SENTENCING OF CONVICTED OFFENDERS:
AN ANALYSIS OF THE PUBLIC'S VIEW

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The results of a survey of public attitudes about appropriate length of prison sentences for convicted offenders are reported. Two main questions are addressed: 1) degree of consensus within the population about appropriate sentences for different offenses and 2) the relationship between the desired sentences expressed by the public and the actual time served by offenders in prison. The analysis suggests considerable agreement across various demographic groups on the *relative* severity of sentences to be imposed for different offenses, but disagreement over the *absolute* magnitude of these sentences. These results suggest the feasibility of generating consensus on a proportional, just deserts sentencing schedule, but difficulty in establishing the "constant of proportionality." The sentences desired by the public are found to be consistently more severe than sentences actually imposed, suggesting the need for greater public awareness of current imprisonment practices so that expectations of the determinate sentencing schedules will be realistic and consistent with limited prison capacity.

I. INTRODUCTION

Few social problems generate as much public interest as do crime and the treatment of criminals.[1] This concern is evident in the periodic public outcries demanding more effective ways of dealing with crime. Such public concern led, in the middle of this century, to the widespread implementation of a variety of treatment programs and the use of indeterminate sentences to rehabilitate offenders. More recently, the growing disillusionment over the possibility of such rehabilitation, and the inequities associated with indeterminate sentences, have led to a call for fixed sentences for convicted offenders.

Legislatures in many states have already passed or are now considering bills to change the sentencing provisions for convicted offenders.[2] These bills include statutes: 1) to abolish

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[1] In a 1976 national survey by the Associated Press, crime was ranked second only to economic issues as the most serious domestic problem during that Presidential election year (New York Times, 1976 [June 4]: 12).

[2] Maine, California, Illinois, Indiana, Colorado, Pennsylvania, Texas, and Minnesota are already implementing new sentencing procedures. North

supervised release on parole completely (Maine) or to eliminate the parole authority's control over early release decisions (California, Colorado, Illinois and Indiana); 2) to set mandatory minimum sentences (Texas and Idaho) or fixed sentences determined by the judiciary (Maine, Indiana), the legislature (California, Illinois) or by a sentencing commission (Pennsylvania, U.S. Senate Bill 1437); and 3) to require a prison sentence for all persons convicted of certain offenses (Class X felonies in Illinois, Massachusetts' "gun law," New York's "drug" and "second felony" laws, and certain violent offenses in Nevada).

All these bills, while adopting slightly different approaches, are intended to make the length of prison terms more definite. The increase in the use of sentences of determinate length is a move away from a rehabilitative philosophy, in which release is based on post-conviction behavior, to one where the punishment is based on the offense and prior record of the offender. This change in philosophy is supported by a growing body of evidence that treatment programs have little effect, beneficial or detrimental (Robison and Smith, 1971; Martinson, 1974; Lipton *et al.*, 1975). Furthermore, a policy of determinate sentences emerges as acceptable to critics from opposite sides of the political spectrum. Determinate sentences eliminate the capricious and arbitrary exercise of discretion in sentence lengths often instituted in the name of "treatment" (American Friends Service Committee, 1971; Mitford, 1973; Fogel, 1975; Dershowitz, 1975; von Hirsch, 1976; and the Twentieth Century Fund, 1976). At the same time, they respond to the call for more stringent crime control through more certain and/or longer sentences (Ford, 1975a; 1975b; 1975c; Wilson, 1975a; 1975b; and van den Haag, 1975).

Although there is considerable agreement with the concept of determinate sentences, difficulties arise in establishing an appropriate sentence for each offense and offender. Questions about what standards should apply and who should fix the sentences are complex and often contentious issues. For example, there is considerable debate over the merits of legislatively fixed sentences and judicial "sentencing guidelines" (Wilkins *et al.*, 1976). Regardless of the final process adopted for establishing sentences, however, any schedule of determinate sentences should reflect some input from the general public. When the requirements of

Carolina, Ohio, Nevada, Connecticut, and the U.S. Congress are among the jurisdictions now considering similar changes.

rehabilitation were of dominant concern, it was appropriate to leave the determination of actual time served largely to professional "treatment specialists" who would decide when an individual was "rehabilitated." As the rehabilitation model is displaced by a concern for "just deserts," however, the public's views on appropriate levels of punishment for different crimes should become increasingly relevant to those who decide on sentencing policies.

How well can public sentiment serve as a reasonable basis for developing sentencing policies? There are three main issues. The first is the degree of consensus among various segments of the community on appropriate sentences for various offenses. Second is the degree to which the severity of the sentences preferred by the public is consistent with judgments about the relative seriousness of the offenses. Such consistency has a bearing on our ability to derive a single sentencing schedule in which sentences are an accurate measure of the seriousness of offenses. A third is the extent to which the sentences preferred by the public agree with current sentencing practices within the criminal justice system. The results of such a comparison will indicate the direction and magnitude of the sentence changes that would be required to satisfy contemporary public sentiment.

A number of previous studies have examined aspects of this question in surveys of different population groups, but no one study has considered all three aspects of the problem. For example, several studies have considered the degree of consensus about appropriate sentences among various subgroups of the population (Rose and Prell, 1955; Makela, 1967; Gibbons, 1969; Boydell and Grindstaff, 1974; Grindstaff, 1974; Thomas *et al.*, 1976). Two different dimensions of consensus are considered: (1) agreement on the rank-order of the sentences imposed for different offenses by the respondents in terms of the relative severity of the sentences; and (2) similarity in the absolute values of the sentences assigned.

The results suggest a high degree of consensus by the respondents on the rank-order of the sentences imposed for different offenses. In comparing the prison sentences assigned by different subgroups of respondents, controlling for sex, race, age, income, occupational prestige, and education, Thomas *et al.* (1976) reported extremely high rank-order correlations ($\geq$ .917). Rose and Prell (1955) did not explicitly analyze the rank-order of agreement, but the data they reported do permit such an analysis. Comparing sex, socioeconomic class, and size of

community, the resulting rank-order correlations exceed .940 when the offenses are ranked by mean prison sentences imposed, and exceed .879 when ranked by the mean fine imposed.

The results of studies of the similarity in the abolute values of the sentences imposed by respondents are more ambiguous. In general, the studies that include other sentencing options in addition to prison — e.g., probation and fines (Gibbons, 1969; Boydell and Grindstaff, 1974) find very little difference in the sentences assigned by different subgroups of respondents.[3] When comparing only the differences between the mean length of the prison sentences imposed, however, other studies (Rose and Prell 1955; Thomas *et al.*, 1976) find some significant differences between population subgroups. In particular, there is some tendency for women to sentence more severely than men for crimes against morals, while men sentence more severely than women for violent crimes. Respondents with more formal education, and those from urban areas, sentence less severely than those with less education and those from rural areas, respectively.

These results are not necessarily inconsistent. The findings of agreement when nonprison sentences are included among the options and disagreement when only the length of prison sentences are compared may reflect a greater agreement among respondents on the decision of whether a prison sentence should be imposed or not, but less agreement about the absolute length of prison sentences to be imposed.

There is considerably less research relating the public's sentencing choices to judgments about the relative seriousness of different offenses or to actual prevailing sentencing patterns. Indeed, none of the studies examined here compared offenses in terms of the severity of the sentences favored by the public and measures of the seriousness of the offenses. Rose and Prell (1955) did collect the data necessary for such a comparison, but did not report any such analysis. Using their data, however, the rank-order correlations between the seriousness scale scores and the mean prison sentences considered appropriate by the various population subgroups are all found to be in excess of .9, indicating that public views on severity are quite consistent with judgements about the relative seriousness of offenses.

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[3] The one exception is a study by Makela (1967) in Finland which includes nonprison sentencing options and reports some differences between subgroups in the sentences assigned.

Several studies provide some comparison of the sentences desired by the public with actual sentences imposed. These studies, however, are limited to comparing the percent who would impose a prison sentence (Gibbons, 1969; Grindstaff, 1974), or comparing the frequency of various gross sentencing options (Makela, 1967). The results indicate some tendency for the public to demand more severe sentences than those imposed by the criminal justice system. Furthermore, in a rank-order comparison between judgments about the relative *seriousness* of offenses and the actual sentences, Rose and Prell (1955) find no correlation. None of the studies examined here compared public preferences with actual sentences in terms of the length of prison sentences.

Building on the fragmented results of previous studies, the research reported here simultaneously addresses all three aspects of determining an appropriate sentence for each offense. We develop measures of what segments of the population regard as the proper sentence for various offenses. The degree of consensus in the community about those sentences is then assessed. The sentences desired by the public are also compared with judgments about the relative seriousness of the offenses and with the current sentencing and release practices of the criminal justice system, in order to assess the divergence between public sentiment and a just deserts sentencing scheme and between public sentiment and current practices.

II. THE SURVEY

To assess public sentiment on the appropriate length of prison sentences for different offenses, a survey was designed and administered to a random sample of residents of Allegheny County, Pennsylvania (which includes the city of Pittsburgh). In addition to various demographic information and whether or not they had recently been the victim of a crime, respondents were asked what amount of time they felt convicted offenders should spend in prison for various kinds of offenses (Table 1). To make the task of assigning sentences manageable in a self-administered questionnaire, only 23 offenses were included in the survey.[4] The included offenses, which were presented in

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[4] Since the sentence assigned to any one offense is relative to the sentences assigned to other more and less serious offenses, there might be an order effect in responses induced by the order in which serious and minor offenses appear in the survey. To avoid this bias, four versions of the survey were used with the order of the offenses randomly determined in each version. This approach avoided the risk of finding extreme sentences that might result

the form of brief crime scenarios, were chosen because they represented a significant contribution to present prison populations in the United States (U.S. Department of Justice, 1976). Some white-collar crimes that have recently received public attention were also on the list.

Table 1.   Survey of Public Views on Prison Sentences: Included Offenses

CRIME TYPE	SCENARIO DESCRIPTION
1st Degree Murder	The offender is convicted of first degree murder after he intentionally killed a person who witnessed a crime he had committed.
2nd Degree Murder	A bank guard is killed during a bank robbery. The offender is convicted of murder in the second degree.
Voluntary Manslaughter	An innocent by-stander is killed when gun shots are fired during an argument. The offender is convicted of voluntary manslaughter.
Rape	The offender is convicted of rape after sexually molesting a young woman. The victim suffered no serious physical injury.
Assault with Intent to Kill	The offender is convicted of aggravated assault and battery with intent to kill after violently clubbing another person.
Aggravated Assault	The offender is convicted of aggravated assault and battery, after he maliciously beats up another individual who insulted him.
Armed Robbery	The offender is convicted of armed robbery after holding up a gas station using a gun.
Robbery	The offender is convicted of robbery for accosting a man on the street and forcibly taking all his money.
Burglary	The offender is caught after entering someone else's apartment without permission. He is convicted of burglary.
Larceny	The offender is convicted of larceny for stealing a tape deck from a locked automobile.
Auto Theft	The offender is convicted of motor vehicle theft after stealing a car and stripping it.
Stolen Property	The offender is convicted of receiving stolen goods after he bought a color television that he knew was stolen.
Simple Assault	The offender is convicted of simple assault after slapping a sales clerk.
Narcotics Sales	After being caught selling cocaine to another individual the offender is convicted of selling narcotics.

from an initially high or low calibration of sentences in response to a sequence of serious or minor offenses at the start of the survey. In fact, no significant differences were found in the analysis of the responses to the four different versions of the survey.

Narcotics Possession	Enough heroin for three injections is found in the offender's pocket. He is convicted of illegal possession of narcotics.
Narcotics Use	The offender is convicted of general narcotics law violation after being observed sniffing cocaine.
Fraud	The offender is convicted of fraud after he knowingly supplied false information on an application for a bank loan.
Sodomy	The offender has engaged in deviate sex with another consenting individual of the same sex. He is convicted of sodomy.
Drunk Driving	The offender is convicted of driving a car while drunk.
Escape	The offender is found guilty of escaping from the state penitentiary. How much time should be added to his original sentence?
Firearms Violation	The offender is found guilty of a firearms violation, after he was caught in possession of a gun without a license.
Medicaid Fraud	The offender is a doctor convicted of fraudulently charging Medicaid for services that were not provided to his patients.
Employee Safety	The offender is convicted of knowingly subjecting his employees to unsafe working conditions. One worker suffers a permanent disability and is unable to work any more.

For each described offense, respondents were asked to assign the length of a prison sentence that "best fits the seriousness of the offense" for first offenders, and for repeat offenders. According to the survey instructions, the "sentence" is to be "the amount of time the offender will actually spend in prison or jail".[5] Also, a "first offender" is someone "convicted of the crime for the first time (he has no prior convictions for any offense)." A "repeat offender already has at least one previous conviction for other offenses (not necessarily the same one), and his current conviction is for the crime listed."[6] If a

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[5] The instructions to the respondents also stated: "You should record two sentences for each offense, one for persons convicted for the first time and one for persons with prior convictions. Each sentencing decision is up to you. Record sentences in terms of the actual amount of time you want the convicted offender to spend in prison. (Any time spent on parole would be after this time served in prison.)"

The instructions were very explicit in noting that the sentence should represent the actual time to be served. This was done to avoid any ambiguity in responses that might have resulted from the significant discrepancy between sentences imposed by judges and the actual time served. In this paper, all discussion of respondents' "sentences" thus refers to "time served."

[6] The survey instructions are explicit about not restricting repeat offenders to the same crime type. Nevertheless, there is undoubtedly some ambiguity, both across respondents and across different offense types, in how respondents interpreted a "repeat offender." The sentence assigned to an offender repeating armed robbery may well be different from that assigned to a first-time armed robber with a prior conviction for some other offense. The

sentence other than confinement was desired (e.g., probation or fine), the respondents were asked to enter "zero" for that offense. For all offenses, the offender was described as a 24-year old man.

The survey was mailed during the spring of 1977 to adult residents in a random sample of 2,500 households. The sample was stratified by census tract to assure that the various communities of the county were represented in the sample in the same proportions as their representation in the total population. With no further follow-up, twenty-four percent of the surveys were returned, yielding a sample of 603 useable responses. Because of response biases associated with returning mail surveys, the available survey responses are not necessarily representative of the general population. Instead, they probably represent the views of those citizens most concerned about the problems of prison sentencing.[7] As such,

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ambiguity will no doubt contribute to variability in the sentences of repeat offenders.

[7] It is well established in survey literature that individuals responding early to a mail survey are different from those who respond later. In particular, early respondents tend to be more interested in the subject matter of the survey, older, and more highly educated (Suchman, 1962; Kish, 1965; Kivlin, 1965; Schwirian and Blaine, 1966; Filion, 1975; Goudy, 1976).

A comparison of the characteristics of the respondents to this survey with those of Allegheny County residents and Pennsylvania residents indicates that this response pattern also obtained in the sentencing survey. The single wave of survey respondents are predominantly highly educated, middle-aged white males with high incomes who are employed in professional or managerial positions.

There are two sources of potential bias in the available responses. The first is the nonrepresentative distribution of the different population subgroups; females, blacks, and people with less education are seriously underrepresented among the respondents. Second is the bias arising from the potential nonrepresentativeness of the responses *within* any population subgroup (e.g., the females who did respond may have different opinions than the females who did not respond).

The problem of nonrepresentativeness *across* subgroups can be dealt with. First, the different subgroups among the respondents can be identified and their responses examined separately. The responses of these subgroups can then be weighted by their actual distribution in the full population to yield estimates of the responses for the total population (Kish, 1965; Mandell, 1974).

The reliability of these results, however, depends on the representativeness of the responses *within* the various subgroups. We know from studies of nonresponse bias that interest in the subject matter is an important factor affecting early response. It is, therefore, likely that the respondents within each subgroup are those with the greatest interest in the survey material.

Because of this interest bias, the responses to many surveys overestimate the subject being investigated. For example, the response bias will yield overestimates of the demand for child care in a survey of employees or of the harvest of water fowl in a survey of licensed hunters. Likewise, the responses to the sentencing survey probably come predominantly from those persons most interested in sentencing. The direction of any one-sided bias, if it exists in the sentencing survey, however, is not obvious. The subject matter is somewhat unique in that it can provoke strong opinions at opposite extremes; there are both hawks and doves with respect to sentence lengths. As long as both respond proportionately and the character of the response bias is independent of subgroup membership (e.g., the response rate of doves is

the responses are a valuable, but only preliminary, indication of public opinion on the subject of sentencing.

III. THE SENTENCES ASSIGNED

Several different measures of the severity of sentences were available from the survey. The *relative use of prison* as a penalty is indicated by the proportion of respondents assigning no prison sentence for either first or repeat offenders.[8] The *severity of prison sentences* is indicated by the mean length of the prison terms actually imposed (MS),[9] again for both first and repeat offenders. These different measures will first be compared with one another to determine the level of consistency among them.

Figure 1.   Relative Severity of Sentences Using the Mean Prison Sentence and the Percent Not Imposing Prison Sentences for First Offenders
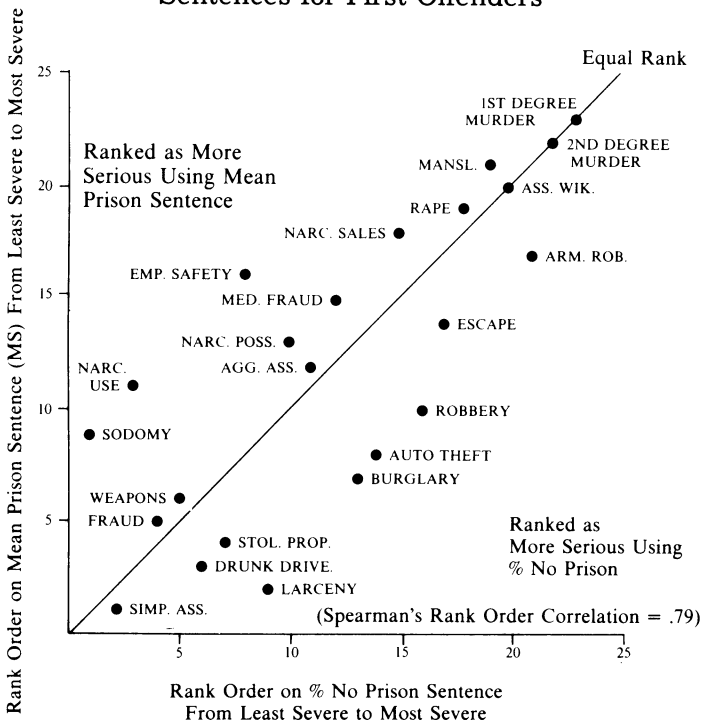
independent of the demographic attributes of the respondent), the responses within any subgroup should not systematically over- or underestimate views on sentence lengths.

    [8] Nonprison sentences are typically noted by a zero. They might include fines probation, or loss of license. Also, while capital punishment was not a sentence option on the survey, some respondents did assign the death penalty. These death sentences are *not* included among nonprison sentences.

    [9] In the calculation of the mean prison sentences (MS), sentences involving zero prison time, life in prison, or death are *not* included.

The two measures can be used to rank the different offenses in terms of relative sentence severity. Figure 1 compares the resulting ranks for the percent no prison and the mean prison sentence for first-time offenders. There is considerable agreement between these two measures of sentence severity, especially for the crimes of violence which receive the most severe sentences.[10] With such a high level of consistency between measures, the particular measure used in any of the subsequent analyses of sentencing patterns does not affect the results.

The most variance between the measures is at the lower end of the scale. Deviations above the line represent crimes for which many respondents assign no prison sentence, but for which relatively more severe sentences are called for by the respondents who do assign one. This discrepancy might reflect considerable disagreement within the population about whether or not behavior like narcotics use, sodomy, and failure to provide for employee safety are indeed criminal acts. People who do not regard such behavior as seriously criminal (or at least not punishable by prison) would not impose any prison sentence, while people who do consider these acts as crimes would impose relatively severe sentences.

The deviations below the line are predominantly property crimes.[11] For these offenses, there is a greater concern for the certainty of punishment as reflected by the relatively higher percent assigning some prison sentence. Length of prison sentences for these offenses is ranked relatively less severely, compared to certainty.

The generally high level of consistency between the two different sentence measures suggests the use of a single sentence severity score incorporating both measures. The proposed sentence severity score (SSS) represents the simple average of all the respondents' sentences for an offense. In calculating the SSS for a crime type, sentences of no prison are set equal to zero and included in the average, as are sentences of life (set equal to 100 years) and death (set equal to 150 years).[12] The sentence severity score for offense i is given by:

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[10] Spearman's rank-order correlation between the percent not imposing prison sentences and mean prison sentence is .79 for first offenders and .72 for repeat offenders.

[11] Property crimes include robbery, auto theft, burglary, larceny, and stolen property.

[12] The values for life and for the death sentence were chosen arbitrarily and intended only to reflect the greater severity of these sentences over sentences specified in years, with death more severe than a life sentence. The

Figure 2.   Mean Prison Sentences (MS) Assigned to First and
Repeat Offenders
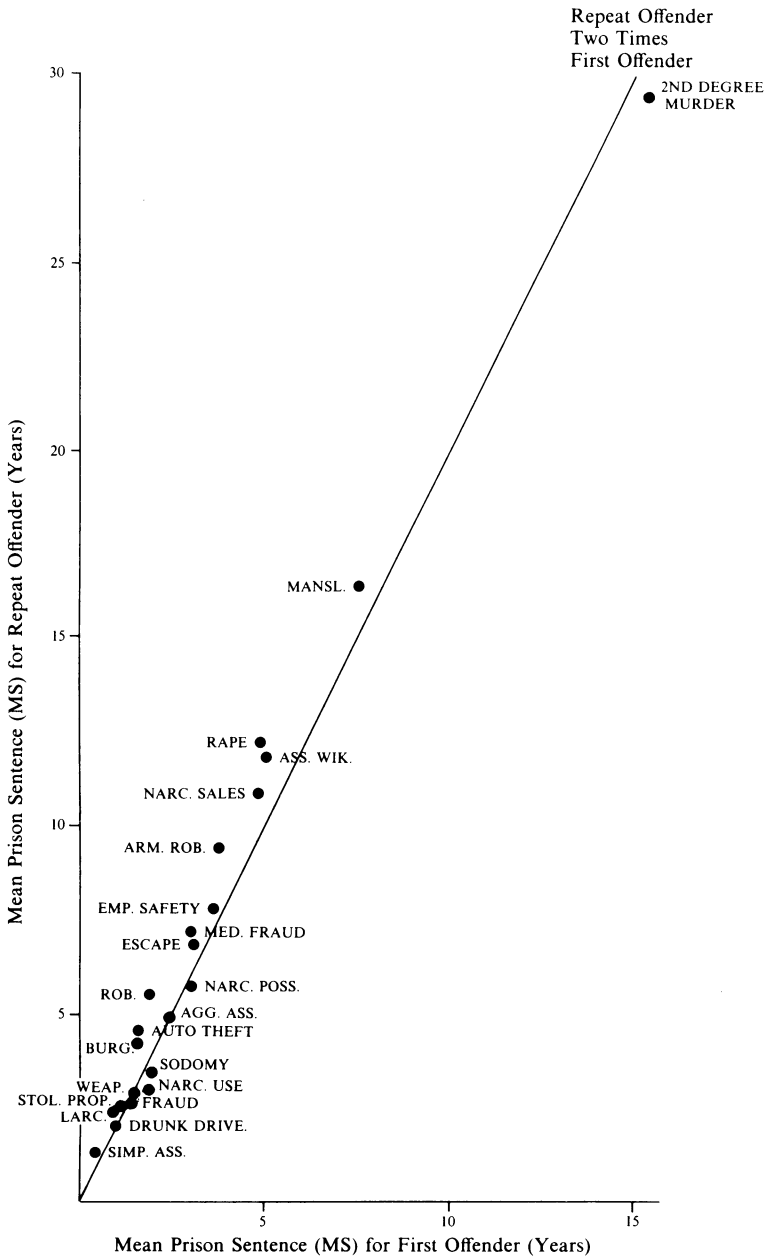
sensitivity of the results to the exact values chosen for life and the death
sentence was tested by recomputing the sentence measures using alternative
values for life and the death sentence. While the various measures obviously
differed in absolute value, intercorrelations among the measures were
unchanged. Furthermore, the sensitivity of the results to the absolute value of
the SSS measure can be largely avoided by using only the rank-order measures
that result from the SSS score.

$$SSS_i = \frac{n_1(MS_i) + n_2(0) + n_3(100) + n_4(150)}{N}$$

where,

MS_i = the mean sentence length of those actually im-
posing a prison sentence (excluding life) for of-
fense i,

n_k = the number imposing each sentence type, and

$N = \sum_{k=1}^{4} n_k$ = the total population of respondents

In all cases the rank-order correlations between the SSS and either the percent not imposing a prison sentence or the mean prison sentence (MS) exceed .73.

Comparison of Sentences for First and Repeat Offenders

The survey respondents were considerably more lenient with first offenders than with repeat offenders. Prison sentences were assigned less frequently for first offenders, and when a prison term was assigned, it was lower for first offenders. Figure 2 compares the mean prison sentences (MS) for first and repeat offenders. With only minor deviations, the mean sentences for repeat offenders are about two times the mean for first offenders.

While there are substantial differences in the absolute values of sentences assigned to first and repeat offenders, there is very little disagreement about the rank order of these sentences. As indicated in Table 2, the Spearman rank-order correlations between the sentences for first and repeat offenders on the various sentence measures are extremely high (>.95).

Table 2.   Rank-Order Correlations Between the Sentences
Imposed on First Offenders and on Repeat Offenders for
Various Sentence Measures[a]

Sentence Measure	Spearman's Rank Order Correlation Coefficient
% Imposing Nonprison Sentences	.95
Mean Prison Sentence (MS)	.98
Sentence Severity Score (SSS)	.99

[a] After the separate sentence measures are determined for each offense type, the offense types are ranked based on the severity of the sentence, and rank-order correlations between the sentences imposed on first offenders and on repeat offenders are calculated.

Relative Severity of the Sentences and Offense Seriousness

Under a model of just deserts, the severity of sentences for criminal offenses should be commensurate with the seriousness of those offenses: the more serious the offense, the more severe the sentence.[13] One way to judge whether or not the sentences recommended by our survey respondents were commensurate with the perceived seriousness of the offenses in question is to compare the sentences recommended by our respondents with judgments about seriousness in other surveys.[14] Two such surveys are available: a 1964 survey of university students, police officers, and juvenile court judges in Philadelphia (Sellin and Wolfgang, 1964), and a 1972 sample of residents of Baltimore (Rossi *et al.*, 1974). In those surveys, respondents were asked only to rate different offenses in terms of perceived seriousness; they were not asked to assign prison sentences.[15]

Rank order correlations were used to compare the offense seriousness rankings of the earlier surveys with the sentence severity measures used in our survey. The Philadelphia survey included data on 141 offense types, the Baltimore survey on 140. The descriptions of offenses in each of the seriousness surveys which best matched the scenarios in our study were identified and ranked according to the seriousness index scores of their respective authors. Of the 23 offenses used in our study, the Philadelphia survey contained similar scenarios for 16 and the Baltimore survey 19.[16]

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[13] Proportionality between sentence and seriousness is only one aspect of a "commensurate deserts" sentence (von Hirsch, 1976). The other is designating the scale of the sentences, which is essential for calibrating the actual magnitude of appropriate sentences.

[14] Ideally, when judging whether or not the sentences recommended by survey respondents are commensurate with the perceived seriousness of those offenses, the sentences recommended by respondents would be compared directly with judgments about seriousness by the same respondents. The explicit consideration of the relative seriousness of each offense in the same survey, however, could well contaminate the assigned sentences, thereby overestimating the role of offense seriousness in determining sentence length.

[15] This comparison between offense seriousness and sentence severity is complicated by the fact that the judgments of offense seriousness from the 1964 and 1972 surveys, and of sentence severity from the present survey, come from population samples drawn at different times and in different cities. To the extent that views about offense seriousness are fairly stable across different population groups and over time, however, the previous seriousness measures can be compared with the present sentence-severity measures to assess the degree to which current respondent sentences are commensurate with judgments about the seriousness of the offenses. The simple correlation between the two different seriousness scales for those offenses common to both scales was calculated as .95, suggesting a very high degree of stability in views about offense seriousness across time and over different population groups.

[16] The descriptions of the compared offenses in each survey and their respective ranks in each survey are available from the authors.

Table 3 presents the rank-order correlations between the two seriousness scales and six different measures of sentence severity of our Allegheny County respondents. There is considerable agreement on the order of the offenses both when ranked by seriousness and by sentence severity. In all comparisons the rank order correlation exceeds .73, suggesting that sentence severity is generally commensurate with the perceived seriousness of the offenses. At least with respect to rank order, the sentences of our survey respondents are largely consistent with the principle of just deserts as it relates sentence severity to offense seriousness.

Table 3.   Rank-Order Correlations for Offenses Ranked by Seriousness and by Sentence Severity

Sentencing Severity Measures (Allegheny County)	Seriousness Scales	
	Philadelphia Survey (Sellin and Wolfgang, 1964) (n = 16)	Baltimore Survey (Rossi et al., 1974) (n = 19)
% Imposing Nonprison Sentences for First Offenders	.85	.81
% Imposing Nonprison Sentences for Repeat Offenders	.75	.73
Mean Prison Sentence for First Offenders (MS_1)	.93	.78
Mean Prison Sentence for Repeat Offenders (MS_2)	.96	.78
Sentence Severity Score for First Offenders (SSS_1)	.97	.80
Sentence Severity Score for Repeat Offenders (SSS_2)	.93	.83

It is apparent from Figure 3 that there are few points of major disagreement and that these occur at the lower end of the scales. In the Philadelphia survey (Figure 3a), narcotics use is abstractly regarded as more serious than the recommended sentence severity for the same offense in Allegheny County, while larceny is assigned a more severe sentence than the judged seriousness of the offense. In the

Figure 3.   Rank Order of Offenses by Seriousness and by
Sentence Severity

(a)

(b)
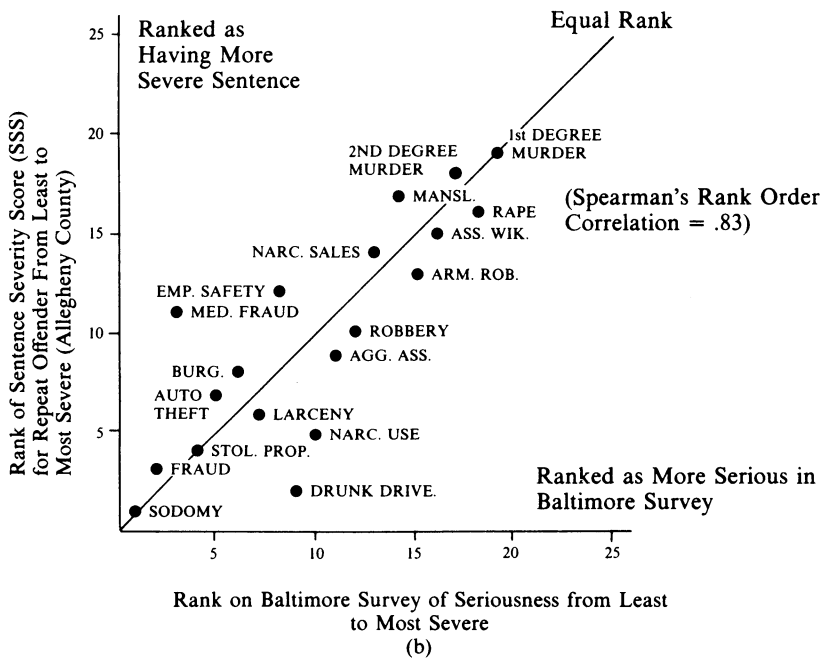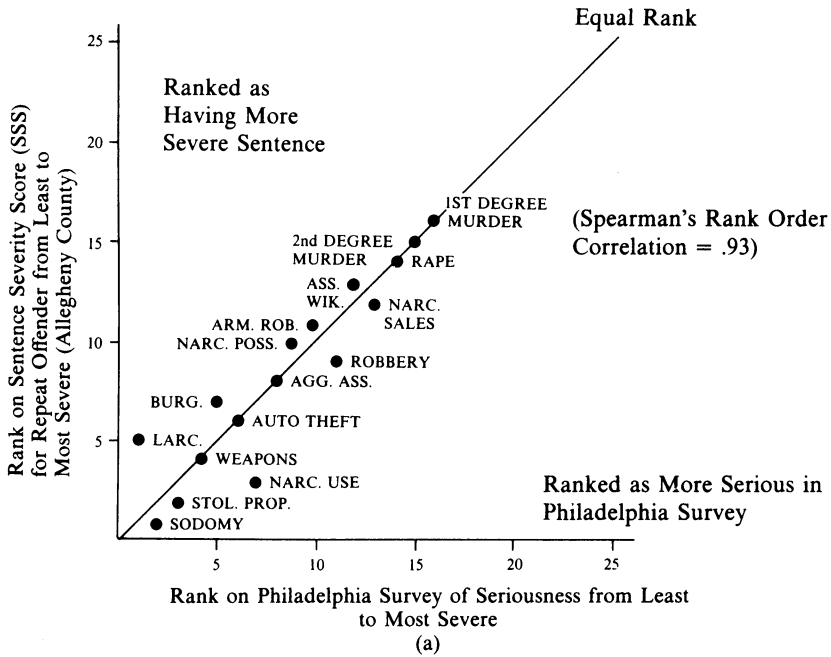
Baltimore survey (Figure 3b), drunk driving and narcotics use are abstractly considered as more serious than the recommended sentence severity for the sames offenses in Allegheny County. At the same time, the white-collar crimes (medicaid fraud and employee safety violations) are assigned more severe sentences than their judged seriousness in the Baltimore survey would suggest. To some extent, these differences may reflect changes in public attitudes since the dates of the surveys, especially an increased public concern for white-collar abuses in the post-Watergate era, and a decreased concern with drug use as an offense. The differences may also reflect the influence on sentences of factors other than just deserts (e.g., a concern for deterrence).[17]

IV.   CORRELATES OF SENTENCES

Arriving at a fixed schedule of sentences appropriate for each offense is a particularly difficult problem. It would be an easy task if there were a general consensus about what sentence best fit each offense. There are, however, a number of factors that might contribute to variations in the sentences assigned for an offense, among them the respondent's socioeconomic standing, moral and ethical training, and personal experience as a victim of crime. An analysis of the

Table 4.   Offense Classes

Offense Class	Offenses Included[a]
All Offenses	1st degree murder, 2nd degree murder, manslaughter, aggravated assault, rape, armed robbery, robbery, burglary, larceny, simple assault, stolen property, narcotics sale, fraud, Medicaid fraud, employee safety, sodomy, weapons, and drunk driving
Violent	1st degree murder, 2nd degree murder, manslaughter, rape, aggravated assault, simple assault
Property	Armed robbery, robbery, burglary, larceny, stolen property
Victimless	Narcotics sales, sodomy
White Collar	Medicaid fraud, employee safety, fraud
Others	Drunk driving, weapons

a The offenses of assault with intent to kill, auto theft, narcotics possession, other narcotics, and escape are not included in these measures because each offense was excluded from one of the four versions of the survey and there were thus no responses for these offenses for a large number of respondents.

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[17]   Differences in the offense descriptions in the different surveys no doubt also contribute somewhat to the observed deviations.

sentences assigned in terms of the respondents' social and economic attributes, education, religious affiliation, and prior victimization reveal the considerable influence of some of these factors.

In order to compare the sentences assigned by different demographic groups, an aggregate sentence severity score ($\overline{SSS}_{j\ell}$) was computed for each demographic group j and each class of offenses ℓ identified in Table 4. First, sentence severity scores (SSS_{ij}) for individual offenses i were computed separately within each demographic group j. The $\overline{SSS}_{j\ell}$ then averages the SSS_{ij} within an offense class ℓ for each demographic group j.[18] Separate $\overline{SSS}_{j\ell}$ measures were computed for first and repeat offenders. The resulting $\overline{SSS}_{j\ell}$ measures for the different demographic subgroups are presented in Table 5. Sex, race, religion, marital status, education, income, occupation, and age were all found to be related to sentences.[19]

Over all offenses, women sentence less severely than men ($p < .002$). The difference, however, is due entirely to the difference in sentences for "violent" crimes ($p < .001$) where men give longer sentences; men also make greater use of the death sentence than do women. The sentences of men and women are not significantly different for any of the other crime types compared.[20]

Race is another important factor, with whites consistently assigning more severe sentences than did blacks. This difference is due both to lower mean prison terms assigned (MS) and to a lower percentage of black respondents assigning prison sentences. The difference, however, is statistically significant only for the offense class including all offenses and for "violent" crimes.[21]

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[18] If SSS_{ij} = mean sentence severity of offense type i assigned by group j, and n_ℓ is the number of offense types in class ℓ, then $\overline{SSS}_{j\ell} = \frac{1}{n_\ell}\Sigma_{i\epsilon\ell}\overline{SSS}_{ij}$ is the aggregate sentence severity score for offense class ℓ assigned by group j.

[19] Two-tailed t-tests were used for comparing the $\overline{SSS}$ in all pairwise comparisons of subgroups within a demographic variable. Unless otherwise noted, a level of significance of .05 was used to identify significant differences between subgroups.

[20] This difference for violent crimes is consistent with the findings in Rose and Prell (1955) and Thomas et al. (1976). The earlier finding that women sentence more severely than men for crimes against morals (e.g., offenses involving alcohol, drugs, or vice) is not supported in the presented survey. We found no significant difference between men and women for the category of victimless crimes.

[21] This result must be interpreted cautiously because of the small number of black respondents. The results in the present survey, however, are consistent with the findings reported by Thomas et al. (1976) that blacks sentence significantly less severely than whites do for the violent crimes of murder and rape.

Looking at religion, we see that Protestants and Catholics sentence in much the same way. The most lenient sentences are typically given by Jewish respondents and by persons reporting no religious affiliation, although the differences between religious subgroups are statistically significant only for persons reporting no religion. The sentences for "victimless" crimes and "others" are the only exceptions to this pattern. For both of these crime types, the sentences indicated by Jewish respondents are among the most severe.

With respect to marital status, previously married persons give the most severe sentences in the "white collar" and

Table 5.   Average Sentence Severity Score-$\overline{\text{SSS}}$[a]
(in years) of First Offenders[b] for Different
Demographic Subgroups

| Attribute | All Offenses | Average Sentence Severity Score - $\overline{\text{SSS}}$ (Years) | | | | |
		Violent Crimes[c]	Property Crimes	Victimless Crimes	White Collar Crimes	Other Crimes
Full Sample (n=603)	8.7	22.4	1.7	3.6	1.9	.6
Sex:						
Males (n=407)	9.4[d]	24.3	1.8	3.7	1.8	.6
Females (n=190)	7.5	18.9	1.5	3.5	2.0	.6
Race:						
White (n=577)	8.9	22.8	1.7	3.7	1.9	.6
Black (n=11)	3.8	9.9	.6	1.3	.7	.2
Religion:						
Protestant (n=212)	8.7	22.2	1.8	3.8	1.6	.6
Catholic (n=292)	8.8	22.7	1.7	3.1	1.9	.6
Jewish (n=14)	7.0	16.7	1.6	5.3	1.9	1.0
Other (n=40)	10.1	25.4	1.9	6.3	2.1	.4
None (n=22)	5.7	14.9	.9	1.8	1.4	.3
Marital Status:						
Married (n=510)	8.8	22.7	1.7	3.8	1.8	.6
Single (n=56)	8.6	23.0	1.6	2.0	1.6	.3
Widowed/ Separated/ Divorced (n=28)	7.8	18.4	2.1	3.4	3.5	1.4
Education:						
≤8 Years (n=23)	10.1	23.8	2.6	5.9	4.1	1.6
9-11 (n=42)	8.0	20.7	1.2	3.7	2.2	.3
12 (n=202)	8.6	22.2	1.6	3.1	1.9	.5
13-15 (n=141)	8.6	22.2	1.8	3.1	1.5	.7
16 (n=98)	9.4	24.0	1.7	4.9	2.1	.5
>16 (n=87)	8.6	22.0	1.9	3.7	1.4	.5

(continued)

Income:

<$3000 (n=25)	9.6	24.5	2.0	3.0	2.8	.7
$3-5000 (n=20)	5.5	13.7	1.3	2.0	1.8	.7
$5-8000 (n=46)	6.6	16.4	1.3	3.1	2.1	.5
$8-11000 (n=64)	8.8	21.4	2.2	3.5	3.2	1.2
$11-15000 (n=121)	8.4	21.5	1.7	3.5	1.8	.5
$15-20000 (n=122)	10.4	27.5	1.7	4.0	1.7	.5
$20-25000 (n=68)	9.0	23.0	1.6	5.1	1.6	.3
>$25000 (n=91)	8.6	22.6	1.6	3.6	1.3	.4

Occupation:

Professional/Managerial (n=195)	9.1	23.3	1.9	5.0	1.5	.5
Clerical/Sales (n=76)	8.3	21.1	1.6	3.3	1.9	.7
Production/Non-Supervisory (n=123)	9.6	24.9	1.6	3.2	2.4	.6
Service (n=8)	4.8	12.9	.9	1.3	.5	.6
Housewife/Unemployed (n=100)	7.3	18.7	1.4	3.2	2.1	.5
Retired (n=59)	9.2	24.1	1.7	2.6	2.2	.7
Self-Employed (n=16)	7.3	19.6	1.4	1.4	1.4	.3
Other (n=11)	7.5	20.5	1.0	1.9	1.1	.1

Age:

≤ 25 years (n=46)	8.3	21.4	1.9	2.3	2.3	.2
25-35 (n=130)	8.5	22.4	1.5	2.3	1.8	.3
35-45 (n=121)	9.6	24.8	2.0	4.4	1.5	.6
45-55 (n=137)	8.8	22.1	1.7	5.3	1.8	.5
55-65 (n=108)	8.8	22.4	1.6	3.6	2.1	1.0
> 65 (n=57)	8.1	20.6	1.7	2.3	2.2	.8

Prior Victim of Crime:

Yes (n=48)	8.0	20.4	1.8	3.4	1.9	.3
No (n=548)	8.8	22.7	1.7	3.7	1.9	.6

[a] This average includes individual sentences of no prison (set equal to zero), life sentences (set equal to 100 years), and death sentences (set equal to 150 years).
$$\overline{SSS}_{j\ell} = \frac{1}{n_\ell} \sum_{i\delta} SSS_{ij}, \text{ where } i = \text{offense type, and } j = \text{demographic subgroup.}$$

[b] The sentences for repeat offenders are not reported here. While they are larger in value than those of first offenders, the pattern of relations among the demographic groups is the same for repeat offenders.

[c] The much greater order of magnitude for violent crimes is largely driven by the sentences for homicide and the associated greater use of life and death sentences for this offense.

[d] A bracket connecting two numbers within a subgroup indicates a statistically significant difference (.05 level) between the pair.

"other" crime groups. These differences are primarily due to the greater use of prison by previously married persons. There are no other significant differences by marital status.

The absence of a secondary education (≤ 8 years of schooling) is a strong discriminator of sentences, especially for

"white collar" and "other" offense types. In general, persons with no secondary education assign more severe sentences than do those with some secondary education.[22] There are no significant differences among the sentences for all educational levels beyond 8 years of schooling.

In terms of occupation, the least severe sentences are given by service workers and the category including housewives and unemployed persons, while professional/managerial, production/nonsupervisory, and retired persons often agree in assigning the most severe sentences. Indeed, the differences between their sentences and those of housewives and unemployed persons are significant for "all" offenses and for "violent" crimes. It might be hypothesized that this difference is due to a concentration of other mild-sentence demographic groups (e.g., blacks or women) among service workers, housewives, and the unemployed. There is, however, no significant association between race and occupation in our data, and so race is not likely to affect the sentences of different occupations. As expected, women are over-represented among housewives and unemployed persons. The milder sentences in this occupational group are thus confounded with the "sex effect." In the case of service workers, on the other hand, the respondents are overwhelmingly white married males, so that the effect cannot be attributed to the occupation group.

With the important exception of those with incomes less than $3,000, low-income respondents (under $8,000) assign significantly milder sentences than do those with incomes over $15,000, particularly for "violent" and "property" crimes.[23] There is very little difference in sentencing among the remaining income levels. Middle-income people ($8-11,000), however, do sentence more severely for "white-collar" offenses. The milder sentences of low-income respondents might be due to a concentration of women and/or blacks in this group. Indeed, there is a strong association in our data between sex and income, with women tending to have lower incomes, and so the "low-income effect" is confounded with the "sex effect." In contrast, the race-income association is much weaker in our sample, and it is therefore not likely to influence the income effect.

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[22] This difference in sentencing for different educational levels is also reported in Thomas *et al.* (1976).

[23] This result is consistent with the earlier findings that upper-class or higher-income respondents tend to sentence more severely than lower-class or lower-income respondents reported in Rose and Prell (1955) and Makela (1967), respectively.

We also considered the possibility that the more severe sentences associated with incomes under $3,000 might be due to a concentration of retired persons who characteristically assign harsher sentences. In fact, however, in our sample, this income category comprises predominantly housewives and unemployed persons who tend to sentence less severely, so that the effect of more severe sentences is most likely associated with that income group.

Age is a factor for "victimless" and "other" crimes, with younger respondents (≤ 35) assigning significantly milder sentences than do older respondents. In part, this undoubtedly reflects changing attitudes toward drugs and sexuality among younger people.

Surprisingly, victimization experience has no effect on the sentences respondents assign. None of the sentences of victims and non-victims are significantly different.

Adjustments for Bias in the Demographic Mix of the Respondent Sample

The results presented so far indicate some significant sentencing variations among subgroups. These differences, combined with the differential response rates of various demographic groups, might seriously bias any aggregate sentence estimated for the full sample. In particular, the lower sentences assigned by blacks and females and the more severe sentences assigned by people with no secondary education (≤ 8 years of schooling) are under-represented in the sample.

The sentences of the respondent sample can be adjusted to compensate for the demographic response bias by partitioning the sample into distinct subgroups based on the demographic variables found to influence sentence significantly. A complete partition using all the demographic variables would generate too many cells with too few entries. However, since significant associations were found between both education and sex with occupation, income, and age,[24] the principal sentence variations in different occupational, income, or age groups can be captured by a partition by education and sex. Partitions by sex, race, and education alone were, therefore, used to reflect most of the important demographic effects.

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[24] Consistent with similar findings in other studies, men and those with higher education tend to hold higher-status jobs and have higher incomes. Also men tend to be older in our data, while those with higher education tend to be younger. Race and religion were not associated with any of the other demographic variables.

Table 6.   Mean Prison Sentences (MS) For First Offenders[a] Imposed
by Different Demographic Subgroups

| Crime Type | Mean Prison Sentence (MS) in Years[b] | | | | | | Sentence Range Containing Median Prison Sentence[c] Full Sample |
	Blacks	White Males ≤ 8 yrs. School	White Males > 8 yrs. School	White Females ≤ 8 yrs. School	White Females > 8 yrs. School	Full Sample	
1st Degree Murder	11.0 (8.2)	49.1 (67.4)	35.5 (33.2)	17.5 (3.5)	25.9[d] (26.7)	31.7 (32.5)	15-20 yrs. (25.3% 15-20 yrs.)
2nd Degree Murder	11.9 (12.7)	27.3 (46.5)	16.2 (16.4)	12.4 (8.4)	12.4 (12.6)	15.4 (17.9)	10-11 yrs. (30% 10-11 yrs.)
Manslaughter	6.9 (9.1)	18.1 (47.0)	6.9 (9.4)	6.4 (2.8)	6.8 (6.8)	7.3 (11.9)	4.5-5.0 yrs. (28.1% 4.5-5.0 yrs.)
Assault With Intent to Kill	2.7 (5.0)	10.7 (24.9)	4.4 (4.9)	5.5 (6.4)	6.1 (6.9)	5.1 (7.3)	2.5-3.0 yrs. (24.7% 1.75-3.0 yrs.)
Rape	4.9 (6.5)	2.9 (2.9)	5.5 (10.3)	7.3 (3.6)	4.1 (4.5)	5.0 (8.7)	2.5-3.0 yrs. (23.7% 1.75-3.0 yrs.)
Narcotics Sales	3.4 (3.3)	4.9 (5.8)	5.3 (7.7)	6.2 (4.4)	4.3 (4.8)	4.9 (6.8)	2.5-3.0 yrs. (21.0% 1.75-3.0 yrs.)
Armed Robbery	1.9 (1.6)	4.0 (3.4)	4.1 (4.3)	5.5 (7.2)	3.6 (3.9)	3.9 (4.2)	1.75-2.0 yrs. (21.1% 1.75-2.0 yrs.)
Employee Safety	1.5 (1.7)	3.4 (2.7)	4.0 (8.5)	6.4 (4.5)	3.1 (3.5)	3.6 (6.9)	1.75-2.0 yrs. (15.1% 1.75-2.0 yrs)
Medicaid Fraud	1.9 (2.1)	4.7 (3.1)	3.3 (4.5)	5.4 (4.5)	2.8 (3.8)	3.2 (4.2)	9-12 mos.
Escape	1.4 (1.5)	3.8 (4.7)	3.6 (5.3)	1.5 (1.6)	2.3 (2.4)	3.2 (4.5)	1.75-2.0 yrs. (21.1% 1.75-2.0 yrs.)
Narcotics Possession	4.0 (5.1)	3.7 (5.2)	3.1 (8.4)	3.7 (3.7)	2.9 (5.5)	3.1 (7.3)	9-12 mos.
Aggravated Assault	.9 (1.0)	1.4 (1.2)	2.1 (3.9)	9.0 (14.2)	3.1 (4.7)	2.4 (2.4)	9-12 mos.
Narcotics Use	1.2 (.8)	1.1 (1.4)	2.3 (10.0)	3.4 (3.7)	1.5 (3.2)	2.0 (7.7)	3-6 mos.
Robbery	.8 (.9)	2.3 (2.4)	2.1 (2.7)	3.1 (3.8)	1.5 (1.5)	1.9 (2.4)	9-12 mos.
Sodomy	.8 (.4)	1.7 (1.4)	1.5 (2.3)	10.1 (9.9)	1.4 (1.4)	1.8 (3.2)	9-12 mos.

Auto Theft	.2 (.2)	3.2 (3.6)	1.6 (2.1)	4.3 (4.3)	1.3 (1.8)	1.6 (2.1)	9-12 mos.
Burglary	.7 (.8)	2.5 (4.5)	1.6 (2.3)	4.6 (7.1)	1.3 (1.2)	1.6 (2.3)	9-12 mos.
Firearms Violation	.5 (.5)	2.2 (2.8)	1.6 (4.5)	4.3 (4.3)	.9 (1.2)	1.4 (3.7)	3-6 mos.
Fraud	1.1 (1.5)	1.8 (2.3)	1.2 (2.3)	3.5 (4.1)	1.2 (2.4)	1.3 (2.3)	3-6 mos.
Stolen Property	.1 (0)	1.7 (1.6)	1.2 (1.8)	3.2 (4.3)	1.0 (1.2)	1.2 (1.7)	3-6 mos.
Drunk Driving	.7 (.9)	1.0 (1.3)	.9 (2.1)	4.0 (7.9)	1.0 (1.9)	1.0 (2.3)	3-6 mos.
Larceny	.3 (.2)	1.1 (1.1)	1.0 (1.8)	2.8 (4.0)	.9 (1.3)	1.0 (1.8)	3-6 mos.
Simple Assault	.4 (.4)	.7 (.6)	.5 (1.3)	.4 (.2)	.5 (.5)	.6 (1.0)	≤ 3 mos.

a The sentences for repeat offenders are higher in magnitude, but exhibit the same pattern among the different demographic subgroups.

b The standard deviation is in parentheses.

c The exact proportion of sentences in the specified range is in parentheses.

d A bracket connecting two numbers for a crime type indicates a statistically significant difference (.05 level) between the pair.

Five demographic subgroups were identified: 1) blacks,[25] 2) white males with no secondary education (8 years or less of schooling), 3) white males with secondary education (more than 8 years of schooling), and 4) and 5) white females also distinguished by educational level. The resulting samples are quite small (about ten) for three of the groups, namely blacks and whites with no secondary education, and caution must be exercised regarding their validity. Nevertheless, the results for all groups are reported here because they provide a preliminary indication of important differences among the demographic groups. Table 6 presents the mean prison sentences (MS) for each of the subgroups.

There appears to be a definite interactive effect between the sex and education variables. For all crime types other than violent offenses there is very little difference between the sentences of low- and high-education white males. Education,

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[25] Because of the small number of blacks in the respondent sample (n=11), no further partitions by sex and education were made. The especially low response of blacks is a serious concern among the response biases.

however, does make a difference for white females, with low-education white females giving significantly longer sentences for many crime types, particularly the "property" and "victimless" offenses (auto theft, burglary, robbery, stolen property, larceny, sodomy, and drunk driving), as well as for rape, aggravated assault, and firearms.[26] In general, blacks tend to give the shortest sentences of any demographic group, while high-education white females are the most lenient sentencers among whites, particularly for "property" crimes.

A comparison among the demographic subgroups for the percent not assigning any prison sentence reveals similar sentencing patterns. White females with high education tend to be the most lenient among whites, while blacks are the most lenient of all the demographic groups compared. Whites with low educations (male or female) assign prison sentences most often.

The sentences of the five demographic groups can be used to correct for the demographic biases in the respondent sample. Using the distribution of the population of Pennsylvania for 1970 reported in Table 7, new weighted sentence measures for the full sample were computed from the

Table 7.   Distribution Over the Demographic Subgroups: Respondent Sample vs. Pennsylvania Population in 1970

Demographic Subgroups	Percent of Each Group in Respondent Sample (n=587)	Percent of Each Group in 1970 Pennsylvania Pop'n ≥ 14 yrs. old (n=8,823,308)[a]
Blacks	1.9	8.0
White Males ≤ 8 yrs. School Complete	3.6	11.6
White Males > 8 yrs. School Complete	63.4	31.8
White Females ≤ 8 yrs. School Complete	1.2	12.3
White Females > 8 yrs. School Complete	30.0	36.2

[a] Source: 1970 Census of the Population, *Detailed Social and Economic Characteristics for Pennsylvania*

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[26] Two-tailed t-tests (.05 level) were used to test the significance of the pairwise differences between the mean sentences of the different demographic groups.

subgroup sentences and compared to the unadjusted sentence measures of all the survey respondents in Table 8.[27]

The adjusted sentence measures are extremely close to the same measures for the respondent sample.[28] The sentences are significantly different from one another for only one offense, the percent not imposing a prison sentence for assault with

Table 8.   Comparison of Adjusted Sentence Measures[a] for First Offenders with Respondent Sample Sentence Measures[b]

Crime Type	Mean Prison Sentence (Yrs.) (MS_1)		Percent No Prison Sentence	
	Adjusted	Survey	Adjusted	Survey
1st Degree Murder	29.4	31.7	2.9	1.6
2nd Degree Murder	15.3	15.4	3.1	1.8
Manslaughter	8.1	7.9	6.5	5.7
Assault With Intent To Kill	5.8	5.1	6.9	3.6*
Rape	4.8	5.0	6.7	6.2
Narcotics Sales	4.8	4.9	10.1	10.5
Armed Robbery	3.9	3.9	3.5	2.8
Employee Safety	3.7	3.6	37.6	37.3
Medicaid Fraud	3.4	3.2	29.1	28.1
Escape	2.7	3.2	7.2	7.6
Narcotics Possession	3.2	3.1	26.3	29.8
Aggravated Assault	3.1	2.4	28.1	28.4
Narcotics Use	1.9	2.0	51.2	58.0
Robbery	1.9	1.9	9.7	8.5
Sodomy	2.5	1.8	67.7	72.0
Auto Theft	1.9	1.6	16.4	12.6
Burglary	1.9	1.6	16.1	19.2
Firearms	1.7	1.4	50.8	53.6
Fraud	1.5	1.3	48.3	55.1
Stolen Property	1.3	1.2	46.9	50.2
Drunk Driving	1.3	1.0	44.1	50.9
Larceny	1.1	1.0	33.1	35.7
Simple Assault	0.5	0.6	63.7	70.2

* Significantly different at .05 level using a two-tailed t-test. In computing the t-statistic, the variance of the adjusted sentence measure was estimated by partitioning the total variance into its within group and between group components and weighting by the population distribution [adjusted $\sigma^2 = \Sigma\ p_i\ \sigma^2 + \Sigma\ p_i\ (\bar{X}_i - \bar{X})$].

a The adjusted measure was computed as the weighted average of the individual subgroup values ($\Sigma\ p_i\ \bar{X}_i$).

b The magnitudes of the variables for repeat offenders are different, but the close relationship between the adjusted results and the respondent sample is preserved.

27 The comparable three-way partition of the population was not readily available for Allegheny County. The marginal distributions for sex, race, and education, however, are almost identical for Allegheny County (AC) and for Pennsylvania (PA) as a whole in 1970 (Percent Male - 47.5 AC, 48.0 PA; Percent Black - 9.0 AC, 8.5 PA; Percent ≤ 8 years education - 26.1 AC, 26.5 PA).

28 Table 8 applies only to first offenders. The finding of no difference between the sentence measures is the dominant pattern for repeat offenders as well; there are two significant differences in the comparison of sentences for repeat offenders (the percent no prison for auto theft and burglary).

intent to kill. The effect of increasing the representation of blacks with their lower sentences is offset by the effect of increasing the proportion of people with low education who call for long sentences. The lower sentences of women are dominated by the education effect. Thus, while the respondent sample is demographically unrepresentative of the population as a whole, their sentences turn out to be a fairly accurate representation of the sentences of that population when corrected for demographic response bias, but not corrected for any selective-response bias within demographic groups.[29]

V.   DEGREE OF CONSENSUS ABOUT APPROPRIATE SENTENCES

Inspection of the standard deviations of sentences within the different demographic groups reported in Table 6 suggests that there is considerable variation in sentences within the different subgroups. A closer examination of the actual distribution of sentences, however, reveals that there is more agreement than is suggested by the standard deviations alone. The distributions for each offense are highly skewed, with large numbers of respondents assigning short sentences and only a small number advocating very long sentences. Such skewed distributions will yield high standard deviations despite the general agreement displayed by large numbers of respondents.

As an indication of the skewed distribution, in all crime types (except armed robbery), between 70 and 80 percent of the sentence lengths assigned by the full sample are at or below the mean of assigned sentences for that crime type.[30] Furthermore, as indicated in Table 6, the median prison sentence assigned by the full sample is always substantially lower than the mean assigned sentence. This relationship between the mean and the median indicates a highly skewed distribution with a predominance of shorter sentences. The generally high level of consensus on sentence lengths across respondents is further supported by the concentration of sentence lengths within the narrow range around the medians reported in Table 6. This same pattern is found within each of

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[29] The adjustment for biases due to demographic mix does nothing to correct for any *within*-group response biases that may exist. To the extent that the *respondents* within a group (e.g., low-education white males) have different views than do *non-respondents* in the same group, the results presented here do not necessarily apply to the population in general. Instead, they represent the views of those persons who are presumably most interested in the sentencing problem. It is not obvious, however, in which direction their responses are likely to be biased.

[30] Sentences of zero prison time, life, or death are explicitly excluded from consideration throughout this analysis of the distribution of sentence lengths.

the demographic groups as well. The distributions suggest general agreement on sentence lengths *within* each group.

The next critical issue is the nature of any consensus across the different demographic subgroups. A careful examination of length of prison sentences assigned by the five demographic subgroups reveals some interesting relationships. In addition to substantial agreement among the different groups on the rank order of the sentences for the different crime types, the actual values of the mean sentences (MS) of the different demographic groups are also highly correlated with one another (Table 9). This strong correlation suggests the existence of a linear relationship between the *actual* magnitude of the sentences of the different groups.

The character of this relationship can be examined by regressing the mean sentences of one group on the mean sentences of other groups.[31] The results of these regressions for first offenders are reported in Table 10. The R[2] values are generally high (well above 50 percent), indicating that using the mean sentence of one group for an offense type in the regression equations provides a reasonably good prediction of the mean sentence of the other groups for the same offense type.

This finding of strong linear relationships among the sentences of different subgroups suggests a structural similarity between the sentences of different subgroups. Not only are their sentences similarly *ordered*, the *relative distances* between the sentences of different offenses are also similar. Two types of proportionality relationships are found between the sentences of different groups. For white females, a proportionality in the *intervals* between sentences is reflected in a linear relationship in which both the intercept and the proportionality coefficient are significant. This means that the increments between the sentences for different offense pairs in one population group are proportional to these same increments for the other groups.[32] For example, the difference between the sentences for any pair of offenses assigned by the more educated white females is one and one-half times the difference in the sentences for the same offense pair assigned

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[31] It should be pointed out that in general the functional relationship estimated by regression is not invertible; i.e., if we estimate $y = \hat{f}(x)$ and $x = \hat{g}(y)$, then in general $\hat{g}(y) \neq \hat{f}^{-1}(y)$. The greater the variance explained by the estimated relationship (the larger R^2), however, the less difference there will be between $\hat{g}(y)$ and $\hat{f}^{-1}(y)$.

[32] If y gives the sentences of one group and x gives the sentences of another group, and $y = \hat{a} + \hat{b}x$ then, $\triangle y = \hat{b} \triangle x$ for all intervals between sentences.

by blacks, and this same proportionality constant holds for these two groups when comparing the sentence difference between any pair of offenses.

Table 9.   Simple Correlations Among the Mean Prison Sentences (MS) in Years of Different Demographic Subgroups[a]

	Blacks	White Males ≤ 8 Yrs. School	White Males > 8 Yrs. School	White Females ≤ 8 Yrs. School	White Females > 8 Yrs. School
Blacks	1.000	.851	.887	.760	.869
White Males ≤ 8 yrs. school		1.000	.971	.830	.991
White Males > 8 yrs. school			1.000	.805	.982
White Females ≤ 8 yrs. school				1.000	.845
White Females > 8 yrs. school					1.000

[a]   Only the correlations of sentences for first offenders are reported here; the correlations of sentences for repeat offenders are similarly high.

Furthermore, when intervals between the mean sentences for different offense pairs are compared across groups, they form the same ratio in each group. If the difference between the mean sentences for one pair of offenses is twice the sentence difference between another pair of offenses in one group, it is twice as large in all groups.[33] Thus the mean sentences of the different groups are not only similarly ordered, the intervals between sentences also maintain a constant ratio across all the groups.

The proportionality relationship is even stronger among blacks and the two groups of white males. For these groups the intercepts are not significantly different from zero, while the proportionality coefficients are highly significant. Thus, not only is there a relationship for the intervals between sentences, but also for blacks and white males the actual magnitudes of the mean sentences of one group are directly proportional to the mean sentences of the other groups (e.g., the mean sentence for any offense type of low educated white males is three times the mean sentence of blacks for the same offense type).

While not reported here, the results for repeat offenders are a further indication of the stability of these structural

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[33]   Let $\triangle y_{ij}$ and $\triangle x_{ij}$ represent the sentence differences between offenses i and j in group y and group x, respectively. The linear relationship, $y = a + bx$, implies that $y_i - y_j = \triangle y_{ij} = b\triangle x_{ij}$. This relationship holds for all offense pairs, so that $\triangle y_{ij}/\triangle y_{kl} = b\triangle x_{ij}/b\triangle x_{kl} = \triangle x_{ij}/\triangle x_{kl}$, i.e., the ratio of the sentence differences is the same for all groups.

Table 10. Relationships Among the Mean Prison Sentences (MS) in Years of Different Demographic Subgroups[a]

Dependent Variable / Independent Variable	Blacks Intercept (t-stat)	Blacks Proportionality Coefficient (t-stat)	White Males ≤ 8 yrs. School Intercept (t-stat)	White Males ≤ 8 yrs. School Proportionality Coefficient (t-stat)	White Males > 8 yrs. School Intercept (t-stat)	White Males > 8 yrs. School Proportionality Coefficient (t-stat)	White Females ≤ 8 yrs. School Intercept (t-stat)	White Females ≤ 8 yrs. School Proportionality Coefficient (t-stat)	White Females > 8 yrs. School Intercept (t-stat)	White Females > 8 yrs. School Proportionality Coefficient (t-stat)
Blacks	—	—	-1.108 (.7862)	+3.025** (8.802) $R^2=.78$	-.2388 (.2229)	+1.940** (7.426) $R^2=.71$	+3.435** (5.167)	+.8706** (5.370) $R^2=.56$	+.1587 (.2140)	+1.459** (8.063) $R^2=.74$
White Males ≤ 8 yrs. School	+.8359 (2.215) $R^2=.78$	+.2601** (8.802)		—	+.4204 (.9432)	+.6391** (18.60) $R^2=.94$	+3.870** (6.980)	+.2702** (6.226) $R^2=.63$	+.6880** (2.629)	+.4828** (23.57) $R^2=.96$
White Males > 8 yrs. School	+.7975 (1.825) $R^2=.71$	+.3732** (7.426)	-.2294 (.3379)	+1.452** (18.60) $R^2=.94$		—	+3.693** (6.961)	+.4169** (6.833) $R^2=.68$	+.4449* (2.385)	+.7292** (34.00) $R^2=.98$
White Females ≤ 8 yrs. School	-1.200 (1.437) $R^2=.56$	+.6647** (5.370)	-6.948 (2.671)	+2.400** (6.226) $R^2=.63$	-4.637* (2.838)	+1.655** (6.833) $R^2=.68$		—	-3.116* (2.697)	+1.238** (7.232) $R^2=.70$
White Females > 8 yrs. School	+.5449 (1.278) $R^2=.74$	+.5182** (8.063)	-1.130 (2.013)	+1.996** (23.57) $R^2=.96$	-.5145 (1.958)	+1.347** (34.00) $R^2=.98$	+3.420** (6.472)	+.5763 (7.232) $R^2=.70$		—

* Estimate significantly different from zero at .05 level using a two-tailed test.

** Estimate significantly different from zero at .001 level using a two-tailed test.

a The mean prison sentences of one group were regressed on the mean sentences of each of the other groups, using a linear model, $y = a+bx(n=23)$. Only the results for sentences of first offenders are reported here. While the values of the intercepts are different for sentences of repeat offenders (reflecting the differences in magnitude), the estimated proportionality coefficients are about the same as reported here.

relationships between the sentences of different demographic subgroups. The differences in scale between the sentences for first and repeat offenders are generally reflected in different values of the intercepts for repeat offenders. The proportionality coefficients between the sentences of the various subgroups, however, are almost identical to those reported for first offenders in Table 10. Aside from important shifts in scale reflecting differences among the subgroups on the absolute magnitude of appropriate sentences, then, the structure of the relationships among the sentences for different demographic groups is the same for first and repeat offenders.

The results of this survey indicate that there is no simple consensus about the appropriate length of prison sentences, although there is considerable agreement about the *relative* severity of the sentences that should be imposed for the different offenses. The strong consensus evident in the distribution of sentences within a group and in the proportionality relationships among the sentences for different population subgroups suggests that the sentence-severity scales of the different groups are commensurate with a single underlying scale of offense seriousness. Such agreement is necessary for developing a just deserts sentencing schedule that is in accord with a public consensus of offense seriousness. The differences in scale among the groups, however, suggest that there are significant differences in the population over just how much punishment is "just" for any particular offense.

## VI.   COMPARISON OF DESIRED SENTENCES WITH THE ACTUAL PERFORMANCE OF THE CRIMINAL JUSTICE SYSTEM

In this section, we will examine the relationship between community expectations regarding sentencing and the actual levels of criminal punishment. For this analysis, the sentences suggested by the survey respondents are compared with data on sentences imposed and actual time served in Pennsylvania correctional institutions.[34]

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[34] The data on time served and sentence lengths between 1970 and 1976 were collected by the Pennsylvania Bureau of Corrections and the Administrative Office of Pennsylvania Courts. These data are summarized in the annual reports of those agencies. The detailed data were made available by the Office of Criminal Justice Statistics of the Pennsylvania Department of Justice in Harrisburg, Pennsylvania.

Mean Prison Sentence From Survey and the Time Actually Served in Prison

Figure 4 compares the average time served in state institutions for persons released between 1971 and 1976 with the mean sentences (MS) imposed on first offenders by survey respondents. The survey sentences fall within one-half to two times the actual time served for most offenses.[35] For most crime types, however, the sentences assigned in the survey, even for first offenders, are more harsh than the actual prison time served most often by recidivists.

Figure 4.   Average Time Served in Pennsylvania Institutions (1971-76) vs. Survey Sentences (MS) for First Offenders

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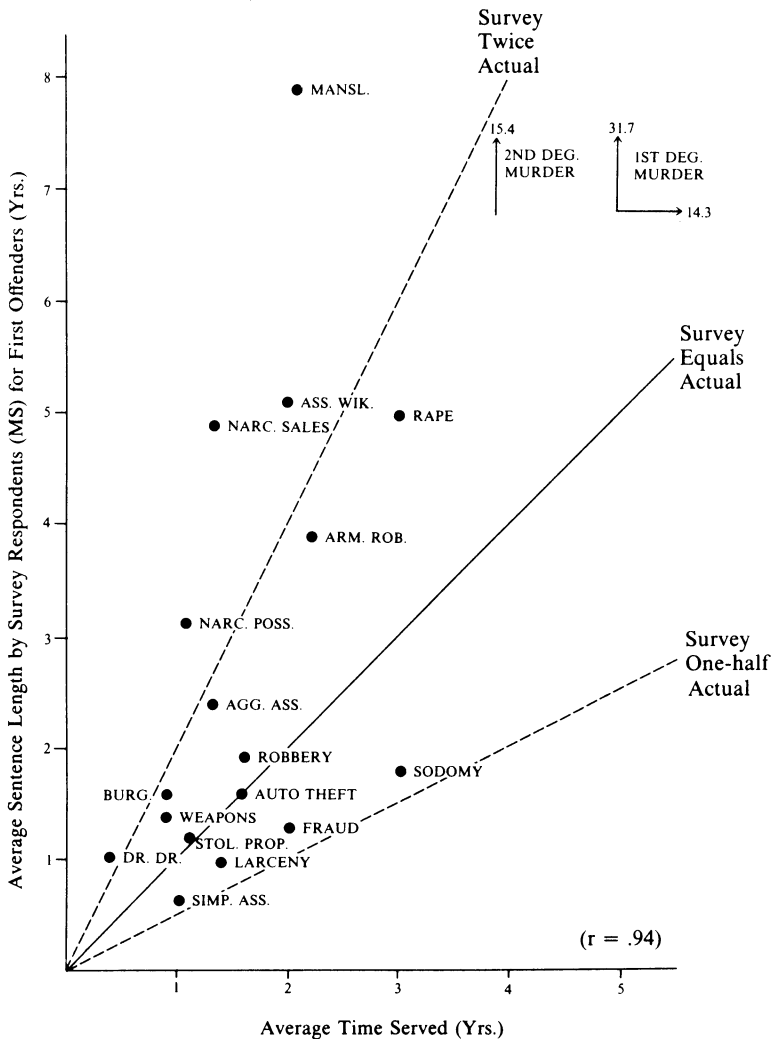
[35] The absolute differences between survey sentences and actual time served, however, are almost all statistically significant at the .001 level, using a two-tailed t-test.

Figure 5.   Average Time Served in Pennsylvania Institutions
(1971-76) Versus Survey Sentences (MS) for Repeat Offenders
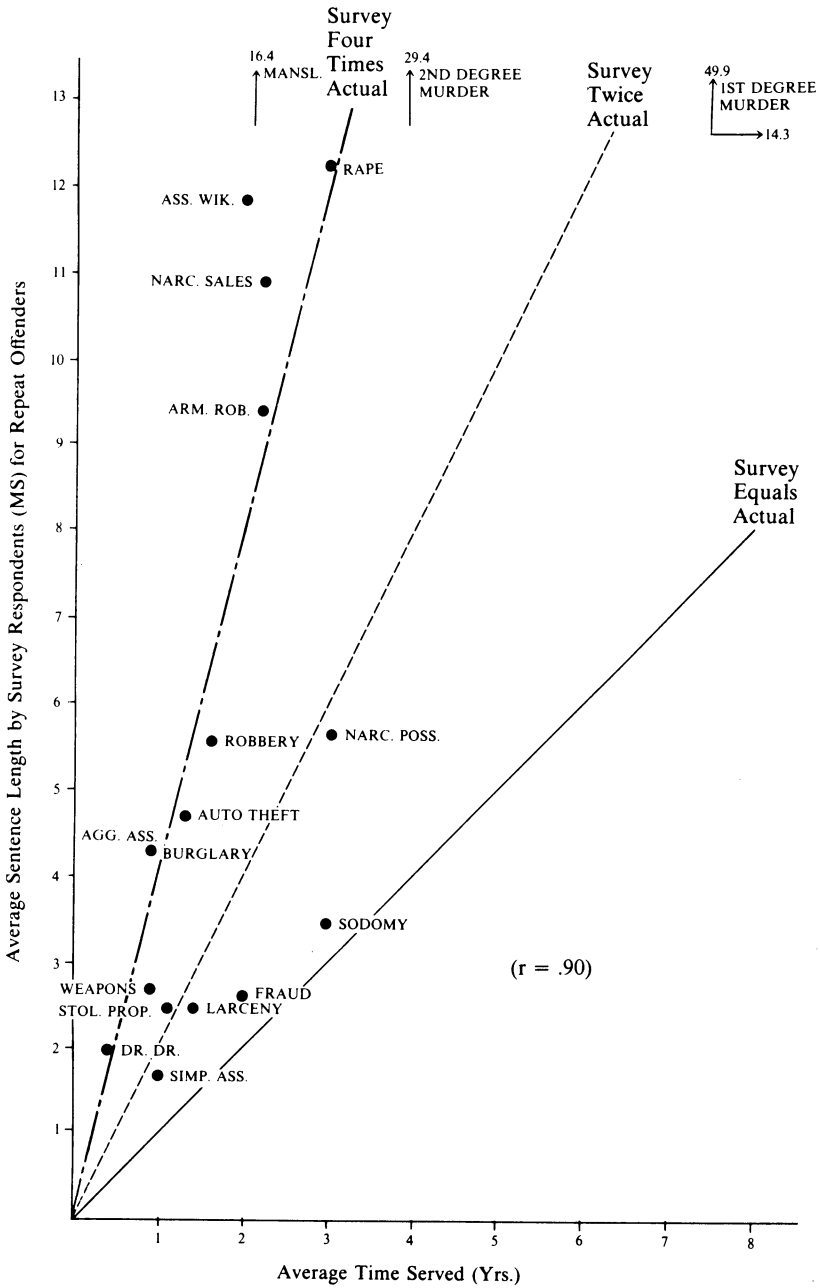
The largest differences between survey sentences for first offenders and actual time served occur for violent offenses,[36] narcotics, and drunk driving, with most differences in the range of two to four additional years for the survey sentences. For all other offenses, and particularly for property crimes, the survey sentences are about one-half year less than the actual time served.

The differences between criminal justice system performance and public expectations are even more pronounced when the average time served is compared with the survey sentences for repeat offenders (Figure 5), who are more representative of persons serving time in prison. In this case, the survey sentences for most offenses are more than twice the average time served. For violent offenses, burglary, narcotics sales, and drunk driving, the respondents to the survey called for sentences more than four times the actual time served. Since the inmates in state institutions are likely to be repeat offenders,[37] these results indicate that recidivist prisoners are serving considerably shorter terms than the survey respondents assign.

Mean Prison Sentences from Survey and the Sentences Actually Imposed by the Courts

Sentences imposed by judges on persons released from state institutions between 1971 and 1976 agree more closely with the sentences assigned by survey respondents than did actual time served (Figure 6).[38] The survey sentences for repeat offenders generally fall between the prevailing minimum and maximum sentences imposed by the courts. Minimum sentences are generally more than one-half the sentences of survey respondents, while maximum sentences are less than twice the survey sentences. Only a few offenses do not follow this pattern. Survey sentences are more severe than current

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[36] Violent offenses include murder, voluntary manslaughter, assault with intent to kill, rape, and armed robbery.

[37] A national survey of inmates in state correctional institutions in 1974 reports that 71 percent of the prison inmates had prior *prison* sentences before the present one (U.S. Department of Justice, 1976; 35). Our own analysis of persons received in Pennsylvania institutions between 1971 and 1976 revealed that 41 percent had prior prison commitments, and therefore prior convictions. Since first offenders are less likely to be sentenced to prison, many of those serving their first prison term probably had prior convictions as well.

[38] Judges' sentences also correspond closely to the sentences of educated white males in the survey (Table 6), the predominant demographic group represented in the judiciary.

court sentences for murder, voluntary manslaughter, and assault with intent to kill (where the actual maximum sentences are less than the survey sentences), and less severe for narcotics sales and sodomy (where the actual minimum sentences are more than the survey sentences).

Figure 6.   Average Sentence in Pennsylvania (1971-76) Versus Survey Sentence (MS) for Repeat Offenders[a]
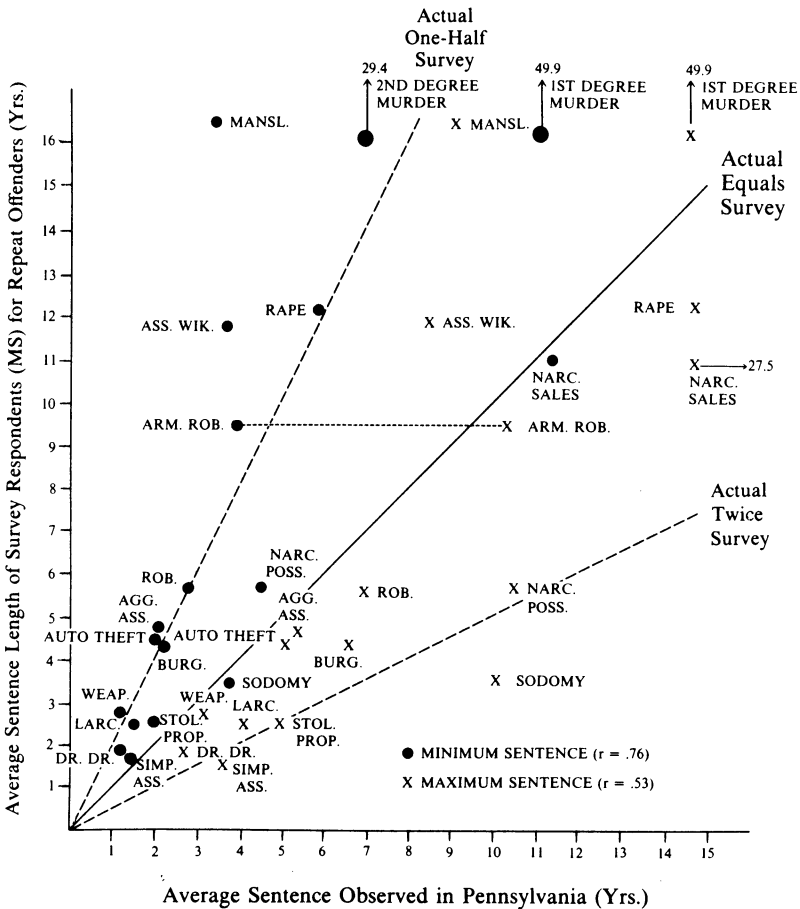
a The actual minimum and maximum sentences for an offense both appear on the same horizontal line (e.g., the actual sentences for armed robbery both appear on the line for a survey sentence of 9.4 years).

The Probability of Imprisonment After Conviction

The proportion of survey respondents assigning some prison sentences in the survey was compared to the probability of a prison sentence for convicted offenders available from the court data (Figure 7). The levels of prison use indicated on the survey are quite high for most offenses, even for first offenders, ranging from 40 to 50 percent for the relatively minor offenses

of drunk driving, weapons violations, fraud, stolen property, and narcotics use to over 80 percent for serious violent and property crimes.[39]

Figure 7.   The Probability of Prison After Conviction: Actual vs. Survey Results[b]

Actual Probability of Prison After Conviction in Pennsylvania in 1974[a]
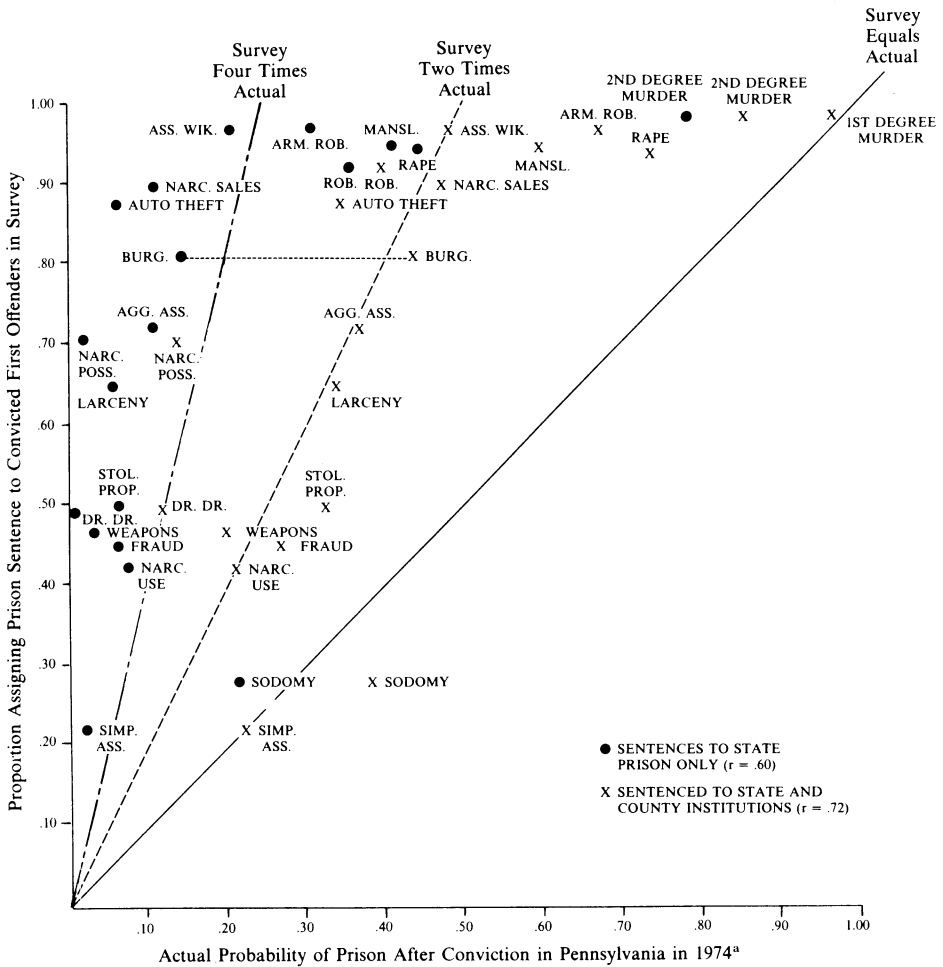
[a] Source: Pennsylvania Criminal Court Dispositions, 1974, Pennsylvania Criminal Information System, Series J-1, No. 5, Pennsylvania Department of Justice, Governor's Justice Commission, Bureau of Criminal Statistics, Harrisburg, Pa. 17120

[b] The actual probabilities to state and county prisons for an offense appear on the same horizontal line (e.g., the actual probabilities of incarceration for burglary both appear on the line for the survey proportion of .808).

[39] The proportions of survey respondents assigning prison sentences to repeat offenders are even higher, exceeding 80 percent for all offenses, except sodomy (41 percent), and over 90 percent for the serious violent and property crimes.

The probability of first offenders being assigned a prison sentence by survey respondents was more than four times the actual probability of commitment to a state prison after conviction for almost all offenses except the most serious (homicide, manslaughter, rape, and armed and unarmed robbery) and least serious (sodomy). First- and second-degree homicide and sodomy were the only offenses where current commitment practices are close to the survey levels.

When actual sentences to county institutions are included, as shown by the cross marks on Figure 7, system performance moves somewhat closer to survey commitments, but the proportions of survey respondents assigning prison sentences are still about twice the present probability of incarceration for all offenses other than homicide, rape, and armed robbery.

Some Interpretations of the Findings

Considerable discrepancies exist between recommended sentence lengths and the actual time served, but there is substantial agreement between recommended sentences and actual sentences. These findings suggest some interesting hypotheses about the origins of people's perceptions of what constitutes an appropriate sentence. First, it may be that people have no idea of the large differences between sentences imposed and the time actually served. Second, it can be hypothesized that people's perceptions of an appropriate sentence are derived more from their perceptions of current sentencing practices, and particularly news stories about actual (or more often potential) sentences that judges do (or might) impose on convicted offenders. On the other hand, release decisions are much more private and so known only to a few.

These questions about the accuracy and role of perceptions in formulating desired sentences can be examined explicitly in replications of the survey in different populations. For example, in addition to assigning a sentence, at least a subset of the respondents could be asked to indicate their estimate of the actual time served. This would elicit their perceptions on the question and provide a measure of the accuracy of those perceptions. Another subset of respondents could be informed of the actual time served before they assign a sentence. This would clarify the misinformation problem and provide some insight into the role of current practices in influencing the public's choices about appropriate sentences.

VII. CONCLUSIONS

This analysis attempts to gauge public attitudes about appropriate prison sentences for convicted offenders. Two main questions are addressed: the degree of consensus within the survey population about appropriate prison sentences, and the relationship between the sentences desired by these respondents and the actual performance of the criminal justice system. There is considerable agreement across the various demographic groups, although the responses of some of the groups were sufficiently small in number to require caution in drawing strong conclusions. The groups agreed on the *relative* severity of sentences to be imposed for different offenses, but disagreed over the *absolute* magnitude of the sentences.

A critical question yet to be resolved is the degree to which the variability in specified sentences reflects strong disagreement over firmly held views, or simply disparity in views that are weakly held. To the extent that people's opinions were based on their perceptions of sentences actually imposed, this diversity may simply reflect differences in those perceptions rather than a more basic disagreement over appropriate sentences.

The uncertainties make it extremely important to pursue this research further in order to learn more about the intensity of individuals' opinions and the bases of their perceptions of appropriate sentences. To the extent that disagreements derive from differences in knowledge or perceptions of current sentencing practice, it is important that the public become informed about the time prisoners actually do serve in prison. Without that baseline, public debate over mandatory-minimum and determinate sentencing schedules cannot be adequately informed.

To the extent that differences in recommended sentences derive less from strong value disagreements and more from differences in knowledge and perception, the strong consistency displayed in relative sentence differences provides a reasonable hope for reaching general agreement on sentencing schedules, at least within a particular jurisdiction.

When compared to the actual performance of the criminal justice system, the desired sentences are consistently more severe than found in current practice. This is true both of the proportion assigning some prison sentences and of the length of sentences specified. The sentence lengths called for on the survey are close in value to the average maximum sentences now imposed, but these maximum sentences tend to be

significantly longer than the time actually served. It is possible that the sentences called for derive more from a misconception of current practice than from disagreement with it.

If the results are found to reflect strongly held opinions that sentence lengths should increase, then the public debate over sentencing policies must reflect the increase in social costs associated with such changes. Much more attention would have to be paid to the problems of crowding of prisons, to the budgetary costs of about $10,000 per year per person to maintain and control prisoners, and to the general disruption prison makes in the lives of the prisoners, those associated with them, and the society generally.

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