriousness, cumulation may be inadequate; if they lie too far apart, cumulation will be excessive. Perhaps an appropriate degree of constraint would be set where the constraining offence represented a clearly different level of seriousness than that of the offence to be constrained, but was no more than one step up in seriousness. This would appear to be established where two offences shared a gravamen, but one of the offences had a second gravamen. Theft and armed robbery provide a clear illustration of the point: both involve appropriating someone else's money or possessions, but in the latter the theft is accompanied by a clear threat of immediate violence and injury.

Now turn to consider how the seriousness of the classes or sub-classes of offence are to be defined. Ashworth used the ranges of sentence for the various offences; accordingly, in one of his examples, a series of mid-range burglaries is related to a mid-range rape. How, then, is range to be construed? It is suggested that the appropriate data base for a particular class of offence is all the sentences of imprisonment determined in the higher courts for all offences – principal and secondary – in that class, not least because this study is concerned with the cumulation of sentences of imprisonment, and sentences imposed in Magistrates' courts are more likely to reflect factors personal to the offender. An analysis of current sentencing practice supported this. The relevant data are to be found in the official sentencing statistics for the higher courts (Supreme and County) in Victoria for the years 1993-1996 (Department of Justice – Victoria, 1994, 1995, 1996, 1997).[2] For the various statutory classes of offence, the ranges defined by the 25th and 75th percentiles[3] are comparatively narrow, stable and for many comparisons between categories of offence show little or no overlap. These features are significant: they suggest that the sentences are determined to a significant extent by the facts of the offence, and that the various statutory offence categories have different characteristic levels of seriousness.

In regard to the offence which is to be constrained, what is wanted are offences typically warranting comparatively low quanta of sentence in relation to the range of imprisonment, but the sentences being substantial enough to reach significant levels of imprisonment in multiple-offence cases. Offences whose range lies between 0.5 and 1.5 years have potential to fulfil this role. Constraining offences satisfying the step-up criterion were found for two of these offences: armed robbery for theft and rape for indecent assault. There were no other pairs meeting all the requirements. The ranges of

sentence for these four offences are narrow and stable; the ranges for theft and indecent assault show substantial overlap, as also do the ranges for armed robbery and rape; against this, theft and armed robbery are well separated, as also are indecent assault and rape (see Table 2.1).

What levels of seriousness, and following from this, sentence, are to represent these offences? The problem was solved by formulating a statement of proportionality consistent with the approach underlying the selection of the pairs of offences, thus: no number of all but the most serious thefts (or indecent assaults) together could be regarded as serious as a mid-range armed robbery (or rape). The 75th percentile sentence could be used to mark 'all but the most serious', and the 50th percentile clearly defines 'mid-range'. When the percentile values averaged across the means for theft and indecent assault and (separately) armed robbery and rape are inserted into the statement of proportionality it becomes: for a case comprising a principal offence warranting a sentence of 1.2 years and a very large number of secondary offences of similar seriousness, not more than 2.7 years should be added to the sentence for the principal offence for the purpose of punishing the seriousness associated with the secondary offences (i.e. the upper limit on the sentence for such a case is 3.9 years).[4] Finally, the sum of sentences representing the seriousness of a 'very large number' of 1.2-year secondary offences was set at 100. The first constraint on the curve, therefore, is that it should pass through the point 2.7 (percent cumulation) for a sum of sentences (for the secondary offences) in years of 100 (i.e. 2.7 years cumulation for 100 years of secondary offences). And since this point represents a working upper limit, the additional increase in cumulation for even very much greater sums of sentence should be small. Accordingly,

Table 2.1

Indices of the Distributions of Sentences (in years) for Theft, Indecent Assault, Armed Robbery and Rape

— Higher Courts (Victoria), 1993–1996

Index	Theft					Indecent Assault					Armed Robbery					Rape				
	'93	'94	'95	'96	Av.	'93	'94	'95	'96	Av.	'93	'94	'95	'96	Av.	'93	'94	'95	'96	Av.
Highest	10	4	4.5	3.5		3.5	8	4	5		12	9	9	10	10.0	12	11	9	14	11.5
75th percentile	1	1	1	1	1.0	1.3	1.3	1.5	1.5	1.4	5	5.5	4	5	4.9	5	7	6	5	5.8
Median	.8	.8	.8	.8	0.8	1	.8	1	1	1.0	3	3	3	3.5	3.1	4	5	5	4.5	4.6
25th percentile	.5	.5	.5	.5	0.5	.7	.5	.7	.5	0.6	2.5	2	2	2	2.1	3.3	3.5	3.3	3	3.3

the second constraint on the curve was taken to be 1.5 percent cumulation for a sum of sentences of 200 years.

What can be said about the curve at the lower levels of seriousness? This can be answered by determining what constraint on cumulation there should be for a moderate number of 1.2-year offences? Four and eight such offences seem to define the lower and upper bounds, respectively, of what could reasonably be regarded as a moderate number of secondary offences. 'Eight' provides the more parsimonious criterion for cumulation, and for this reason was preferred as the basis for calibrating the curve.[5] And perhaps the average of the mean 25th percentile sentences for the constraining offences should set the progressive constraint on cumulation, this level marking all but the least serious offences in a particular offence category. This translates into a statement of proportionality, thus: for a case comprising a principal offence warranting a sentence of 1.2 years and eight secondary offences of similar seriousness, not more than 1.5 years should be added to the sentence for the principal offence for the purpose of punishing the seriousness associated with the secondary offences (i.e. the upper limit on the sentence for such a case is 2.7 years). It follows that the curve should pass through the point 15.6 (percent cumulation) for a sum of sentences for the secondary offences of 9.6 years (i.e. 1.5 years cumulation for 9.6 years of secondary sentences). This is the third constraint on the curve.

The above discussion explains the calibration of Curve 1 as it is to be found in Figure 2.1: why for a particular sum of sentences for the secondary offences one percentage cumulation for these sentences rather than another is considered proportionate. In fact, this curve represents the line satisfying the requirements of the unlimited cumulation of sentence and by way of decreasing gains and, simultaneously,

passing as closely as possible to the three constraining points – (100, 2.7) (200, 1.5) and (9.6, 15.6) – derived in the above analysis. In respect of the sums of sentence for the secondary offences of 9.6, 100 and 200, it provides for respective percentage cumulations of 15.6, 2.7 and 1.4. This curve clearly is an excellent fit to the calibrating points.[6]

This justification closes with some comments on the generality of this analysis. The framework for the constraint on cumulation is based on a principal offence of theft/ indecent assault warranting a sentence of 1.2 years and multiple secondary offences also of theft/ indecent assault and of the same degree of seriousness. There appears to be good reason why the framework should not be confined to theft/indecent assault; it is that seriousness is defined by sentence and is independent of the class of the offence. Nor should this analysis be restricted to cases for which the sentence for the principal offence is 1.2 years. The framework relates to the constraint on cumulation of secondary offences and, on the ground of proportionality, should this not be independent of the seriousness of the principal offence?[7] Finally, rare will be the case where a sentence of 1.2 years is fixed for each of the secondary offences comprising the case. However, it would seem not too great an approximation to use this framework for determining cumulation in cases where the mean sentence for the individual secondary offences is 1.2 years. Nevertheless, the analysis is limited to secondary offences of this average level of seriousness.

This raises the matter of how much more or less cumulation there should be where the mean sentence for the individual secondary offences is greater or less than 1.2 years. Figure 2.3 quantifies this, and to the calibration of the line this discussion turns. Again, what is wanted is a pair (or pairs) of offences, one providing the standard for constraint on cumulation of the other. The difference here is that the offences must be significantly

more serious; only in this way can there be the contrast necessary for the calibration of the line. Accordingly, the most serious offence of murder was chosen to act as the constraint on cumulation. Recall, the 50th percentile sentence of the constraining offence marks the limit on cumulation. For murder this is 17.8 years (see Table 2.2). In regard to the selection of the constrained offence, the interpretation of a step down in seriousness is difficult to apply here, the problem arising because murder is so serious. Rather, the step down in seriousness was defined by the sentences imposed for the worst instances of the most serious offences involving personal violence, murder aside. For this, two offence categories were found, apparently of appropriate seriousness - the highest sentence imposed for each offence in at least one of the four years was in excess of ten years – and for which the highest sentence imposed showed reasonable stability, namely, rape and armed robbery. The average of the mean highest sentences imposed for these two offences is 10.8 years (see Table 2.1). So the statement of proportionality for the constraint on cumulation becomes: for a case comprising a principal offence warranting a sentence of 10.8 years and a very large number of secondary offences of similar seriousness (these secondary offences together totalling 100 years), not more than 7.0 years should be added to the sentence for the principal offence for the purpose of punishing the seriousness associated with the secondary offences (i.e. the upper limit on the sentence for such a case is 17.8 years). Again, this applies to cases where the mean individual sentence for the secondary offences is 10.8 years.

There are now two statements of proportionality for limiting the quantum of cumulation, one applying to more serious secondary offences and the other to less serious secondary offences. The final task is to link these in an internally consistent way, and in

Table 2.2

Indices of the Distributions of Sentence (in years) for Murder

— Higher Courts (Victoria), 1993-1996[8]

	1993	1994	1995	1996	Average
Highest	Life	Life	Life	20	
75th percentile	Life	20	Life	18	
Median	20	18	16	17	17.8
25th percentile	15	15	14	15	14.8

doing this provide a limit for secondary offences of any level of seriousness. There would appear to be no basis for regarding the effect of the mean individual secondary sentence on the adjustment to the degree of cumulation as otherwise than linear. Accordingly, the problem can be addressed in terms of simple proportions. Now, as the mean individual sentence for the secondary offences increases from 1.2 years to 10.8 years, so the limit on cumulation for 100 years of secondary offences rises from 2.7 to 7.0 years. Clearly, the degree of cumulation where the mean individual sentence is 1.2 years is (by definition) 100 percent of the 2.7; and the degree of cumulation where the mean individual sentence is 10.8 years is 259[9] percent of the degree of cumulation for mean individual sentences of 1.2 years. This explains the calibration of Figure 2.3: it is the line passing through the points (1.2, 100) and (10.8, 259). And since the percentage increase or decrease in the degree of cumulation where the mean individual sentence for the secondary offences is greater or less than 1.2 years is not a function of the sum of the sentences for the secondary offences, this line (and the associated formula) applies to all levels of this factor.

Potential Limitations of the Framework

There are a number of potential limitations of the proposed framework defining proportionate effective sentences.

The first is the idea of proportionality between the seriousness of single classes of offence as a foundation for the framework. The questioning of this is to be found in Wells' (1992) rhetorical question: why the sentence considered proportionate to a case comprising a number of unrelated offences should be constrained by the level of sentence proportionate to the most serious of those comprising offences as a class of offence.

However, there is no conceptual basis for this alternative; indeed, it is so critically vague as to make it difficult to envisage how it could be used to derive a standard for the constraint of cumulation. Yet, perhaps there is an alternative to proportionality? In Victoria, the notion of the crushing sentence is not infrequently relied on by judges as a justification for the constraint on cumulation in multiple-offence cases (see Lovegrove, 1997a, 1997b), and it has been applied by the High Court in this type of case (see the judgment in Postiglione, 1997). But it would not be helpful in developing a standard for proportionate effective sentences. One reason is that it is a concept with great relevance when particularly long sentences of imprisonment are contemplated and, accordingly, as a matter of logic, does not lend itself to being applied at the lower end of punishment severity. A second reason is that proportionality relates to offence seriousness, whereas the crushing sentence finds its justification in the welfare of the offender.

The second potential limitation concerns the assumption underpinning the analysis that the current sentencing practice of the courts is a valid indicator of the seriousness of the single offences in each of the pairs defining relative seriousness. Whatever the wisdom of the judges' view of the relative seriousness of single offences, it is intuitive and, viewed more broadly, it must be considered to have a theoretically weak basis.

Then there are technical matters. (1) The derived numerical standard for proportionality would have been surer had there been a greater number of (pairs of) offences underlying the scaling of relative seriousness. (2) It had to be assumed that these ranges of sentence were based on cases in which the sentences were determined largely by the facts of the offence rather than matters personal to the offender. For reasons given

in the discussion, neither of these matters appears to represent a serious threat to the framework presented here.

Finally, there are matters relating to the scope of the analysis. Factors in addition to the seriousness of the comprising offences, considered individually and together, might be thought to bear on case seriousness and, hence, the proportionate effective sentence. For example, perhaps there should be greater cumulation where the gravamens of unrelated offences comprising the case cover a range (e.g. a theft and an armed robbery as against two armed robberies); and the timing of the comprising offences might be a factor: the greater the period covered by the offending, the more serious the case. These factors have been identified as relevant to sentence by judges in Victoria (see Lovegrove, 1998). But, in general, they would be expected to carry far less weight than the factors of the sum of the sentences for the secondary offences and the mean of the individual sentences for the secondary offences: the latter characterise all cases and are appropriate as elements of the framework; the former would be seen as features of a case only when manifest in the extreme and are more properly treated as variations within the framework.

The numerical standard for the proportionate sentencing of multiple offenders having been established, this standard is now applied to assess the appropriateness of judicial practice.

The Analysis of the Data

Does judicial practice in regard to the cumulation of sentence, and described in Part 1, comport with the principle of proportionality, as it has just been operationalised above for the multiple offender? The following analyses, presented separately for armed robbery, burglary and rape, respectively, address this question.

General Analysis

Armed Robbery. This sub-sample, it will be recalled, comprises 27 offenders. To assess whether or not the cumulation of sentence in a particular case was disproportionate, the actual degree of cumulation was compared with the degree of cumulation defined as proportionate. There are two measures of the degree of cumulation: (1) the quantum of sentence added to the sentence for the principal offence; (2) this quantum as a percentage of the sum of the sentences for the secondary offences. Data relating to actual cumulation were taken directly from the analyses in Part 1. Proportionate cumulation was calculated using the two formulae derived in the theoretical analysis above. Since the criterion of proportionality depends on the sum of the sentences for the secondary offences and the mean of the individual sentences for these secondary offences, it varies with the particular case, and, for this reason, must be calculated separately for each of the 27 cases[10]. The relevant data are presented in terms of a two-way classification. One follows the categories of the circumstances of the offences comprising a case – 'single event', 'escapade', 'multiple event', 'single-multiple event' (see Part 1). The second is by way of the sum of the sentences for the secondary offences – < 3 years, ≥ 3 years; this particular cut-off point for these two categories was chosen because it represented a natural division in the distribution of cases for this variable (see Table 2.3) and the sums of sentence of less than three years could reasonably be regarded as short. This two-way classification was adopted because cases varying across it would appear to differ in character and in a way that might be thought to affect the degree of cumulation considered appropriate. With these prefatory remarks,

Table 2.3

Distribution of the Sums of Sentence for the Secondary Offences (in years)

for Armed Robbery (n = 27)

Sums of Sentence (years)	Frequency
<1	4
≥1	8
≥2	3
≥3	
≥4	2
≥5	
≥6	
≥7	3
≥8	
≥9	1
≥10	
≥11	2
≥12	1
≥13	3 (19, 25, 61)

now turn to the data in Table 2.4 showing how frequently and to how great an extent the cumulation of sentence for the 27 cases of armed robbery exceeds the calculated criterion of proportionality. Cases for which the actual degree of cumulation exceeds the proportionate degree are marked with an asterisk. (The figures in brackets will be dealt with later.)

Consider, first, cases for which the sum of the sentences for the secondary offences is low (< 3 years) (see Table 2.4a). Cumulation can be seen to be disproportionately harsh in 12 of these 15 cases (the three exceptions being in the 'single-multiple event' category), and but for two of the twelve cases (the two exceptions being in the 'escapade' category) the excessive cumulation can be reasonably thought of as generally not insubstantial. This is, of course, a subjective judgment, and in making it account must be taken simultaneously of both indices – percent and quantum – of the degree of cumulation. For example, a difference of two months between the actual and proportionate degrees of cumulation might be regarded as significant for very low values of the quantum cumulated but not for higher values. For the ten cases where the actual degree of cumulation clearly exceeded the proportionate degree, the mean percentage difference was 29 (55 cf. 26) and the mean quantum difference was 3.2 months (6.2 cf. 3.0).

Now, there is a second, a stricter, criterion from which to assess the degree of injustice. What matters here is the degree of cumulation in relation to the effective sentence. So, for example, an excessive quantum of cumulation of three months could result in an effective sentence of 18 months instead of 15 months, or 90 months instead of

Table 2.4a

Actual and Proportionate Degree of Cumulation

as a Percentage and a Quantum (in months) for the Four Categories of Armed Robbery –

Sum of Sentences for the Secondary Offences < 3 years (n = 15)

Single				Escapade				Multiple				Single-Multiple			
A%	P%	A_m	P_m	A%	P%	A_m	P_m	A%	P%	A_m	P_m	A%	P%	A_m	P_m
*50	25	12	6	*50	27	6	3.2	*50	27	6	3.2	15 (25)	24 (27)	3	4.8 (3.2)
*50	27	6	3.2	*33	28	6	5	*100	25	12	3	22 *(33)	25 (28)	6	6.7 (5.0)
*68	25	2	0.7	*52	26	2	1.1					*30 *(54)	24 (25)	6	4.8 (2.8)
*50	25	3	1.4									13 *(50)	23 (25)	3	5.6 (1.6)
*50	26	3	1.6												
*50	27	6	3.2												

Note. A% actual percentage

P% proportionate percentage

A_m actual quantum (in months)

P_m proportionate quantum (in months)

Table 2.4b

Actual and Proportionate Degree of Cumulation

as a Percentage and a Quantum (in months) for the Four Categories of Armed Robbery –

Sum of Sentences for the Secondary Offences ≥ 3 years (n = 12)

Single				Escapade				Multiple				Single-Multiple			
A%	P%	A_m	P_m	A%	P%	A_m	P_m	A%	P%	A_m	P_m	A%	P%	A_m	P_m
25 *(33)	25 (31)	12	12 (11)	19	19	20	20.4	13	14	18	19.2	8	19	4	9.4
9	20	12	26.4					20	21	18	19.2	*31 *(33)	17 (25)	72	38.4 (54.0)
								14	25	12	20.4	*20 *(21)	14 (15)	30	21.6 (21.6)
								*10	6	72	44.4	*43	25	36	20.4
												11 (11)	11 (13)	33	33.6 (37.2)

Note. A% actual percentage

P% proportionate percentage

A_m actual quantum (in months)

P_m proportionate quantum (in months)

87 months; the former might be thought of as troubling, the latter not. It is important, therefore, to examine the data in Table 2.4a from this perspective. The relevant data are presented in Table 2.5a; they are: the quantum of excessive cumulation (A_m - P_m, in Table 2.4a); the proportionate effective sentence, i.e. the total of the sentence for the principal offence (taken directly from the analysis in Part 1) and the proportionate quantum of cumulation (P_m, in Table 2.4a); the quantum of excessive cumulation as a percentage of the proportionate effective sentence. This information is given in the table for each of the 12 cases for which the immediately preceding analysis revealed excessive cumulation. (To facilitate comparisons across Tables 2.4a and 2.5a, data relating to a particular case are located in the corresponding positions in both tables.) In determining whether the excessive cumulation is significant or not, account should be taken simultaneously of both the proportionate effective sentence and the quantum of excessive cumulation as a percentage of this. The reason: justice is not measured in scruples. By way of example, consider an excessive quantum of cumulation resulting in a ten-percent increase, in one case on a proportionate effective sentence of ten months and, in another case, on a proportionate effective sentence of ten years. Now, were these sentences for individual offences, only the latter difference is likely to be regarded as sufficiently great so as to be outside the range for that offence and therefore a sentencing error. From this perspective, then, cumulation would perhaps be regarded as excessive in as few as 3 of the 15 cases. (The three are marked with an asterisk.) This is to be compared with the findings for the same cases considered from the first perspective, where cumulation was thought to be clearly excessive in 10 of the 15 cases.

This analysis now turns to consider the findings for those cases for which the sum of sentences for the secondary offences is high (≥ 3 years). Referring to Table 2.4b, cumulation can be seen to be disproportionately harsh in four of the twelve cases, one being in the 'multiple

Table 2.5a

Excessive Cumulation (Quantum in months) as a Percentage of the Proportionate Effective Sentence (in months) for the Four Categories of Armed Robbery – Sum of Sentences for the Secondary Offences < 3 years (n = 15)

Single			Escapade			Multiple			Single-Multiple		
PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$
*46.0	6.0	13	45.2	2.8	6	*27.2	2.8	10	— (—)	— (—)	— (—)
99.2	2.8	3	65.0	1.0	2	*9.0	9.0	100	— (29.0)	— (1.0)	— (3)
12.7	1.3	10	19.1	0.9	5				34.8 *(32.8)	1.2 (3.2)	3 (10)
16.4	1.6	10							— (49.6)	— (1.4)	— (3)
19.6	1.4	7									
81.2	2.8	3									

Note. PES_m proportionate effective sentence (in months)

EC_m excessive cumulation (quantum in months)

$\frac{EC}{PES}$ excessive cumulation as a percentage of the proportionate effective sentence

Table 2.5b

Excessive Cumulation (Quantum in months) as a Percentage of the Proportionate Effective Sentence (in months) for the Four Categories of Armed Robbery – Sum of Sentences for the Secondary Offences ≥ 3 years (n = 12)

Single			Escapade			Multiple			Single-Multiple		
PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$
— (59.0)	— (1.0)	— (2)	—	—	—	—	—	—	—	—	—
—	—	—				—	—	—	*146.4 *(162.0)	33.6 (18.0)	23 (11)
						—	—	—	*63.6 *(63.6)	8.4 (8.4)	13 (13)
						*104.4	27.6	26	*80.4	15.6	19
									— (—)	— (—)	— (—)

Note. PES_m proportionate effective sentence (in months)

ES_m excessive cumulation (quantum in months)

$\frac{EC}{PES}$ excessive cumulation as a percentage of the proportionate effective sentence

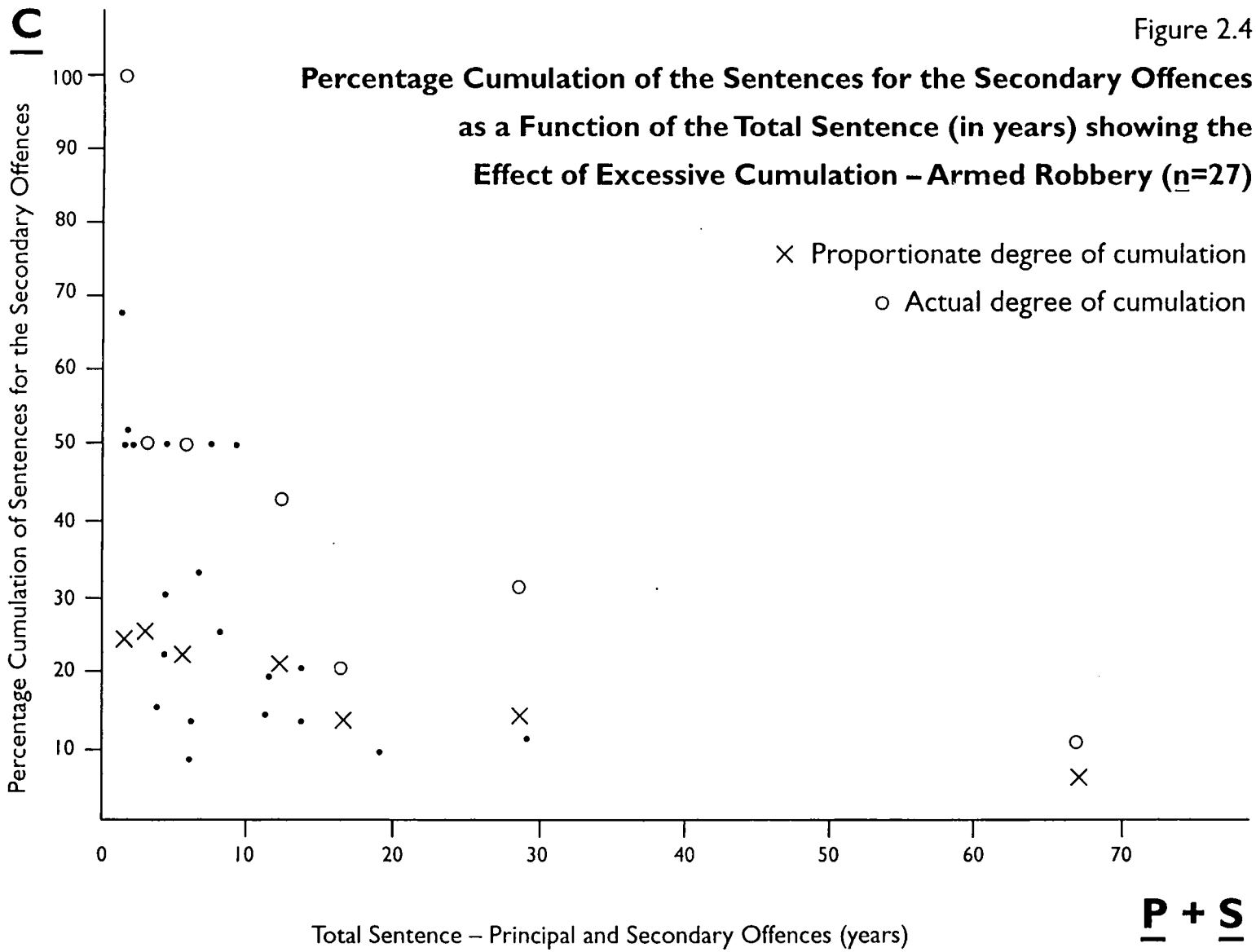
event' category[11] and three being in the 'single-multiple event' category. And the excessive cumulation is very substantial, indeed: the mean difference between the actual and the proportionate degrees of cumulation being 10 (26 cf. 16) percent, representing a quantum of 21.3 (52.5 cf. 31.2) months. But what about the degree of cumulation in relation to the effective sentence? Turning to Table 2.5b, it can be readily apprehended that the relevant data do not warrant a change in the conclusion of excessive cumulation of a very substantial degree in (the same) four of the twelve cases.

For the record, the quantitative relationship between the effective sentences and the sentences for the individual component offences for the 27 offenders in the armed robbery sample, and shown in Figures 1.2 and 1.3, is re-presented in Figure 2.4. However, here the graphical representation of judicial practice is modified somewhat: the points for the seven offenders, for whom cumulation was determined to be excessive, are plotted as in Figures 1.2 and 1.3 (i.e. according to the actual degree of cumulation ordered by the judge) but in addition according to the degree of cumulation defined as proportionate in this analysis.[12] (These points appear in Figure 2.4 as circles for the actual degree of cumulation and as crosses for the proportionate degree of cumulation.)

It will be recalled from Part 1 that there was the potential for error in the armed robbery data for some of the offenders. (This problem also arose, mutatis mutandis, for burglary and rape.) The precondition occurred where all or some of the offending comprised a single event and the sentence for a separate transaction connected with an armed robbery (e.g. a false imprisonment) was made concurrent with the sentence for the armed robbery. Under these circumstances, it is not clear whether concurrency was ordered to avoid excessive cumulation or because the seriousness associated with the connected offence was taken account of in the

Figure 2.4

Percentage Cumulation of the Sentences for the Secondary Offences as a Function of the Total Sentence (in years) showing the Effect of Excessive Cumulation – Armed Robbery (n=27)



sentence for the armed robbery. Where the latter alternative represents the judge's thinking, the sentence for the connected offence should not be incorporated in the calculations of the sum of the sentences for the secondary offences or of the mean of the individual sentences for these secondary offences. Since in none of the relevant instances did the sentencing judge remark on this aspect of sentence determination, it could not be known whether the data carried this error. Accordingly, for the indices in Tables 2.4 and 2.5, it was necessary to redo the calculations for those offenders whose sentences are potentially subject to this error. (The adjustment could apply to one or more connected offences and one or more armed robberies for a particular offender.) The resulting figures are shown in brackets. In fact, the above conclusions require little modification. Consider first those cases for which the sums of sentence for their secondary offences are less than three years. With respect to the degree of cumulation, cumulation is potentially excessive in an additional two cases – both are in the 'single-multiple event' category – but in only one of them would the difference be regarded as not insubstantial. And from the perspective of the degree of cumulation in relation to the effective sentence, for these two cases the excessive cumulation could not be thought of as significant. However, from this perspective, there is one additional case (again in the 'single-multiple event' category) for which there is the possibility of the excessive cumulation being significant. In respect of those cases for which the sums of sentence for their secondary offences are high (≥ 3 years), there are no potential changes worthy of comment.

Burglary. This sub-sample, it will be recalled, comprises 13 offenders. To assess whether or not the cumulation of sentence in a particular case was disproportionate, the actual degree of cumulation was compared with the degree of cumulation defined as proportionate. There are the same two measures of the degree of cumulation: (1) the quantum of sentence added to the

sentence for the principal offence; (2) this quantum as a percentage of the sum of the sentences for the secondary offences. Data relating to actual cumulation were taken directly from the analyses in Part 1. Proportionate cumulation was calculated using the two formulae derived in the theoretical analysis above. Since the criterion of proportionality depends on the sum of the sentences for the secondary offences and the mean of the individual sentences for these secondary offences, it varies with the particular case, and, for this reason, must be calculated separately for each of the 13 cases.[13] The relevant data are again presented in terms of a two-way classification. One follows the categories of the circumstances of the offences comprising a case – 'single event', 'escapade', 'multiple event', 'single-multiple event' (see Part 1). The second is by way of the sum of the sentences for the secondary offences - < 3 years, ≥3 years; this particular cut-off point for these two categories was chosen because, as for armed robbery, it represented a natural division in the distribution of cases for this variable (see Table 2.6) and the sums of sentence of less than three years could reasonably be regarded as short. How frequently and to how great an extent the cumulation of sentence for the 13 cases of burglary exceeds the calculated criterion of proportionality is shown in Table 2.7. Cases for which the actual degree of cumulation exceeds the proportionate degree are marked with an asterisk. (The figures in brackets will be dealt with later.)

Consider, first, cases for which the sum of sentences for the secondary offences is low (< 3 years) (see Table 2.7a). Cumulation can be seen to be disproportionately harsh in 6 of these 7 cases (the one exception being in the 'single-multiple event' category), and but for one of the six cases (the exception being in the 'single event' category) the excessive cumulation can be reasonably thought of as generally (perhaps) very substantial. For the five cases where the actual degree of cumulation clearly exceeded the proportionate degree, the mean percentage difference

Table 2.6

Distribution of the Sums of Sentence

for the Secondary Offences (in years) for Burglary (n = 13)

Sums of Sentence (years)	Frequency
<1	
≥1	7
≥2	
≥3	
≥4	1
≥5	
≥6	2
≥7	3 (25, 29.3, 47.8)

Table 2.7a

Actual and Proportionate Degree of Cumulation

as a Percentage and a Quantum (in months) for the Four Categories of Burglary –

Sum of Sentences for the Secondary Offences < 3 years (n = 7)

Single				Escapade				Multiple				Single-Multiple			
A%	P%	A_m	P_m	A%	P%	A_m	P_m	A%	P%	A_m	P_m	A%	P%	A_m	P_m
*33	28	6	5					*100	21	22	4.6	*52	25	6.5	3.1
*43	25	6	3.5					*67	24	12	4.3	14	22	3	4.7
*(100)	(26)		(1.6)												
												*100	25	18	4.4

Note. A% actual percentage

P% proportionate percentage

A_m actual quantum (in months)

P_m proportionate quantum (in months)

Table 2.7b

Actual and Proportionate Degree of Cumulation

as a Percentage and a Quantum (in months) for the Four Categories of Burglary –

Sum of Sentences for the Secondary Offences ≥ 3 years (n = 6)

Single				Escapade				Multiple				Single-Multiple			
A%	P%	A_m	P_m	A%	P%	A_m	P_m	A%	P%	A_m	P_m	A%	P%	A_m	P_m
								*31	22	24	16.8	*50	25	24	12
								2	8	6	27.4				
								2	9	6	26.6				
								5	5	31	30.7				
								12	17	9	13.1				

Note. A% actual percentage

P% proportionate percentage

A_m actual quantum (in months)

P_m proportionate quantum (in months)

was 48 (72 cf. 24) and the mean quantum difference was 8.9 months (12.9 cf. 4.0).

Now to the second, stricter, criterion from which to assess the degree of injustice: the degree of cumulation in relation to the effective sentence. The data relevant to Table 2.7a are presented in Table 2.8a; they are, as before: the quantum of excessive cumulation (A_m - P_m, in Table 2.7a); the proportionate effective sentence, i.e. the total of the sentence for the principal offence (taken directly from the analysis in Part 1) and the proportionate quantum of cumulation (P_m, in Table 2.7a); the quantum of excessive cumulation as a percentage of the proportionate effective sentence. This information is given in the table for each of the six cases for which the immediately preceding analysis revealed excessive cumulation. (To facilitate comparisons across Tables 2.7a and 2.8a, data relating to a particular case are located in the corresponding positions in both tables.) From this perspective, then, cumulation may be regarded as excessive (actually, generally to a very substantial degree) in four of the seven cases. (The four are marked with an asterisk.) This is to be compared with the findings for the same cases considered from the first perspective, where cumulation was thought to be clearly excessive in five of the seven cases.

This analysis now turns to consider the findings for those cases for which the sum of sentences for the secondary offences is high (≥ 3 years). Referring to Table 2.7b, cumulation can be seen to be disproportionately harsh in two of the six cases, one being in the 'multiple event' category and the other being in the 'single-multiple event' category. And the excessive cumulation is substantial, indeed: the mean difference between the actual and the proportionate degrees of cumulation being 17 (41 cf. 24) percent, representing a quantum of 9.6 (24.0 cf. 14.4) months. But what about the degree of cumulation in relation to the effective sentence? Turning to Table 2.8b, it can be readily apprehended that the relevant data do not warrant a change in the conclusion of excessive cumulation of a substantial degree in (the same) two of the six cases.

Table 2.8a

Excessive Cumulation (Quantum in months) as a Percentage of the Proportionate Effective Sentence (in months) for the Four Categories of Burglary – Sum of Sentences for the Secondary Offences < 3 years (n = 7)

Single			Escapade			Multiple			Single-Multiple		
PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$
23.0	1.0	4				*7.4	17.4	235	*27.1	3.4	13
30.5 *(28.6)	2.5 (4.4)	8 (15)				*10.3	7.7	75	—	—	—
									*16.4	13.6	83

Note. PES_m proportionate effective sentence (in months)

EC_m excessive cumulation (quantum in months)

$\frac{EC}{PES}$ excessive cumulation as a percentage of the proportionate effective sentence

Table 2.8b

Excessive Cumulation (Quantum in months) as a Percentage of the Proportionate Effective Sentence (in months) for the Four Categories of Burglary – Sum of Sentences for the Secondary Offences ≥ 3 years (n = 6)

Single			Escapade			Multiple			Single-Multiple		
PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$
						*64.8	7.2	11	*48.0	12.0	25
						—	—	—			
						—	—	—			
						—	—	—			
						—	—	—			

Note. PES_m proportionate effective sentence (in months)

EC_m excessive cumulation (quantum in months)

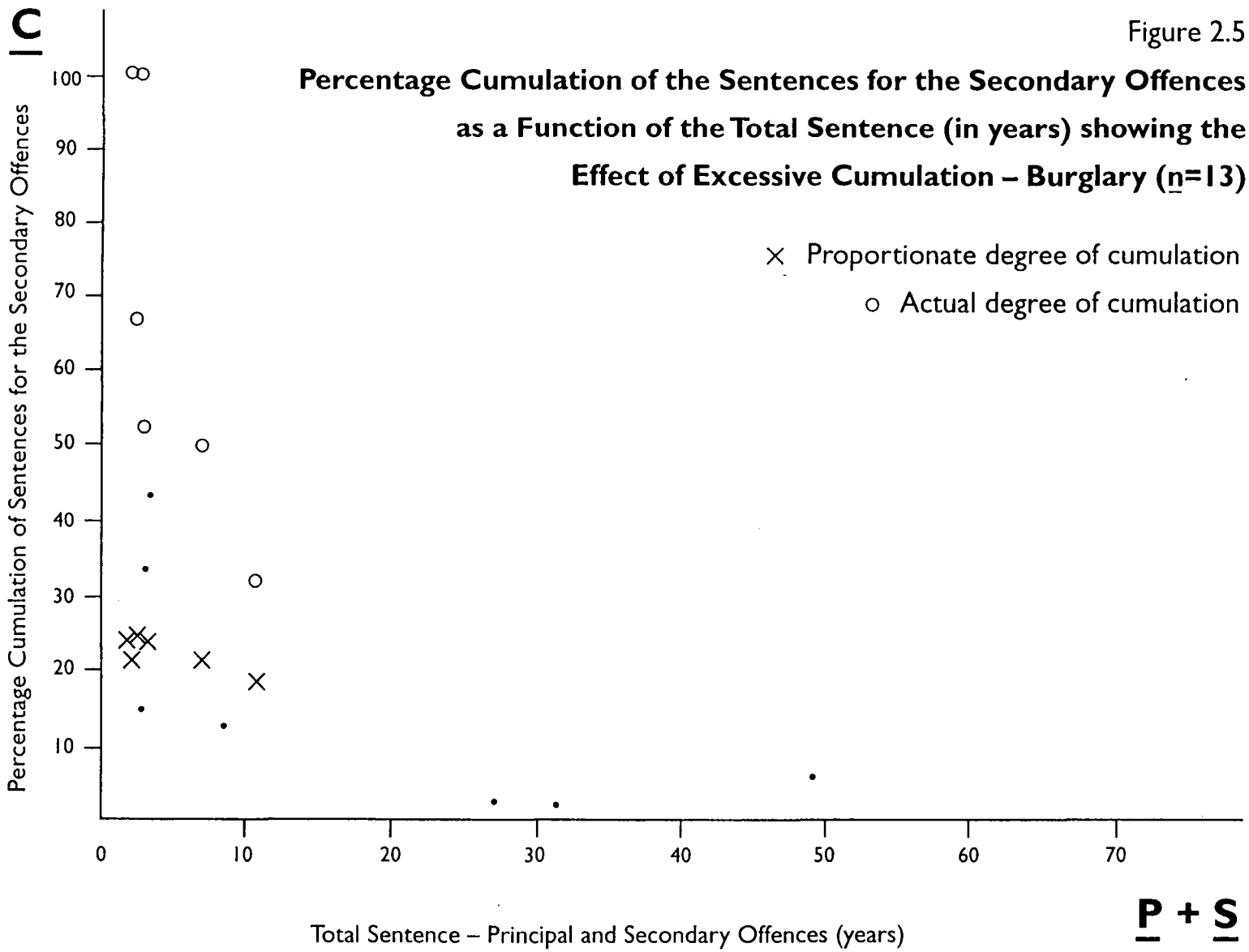
$\frac{EC}{PES}$ excessive cumulation as a percentage of the proportionate effective sentence

For the record, the quantitative relationship between the effective sentences and the sentences for the individual component offences for the 13 offenders in the burglary sample, and shown in Figure 1.4, is re-presented in Figure 2.5. However, here the graphical representation of judicial practice is modified somewhat: the points for the six offenders, for whom cumulation was determined to be excessive, are plotted as in Figure 1.4 (i.e. according to the actual degree of cumulation ordered by the judge) but in addition according to the degree of cumulation defined as proportionate in this analysis.[14] (These points appear in Figure 2.5 as circles for the actual degree of cumulation and as crosses for the proportionate degree of cumulation.)

Again, there is the potential for error in the data in Tables 2.7 and 2.8 for some of the offenders. It is where all or some of the offending comprised a single event and the sentence for a separate transaction connected with a burglary (e.g. a false imprisonment) was made concurrent with the sentence for the burglary. As explained for armed robbery, under these circumstances, it is not clear whether concurrency was ordered to avoid excessive cumulation or because the seriousness associated with the connected offence was taken account of in the sentence for the burglary. Where the latter alternative represents the judge's thinking, the sentence for the connected offence should not be incorporated in the calculations of the sum of the sentences for the secondary offences or of the mean of the individual sentences for these secondary offences. Since in none of the relevant instances did the sentencing judge remark on this aspect of sentence determination, it could not be known whether the data carried this error. Accordingly, it was necessary to redo the calculations for the relevant offenders. (This adjustment could apply to one or more connected offences and one or more burglaries for a particular offender.) There was only one offender in this burglary sample whose sentences are potentially subject to this error. The figures from the redone calculations for this offender are shown in brackets in Tables 2.7a and

Figure 2.5

Percentage Cumulation of the Sentences for the Secondary Offences as a Function of the Total Sentence (in years) showing the Effect of Excessive Cumulation – Burglary (n=13)



2.8a – the affected tables. In fact, the above conclusions require little modification. With respect to the degree of cumulation, there is no change. And from the perspective of the degree of cumulation in relation to the effective sentence, cumulation now appears as excessive.

Rape. This sub-sample, it will be recalled, comprises 24 offenders. To assess whether or not the cumulation of sentence in a particular case was disproportionate, the actual degree of cumulation was compared with the degree of cumulation defined as proportionate. Again, there are the same two measures of the degree of cumulation: (1) the quantum of sentence added to the sentence for the principal offence; (2) this quantum as a percentage of the sum of the sentences for the secondary offences. Data relating to actual cumulation were taken directly from the analyses in Part 1. Proportionate cumulation was calculated using the two formulae derived in the theoretical analysis above. Since the criterion of proportionality depends on the sum of the sentences for the secondary offences and the mean of the individual sentences for these secondary offences, it varies with the particular case, and, for this reason, must be calculated separately for each of the 24 cases.[15] The relevant data are presented in terms of a one-way classification: the categories of the circumstances of the offences comprising a case – 'single event', 'escapade', 'multiple event', 'single-multiple event' (see Part 1). (For armed robbery and burglary, it will be recalled, there was a second classification by way of the sum of the sentences for the secondary offences – < 3 years, ≥ 3 years; this was not used here because of the paucity of sentences falling in the lower levels of the distribution for this variable – see Table 2.9.) How frequently and to how great an extent the cumulation of sentence for the 24 cases of rape exceeds the calculated criterion of proportionality is shown in Table 2.10. Cases for which the actual degree of cumulation exceeds the proportionate degree are marked with an asterisk. And the

Table 2.9

Distribution of the Sums of Sentence for

the Secondary Offences(in years) for Rape (n = 24)

Sums of Sentence (years)	Frequency
<1	
≥1	
≥2	4
≥3	1
≥4	2
≥5	1
≥6	4
≥7	3
≥8	
≥9	2
≥10	1
≥11	
≥12	2
≥13	1
≥14	3 (25.5, 30.5, 38.5)

Table 2.10

Actual and Proportionate Degree of Cumulation

as a Percentage and a Quantum (in months) for the Four Categories of Rape (n = 24)

Single				Escapade				Multiple				Single-Multiple			
A%	P%	A_m	P_m	A%	P%	A_m	P_m	A%	P%	A_m	P_m	A%	P%	A_m	P_m
*36	23	14	8.9					*41	22	12	6.5	*40 *(67)	25 (28)	12	7.5 (5.1)
10	10	48	46					*100	29	24	7	*19	16	18	15.1
15	22	12	16.8									*13 *(14)	9 (9)	48	32.7 (32.1)
20	33	12	20									*38 *(57)	16 (20)	42	17.8 (14.9)
6	14	18	42.8									12	13	18	19.6
*24	21	21	18.5												
17	25	12	17.9												
*36	20	30	16.5												
*26	20	21	16.1												

Table 2.10 (contd)

Single				Escapade				Multiple				Single-Multiple			
A%	P%	A_m	P_m	A%	P%	A_m	P_m	A%	P%	A_m	P_m	A%	P%	A_m	P_m
17	35	12	24.8												
*65	22	33	11.4												
*63	22	32	11.4												
11	21	12	22.6												
17	20	24	29.1												
*23	20	36	31.2												
12	22	4	7.5												
10	25	12	29.8												

Note. A% actual percentage
P% proportionate percentage
A_m actual quantum (in months)
P_m proportionate quantum (in months)
The data for serious sexual offenders are underlined.

entries for those offenders deemedby the court to be serious sexual offenders are underlined. (The figures in brackets will be dealt with later.)

Cumulation can be seen to be disproportionately harsh in 13 of these 24 cases (all but one of the eleven exceptions being in the 'single event' category), and but for three of the thirteen cases (two of the exceptions being in the 'single event' category and the other being in the 'single-multiple event' category) the excessive cumulation could be reasonably thought of as generally very substantial. For the ten cases where the actual degree of cumulation clearly exceeded the proportionate degree, the mean percentage difference was 25 (46 cf. 21) and the mean quantum difference was 13 months (27 cf. 14).

Now to the second, stricter, criterion from which to assess the degree of injustice: the degree of cumulation in relation to the effective sentence. The data relevant to Table 2.10 are presented in Table 2.11; they are, again: the quantum of excessive cumulation (A_m - P_m, in Table 2.10); the proportionate effective sentence, i.e. the total of the sentence for the principal offence (taken directly from the analysis in Part 1) and the proportionate quantum of cumulation P_m, in Table 2.10); the quantum of excessive cumulation as a percentage of the proportionate effective sentence. This information is given in the table for each of the 13 cases for which the immediately preceding analysis revealed excessive cumulation. (To facilitate comparisons across Tables 2.10 and 2.11, data relating to a particular case are located in the corresponding positions in both tables.) From this perspective, then, cumulation may be regarded as generally very substantial in up to 8 of the 24 cases. (The eight are marked with an asterisk.) This is to be compared with the findings for the same cases considered from the first perspective, where cumulation was thought to be clearly excessive in 10 of the 24 cases.

For the record, the quantitative relationship between the effective sentences and the

Table 2.11

Excessive Cumulation (Quantum in months) as a Percentage of the Proportionate Effective Sentence (in months) for the Four Categories of Rape (n = 24)

Single			Escapade			Multiple			Single-Multiple		
PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$
68.9	5.1	7				*30.5	5.5	18	67.5 *(65.1)	4.5 (6.9)	7 (11)
—	—	—				*103.0	17.0	17	75.1	2.9	4
—	—	—							*92.7 *(92.1)	15.3 (15.9)	17 (17)
—	—	—							*53.8 *(50.9)	24.2 (27.1)	45 (53)
—	—	—							—	—	—
126.5	2.5	2									
—	—	—									
*76.5	13.5	18									
*58.1	4.9	8									

Table 2.11 (contd)

Single			Escapade			Multiple			Single-Multiple		
PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$	PES_m	EC_m	$\frac{EC}{PES}$
—	—	—									
*47.4	21.6	46									
*50.4	20.6	41									
—	—	—									
—	—	—									
103.2	4.8	5									
—	—	—									
—	—	—									

Note. PES_m proportionate effective sentence (in months)

EC_m excessive cumulation (quantum in months)

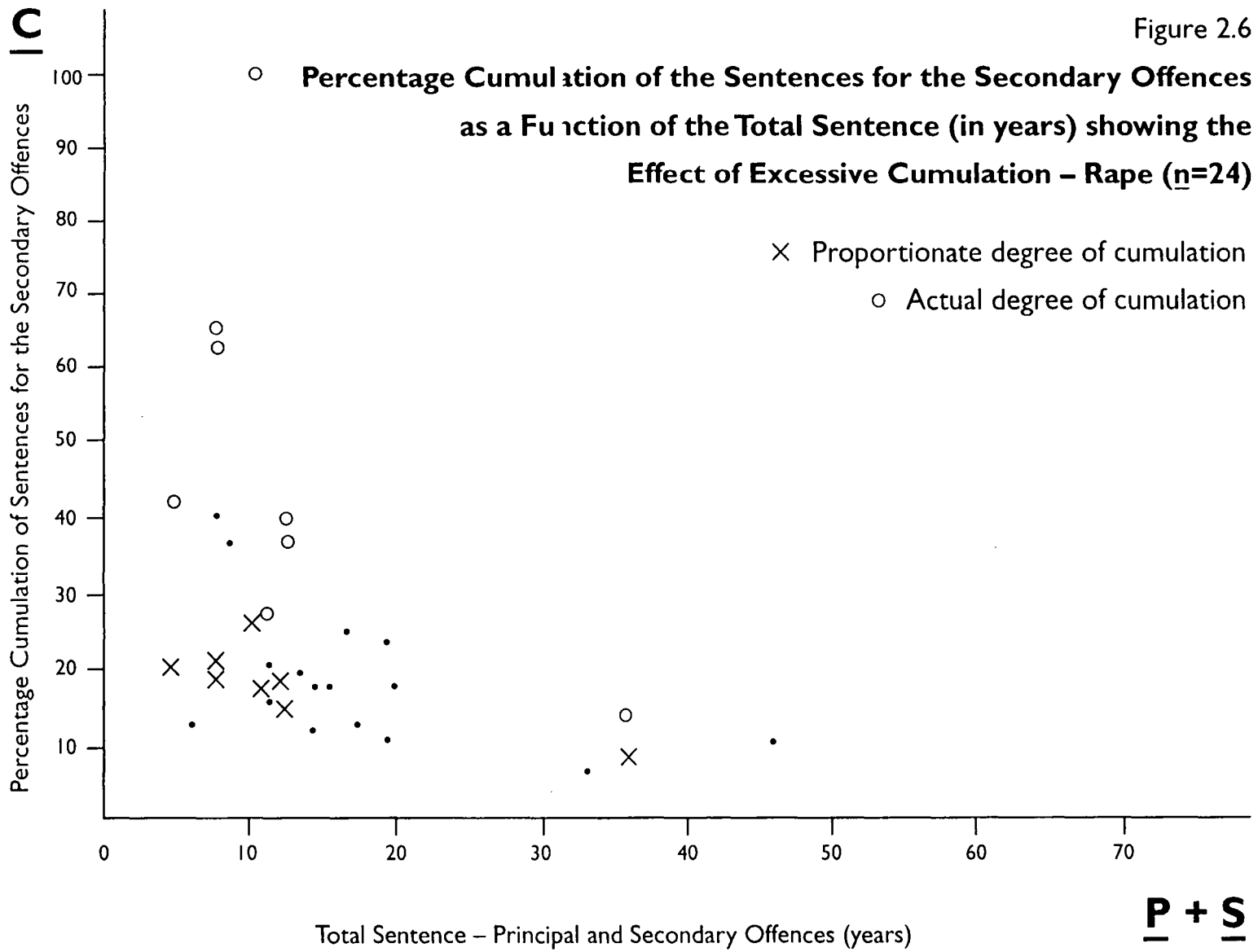
$\frac{EC}{PES}$ excessive cumulation as a percentage of the proportionate effective sentence

sentences for the individual component offences for the 24 offenders in the rape sample, and shown in Figure 1.5, is re-presented in Figure 2.6. However, here the graphical representation of judicial practice is modified somewhat: the points for the eight offenders, for whom cumulation was determined to be excessive, are plotted as in Figure 1.5 (i.e. according to the actual degree of cumulation ordered by the judge) but in addition according to the degree of cumulation defined as proportionate in this analysis.[16] (These points appear in Figure 2.6 as circles for the actual degree of cumulation and as crosses for the proportionate degree of cumulation.)

Again, there is the potential for error in the data for some of the offenders. For armed robbery and burglary this potential error arose where all or some of the offending comprised a single event and the sentence for the separate transaction connected with the armed robbery/burglary (e.g. a false imprisonment) was made concurrent with the sentence for the armed robbery/burglary. Under these circumstances, it is not clear whether concurrency was ordered to avoid excessive cumulation or because the seriousness associated with the connected offence was taken account of in the sentence for the armed robbery/burglary. Where the latter alternative represents the judge's thinking, the sentence for the connected offence should not be incorporated in the calculations of the sum of the sentences for the secondary offences or of the mean of the individual sentences for these secondary offences. Since in none of the relevant instances did the sentencing judge remark on this aspect of sentence determination, it could not be known whether the data carried this error. For rape, it will be recalled, the same problem manifests itself somewhat differently. It arises where all of the one or more associated offences – these include any non-principal rapes – were made concurrent, in regard to a single incident involving one victim. Accordingly it was necessary to redo the

Figure 2.6

Percentage Cumulation of the Sentences for the Secondary Offences as a Function of the Total Sentence (in years) showing the Effect of Excessive Cumulation – Rape (n=24)



calculations for the relevant offenders. (The adjustment is made for all the associated offences.) There were three offenders in this rape sample whose sentences are potentially subject to this error. The figures from the redone calculations for these offenders are shown in brackets in Tables 2.10 and 2.11 – the affected tables. In fact, the above conclusions require little modification. With respect to the degree of cumulation, there is no change. And from the perspective of the degree of cumulation in relation to the effective sentence, there is one additional case (this being in the 'single-multiple event' category) for which there is the possibility of the excessive cumulation being significant.

The Incidence of Disproportionately Severe Cumulation

In the three samples of armed robbery, burglary and rape there were in total 64 offenders. When the broad criterion of degree of excessive cumulation was applied to these offenders' sentences, 31 – just under one half – were found to be disproportionately harsh. How these were distributed in respect of the type of offence and the two case characteristics is shown in Table 2.12. On the basis of these data, the following is suggested, although tentatively in view of the small numbers. Across offences, there is no striking variation in the incidence of disproportionate harshness. However, within each of armed robbery and burglary, the incidence tended to be greater where the sum of sentences for the secondary sentences was lower. Similarly, between the four categories of the circumstances of the offence, disproportionate harshness was somewhat more frequent for the offenders falling in either the 'multiple event' or 'single-multiple event' categories: across the three offences 18 of 33 for these two categories as against 13 of 31 for the 'single event' and 'escapade' categories; although the trend was solely attributable to rape.

Table 2.12

Relationship between the Incidence of Excessive Cumulation – Broad Criterion – and Case Characteristics for Armed Robbery (n=27), Burglary (n=13) and Rape (n=24)

Offence	Sum of Sentences for the Secondary Offences (years)	Single	Escapade	Multiple	Single-Multiple	Sub-totals
Armed Robbery	<3	6(6)	1(3)	2(2)	1(4)	10(15)
	≥ 3	0(2)	0(1)	1(4)	3(5)	4(12)
Burglary	<3	1(2)	0(0)	2(2)	2(3)	5(7)
	≥ 3	0(0)	0(0)	1(5)	1(1)	2(6)
Rape		5(17)	0(0)	2(2)	3(5)	10(24)

Note. The figures in brackets give the number of cases in each of the categories.

Table 2.13

Relationship between the Incidence of Excessive Cumulation – Strict Criterion – and Case Characteristics for Armed Robbery (n=27), Burglary (n=13) and Rape (n=24)

Offence	Sum of Sentences for the Secondary Offences (years)	Single	Escapade	Multiple	Single-Multiple	Sub-totals
Armed Robbery	<3	1(6)	0(3)	2(2)	0(4)	3(15)
	≥ 3	0(2)	0(1)	1(4)	3(5)	4(12)
Burglary	<3	0(2)	0(0)	2(2)	2(3)	4(7)
	≥ 3	0(0)	0(0)	1(5)	1(1)	2(6)
Rape		4(17)	0(0)	2(2)	2(5)	8(24)

Note. The figures in brackets give the number of cases in each of the categories.

By way of comparison, when the stricter criterion of degree of excessive cumulation in relation to the effective sentence was applied to these offenders' sentences, 21 – one-third – were found to be disproportionately harsh. How these were distributed in respect of the type of offence and the two case characteristics is shown in Table 2.13. On the basis of these data, the following is suggested. Across offences, there is no striking variation in the incidence of disproportionate harshness. And within each of armed robbery and burglary, the sum of sentences for the secondary sentences did not appear as a factor. However, between the four categories of the circumstances of the offence, there are striking differences. Disproportionate harshness was largely found for the offenders falling in either the 'multiple event' or 'single-multiple event' categories. The figures speak for themselves: across the three offences 16 of 33 – one half – for these two categories as against 5 of 31 for the 'single event' and 'escapade' categories. This trend was strong for the three offences.

Disproportionately Severe Cumulation and the Serious Sexual Offender

In the rape sample of 24 offenders, 12 were deemed by the court to be serious sexual offenders, and for one of these the judge appeared to regard a longer than proportionate sentence as appropriate. It might be expected that these cases would largely account for the instances of disproportionately harsh cumulation according to the stricter criterion and identified empirically in the present study. Table 2.14 shows otherwise. Moreover, the sentence for the one case deemed to require a disproportionate sentence did not exceed this (stricter) criterion of excessive cumulation.

Table 2.14

Relationship between the Incidence of Excessive Cumulation – Strict Criterion – and Serious Sexual Offenders for the Four Categories of Rape

Offender Category	Single	Escapade	Multiple	Single-Multiple	Sub-totals
Serious Sexual	0(7)	0(0)	1(1)	2(4)	3(12)
Non-Serious Sexual	4(10)	0(0)	1(1)	0(1)	5(12)

Note. The figures in brackets are the number of cases in each of the categories.

Proportionality and the Cumulation of Sentence:

A Discussion of the Analysis

What has been offered here is a quantitative investigation of the severity of effective sentences imposed on multiple offenders by Victorian judges in the mid-nineties; in particular, whether they accord with the requirements of proportionality considered as a limiting principle. The effective sentences are taken from Part 1 of the study, which presented a quantitative picture of the sentencing of multiple offenders according to the totality principle. This was based on an analysis of archival data and showing the relationship between the effective sentence imposed for a case and the sentences of imprisonment fixed for the individual component sentences for offences representing separate transactions. For this there were separate analyses for cases involving each of armed robbery, burglary and rape as principal offences.

The totality principle enjoins the judge to impose an effective sentence appropriate to the circumstances of the case viewed as a whole. For this the sentence must be both proportionate with respect to the seriousness of the case and merciful by way of not being crushing in the light of the offender's rehabilitation prospects and other circumstances such as state of health. As a matter of principle, the sentences considered appropriate to the individual comprising offences as separate transactions determine the seriousness of the case; what is appropriate to these offences is determined by matters relating to the offence and the offender. (See generally, Fox and Freiberg, 1999.) Proportionality can be seen as determining and as limiting. In the present study it is applied in the latter sense (i.e. the focus is whether the sentences are disproportionately harsh). From this perspective, the extension of mercy to the offender may justify an effective sentence

below the proportionate limit; whether the case sentences are appropriate on this ground is beyond the scope of the present study.

There are good reasons for investigating whether the effective sentences in these samples comport with the principle of proportionality operationalised for the multiple offender. Although the totality principle incorporates proportionality and mercy, the idea of the effective sentence not crushing the offender appears, at least historically, to have been the dominant explicit reason for the constraint on cumulation in Victoria. Indeed, in Lovegrove's (1997a, 1997b) study of judges' accounts of their decision making as they determined sentences for multiple offenders, the express policy consideration for limiting cumulation was that of the crushing sentence. This is not to say that proportionality did not play a significant, albeit implicit, role in the decision. But it may indicate that proportionality lies in the background of the judge's thought; if, in fact, this is the case, then there is a risk of disproportionate harshness. In any case, even if proportionality is a dominant consideration, its meaning has not been elaborated but remains an intuitive notion. Thus, to ascertain what proportionality means – or does not mean – in practice, it is necessary to compare the principle as applied against a standard derived from a principled definition.

The present study does this. Apparently the only work on proportionality as a limiting standard applying to the multiple offender is that of Thomas (1979) and Ashworth (1983, 1992, 1995) based on English practice. In their conception, the cumulation of sentence should be constrained by the seriousness of the comprising offences as a class of offence. Without doubt, this concept represented a great step forward in the thinking on this question. But it remained somewhat underdeveloped for general use, being of practical value only in egregious instances of disproportionate

harshness. So, for example, six years' imprisonment would be excessive for six one-year thefts, but what quantum would be excessive for three one-year thefts? What is required, then, is a precise standard; necessarily a numerical standard. Herein lies the significant contribution of the present study. The ideas of Thomas and Ashworth were developed to produce a numerical standard. The product of this work is a formula for calculating what quantum of sentence should be regarded as proportionate for a particular case, this taking account of the sentences considered appropriate to the individual secondary offences comprising the case. This standard was applied to each of the cases in the three samples to determine whether the imposed effective sentence was excessive in the light of this criterion of proportionality. This test would be expected to be particularly sensitive. There are two reasons for this. First – this is a point emphasised in Part 1 – the representation of the relationship between the effective sentence for a case and the sentences for the individual component offences accords with the judicial approach to this problem. By this means, it has the potential to offer an accurate description of judicial practice in terms of the major factors determining the decision. Secondly, the numerical standard is based on a model having the same general structure as the representation underlying the description. It therefore relates directly to the description, this making for greater precision.

General Discussion

There were two criteria against which to assess the disproportionality of a cumulation order. For the first, the actual and defined proportionate degrees of cumulation were compared, regard being had at once to the quantum of sentence added to the principal sentence and to this quantum as a percentage of the sum of the secondary sentences. For the second criterion, what mattered was the degree of cumulation in

relation to the effective sentence, account being taken simultaneously of the proportionate effective sentence and the quantum of excessive cumulation as a percentage of this.

To the first – the broad – criterion. Across the three samples of offences there were 64 offenders, and in 31 of these cases – just under one-half –cumulation was considered to be excessively harsh (in an additional six cases cumulation exceeded what was proportionate, but to a degree considered insubstantial). The legal category of offence did not appear to be a factor. However, there was some tendency, but not to a marked degree, for the incidence of disproportionality to be lower where the sum of the secondary sentences was higher and for the 'single event' and 'escapade' categories – though the small numbers do not make for reliability. In most instances the disproportionality was substantial, but ranged from the not-insubstantial to the very substantial. In fact, the overall mean difference between the actual and proportionate quanta of cumulation was 10.0 months. According to this evidence, too many offenders served too much unnecessary imprisonment.[17] An illustration of a not-insubstantial difference is the case ('escapade') in which sentences of 3.5 years and 1.0 years were imposed for offences of armed robbery and burglary, and 50 percent or 6 months of the latter sentence was made cumulative; for this case the proportionate degree of cumulation was calculated to be 27 percent or 3.2 months. This would seem to approach a real injustice. A very substantial difference is represented in the case ('single-event', one victim) in which sentences of 5.0 years, and 2.0 years, 2.0 years, 2.0 years, and 1.0 year were imposed for offences of rape, indecent assault, indecent assault, threatening to kill, and causing injury intentionally, and 36 percent or 2.5 years of the latter four sentences were made cumulative; for this case the proportionate degree of cumulation was

calculated to be 20 percent or 16.5 months. This would seem to represent a real injustice.[18]

All this says nothing about the appropriateness of the sentences in the 33 of the 64 cases satisfying this criterion of proportionality. The fact is, there is the possibility of hidden disproportionality. It arises thus. The court may, on the basis of the totality principle, properly reduce what otherwise would be the proportionate degree of cumulation on the grounds of factors personal to the offender (e.g rehabilitation prospects). As a result, in a particular case the actual effective sentence may be below the criterion proportionate effective sentence. Yet there is no way of knowing from the present data whether the notional effective sentence from which the reduction in effect was made was itself disproportionate. Accordingly, whether or not the figure of 31 underestimates disproportionality and, if it does, the true incidence, is beyond the scope of the present study. Clearly, any increase would come off an already substantial base.

Now to the second – the strict – criterion for disproportionality, in which the quantum of excessive cumulation is considered in relation to the proportionate effective sentence. Under this criterion, the degree of excessive cumulation must be significant not only of itself but also in relation to the magnitude of the proportionate effective sentence. There were, on this standard, 21 offenders whose effective sentences would be regarded as disproportionately harsh, comprising about one-third of the sample of 64. (There was no evidence that the serious sexual offenders in the rape sample made a disproportionate contribution to this finding.) This is down by ten on the incidence for the broad criterion, but still represents a very substantial proportion of the total sample. Thus the conclusion remains: too many offenders served too much unnecessary punishment. Nevertheless, in view of the small sample sizes the data do not provide a valid basis for estimating the

extent of the problem. In regard to the two criteria, the following bear comment. First, while on the broad standard there was a tendency for disproportionality to be more common among cases falling in the 'multiple event' and 'single-multiple event' categories, this was marked under the strict criterion. Secondly, of the two cases – one an armed robbery, the other a rape – used in the present discussion to illustrate disproportionality under the first criterion, for only one – the rape – would the sentence be regarded as disproportionately harsh under the second criterion. (In fact, the sentence for this case was imposed on appeal; the original sentences for the individual offences were not interfered with, but the order for full concurrency was set aside.)

In this study effective sentences are assessed in terms of a numerical standard of proportionality. For this the only express standard was to be found in English sentencing law (see Ashworth, 1995), this being operationalised numerically in the present study using appropriate Victorian sentencing data. In the validity of this standard and in the validity of its operationalisation, lie the limitations of the present conclusions. Clearly, these conclusions, as expressed, must be regarded as subjective. There can be said to be substantial unnecessary imprisonment only if one accepts effective sentences as properly constrained by proportionality defined in terms of the seriousness of single offences. The validity of this standard remains open, and is beyond the scope of the present numerical analysis. Put objectively, then, the conclusion must be that the finding of effective sentences not infrequently exceeding the English standard may reflect a different standard among Victorian judges for the constraint on cumulation; a standard – necessarily intuitive because it has not been articulated – allowing for a case a proportionate effective sentence not framed by the seriousness of its comprising offences as a class of offence. Nevertheless, there is a second possible objective conclusion:

Victorian judges' sense of justice may conform to the English standard but they may experience difficulty in applying it.

What about the limitations to the conclusions arising from the validity of the standard of proportionality as operationalised? It will be recalled that this process required of the author three personal judgments: selecting the pairs of offences framing proportionality; fixing sentences to represent their seriousness; and deciding how many offences are to be constrained within the frame. In regard to this, the criterion of proportionality will allow greater cumulation where it is based on greater differences in seriousness in respect of the first two points and, in relation to the third point, fewer offences. In the author's view, the most problematic judgment related to the constraint on cumulation for a moderate number of secondary offences each warranting 1.2 years. In determining the criterion, eight was taken to define a moderate number, but would four have not been reasonable? Certainly, the figure of eight is more consistent with the guiding principles of the Sentencing Act 1991 (Vic), enjoining as they do, the sentencer to apply punishment parsimoniously;[19] moreover, as noted in the derivation of the standard, with 'four' Curve 1 would have crossed the C axis in Figure 2.1 not at 31 but at 66 percent cumulation – what might be regarded as an absurdly high level.[20] Unfortunately, little more than this can be offered by way of justification. The problem is, the answer does not follow as a matter of logic, nor can the soundness of the judgment be tested for coherence. This contrasts with the other decisions. For example, it seemed reasonable that when a very large number of offences are to be constrained, the heartland of the constraining offence (i.e. the 50th percentile sentence) set the limit on cumulation; this comports well with a low level of seriousness of the same constraining offence – this level including all but the least serious instances, and marked by the 25th percentile

sentence – limiting cumulation of sentence for a moderate number of the constrained offences.

Let it not be forgotten, the validity of this analysis also turns on the validity of the description of judicial practice from which comes its data base. In respect of this, there is one matter worth rehearsing. The analysis of disproportionate harshness makes an important assumption: namely, the sentences imposed for the offences comprising the case are appropriate. Some doubt over this was raised in a cautionary point on the validity of the description; there may be a tendency among some judges to offset the potentially crushing effects arising from cumulation by imposing somewhat less than appropriate sentences for comprising offences, its effect being artefactually to raise the degree of cumulation. This, of course, has the potential to give a misleadingly high incidence of disproportionate harshness. Yet, it would not withdraw the cloud now hanging over the judicial approach to this sentencing problem as a result of the present analysis. For the extent to which it was an actual problem, the findings would indicate not so much disproportionate harshness of effective sentences as disproportionately lenient sentences for offences comprising the cases, itself an undesirable outcome for reasons advanced by Fox and Freiberg (1999). In any case, any impact of this possible factor would be expected to be largely confined to the broad criterion of disproportionality.

Concluding Observations

The quality of the present quantitative description of how Victorian judges apply the totality principle – it was noted in the general concluding comments to Part 1 – is limited by the incompleteness and the imprecision of judicial sentencing policy in regard to this problem. This is because an accurate and complete quantitative description requires that the data reflecting practice be analysed according to the structure of judicial

thought; but Victorian judges are yet to formulate an agreed approach to the sentencing of the multiple offender. An approximation to some ideal policy had to do. Moreover, as for description, so for the investigation of disproportionate harshness, here in Part 2. There was clear evidence of effective sentences exceeding the criterion of proportionality. But what did this mean: the judges' applying a standard of proportionality different from the criterion or having difficulty in applying the criterion? Unfortunately, the answer awaits a judicial policy on what should constitute proportionality in the sentencing of the multiple offender. In view of this, the present study is better regarded not as a rigorous empirical analysis of the principle of proportionality as Victorian judges apply it to the multiple offender, but as a first step towards a more rigorous principled legal analysis of this sentencing problem.

NOTES

1. The numerical standard of proportionality derived in Lovegrove (2000) did not include sentencing data for the year 1996.

2. Sentencing data prior to 1993 could not be used to discern current sentencing practice. In 1992 remissions for good behaviour while in custody were abolished. These could amount to one-third of an offender's sentence. To offset the effect of this change on the time prisoners would serve, courts were required by s.10 of the Sentencing Act 1991 (Vic), when imposing sentences of imprisonment, to reduce what would previously have been considered to be the appropriate sentences by one-third. (See generally, Fox and Freiberg, 1999.)

3. The pth percentile in a distribution of sentences is the sentence below which p percent of the sentences fall and above which (100-p) percent of the sentences fall.

4. 1.2 years is the average of the mean 75th percentile sentences for theft and indecent assault and 3.9 years is the average of the mean 50th percentile sentences for rape and armed robbery.

5. Note, if 'four' had been chosen as the criterion, Curve 1 would have crossed the C axis in Figure 2.1 not at 31.1 but at 65.7, an extraordinarily harsh degree of cumulation (see Figure 2.1).

6. This curve was fitted by Professor Pip Pattison, Department of Psychology, University of Melbourne, using least squares and the modified Gauss-Newton algorithm in the BMDP 3R programme; see Dixon (1990).

7. To Victorian trial judges, it will be recalled, less cumulation is warranted where the sentence for the principal offence is higher (see Part 1).

8. The official sentencing statistics for this offence are presented in two categories – 'Murder' and 'Murder (not life imprisonment)'. For the present purpose, the data on imprisonment in these two categories had to be combined. Appreciation is due to Mr W. Johnston of the Department for providing the author with printouts of the raw data for the category 'Murder (not life imprisonment)'.

9. $\frac{7.0}{2.7} \times \frac{100}{1}$

10. In calculating this 'sum', account is taken of only the most severe sentence in a group of offences comprising a single transaction, and, in determining this 'mean', regard is had to only sentences of imprisonment.

11. In fact, the degree of excessive cumulation, substantial as it is, may be an underestimate of the true value. This is the case in which other offences – in effect, five armed robberies and one attempted armed robbery – were admitted and taken into account in the determination of sentence. For the purpose of calculating the degree of cumulation, the appropriate sentence for each of the admitted offences was assumed to be the same as the sentence imposed for each of the seven prosecuted armed robberies (as explained in Part 1 – see note 10).

    To the extent that this overestimates the judge's view of the seriousness of the admitted offences, so the calculated degree of excessive cumulation underestimates the real injustice.

12. These values are, of course, based on S. However, they have been adjusted for their use in this figure, being based on P + S, so as to be consistent with its structure. In fact, the differences between the two sets of values are negligible.

13. See note 10.

14. See note 12.

15. See note 10.

16. See note 12.

17. Recall, none of this could be attributed to sentences purposely made disproportionate in respect of serious sexual offenders.

18. The offender was not deemed to be a serious sexual offender.

19. See s.5(3) and following.

20. As a consequence of the doubt surrounding this decision, the test of disproportionality is less certain for cases whose sums of sentence for the secondary offences are low.

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