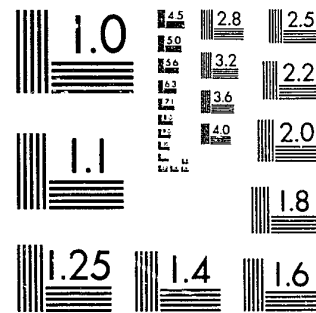


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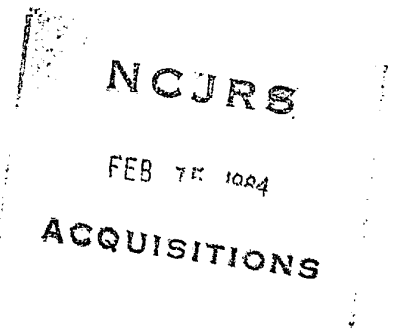
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WEIGHTED DISPOSITIONS: ADDING QUALITY TO PERFORMANCE MEASUREMENT

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Prior to this position, Ms. Jacoby was a Research Associate at the Bureau of Social Science Research where she conducted a nationwide study on prosecutorial decisionmaking which is presently being replicated in Canada, England, Finland, and Germany. As Director of the National Center for Prosecution Management, she provided technical assistance to prosecutors, developed manuals and teaching aids and supported the management improvement activities of attorneys throughout the United States.

She has served on the National Advisory Commission of Criminal Justice Standards and Goals, as consultant to local and state governments and is the author of The American Prosecutor: A Search for Identity (Lexington Books, 1980). She has a B.A. in Sociology from Boston University and a M.A. in Statistics from American University.

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WEIGHTED DISPOSITIONS: ADDING QUALITY TO PERFORMANCE MEASUREMENT*

I. Introduction

Historically, the output of prosecutors and defense counsel has been measured by conviction and acquittal rates. In more recent years, dismissal rates have also emerged as an indicator of performance. Unfortunately, such measures have little utility in the context of managing offices, allocating resources, making case assignments or evaluating the quality of prosecutorial and defender services at the agency (not individual) level. The rates do not reflect the multiplicity of functions carried out by the offices; they only partially represent the universe of dispositions generated daily; and they are not able to reflect satisfaction with the dispositions obtained. As a result, managers or evaluators have been left without a means of systematically assessing whether alternative dispositions could have been achieved more efficiently or at a lower cost. They also cannot monitor the operations of an agency for changes in levels of service.

Nevertheless, disposition rates continue to be used because few other measurement alternatives exist that can satisfy the requirements listed above. Yet there is a need for such an evaluative capability as evinced by the fact that just such a process exists in the operating world of prosecution and public defense. Levels of performance are monitored through a review of individual case closings and in many jurisdictions this is part of the ongoing work of the

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agency. Cases closed by dismissal may be reviewed and inspected; and control or approval mechanisms may be established for plea negotiations, dismissals or declinations. Some jurisdictions have even developed reporting systems that collect the subjective appraisal of the case's outcome as recorded by the attorney. Many of these and other procedures can be observed in a number of prosecutor and defender offices that are concerned with the quality of their operations.

It is when we attempt to subject these management activities to measurement that we see why disposition rates have prevailed in lieu of alternative measures. At the heart of the problem is the fact that in order to measure the adequacy or quality of dispositions, new techniques will have to be developed. They will have to have the capability of assigning values to dispositions and developing measures that can be used to monitor and evaluate operations. One approach that appears feasible is to evaluate the quality of the dispositions by whether the sanctions imposed are acceptable. For example, a plea of guilty to a robbery cannot be fully evaluated for its acceptability until sentence is imposed. Simple conviction or acquittal rates beg the issue of whether dispositions obtained are equitable or acceptable to the public defender or prosecutor.

If one assumes that the quality of dispositions is indicated by the sanctions imposed, then one should be able to test whether the sanctions are too harsh or too lenient relative to the characteristics of the case. But before this is possible, it is necessary to (1) establish a scale that can be assigned to all the different types of criminal penalties to reflect their severity; and (2) identify the factors that establish expected (or preferred) dispositions and the relative weights that should be associated with them.

This paper describes some first steps taken to address these issues by presenting a practical approach which appears to overcome most of the measurement

barriers. Specifically, it briefly describes a scale recently developed by the authors which quantifies a wide range of sanctions imposed in criminal proceedings according to their severity. Then it discusses in more detail an approach to measuring satisfaction using a concept of bounded acceptability.

The work described here is part of an ongoing research project supported by the National Institute of Justice. Therefore, it should be considered provisional or even preliminary in nature since refinements and further analysis may alter or modify some of the results reported at this time.

II. Background

In order to measure output such that it reflects both the quantity and quality of various types of dispositions, we need to be able to weight dispositions by some qualitative factor that moves beyond the mere count of acquittals, convictions or dismissals. Since the vast majority of prosecutions end with convictions or pleas, both experience and research indicate that dispositions are evaluated in the context of the acceptability of the sanction imposed. To be sure, using sanctions to indicate the quality of agency performance introduces some problems, but it does yield a practical approach to weighting case dispositions. Although the court imposes the sanctions, not the prosecutor or public defender, it is the expected level of sanction that, in large part, moves the prosecutor and defense counsel to choose one dispositional route over another and to evaluate the results of their efforts for acceptability.

Additionally, the fact that sanctions are chosen as the weighting factor also has implications for the other, non-sanctioned dispositions of acquittals and dismissals. It suggests that these outcomes might have to be evaluated by another set of acceptability standards if the entire dispositional pattern of an office is to be ultimately evaluated. (For this paper, this issue has been temporarily set aside).

In focusing our attention on convictions, we assume that it is possible to evaluate dispositions with respect to acceptability of the sanction either imposed or expected. Both the practices of plea negotiations and setting a "bottom line" for a case offer empirical evidence that limits can be placed about criminal case dispositions for evaluative purposes. The research question is whether these limits can be statistically verified and can the factors that set them be explicated into a statistical model or set of models. If this can be done, then an agency head will have a powerful management and budgetary tool.

We assume that there should exist a band of acceptable sanctions which can be described by the characteristics of the crime, the criminal and the legal/evidentiary nature of the case. Outside the band exist two other sets of sanctions that can be classified as either too punitive for the defendant or too lenient for society. We also assume that negotiation between the public defender and the prosecutor takes place within the limits of the set of acceptable sanctions. However, we do not assume that the prosecutors and defenders place the same sanction limits around the same set of cases; in fact, we are more inclined to believe that the boundaries will differ and that the intersection of these two sets may suggest the limits for plea negotiation.

If it is possible to identify the factors that establish the sanction limits around cases, then the performance of an agency can be monitored with respect to how often its dispositions fall within acceptable bounds. Acceptability should be a reflection of a number of factors not the least of which are the values set by the courts and the community. These are indicated by such factors as the seriousness of the offense, the evidentiary strength of the case and the nature of the defendant's criminal record among others. The weights that these factors will bring to the setting of limits should vary by whether it is the prosecutor or public defender who is setting the limits, by prosecutorial policy or the

court's sentencing procedures. They may also vary according to type of offense or dispositional route selected. Although both the factors and their weights have yet to be statistically determined, based on our past experience and the preliminary results reported here, we have no reason to assume that they cannot be identified and described by models.

One should expect to find in any jurisdiction a great deal of common agreement with respect to the sanction value of cases. It is not likely that these values will differ greatly among the participants in the adjudication process. From an economic perspective, we can think of the court establishing the value of cases by its sentencing policies and the prosecutor and public defender shopping among these set prices as they place a value on a case. For example, one would not normally expect a sanction of incarceration for an attempted burglarly by a first offender. Similarly, one might expect just that sanction if the defendant was a two-time convicted felon tried in a jurisdiction that has an habitual offender act. We assume that there is a common core of agreed upon values for each of these cases with disagreement occurring only at the boundaries of the min/max range.

If such a common core exists, the implications of this for the efficient utilization of the dispositional routes of plea or trial are clear since one can assume that if the severity of sanction is agreed upon by both prosecutor and defense, then pleas can be negotiated. If disagreement exists, then the more adversarial and time consuming trial disposition route may be necessary. There is simply no reason to believe that, for the vast majority of criminal cases disposed by pleas, the values vary substantially between the court, prosecutor and public defender in a jurisdiction. On the other hand there is also solid reason to believe that there exists another set of cases that will always seek a trial disposition and these can be generally identified as those involving

mandatory jail sentences, career criminal or habitual offender statutes and notorious crimes.*

If it is possible to define limits and weight the influential factors that forecast them, then we can set out a concept of a weighted disposition measure which can indicate the amount of congruence between expected dispositions (including sanctions) and those actually obtained. Such a measure could be thought of as the ratio** of the actual sanction imposed by the court to the maximum acceptable value as defined by the public defender (or the minimum acceptable level as defined by prosecution). The aggregate of these scores should indicate the effectiveness of the defender's or prosecutor's office in achieving its goals and, more importantly, permit comparison between agencies because it is based on a non-dimensional score.

This is not a productivity measure in the classical sense but rather it is an indicator of the agency's ability to reach its own, self-defined acceptable levels of performance. We assume that if an agency is not able to operate within its own acceptable range of preferred outcomes under conditions of efficiency, then something is amiss and the agency head should be aware of the situation.

For example, if a defender values the acceptable range of sanctions in a case between 2.4 and 3.5 (over 3.5 being considered too punitive) and the actual severity of the sanction imposed is 4.5, then the weighted disposition is $4.5/3.5$ or 1.8. In this case, the maximum sanction acceptable was exceeded by 80 percent.

* Although these constitute only a small percentage of the dispositions, they consume the most resources and thus cannot be excluded even though they may ultimately be characterized by a different model.

** We recognize that the ratio is only one of many measures that could (and should) be considered in developing a weighted disposition. It is used here to illustrate the concept in simple terms.

Similarly, if the prosecutor defined a minimum acceptable level as having a value of 2.4 and the sanction imposed was valued at only 1.5 then the weighted disposition, the ratio of actual to expected, is .6 or only 60 percent of the minimum. If these illustrations are extended over the entire agency so that it records the results of all cases disposed in the office, the average score should reflect the overall ability of the agency to achieve its own expectations.

From this agency perspective, such a measure will permit the public defender or prosecutor to examine dispositions achieved by the office over a period of time (monthly or quarterly, for example) and observe whether they are meeting their expected outcomes. If, for example, the monthly report to the public defender indicates that 60 percent of the dispositions are exceeding the defender's acceptable limits, then he or she may want to find out why.

The reasons may be one or many; some may be under agency control, others outside of it. They may be due to changes in internal procedures such that defenders are accepting plea offers that are generally more punitive than what they have previously accepted; or they may be due to changes in prosecutorial policy that restricts the use of plea bargaining. They may even be due to changes in judicial sentencing policy or new legislation or court rules. The important fact is that, first, the agency head is aware that change is taking place and secondly, that the reasons can be identified so that appropriate action can be taken if necessary.

Identifying statistically the range of sanctions that are acceptable by type of case and defendant is a complex task. It first requires that we have the ability to numerically weight sentences in order of their severity, then to statistically identify sets of sanctions that are acceptable given the characteristics of the case and the defendant.

III. A Severity of Sanction Scale

For researchers and evaluators, the need for a scale that could reflect the severity of the sanction imposed on criminal cases has been ever present and recently has taken on added emphasis. Leslie Sebba examining the study conducted at Temple-Drexel to develop severity scales states that "it is difficult ... to conduct a comprehensive analysis of sentencing practices without reducing the various forms of judicial disposal to a single scale." (Sebba, 1978: 6) Building on his and other research, the severity scale developed for use in this research project was based on ranks assigned by prosecutors to a full range of simple and complex sanctions.

Briefly, the scale covers a set of 171 penalties which were presented in sets of 72, randomly selected and displayed to prosecutors. The prosecutors were asked to rate the penalties on a scale of 0 to 10 and duplicate ratings were permissible. A minimum of 60 responses was required for each particular sentence. As of January, 1982 the tests had been conducted on 177 prosecutors and 13,211 sanction responses were obtained and analyzed.*

Figure 1 presents the average severity rating for single-order penalties. (Combinations of penalties carry different weights and are not displayed here). It is clear from this distribution that dramatic changes occur once incarceration is imposed and as the length of sentence increases. It is this scale that was used to weight the sanctions obtained by the study and to establish the boundaries about the acceptable dispositions.

* The description of this research is currently being documented by the authors for publication.

FIGURE 1
AVERAGE SEVERITY RATINGS FOR SINGLE-ORDER PENALTIES

<u>Penalty</u>	<u>Average</u>	<u>Penalty</u>	<u>Average</u>
Fine, \$10	0.26	Suspension of Drivers License, 1 Year	2.37
Conditional Discharge	0.48	Jail, 30 Days	2.61
Mediation	0.54	Jail, 60 Days	2.98
Unsupervised Probation 1 year	0.60	Jail, 90 Days	3.07
Unsupervised Probation 90 days	0.66	Fine, \$10,000	3.13
Unsupervised Probation 6 months	0.72	Jail, 6 Months	3.85
Fine, \$100	0.81	Jail, 1 Year	4.17
Treatment Program, 30 Days	0.93	Penitentiary 2-5 Years	5.54
Suspension of Drivers License, 30 Days	1.17	Penitentiary 3 Years	5.54
Restitution	1.18	Penitentiary 5 Years	6.21
Treatment Program, 90 Days	1.25	Penitentiary 5-10 Years	6.57
Treatment Program, 6 Months	1.28	Penitentiary 10 Years	7.43
Probation, 1 Year	1.29	Penitentiary 10-20 Years	7.95
Probation, 2 Years	1.51	Penitentiary 20 Years	8.13
Treatment Program 1 Year	1.55	Penitentiary 99 Years	9.17
Suspension of Drivers License, 6 Months	1.78	Penitentiary Life	9.22
Suspension of Drivers License, 90 Days	1.81	Penitentiary Life plus 99 Years	9.38
Fine, \$1,000	1.90	Death	9.86
Probation, 4 Years	2.04		

IV. Measuring Acceptable Sentences

Given the assumption that a weighted disposition is a reasonable way to measure the output of prosecutor and public defender offices and given the assumption that the ratio of the desired achieved sanction to the minimum acceptable sanction is one such measure of success, then our research should focus on (1) developing measures of minimum acceptable sanctions and the range of acceptable sanctions; and (2) identifying the factors that establish these bounds.

There are two ways to approach this task. The first is to sample closed cases, record their characteristics and the actual disposition. Analysis of this data would produce an equation describing the lower bound of sentences received for cases with certain characteristics. The disadvantage in this approach is that since the cases reflect only sentences that were achieved, they cannot specify whether they were acceptable or more importantly what is not acceptable.

The second approach, and the one selected, was simulation.* Using 30 cases selected from the simulated standard case set developed in earlier research, 193 attorneys in a single prosecutor's office were asked to evaluate a range of sanctions. The simulated approach has the research advantage of covering a full range of criminal cases and defendants and allowing us to control for the effects of the seriousness of the offense, defendant criminal history, and evidentiary strength. Each attorney answered a series of questions about decision-making activities. Such decisions begin with the crucial decision-

* This procedure has already been applied successfully in more than 20 jurisdictions throughout the country. The results are stable and compare favorably with the overall performance of the office. Many of the concerns about the validity of simulation have been addressed in earlier phases of this research.

FIGURE 2
EXAMPLE OF EVALUATION SHEET

Your Initials: ASM Case #: 114 Form P-022382

1. Circle the number that best represents the PRIORITY you feel that this case should have for prosecution.

1 2 3 4 5 6 7
 Lowest Average Highest

2. How strong is the evidence in this case?

1 2 3 4 5 6 7
 Weakest Average Strongest

3. How serious is the defendant's record?

1 2 3 4 5 6 7
 Not Average Very
 Serious Serious Serious

4. After reviewing this case would you accept it for prosecution?

1. Yes: GO TO 5 (below).
 2. NO: GO TO NEXT CASE.

5. Considering the characteristics of this case and your court, how would you expect it to be disposed? (Check only one).

1. Plea of guilty 2. Trial 3. Dismissal 4. Other: _____
 (Specify)

6. At what level will this case be disposed?

1. Felony (as charged) 3. Misdemeanor (as charged) 5. Violation or Infraction
 2. Felony (lesser charge) 4. Misdemeanor (lesser charge) 6. Other: _____
 (Specify)

7. In your opinion and irrespective of the court, what would be a reasonable and appropriate sentence for this defendant? (Use any combination).

1. Submit to mediation 7. Conditional Discharge
 2. Restitution order and/or 8. Supervised Probation: Time _____
 3. Victim Compensation: \$ _____ 9. Incarceration: Time _____
 4. Treatment Program: Time _____ 10. Other: Psychiatric Care - Supervised
 (Specify)
 5. Suspend License: Time _____
 6. Fine (imposed): \$ _____

8. Among the sanctions listed below, check ALL that are UNACCEPTABLE for this case.

1000 MEDIATION 1801 FINE \$100 & MEDIATION
 1701 FINE \$100 & SUSPENSION OF DRIVERS LICENSE 30 DAYS 2411 TREATMENT PROGRAM 6 MONTHS & SUSPENSION OF DRIVERS LICENSE 1 YEAR
 1403 TREATMENT PROGRAM 30 DAYS & SUSPENSION OF DRIVERS LICENSE 1 YEAR 1000 JAIL 30 DAYS
 2808 PROBATION 2 YEARS & JAIL 60 DAYS 1508 FINE \$10,000 & TREATMENT 30 DAYS
 2218 RESTITUTION & JAIL 6 MONTHS 1400 PENITENTIARY 20 YEARS

making activities. Such decisions begin with the crucial decision of whether the case should be prosecuted at all through specifying what a reasonable and appropriate decision might be. In addition, subjective measures were collected on the priority of the case for prosecution, the seriousness of the defendant, and the strength of the case. Ultimately, these summary measures should also impact the minimum acceptable sanction.

As can be seen from Figure 2, the sanction issue has been divided into two parts (Questions 7 and 8). First, the individual asked for a point estimate of the reasonable and appropriate sanction. The purpose of this is two-fold: (1) to determine if the point estimate falls within the range of acceptable sanctions; (2) to determine where within that range it falls. Following this question, each respondent checked off all sanctions that were not acceptable for the case. The remaining, acceptable, sentences thus form the band of acceptable sanctions.

The forms filled out for each cases by each prosecutor contained different sets of sanctions. These sanctions were chosen randomly from each decile of the sentencing scale and randomly displayed. As a result, each form contained a uniform spread of sanctions across the full range of severity although the actual stimulus might be different.

The data set derived from the office gives us repeated measurement on 30 cases by 193 attorneys. Naturally, there will be a difference of opinion about what is an acceptable sentence among individual assistants. However, we expected that measures of central tendency would exist and that there would be a range between the minimum acceptable sanction and the maximum acceptable sanction.

There are several measurement problems which have not been resolved at this relatively early stage of the research, two of which bear noting here.

First, we cannot at this time delineate between sentences which were rejected for being too harsh or too lenient and those which were rejected for being inappropriate. For example, it is clear that 5 years in jail is probably rejected because it is too harsh a sentence to be imposed upon a first time offender charged with breaking and entering. At the same time, a sentence involving a treatment program may be rejected not because it is too lenient, but rather because it does not make sense in the context presented. The same would not be true for a case involving substance abuse in which case both sentences can be evaluated. In subsequent data collection efforts, it is probably reasonable to sample from a subset of sentences which clearly are interpretable with respect to the simulated case.

Second, since we define the range of acceptable sanctions as being represented by sanctions which have not been rejected as "reasonable," there may be an unmeasured gap created by our random selection procedure. Within each decile over the full range, there may be a gap between the end-points of what would be an accepted range and those sentences closest to that range which were evaluated and rejected. One possible solution to this problem is to choose the midpoint as an estimate of the true boundary at each end of the scale. It can also be argued that averaging the end-points across attorneys will essentially correct for this incomplete design problem.

In the analysis which follows, we examine the average minimum acceptable sentence for each of the thirty cases. There are two basic results which we expect. First, we expect to see some range between minimum and maximum acceptable scale scores. If this range is not present, then our assumptions about bottom lines, plea negotiation and sentencing as an indicator of acceptability are called into question. Further, if we hypothesize a log-normal sentencing scale, we should find similar ranges throughout the cases. We would

expect this because it is reasonable to assume that the difference between the maximum and the minimum are independent of where they are on the scale. In other words, if a reasonable and appropriate sentence for the crime and defendant has a value of 1, then the prosecutor might be willing to take 75% of that value or 125% of that value; but clearly, 10% or 400% of the value could be in error.

The second purpose of this research was to examine the relationship between minimum acceptable sentences and the characteristics of the cases. At present this analysis is limited by the small number of cases that have been evaluated. The thirty cases are tied to some 85 independent variables which describe the attributes of the case and the defendant; but until we increase the number of cases, a more extensive analysis of the variables is not possible. However, we can examine a few case characteristics and especially the relationships between the minimum acceptable sentence and the seriousness of the offense, the criminal index score and the priority assigned to the case for prosecution as well as the evidentiary strength of the case.

V. Results

The results of the preliminary analysis of the data although still provisional have established a few facts. First and most important, is the fact that prosecutors set sanction limits about cases. For each case, some sanctions were always checked as unacceptable. Figure 3 presents the average minimum and the maximum values assigned to each case. A rank order correlation was performed between the min/max to test whether there was an association between the two and the result was a correlation of .98. This means that bounds are set and that prosecutors could discern a minimum and maximum level about each case.

It was assumed that the priority of the case for prosecution would be related to the severity of the sanction that was deemed acceptable since previous research had indicated this association. The averages for minimum

FIGURE 3

AVERAGE MINIMUM AND MAXIMUM ACCEPTABLE SANCTION

VALUES BY CASE *

CASE	N	MIN	SDEV	MAX	SDEV
9	192	4.57	2.42	5.53	1.88
13	143	2.73	1.72	3.37	1.45
15	189	2.17	1.18	3.81	1.24
25	192	2.22	1.53	3.73	1.30
27	190	3.37	1.92	4.43	1.53
28	186	1.72	1.21	3.03	1.36
33	140	1.92	1.38	3.14	1.45
38	155	1.47	1.01	2.43	1.39
50	154	1.38	0.96	2.83	1.24
69	141	2.94	1.95	4.10	1.81
75	177	2.43	1.37	3.90	1.26
83	198	2.15	1.18	3.33	1.07
90	191	2.55	1.31	4.02	1.23
100	192	2.80	1.54	3.95	1.04
103	192	4.21	2.19	5.01	1.79
106	189	2.74	1.52	3.88	1.29
113	193	4.87	2.93	5.53	2.41
114	189	3.17	2.38	4.33	1.90
129	186	4.11	2.53	5.05	2.07
155	131	4.07	2.30	4.83	1.86
158	193	4.15	2.10	4.94	1.78
162	191	3.05	1.77	4.15	1.58
165	188	1.76	1.37	2.53	1.53
173	168	1.74	1.44	2.93	1.57
177	177	1.68	1.05	3.00	1.19
183	192	2.72	1.29	3.74	1.11
205	192	3.41	1.67	4.49	1.50
207	192	3.37	1.69	4.53	1.35
214	192	4.20	2.09	5.06	1.73
225	178	3.58	2.19	4.72	1.86

* Raw data uncorrected for outliers

and maximum boundaries were computed for each of the cases and these were plotted against the severity scale. (Figure 4). As it can be seen, there is a clear progression up the severity ladder with the boundaries moving in the expected manner. Overlap does occur between the minimum of one priority level and the maximum of the preceding level which suggests that priority alone is not the sole determinant of sanctions. (There may always be some intersection occurring between classifications no matter what variables are used. The task is to reduce this to a minimum). Nevertheless, it appears as though priority as an overall variable shows the rationality of the sanctioning system.

In contrast, a plot of the boundaries as described only by the prosecutor's evaluation of the seriousness of the defendant's criminal history (Question 3 on the form) shows no relationship to the sanction severity (Figure 5). This is interesting since one could hypothesize that as the record of the defendant increases the likelihood of sanctions becoming more severe also increases. On the other hand, if one agrees with the philosophy that the punishment should fit the crime, then one would expect this result and look to the seriousness of the crime as explaining the severity of sanctions. Further analysis is clearly indicated and the results of the regression analysis presented subsequently are interesting.

Figure 6 shows that there is a strong relationship between the seriousness of the offense as measured by the Sellin/Wolfgang scale and the sanctions imposed. Noticeable from this plot is the narrowness of the band of sanctions when the crime is at the lower end of the seriousness scale and its expansion as seriousness increases. It is difficult to explain why this happens now because of the small sample. Again, an increase in the data base size is justified.

A more complicated logic pattern was set up and examined. This one was based on a number of relationships that were observed from our previous research

Severity.

6.0

5.0

4.0

3.0

2.0

.8

.6

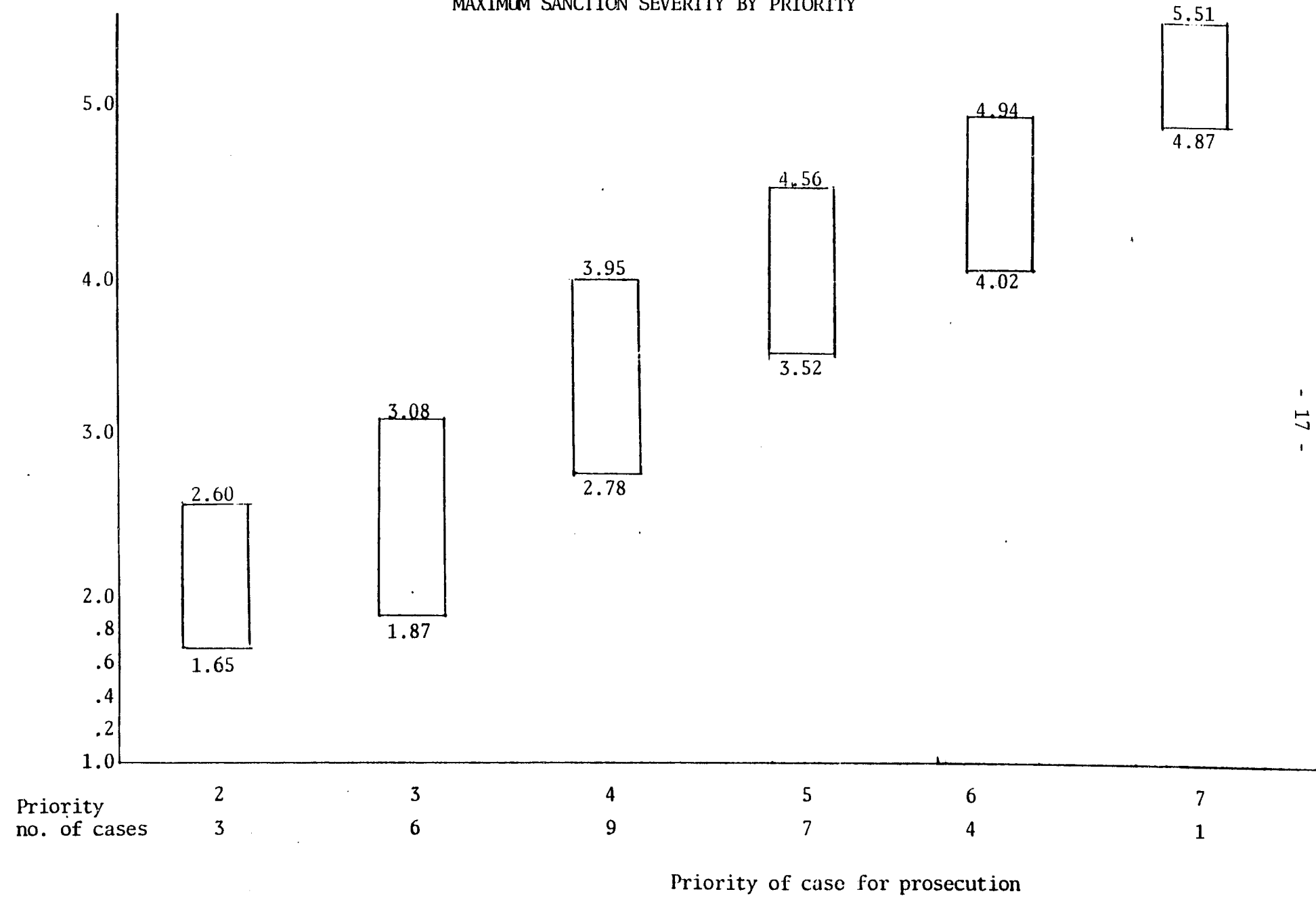
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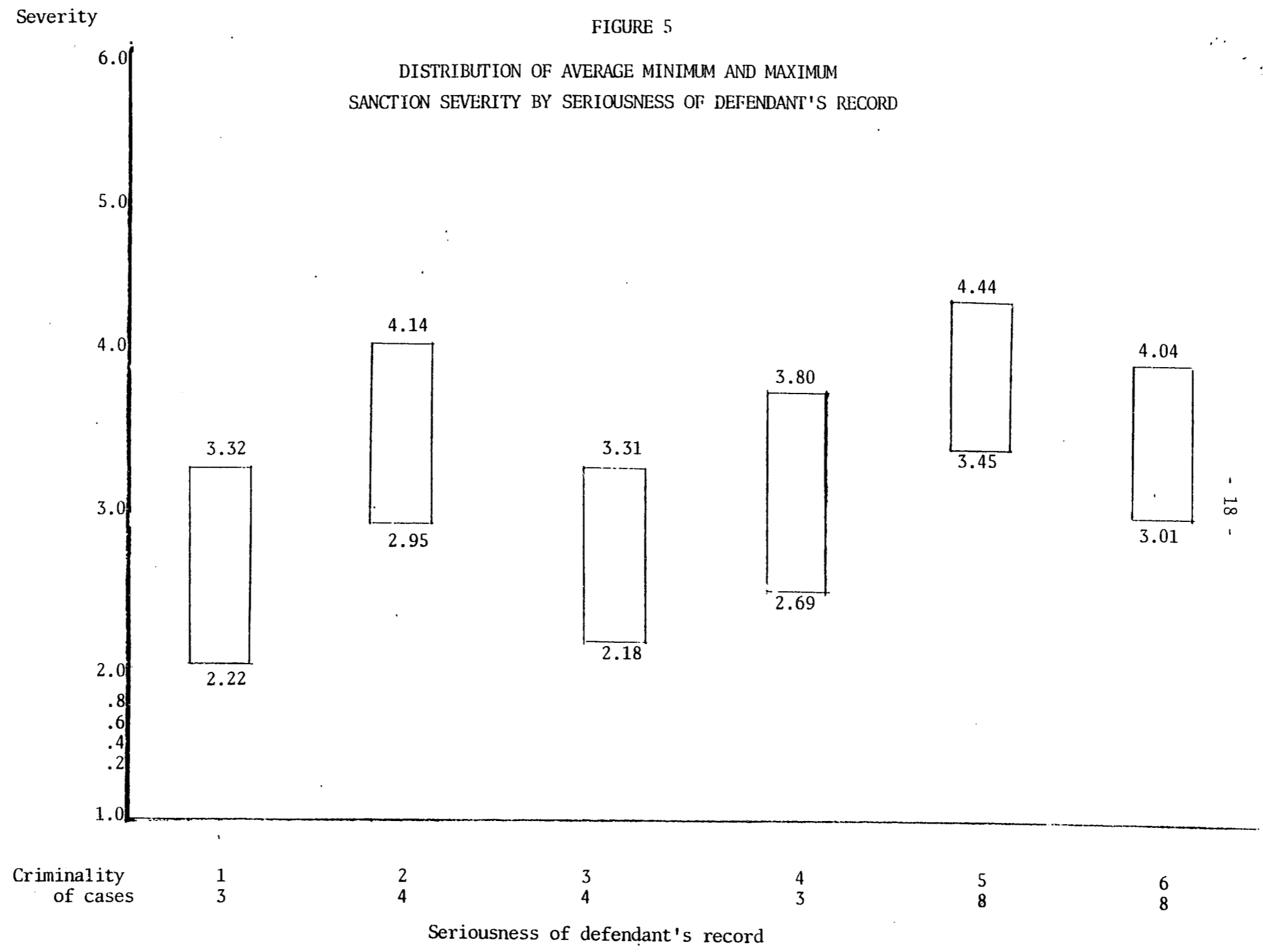
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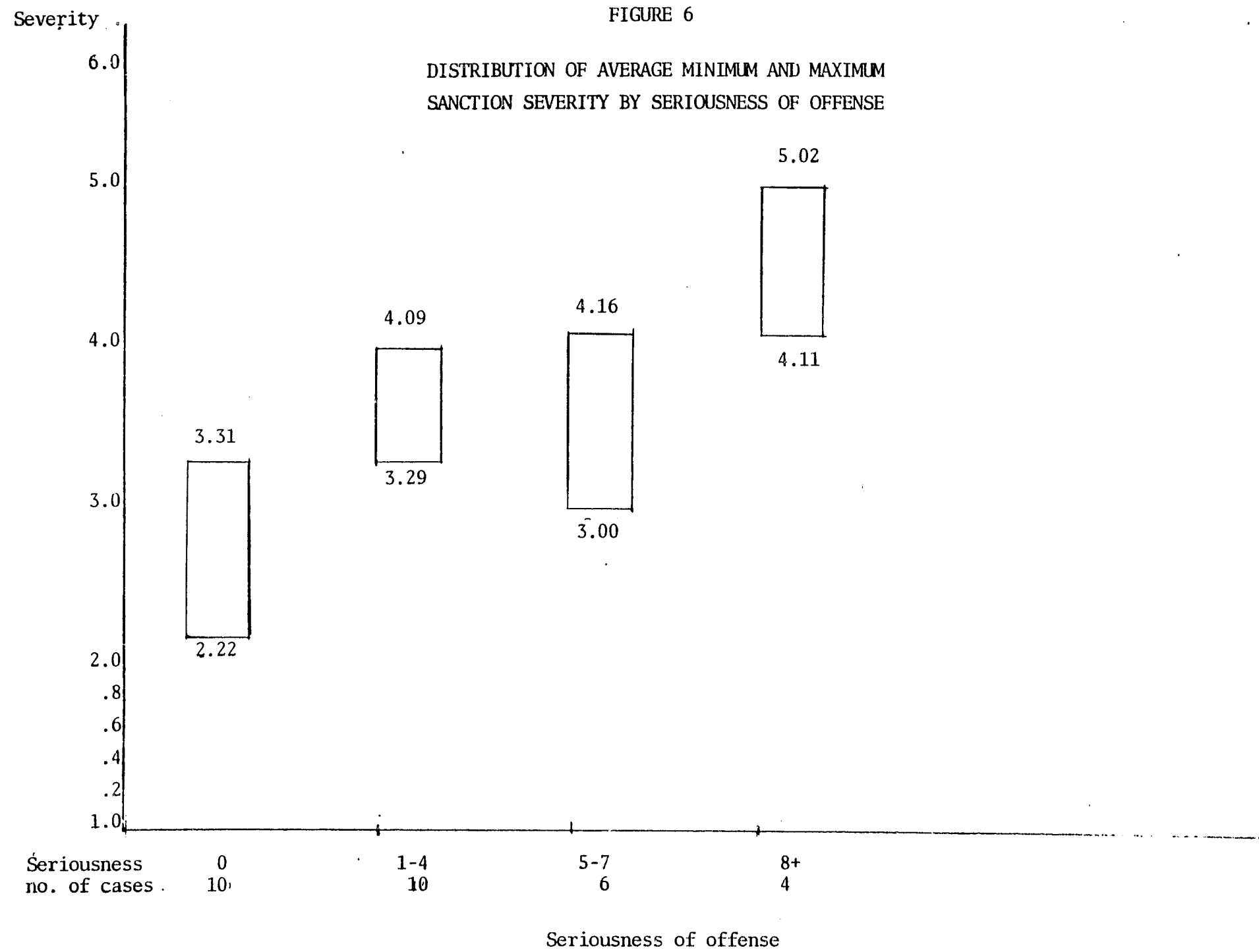
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FIGURE 4

DISTRIBUTION OF AVERAGE MINIMUM AND
MAXIMUM SANCTION SEVERITY BY PRIORITY







and are the focus of our present work. It involves the dispositional route followed by a case and its relationship to the priority of the case for prosecution.

The national study on prosecutorial decisionmaking found that priority could be explained by a combination of three factors: the seriousness of the offense, the evidentiary strength of the case and the criminality of the defendant (Jacoby et al, 1982:37). It also found that priority was a strong predictor of the type of disposition sought. As the priority of the case increased, the likelihood of it being disposed of by trial also increased until at the highest level (7 on the rating scale) one could expect 78 percent of the cases to be disposed of by trial (Jacoby et al, 1982:84). In general, trial resources were reserved for the most serious cases. A statistical model (RDR for Recommended Dispositional Routing) using the variables that explained priority was developed to forecast the dispositional decisions made by prosecutors about cases. When the generalized model was used to forecast whether cases would be disposed of by plea or trial, it had an error rate that depending on jurisdiction, ranged from a low of 3 percent to a high of 20 percent.

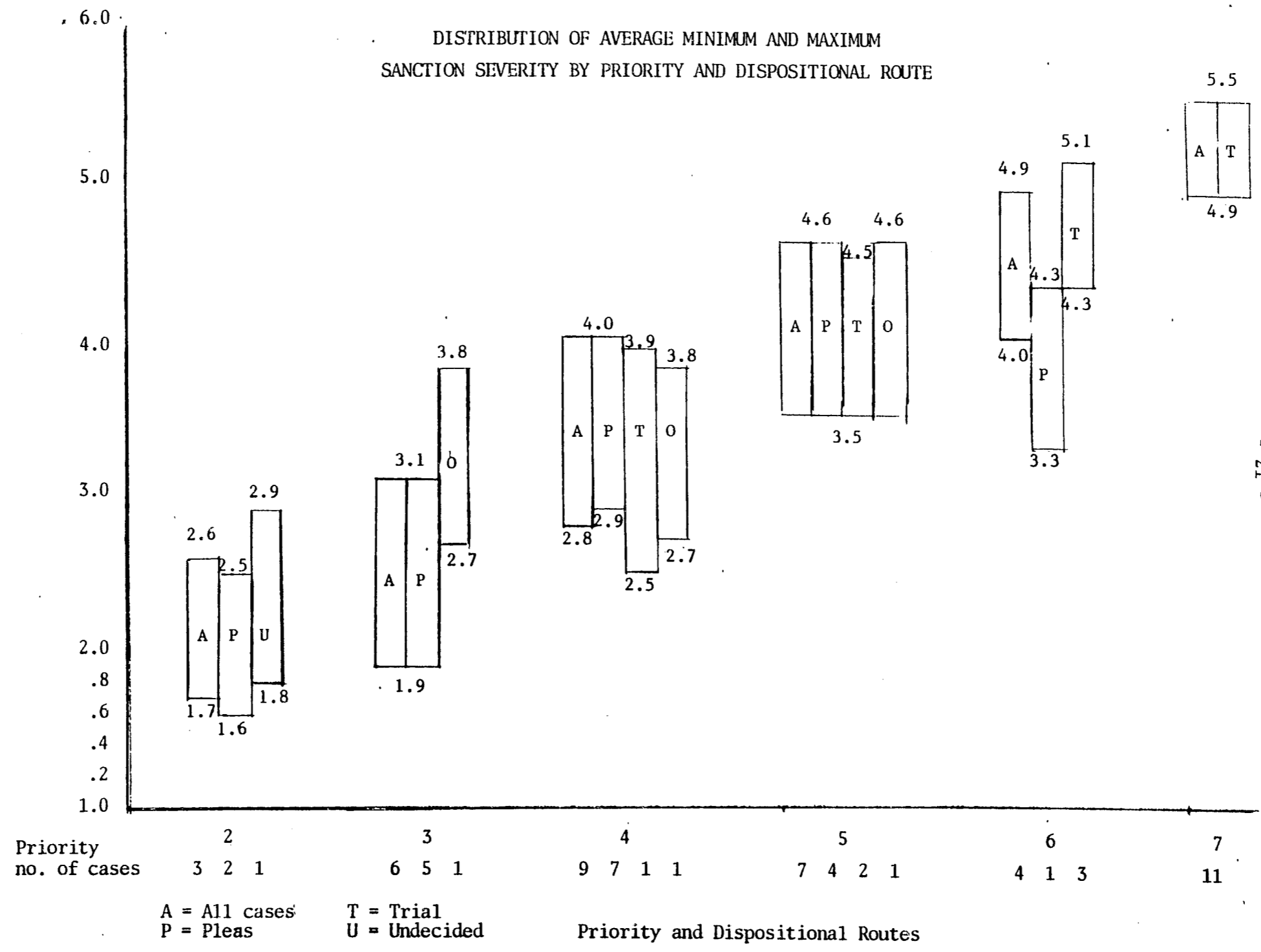
(Jacoby et al, 1982:87-99) Furthermore, it has been assumed by most researchers and practitioners that cases disposed of by trial would receive stronger sanctions than those disposed of by plea. (Wasting the courts' resources is usually the reason offered). If this were the case then we should expect to see it reflected in the severity bounds.

Figure 7 presents the relationship between the priority of the case, dispositional route and the expected sanction levels. This is an interesting plot because it is both clear and confusing. (It is also based on only 30 cases.) First, it is clear that the relationship between priority and trials holds very well in the 6 and 7 range. The undecided set are cases where the attorneys

SEVERITY

FIGURE 7

DISTRIBUTION OF AVERAGE MINIMUM AND MAXIMUM SANCTION SEVERITY BY PRIORITY AND DISPOSITIONAL ROUTE



could not agree on the dispositional route, either plea or trial. In the 2 and 3 priority ranked cases, it appears that if there is a question of trial (the undecided set), the sanctions equate more to the next priority level than to the one to which they were assigned. With one exception, there is an overall consistency in the width of the bands. Although the levels vary, the spread tends to remain relatively constant. The exception to the pattern occurs in the priority 6 cases where there is an obvious and significant decrease in the sanction bounds for high priority cases disposed of by plea. The level of this group is more closely aligned with priority 5 cases than priority 6. Why this occurs is not yet clear because the sample size is so small, it may merely be a statistical aberration.

A regression analysis was performed using a limited set of variables to examine these relationships more comprehensively. The variables used were:

- a. Sellin-Wolfgang - Coded to four dummy variables (0, 1-4, 5-9, 10+);
- b. Criminality - A Logarithmic index which represents the criminal record of the defendant. (Turner, Ratledge: 1980);
- c. Two variables indicating the existence of two or more police witnesses and two or more civilian witnesses;
- d. The circumstances of arrest coded as two dummy variables, one indicating arrest on the scene and another indicating arrest within 24 hours;
- e. Finally, a variable was introduced which reflects a measure of the legal complexity of the case.

FIGURE 8

RESULTS OF REGRESSION ANALYSIS ON
MINIMUM ACCEPTABLE BOUNDARY

<u>Variable</u>	<u>Coefficient</u>	<u>Standard Error</u>	<u>F-Statistic</u>
SW2	1.01	.44	5.23
POLWIT2U	-0.23	-0.33	.49
ONSCENE	0.39	0.47	.71
COMPLEXITY	0.10	0.22	.19
CRIMINALITY	*	*	*
CIVWIT2U	*	*	*
HOURS24	*	*	*
CONSTANT	1.93		

* Partial correlation coefficients too small to enter

As Figure 8 shows the primary determinant of the minimum acceptable sanction is the seriousness of the offense. The R-square was .425 adjusted for degrees of freedom (6, 23) to .275 with an overall F for the equation of 2.84.

This result is not really surprising since one could expect the lower threshold of sanction to be primarily dictated by the crime itself. This pattern surfaced before when analysis showed that the decision to accept a case was based on its seriousness and its evidentiary strength. The defendant's record did not play a significant role. (Jacoby et al, 1982:38)

In Figure 9 below we see a much different type of equation emerge when the dependent variable is the maximum acceptable sentence.

FIGURE 9

RESULTS OF REGRESSION ANALYSIS ON
MAXIMUM ACCEPTABLE BOUNDARY

<u>Variable</u>	<u>Coefficient</u>	<u>Standard Error</u>	<u>F-Statistic</u>
SW2	0.51	.33	2.27
SW3	*	*	*
SW4	1.17	.47	6.16
CRIMINALITY	.58	.31	3.41
COMPLEXITY	.44	.16	7.19
HOURS24	*	*	*
ONSCENE	*	*	*
POLWIT2U	*	*	*
CIVWIT2U	*	*	*
CONSTANT	2.00		

* Partial correlation coefficients too small to enter

First, the seriousness of the offense is still important but now the effects of the criminality of the defendant and the complexity of the case emerge as important. This pattern is supported also by the analysis of the decision to incarcerate which indicated that the imposition of the harshest sentence is made only when a serious crime is committed by a repeat offender and the evidence of guilt overwhelming (Jacoby et al, 1982:43).

The R-square was .533 adjusted for degrees of freedom (6, 23) to .33 with an overall F for the equation of 3.55.

VI. Conclusion

In conclusion, it appears from this testing that we may be able to place into measurement that evaluative process performed by prosecutors which determines whether case dispositions are acceptable. The results presented here at least preliminarily confirm that bounds are set about cases which are based on the severity of the sentence imposed. They also suggest that it may be possible to statistically forecast the boundaries based on the characteristics of the case, the evidence and the criminal history of the defendant. Of interest is the hint that perhaps more than one model may be necessary to describe the boundaries since the factors influencing the minimum level may differ from the maximum.

The limitations to this research are quite clear at this time and more testing of more cases assumes a priority position. Until results from other jurisdictions are available, many questions remain unanswered most importantly, the effect of sentencing policies of the court on the boundaries; the evaluation processes used by defense counsel; and the interaction between defense and prosecution as they each evaluate similar cases from their own perspectives. Until then, the results presented here are important more because they give justification to further testing than because they answer many research questions.

NOTES

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5. Turner, Stanley H., and Edward C. Ratledge, "Toward a Composite Index of
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