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Academically Speaking...
Criminal Justice Research by Florida's Doctoral Candidates
1991

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FORWARD

When the Florida Legislature created the Florida Criminal Justice Executive Institute in 1990, it also encouraged on-going cooperation between the Institute and Florida's community colleges and universities. Our relationship is still in its formative stage, and we are working to define the most appropriate role the State University System can and will play at FCJEI. *Academically Speaking*...is the first in what we hope will be a long line of cooperative ventures between the State University System and the Florida Criminal Justice Executive Institute.

Academically Speaking...is an important document for several reasons. It is a clear demonstration of our return on investment in higher education in Florida. It offers recent doctoral candidates a unique opportunity to publish, because the results of their hard work will be read by such a broad audience. Publication is an essential part of their professional development. Through this compendium, we hope you will understand the contributions they already have made to criminal justice in Florida, and the contributions they will make to criminal justice here and elsewhere in the future.

One of the most valuable things *Academically Speaking*... will do is to highlight the opportunity we have to advance one another's point of view. Each of us considers our work important. Those of you in law enforcement, corrections, prosecution and other areas make necessary and important contributions to the criminal justice system. Your peers recognize the value of your work. Those of us in academic institutions place great value and emphasis on research and evaluation. Our work provides data and information which other academics indicate is meaningful, but which also has great value for practitioners. Too often each of us fails to understand the other's contribution -- we do not recognize the degree to which research and practice overlap, or how much one supports and directs the other. Fortunately, in Florida we have a unique opportunity to cultivate this overlap through the Florida Criminal Justice Executive Institute.

FCJEI was created to fill Florida's need for an innovative, multifaceted approach to the professional development of criminal justice executives. FCJEI carries out its mission through an integrated program of education, training and research. While the staff of FCJEI might carry out this mission alone, they have elected to take advantage of the knowledge and skills available at Florida's colleges and universities.

This relationship is not new, nor is it unique. Florida's community colleges historically have participated in criminal justice training and career development as the State's regional training centers. Several of them are actively involved in the development of new or experimental programs in criminal justice education. Santa Fe Community College, for example, is working with FDLE and the Criminal Justice Standards and Training Commission on the Enhanced Criminal Justice Training System. The Allstate Center at St. Petersburg Junior College is an outstanding example of the working relationship between an educational institution and the

business and criminal justice communities.

Our State University System offers criminology, criminal justice and related programs which form the basis of many careers in Florida. Unlike the training centers, however, our universities may not come to mind when considering alternatives for "continuing" education in the criminal justice field. Our work with the Florida Criminal Justice Executive Institute has the potential to clarify that role. Already, SUS faculty and staff are serving as instructors at FCJEI. Publications like *Academically Speaking...* and other similar projects afford us the opportunity to become more involved in professional development. Increased interaction between practitioners and academics will help us to understand one another's views. Then, together, we can work to improve criminal justice in Florida.

Charles B. Reed
Chancellor, State University System of Florida

Academically Speaking...
Criminal Justice-Related Research by Florida's Doctoral Candidates
1991

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INTRODUCTION

Academically Speaking... 1991 is the first in an annual series planned by the Florida Criminal Justice Executive Institute (FCJEI). This volume contains nine articles on criminal justice-related topics, each based on the dissertation research of a doctoral candidate from Florida's State University System. These works were selected after a review of dissertation titles provided by state universities offering advanced degrees. Each candidate with a criminal justice-related title was contacted regarding possible participation in the compendium, and all positive replies were accepted for publication.

The final product spans two universities, six disciplines and a wide range of topics. Here, in one place, is current research on homicide, drugs, and officer selection and performance; on juvenile and adult offenders; and on victims. Each article also includes a short biographical statement provided by the author. They are as varied in their careers as they are in their contributions.

For example, the news media has offered extensive coverage regarding new limitations the United State Supreme Court has placed on habeas corpus petitions, particularly since several offenders have been scheduled for execution in recent months. A more critical issue for law enforcement may be whether executions have any impact on homicide rates, something not discussed in the news. Carol Bullock provides just such an examination here.

Since 1987 the United States has spent billions of dollars in its war against drugs. David Sollars and Myrna Cintron discuss two unusual aspects of the drug problem: the geographic spillovers resulting from drug enforcement, and the cycle of "crisis" we have experienced when combatting drugs.

Tracy Griffith adds an article of interest to anyone reviewing pre-employment psychological screening information. "Correlates of Police and Correctional Officer Performance" describes the testing instruments often employed, as well as possible strengths and weaknesses. His paper is followed by Diane Waryold's evaluation of the role of campus police/law enforcement as perceived by university law enforcement officers.

The success of probation, counseling or other rehabilitation programs is a function of a number of factors. Three articles, by Kay Morgan, Cynthia Swenson and Shirley Spooner, discuss these factors and their outcomes. Clearly, what works and what doesn't are essential questions if we expect to be successful in our work.

Academically Speaking... closes with an historical review of the creation of the Florida Network of Victim Witness Services, written by Susan Sayles. Florida is a model for other states when it comes to the rights of victims. Becoming a model, however, was not as easy as one might expect.

It is our hope that *Academically Speaking...* will demonstrate the value that university research has for the broader criminal justice community. FCJEI was created to provide an integrated program of training, education and research. One of our

goals, especially given our statutory affiliation with the State University System, is to integrate the academic and the professional community through a broad range of publications. This compendium serves as one of the vehicles to this necessary integration.

James D. Sewell, Ph.D.
Director
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The Effect of Executions on Homicides[1]
Florida, 1979 - 1987

Carol A. Bullock, Ph.D.

Overview

While some death penalty-deterrence studies have reported varying evidence of an inverse relationship between the death penalty and homicides, suggesting deterrence, (Ehrlich, 1975, 1977; Yunker, 1976, 1982; McFarland, 1978; Cloninger, 1979; Phillips, 1980; Stack, 1987), most have reported little or no evidence of deterrence (Schuessler, 1952; Sellin, 1955, 1967a, 1967b; Savitz, 1958; Reckless, 1969; Bowers and Salem, 1972; Bowers, 1984; King, 1978; McFarland, 1978; Peterson and Bailey, 1988; Bailey and Peterson, 1989). Many studies have indicated a positive relationship, suggestive of counterdeterrence (Dann, 1935; Graves, 1956; Schuessler, 1952; Savitz, 1958; Sellin, 1967a, 1967b; Samuelson, 1969; Forst, 1977, 1983; Bailey, 1974, 1975; King, 1978; Phillips, 1980; Bowers and Pierce, 1980; Peterson and Bailey, 1988).

Both an interrupted time series design and an ARIMA analysis are used to investigate the effect of executions on homicides in the State of Florida for the years 1979-1987.[2] Daily homicide data for the state during that period are utilized, as well as a deterrability index dividing the murders in that data set into three categories: those most likely to decrease ("deterrable"), those most likely to increase ("brutalizable"), and those most likely to remain unchanged ("unaffected") by executions. A number of interrelated hypotheses are tested:

(1) There is no relationship between executions and the total homicide rate.

(2) There is a negative relationship between executions and the "deterrable" homicide rate.

(3) There is a positive relationship between executions and the "brutalizable" homicide rate.

(4) There is no relationship between executions and the "unaffected" homicide rate.

Included also is a publicity measure to test the hypothesis that, (5) There is a negative relationship between the amount of execution publicity and the total homicide rate.

This paper is from Dr. Bullock's dissertation, "The Effect of Florida's Post Furman Executions on Homicide Rates," Gordon Waldo, Major Professor. Carol Bullock has a bachelor's degree in business, and a master's degree in Slavic and East European Studies/Comparative Policy Studies. Her research at the master's level dealt with the criminal justice system of Yugoslavia. Current research interests include female crime and delinquency and victimology, as well as deterrence.

Variables

Executions. "Execution" in the study refers to the date of execution. Seventeen inmates were executed between 1979 and 1987, but not all are included in the study. In several instances one execution occurred within a very short time of another. That close proximity could contaminate the data in such a way that it would be difficult to determine whether changes in frequencies of murders are the result of the execution being studied, or a cumulative effect of more than one execution in the same time period. For that reason, this article includes analyses of only those executions with 14-day pre-execution and 14-day post-execution periods during which there were no other executions in the state.

Table 1 lists names of inmates executed during 1979-87, and the dates of their executions, along with notes of those excluded.

Deterrability Index. The "deterrability index" is based on the judgments of 144 undergraduate students in the School of Criminology and Criminal Justice at Florida State University.[3] To develop the index, each student was given a list of 51 items from four categories of information included on the SHRs [method used, relationship of offenders and victims, number of victims and offenders in a murder, circumstances, e.g., quarrel, robbery] and asked whether each of the 51 factors would be associated with a type of murder likely to (a) increase, (b) be unaffected, or (c) decrease as a result of state executions.[4]

Table 1
Inmates Executed in Florida, 1979 - 1987

1.	05-25-79	John Spenkelink	10.	11-08-84	Timothy Palmes
2.	11-30-83	Robert Sullivan	11.	01-30-85	James Raulerson
3.	01-26-84	Anthony Antone	12.	03-06-85	Johnny Paul Witt
4.	04-05-84	Arthur Goode	13.	05-29-85	Marvin Francois
5.	05-10-84	James Adams	14.	04-15-86	Daniel Thomas*
6.	06-20-84	Carl Shriner**	15.	04-22-86	David Funchess*
7.	07-13-84	David Washington**	16.	05-20-86	Ronald Straight
8.	09-07-84	Ernest Dobbert*	17.	08-28-87	Beauford White
9.	09-20-84	James Henry*			

* *These executions were excluded from the study because of other executions within a 14-day period before or after.*
** *These executions were excluded from the first interrupted time series analysis, but included (with a reduction in days examined) in the analysis looking at the effect of execution publicity on murder.*

A mean for each of the 51 items was calculated after assigning a value of 3 to each "increased" response; 2 to each "unaffected"; and 1 to each "decreased." A computer program analyzed each homicide in the data set and, where an element of the homicide matched one of the 51 items, the mean value for that item was assigned to the matching element of the homicide. Because the data set contained up to four circumstances, up to four methods, and up to five relationships for each homicide, a subindex value (the mean) for each of the categories (circumstance, relationship, method, victim:perpetrator ratio) was calculated. An index value (the mean of the subindex values) was thereby calculated for each homicide.[5]

Publicity. Publicity is a measure of newspaper space allotted in The Miami Herald (the state's most widely circulated newspaper) and The Tallahassee Democrat (the only daily newspaper in Florida's capital city) to day-after-execution stories for each execution. Story text, headlines, and photographs are included in the measurement, but only information directly related to the execution studied is measured. On the basis of these measurements, the executions are divided into four categories: high publicity, medium high publicity, medium low publicity, and low publicity.

Data Analyses

Interrupted Time Series. For each execution included in the study, both daily and cumulative frequencies are analyzed for consistency with the hypothesis tested as well as for any other pattern that might emerge. Analyses are conducted for total homicides, and then for each of the three categories into which the total homicides have been divided. Reported results of t-tests measuring the differences in pre- and post-execution homicides are the t-values for the 14-day period. While there is no reason to think the effect would be specific to the 14-day period, there is no theoretical reason to perform the test for any other particular time period -- nor did any pattern emerge in the analyses that would suggest the choice of an alternate time period.[6]

Autoregressive Integrated Moving Averages Analysis. In addition to an interrupted time series design, the data were subjected to an econometric analysis, the Autoregressive Integrated Moving Averages (ARIMA) design; such designs have not been widely used in criminological research. The ARIMA structure used in the study was identified on the basis of the entire data set (homicide data for the years 1976-1987), and the impact of executions then analyzed by entering their dates into the program.[7]

McDowall et al. (1988:14-15) have identified three "sources of noise" found in social science data, that could "obscure" a time series intervention component: (1) trends (systematic changes in the process, usually thought of as in an upward or a downward direction) and drifts (nonsystematic changes in the time series process -- could shift up and down, whereas

trends are usually considered to be changes in either an upward or a downward direction); (2) seasonality (changes in the time series process at regular intervals); and (3) random error (fluctuations in the data that are present even if trend and seasonality are "removed"). ARIMA time series models help to identify and reduce (or "whiten") the effects of all these obscuring factors so that the true impact of an intervention can be observed. It is also possible to determine from the ARIMA analysis whether there is any true significance in any impact of the intervention; this is not always discernible from simple time series analyses.

Findings

Interrupted Time Series. As indicated earlier, there are eleven executions in the initial analysis of murders for a period of 14 days before and 14 days after executions. Table 2 shows the frequencies of homicides for 14 days prior to and following all executions in the analysis, then for each of the three subfiles. The day number refers to the number of days' distance from the event. For example, Day No. 1 in the Before column refers to the day immediately preceding execution; in the After column, the day immediately following.

Daily frequencies in the total section show peak daily homicide frequencies on days 10-12 prior to execution. At no time in the post execution period did the daily frequencies reach these numbers. The lowest daily frequency is on day 13 in the post-execution period. While this change appears to be in the direction of deterrence, it should be noted that *cumulative* frequencies for the post-execution period, with the exceptions of those reported on days 1, 13, and 14, exceed those for the same periods prior to executions. This would suggest a brutalization effect. At the end of the 14-day period, however, there were two fewer homicides following executions than in the 14-day period prior to executions. Overall, there is no effect; the two-tail probability of such a finding is 0.937.

Frequencies of brutalizable homicides indicated that the executions had no effect on the number of homicides to follow. The probability of 0.783 is not statistically significant.

For deterrable homicides, although daily frequencies of post-execution homicides level off at one point and then drop to zero at the end of the 14 days, the cumulative frequencies show that at no point in the 14-day period is there a decline. While there is essentially no effect, the direction is suggestive of brutalization, not deterrence. Again, the finding is not statistically significant, with a probability of 0.520.

The pattern of unaffected homicides shows a slight deterrent effect at day 1, and consecutively at days 3-8. Overall, however, there is no effect. While there were four fewer homicides in the 14 days following executions than during the 14 days before executions, the difference is not statistically significant, with a probability of 0.872.

Table 2

Effects of Executions on Homicides

Frequencies for a 14-Day Period Prior to and Following Executions of Spenkelink, Sullivan, Antone, Francois, White, Goode, Adams, Palmes, Raulerson, Witt, Straight

Day No.	Total[a]				Brutalizable[b]				Deterrable[c]				Unaffected[d]			
	Before		After		Before		After		Before		After		Before		After	
	f	cf	f	cf	f	cf	f	cf	f	cf	f	cf	f	cf	f	cf
1	25	25	23	3	4	4	2	2	4	4	7	7	15	15	14	14
2	20	45	31	54	2	6	5	7	3	7	5	12	17	32	21	35
3	28	73	27	81	2	8	4	11	4	11	3	15	26	58	20	55
4	30	103	30	111	3	11	1	12	5	16	6	21	25	83	23	78
5	27	130	26	137	5	16	8	20	4	20	3	24	30	113	15	93
6	25	155	27	164	3	19	3	23	7	27	7	31	11	124	17	110
7	23	178	24	188	5	24	3	26	2	29	3	34	17	141	18	128
8	25	203	29	217	3	27	5	31	5	34	3	37	16	157	21	149
9	21	224	32	249	7	34	2	33	3	37	3	40	15	172	27	176
10	35	259	31	280	5	39	8	41	0	37	3	43	18	190	20	196
11	34	293	25	305	4	43	2	43	5	42	4	47	22	212	19	215
12	36	329	30	335	8	51	6	49	2	44	5	52	22	234	19	234
13	25	354	16	351	5	56	2	51	3	47	3	55	15	249	11	245
14	22	376	23	374	4	60	6	57	3	50	0	55	17	266	17	262

[a] *21 murders were committed on the days these inmates were executed.*
[b] *3 "Brutalizable" murders were committed on the days these inmates were executed.*
[c] *5 "Deterrable" murders were committed on the days these inmates were executed.*
[d] *13 "Unaffected" murders were committed on the days these inmates were executed.*

Table 3

Effects of Execution Publicity on Homicides

Frequencies for a 14-Day Period Prior to and Following Execution Stories, According to Amount of Publicity

	High[a]				Medium High[be]				Medium Low[cf]				Low[d]			
	Before		After		Before		After		Before		After		Before		After	
Day No.	f	cf	f	cf	f	cf	f	cf	f	cf	f	cf	f	cf	f	cf
1	3	3	4	4	7	7	9	9	5	5	11	11	7	7	12	12
2	3	6	5	9	4	11	8	17	7	12	8	19	12	29	10	22
3	4	10	1	10	6	17	6	23	2	14	8	27	13	32	20	42
4	1	11	1	11	8	25	7	30	5	19	9	36	23	55	15	57
5	6	17	2	13	8	33	6	36	8	27	10	46	19	74	14	71
6	6	23	4	17	9	42	6	42	15	42	5	51	18	92	13	84
7	3	26	4	21	4	46	11	53	5	47	5	56	14	106	15	99
8	2	28	5	26	8	54	10	63	5	52	8	64	11	117	12	111
9	5	33	4	30	5	59	13	76	6	58	4	68	13	130	17	128
10	2	35	3	33	12	71	12	88	10	68	3	71	8	138	11	139
11	4	39	5	38									16	154	11	150
12	4	43	3	41									17	171	7	157
13	5	48	6	47									16	187	13	170
14	2	50	5	52									14	201	11	181

[a] *Includes Spenkelink and Sullivan; 3 murders were committed on the days these stories were published.*

[b] *Includes Antone, Shriner, Adams; 6 murders were committed on the days these stories were published.*

[c] *Includes Goode, Raulerson, Washington; 7 murders were committed on the days these stories were published.*

[d] *Includes Palmes, White, Francois, Straight, and Witt; 10 murders were committed on the days these stories were publishea.*

[e] *Shriner was added to the analysis to include more executions with Medium High publicity; the time period was necessarily reduced to ten days to avoid contamination effect of other executions within the period of analysis.*

[f] *See note (e) regarding the shorter period of analysis resulting from the addition of Washington's execution.*

Table 3 gives the same information for the publicity analysis.[8] Organization of the table is the same as that for Table 2. Only two of the executions (Spenkelink and Sullivan) were in the "High Publicity" category. If Hypothesis 5 is correct, there should be a statistically significant decrease in the murders following executions in this analysis. The daily and cumulative frequencies show similar patterns. Cumulative frequencies at days 5 through 13 decrease following executions; the cumulative frequencies at days 2 and 3 are equal; and at days 1, 2, and 14 the after-execution frequencies are greater than those of the same days prior to execution. Although the change is somewhat consistent with the hypothesis, there is a changing pattern within, and the significance of the overall change at the end of the period is 0.889.

If findings were consistent with the hypothesis, the second greatest amount of deterrence in the publicity analysis would be following executions with Medium High Publicity. However, all the cumulative frequencies in that table move in the direction of brutalization with the exception of day 6, when the cumulative frequencies are equal. With a probability of 0.835, the results are not statistically significant.

Cumulative frequencies of homicides following executions with Medium Low Publicity were greater on each of the ten days following executions than was the case for the ten days immediately prior to executions. The results are not statistically significant (probability = 0.152).

One would expect less impact from Low Publicity executions than from those in the other categories; but the frequencies show a *greater* reduction at the end of the 14-day period than did any of the other publicity categories. There were increases in the cumulative frequencies only at days 1, 3, and 4 (a movement in the direction of brutalization), while the movement was in the direction of deterrence for the remainder of the period. Again, the probability (.326) shows the finding to be not statistically significant.

ARIMA. An ARIMA analysis was applied to each of the data sets by modeling the entire series, then adding the interventions (as dummy variables) to that overall structure. Interventions were first added for all the executions, to determine the overall effect of the seventeen, then for each execution. The same pattern of analysis was used for each of the "indexed" data files. Results of these analyses are reported in Table 4, where θ is the trend parameter and ω is a measure of the intervention effect. For example, a ω value of -0.876 (if it is statistically significant and has a small standard error) indicates that for that particular intervention the level of the series drops by 0.876 homicides. The ARIMA analysis for the total homicide file shows some of the ω estimates to be positive and some to be negative; none are statistically significant. The tables indicate that each of the ω values is a point estimate. Listed below those estimates and t-values in the tables is the standard error. In some of the ω

Table 4
ARIMA(0,1,1) Analysis of Effects of Executions on Homicides (d.f. = 623 for each)

Execution	Total		Brutalizable		Deterrable		Unaffected	
	θ (t-value) [st.error]	$\omega^{(a)}$ (t-value) [st.error]	θ (t-value) [st.error]	$\omega^{(a)}$ (t-value) [st.error]	θ (t-value) [st.error]	$\omega^{(a)}$ (t-value) [st.error]	θ (t-value) [st.error]	$\omega^{(a)}$ (t-value) [st. error]
All	.9232 (63.76) [.0145]	-2.427 (-1.72) [1.4151]	.9293 (67.22) [.0138]	-1.204 (-1.38) [.8757]	.9699 (120.70) [.0080]	-.8311 (-1.28) [.6513]	.9370 (72.04) [.0130]	-.5610 (-.69) [.8098]
Spenkelink	.9227 (63.48) [.0145]	2.046 (.37) [5.6050]	.9285 (66.71) [.0139]	4.123 (1.69) [2.4458]	.9701 (122.60) [.0079]	-1.945 (-.75) [2.5921]	.9368 (71.94) [.0130]	.2945 (.09) [3.2012]
Sullivan	.9236 (63.96) [.0144]	-7.686 (-1.37) [5.5946]	.9294 (67.30) [.0138]	1.193 (.48) [2.4640]	.9878 (410.48) [.0024]	-1.245 (-.48) [2.5832]	.9371 (72.11) [.0130]	-3.621 (-1.13) [3.1994]
Antone	.9232 (63.66) [.0145]	-4.152 (-.74) [5.6062]	.9294 (67.22) [.0138]	1.474 (.60) [2.4749]	.9699 (433.98) [.0023]	2.786 (1.08) [2.5810]	.9367 (71.89) [.0130]	-4.811 (-1.50) [3.1967]
Goode	.9231 (63.71) [.0145]	-.5207 (-.09) [5.6034]	.9293 (67.23) [.0138]	5.337 (1.54) [3.4598]	.9698 (120.62) [.0080]	-5.273 (-2.04)* [2.5842]	.9368 (71.98) [.0130]	-.7188 (-.22) [3.2010]
Adams	.9231 (63.73) [.0145]	.2118 (.04) [5.6028]	.9295 (67.30) [67.28]	.9882 (.29) [.01]	.9699 (121.27) [.0080]	1.830 (.71) [2.5919]	.9369 (72.00) [.0130]	-2.773 (-.87) [3.1993]
Shriner	.9237 (64.18) [.0144]	-.9073 (-.16) [5.6032]	.9293 (67.19) [.0138]	-2.164 (-.62) [3.4661]	.9699 (121.29) [.0080]	1.840 (.71) [2.5920]	.9368 (71.97) [.0130]	-.7611 (-.24) [3.2016]
Washington	.9231 (63.68) [.0145]	-8.151 (-1.46) [5.5935]	.9291 (67.07) [.0139]	-5.279 (-1.53) [3.4598]	.9878 (409.82) [.0024]	-2.225 (-.86) [2.5819]	.9584 (95.79) [.0100]	-.8547 (-.27) [3.1955]
Dobbert	.9231 (63.72) [.0145]	-1.251 (-.22) [5.6043]	.9294 (67.28) [.0138]	-.1742 (-.05) [3.4662]	.9878 (412.79) [.0024]	-.2153 (-.08) [2.5833]	.9368 (71.98) [.0130]	-.8528 (-.27) [3.2013]

Table 4, con't.

Execution	Total		Brutalizable		Deterrable		Unaffected	
	θ (t-value) [st.error]	$\omega^{(a)}$ (t-value) [st.error]	θ (t-value) [st.error]	$\omega^{(a)}$ (t-value) [st.error]	θ (t-value) [st.error]	$\omega^{(a)}$ (t-value) [st.error]	θ (t-value) [st.error]	$\omega^{(a)}$ (t-value) [st. error]
Henry	.9230	-5.639	.9294	-1.316	.9700	-.2377	.9368	-3.986
	(63.62)	(-1.01)	(67.26)	(-.30)	(121.50)	(-.09)	(71.94)	(-1.25)
	[.0145]	[5.6008]	[.0138]	[3.4670]	[.0080]	[2.5936]	[.0130]	[3.1973]
Palmes	.9226	-3.682	.9293	-.8010	.9698	-3.286	.9369	.7870
	(63.42)	(-.66)	(67.23)	(-.23)	(120.29)	(-1.27)	(72.01)	(.25)
	[.0145]	[5.5995]	[.0138]	[3.4657]	[.0081]	[2.5902]	[.0130]	[3.2017]
Raulerson	.9234	7.949	.9297	3.075	.9700	-1.444	.9367	4.9520
	(63.86)	(1.42)	(67.47)	(.89)	(121.85)	(-.06)	(71.91)	(1.55)
	[.0145]	[5.5961]	[.0138]	[3.4648]	[.0080]	[2.5934]	[.0130]	[3.1955]
Witt	.9231	1.116	.9295	1.207	.9700	-.1118	.9368	-.1606
	(63.62)	(.20)	(67.23)	(.35)	(121.85)	(-.04)	(71.94)	(-.05)
	[.0145]	[5.6105]	[.0138]	[3.4707]	[.0080]	[2.5934]	[.0130]	[3.2022]
Francois	.9235	2.626	.9294	-1.634	.9699	.9604	.9368	2.887
	(64.10)	(.47)	(67.29)	(-.47)	(121.47)	(.37)	(71.98)	(.90)
	[.0144]	[5.6024]	[.0138]	[3.4666]	[.0080]	[2.5927]	[.0130]	[3.1991]
Thomas	.9231	-.4383	2.9294	-.0038	.9699	-2.231	.9368	1.837
	(63.74)	(-.08)	(67.28)	(.01)	(121.31)	(-.86)	(71.91)	(.57)
	[.0145]	[5.6023]	[.0138]	[3.4663]	[.0080]	[2.5918]	[.0130]	[3.2015]
Funchess	.9229	-8.812	.9293	-6.161	.9700	-.2067	.9367	-2.330
	(63.59)	(-1.58)	(67.23)	(-1.78)	(121.66)	(-.08)	(71.89)	(-.73)
	[.0145]	[5.5911]	[.0138]	[3.4571]	[.0080]	[2.5936]	[.0130]	[3.2006]
Straight	.9227	-6.169	.9291	-6.258	.9699	-1.246	.9368	.5784
	(63.48)	(-1.10)	(67.09)	(-1.81)	(121.74)	(-.48)	(71.99)	(.18)
	[.0145]	[5.5978]	[.0138]	[3.4589]	[.0080]	[2.5927]	[.0130]	[3.2017]
White	.9238	-4.434	.9294	1.474	.9699	-2.219	.9367	.6985
	(64.25)	(-.79)	(67.22)	(.60)	(406.52)	(-.86)	(.7190)	(.22)
	[.0144]	[5.6077]	[.0138]	[3.4598]	[.0024]	[2.5870]	[.0130]	[3.2083]

(a) *The intervention coefficients are point estimates.*

* $p < .05$

estimates shown in these four tables, the standard error is so large that it is possible the sign of the ω estimate is actually the opposite of that shown in the table, owing to error.

The brutalizable file again resulted in no statistically significant ω estimates and in very large standard errors.

There is a statistically significant ω estimate in the deterrable file. The standard error is very large, but so is the ω estimate. It is unclear why this occurred for only one of the executions in the file; it is the only statistically significant ω in any of the files. The implication is that there is an intervention effect at the point of of Goode's execution that drops the level of the series by 5.273 homicides. While this possibility is not discounted, there is also a possibility that this is a chance occurrence.

There are no statistically significant ω's in the unaffected file.

Conclusions

The findings produced mixed results in that they provide support for some of the hypotheses being tested, but fail to support some of the other hypotheses and the main thesis of the study. The main thesis consisted of five interrelated research hypotheses. The first research hypothesis was that executions would have neither a brutalization effect nor a deterrence effect on the total homicide rate. Hypotheses 2-4 were that homicides in the subfiles (2) Deterrable, would decrease; (3) Brutalizable, would increase; and (4) Unaffected, would neither increase nor decrease following executions. The fifth hypothesis was that there would be a negative relationship between amount of publicity and total homicides.

Hypothesis 1 was not disproved with the interrupted time series nor the ARIMA analysis. Once the effects of trends, autoregression, and moving averages were "removed" from the data with the ARIMA model, the impact of executions was negligible, as evidenced by the ω estimates. The interrupted time series showed an erratic pattern. While there were clearly peaks and valleys throughout, there appeared to be no general trend in the homicides immediately preceding and following executions for this data set. Hypothesis 1 was accepted since it was supported by the analysis.

A test of Hypothesis 2 revealed that the pattern and frequencies of deterrable homicides increased following executions, although not significantly so. Change was actually in the direction of brutalization rather than deterrence, but the amount was not statistically significant. This hypothesis cannot be accepted. ARIMA analysis resulted in one statistically significant ω estimate, at the intervention of Goode's execution. It is not clear what this large estimate means. All of the ω estimates for the Goode execution are quite large. This intervention effect was also larger than any of the other ω estimates in the deterrable file, and the large standard error arouses suspicion about the point estimate. Hypothesis 2 cannot be accepted, but it must be rejected with

qualification because of the ω estimate at the intervention of the Goode execution.

Hypothesis 3 was not supported by the interrupted time series analyses. Rather than an effect of brutalization resulting from executions, the pattern seems to suggest a deterrent effect. This effect is most pronounced at days 5 and 7, but several spikes in the days that follow diminish the magnitude of the decrease. Not only is the decrease not significant, but, importantly, the change in the number of homicides is in the wrong direction to support the hypothesis. This would appear to suggest more of a deterrent effect with this "brutalizable" data set than for the "deterrable" data set. Hypothesis 3 is rejected. The evidence presented appears to support the deterrence hypothesis better than it does the brutalization hypothesis.

Hypothesis 4 is accepted; homicide frequencies show an erratic pattern,and he ARIMA analysis shows no effect in the Unaffected file.

Frequencies of various levels of execution publicity, used to test Hypothesis 5, showed that at the end of the 14 day period of High, Medium High, and Medium Low, there is indication of a brutalization effect; and of Medium High, an effect suggestive of brutalization. rather than deterrence. The only suggestion of a deterrent effect is for Low Publicity. Hypothesis 5 is rejected.

In general, this study confirms the findings of the overwhelming majority of other deterrence research: executions have no effect on homicides. What the study does reveal about the *pattern* of homicides following executions is that it is an erratic and fluctuating pattern that could NOT be detected if only weekly (7-day) or other periodic frequencies are reported, as is the case in most death penalty-deterrence studies.

Endnotes

1. The words "homicide" and "murder" are used synonymously in this report.

2. Homicide data for 1976-1987 were collected from Supplemental Homicide Reports (SHRs) filed with Florida Department of Law Enforcement (FDLE) by each law enforcement agency in the state. The analysis begins with 1979, the year of the first post-Furman execution in Florida; SHRs were available for consecutive years only through 1987. (FDLE estimates that, because of changes in the reporting system and changeover to a new computer system in 1988, some 30% of the total crime data for the state for that year were not reported to the Department. It should be noted that although 1987 is the last year included in the study, Florida has continued to execute inmates since that date.)

3. Although potential murderers, not murders, are deterred, brutalized, or unaffected, it is felt that the index is a reasonable proxy measure of those effects.

4. Modal responses to the 51 judges show only nine (18%) of the 51 items associated with brutalization; nineteen (37%) with deterrence. Of the remaining 23 items, two tie (brutalization/no effect, no effect/deterrence) and 21 (41%) are judged to be unaffected by executions.

5. Means, rather than totals, were used throughout to avoid assigning low index values to those cases for which less

information or less relevant information is available.

6. DBaseIII was used for data entry; SPSS was used for t-tests, recoding, frequencies, and deterrability indexing.

7. Both BMDP and RATS statistical packages were used in the ARIMA analysis.

8. Publicity analysis includes executions of 13 of the 17 inmates. While those additions increased the number of executions in the analysis, they necessitated a reduction in the numbers of days analyzed, to avoid contamination of the data by other executions in the same period.

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Geographic Spillover Effects of Drug Law Enforcement: Evidence and Implications for Local Government in Florida

David L. Sollars, Ph.D.

1. Introduction

The economics of crime literature has explored many theoretical and empirical issues involved in modeling the behavior of criminals, victims, law enforcement agencies, and the response of the public. One area that has received less emphasis from economists is the illicit drug market and how public policy influences this market.[1] During the 1980s, a large share of law enforcement resources was focused on controlling the illicit drug trade. This paper examines one of the dimensions of the crackdown in the State of Florida, namely, the interjurisdictional behavior of drug market participants and property crime perpetrators. Specifically, the focus is on how enforcement efforts directed at the illicit drug market affect the level and geographic distribution of property crime.

How do drug and property crime arrests in community *i* affect property crime in community *j*? Questions of this type and models which purport to explain this phenomena are found in the crime spillover literature. The central problem to be examined here is the effect of law enforcement activity aimed at the illicit drug market and how this emphasis partially determines the level of property crime. In particular, we seek to determine whether the level of police resources in one jurisdiction and that jurisdiction's emphasis on the illicit drug market, affect the level property crime which occurs in neighboring jurisdictions. If substantial spillover effects do exist, then greater cooperation among neighboring law enforcement agencies in developing enforcement strategies is required.

Section 2 is a review of the relevant economics of crime literature, with a particular focus on studies that deal with the crime spillover phenomena. Theoretical considerations and presentation of the general model

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are presented in Section 3. Section 4 includes a discussion of the data to be used in estimating the empirical relationships. Section 5 contains the statistical results. The concluding Section (6) summarizes the major findings of this study and explores the implications of the findings.

2. Review of the Literature

The economics of crime literature is an application of microeconomic theory to the problem of crime. The application of modern economic theory to criminal behavior is usually credited to Becker (1968) and Ehrlich (1973), and pioneering work was also done by Sjoquist (1973), Carr-Hill and Stern (1973), and Blocke and Heineke (1975). The literature has grown substantially, evidenced by the numerous literature reviews such as Cloninger (1975), Chaiken (1976), Greenberg (1977), Blumstein, et al (1978), Palmer (1977), Brier and Feinberg (1980), and Cameron (1988).

Empirical testing of the economic model of crime has also produced voluminous literature. In what has become the standard approach, a multi-equation system is specified (Taylor 1978, Cameron 1988). The first equation specified is an offenses function, or a crime supply equation. Other equations include a probability of arrests and/or conviction function, a punishment severity function, and a police resources function. Testing has used many types of data and different levels of aggregation. For example, Ehrlich (1973) uses cross-section state level data, and Carr-Hill and Stern (1973) use similar data from uses municipality data for 53 isolated cities. Phillips and Votey (1975) use California county level data. Thaler (1977), Mehay (1977), Mathieson and Passel (1976) use a single metropolitan area with many precincts or divisions. Buck et al. (1983) utilize a data set of 230 communities in New Jersey. Witte (1980), Schmidt and Witte (1985), use individual data, and Trumbull (1988) uses both county level and individual data.

Geographic spillovers occur when the criminal moves from location to location in response to increased crime deterrence activity and/or changes in the potential payoff structure in one geographic area relative to another (Reppetto 1976, Hakim and Rengert 1981). The nature of the spillover problem involves a production externality across jurisdictions where different levels of law enforcement inputs (and therefore outputs) result in an "exporting" of crime to other jurisdictions. Spillovers are important in models which seek to measure deterrence effects since a reduction in the crime rate is the goal of law enforcement. If the criminal activity is simply exported to other communities, then overall social welfare is not enhanced.

A stylized model of the spillover process might be represented as follows: for simplicity, assume that only one type of crime exists, for example, burglary, and that there are two jurisdictions i and j. Also assume that criminal activity can be deterred by law enforcement activity and that

criminals are free to move from *i* to *j*. Initially, burglars do not cross jurisdictional boundaries. To begin the spillover process, let the deterrent activity increase (as a result of the demand and supply interaction in the market for crime prevention) in one jurisdiction relative to the others in order to create a state of disequilibrium. We would then expect to see two phenomena. First, as the probability of being caught for burglary increases in area *i*, we would expect the amount of burglary offenses to decline as potential burglars view the expected net payoff from burglary to be less than that involved in alternative activities. Secondly, facing a lower relative probability of being caught in jurisdiction *j*, we would expect some criminals from *i* to move to *j* in order to commit burglaries. Thus, the amount of burglary offenses would rise in *j*, as burglars from *i* enter *j*. The increase in burglaries in *j* might be termed the "gross spillover effect" of an increase in law enforcement activities in *i* (Hakim et al. 1979).

However, if jurisdiction *j* responded to the increase in burglaries within its jurisdiction by increasing deterrence activities, then the same results that occurred in jurisdiction *i* would also occur in *j*. Some burglars would find the probability of being arrested for burglary increasing and would thus opt out of the burglary profession, while others might tend to redirect their efforts to jurisdiction *i* since the probability of being arrested in *i* relative to *j* has now fallen. Eventually, a new equilibrium in terms of police expenditures and the level of crime in the two jurisdictions would be achieved. Measurement of the crimes in *j* committed by those who enter from jurisdiction *i* minus those criminals who either dropped out of the market or moved to jurisdiction *i* would thus give the "net spillover" effect of an increase in jurisdiction *i*'s police activity. Thus from a measurement point of view, the net spillover effect would give the true cost imposed on *j* as the result of policy changes in *i*.

Directly measuring spillover effects is difficult given the paucity of location specific data. Three types of methodologies have been employed in an attempt to indirectly measure the geographic spillover phenomena: 1) Experimental (Press 1972, Chaiken et al. 1974, Knapp et al. 1980); 2) Partial equilibrium (Mehay 1977, Fabrikant 1980); and 3) General equilibrium (Hakim, Ovadia, Sagi, and Weinblatt 1979, Mathieson and Passell 1976, Avio and Clark 1978, Kennett 1982; Mehay 1981, McPheters and Stronge 1981, Katzman 1981).

Given the wide variety of types of models used and the different data sets, it is somewhat remarkable that most of the studies in the geographic spillover literature come to the same conclusion: when spillovers are found to exist, they are small. In general, it is found that a majority of the crimes investigated (property and violent crime) occur in close proximity to the criminal's home residence, ranging from a few blocks to three miles (McIver 1981, 24). This might explain the small levels of measured spillover.[2] Nonetheless, the evidence is

sufficiently strong enough to suggest that an effort to fully specify a model of property crime determination should account for potential geographic spillovers between nearby jurisdictions.

3. Model Specification

Cameron's (1988) review of the crime literature suggests that most econometric models of property crime use a simultaneous systems approach in order to model criminal and law enforcement activity. According to Cameron, the basic structure is given by

(1) C = f{ CR, S ... }

(2) CR = g{ C, I ... }

(3) I = h{ C ... }

where:
C = property crime rate
CR = clearance rate (probability of arrest and/or conviction)
S = severity of punishment
I = police resources

This type of formulation is appropriate because of the interrelationships between the different components of the model. For example, law enforcement activity should reduce crime rates, but it is also expected that crime rates help to determine the level of law enforcement activity. The effectiveness of police will also, in part, be determined by the caseload they face (reported crimes) and the level of inputs. The level of inputs will in turn be influenced by the amount of crime and the fiscal ability of the community. In order to reduce any bias which would result from simply analyzing one sector of the model, a multi-equation a structural model is suggested.

The model used to evaluate the potential property crime spillover effects is specified as follows (expected signs are also included):

(4) OTP = f{ AOTP, ASPP, PVALUE, AVWAGES, UR, ABLKPCT, TPA1524, DENS, SWDIFR, DRDIFR, u }

where:
OTP = property crime rate
AOTP = arrest/offense ratio, $f_{AOTP} < 0$
ASPP = stolen property arrests rate, $f_{ASPP} < 0$
PVALUE = assessed property value, $f_{PVALUE} <> 0$
AVWAGES = average wage or salary, $f_{AVWAGES} < 0$
UR = unemployment rate, $f_{UR} > 0$
ABLKPCT = percent of population which is black, $f_{ABLKPCT} > 0$
TPA1524 = percent of population aged 15 to 24, $f_{TPA1524} > 0$
DENS = population per square mile land area, $f_{DENS} > 0$
DIFR = police resources differential ratio, $f_{DIFR} > 0$
DRDIFR = drug arrests differential ratio, $f_{DRDIFR} <> 0$
u = error term

(4) might be termed a crime supply equation. In modelling the crime supply function, we assume that individuals who engage in crime are rational economic agents faced with both legal and illegal income earning possibilities.[3] The purpose of the crime supply function is to determine those factors which affect the decisions of rational economic agents to commit

crimes (as opposed to other forms of economic activity). These factors can be divided into three categories: Potential direct costs and benefits from crime; opportunity costs; and other relevant socioeconomic or environmental characteristics.

The major disincentive for a potential criminal is the possibility of detection, arrest, and conviction, both in a psychic as well as in a pecuniary sense. Ideally, we would also want to include a severity of punishment variable such as probability of sentence if convicted or the length of prison term. These data, however, do not yet exist at the county or municipal level of aggregation (the data type used in this study). Moreover, given the sentencing guidelines in Florida, the variation in punishment may not be as large as it would otherwise. We can proxy for the subjective probability of arrest by the arrests/offenses ratio.[4] The expectation is that increases in the arrests/offenses ratio will deter property crime.

On the other hand, the potential return to criminals from committing property crimes is a function of many factors. Since stolen goods are generally sold to generate income, police efforts to reduce the size of the stolen goods or "fence" market will also discourage property crime. Secondly, the gains from property crime will also be determined by the type and value of potential stolen goods. Wealthier areas will have, holding everything else constant, a variety and abundance of high value goods (jewelry, electronics, etc.) relative to that found in poorer areas. For this reason, we would therefore expect that wealthier areas will attract more potential criminals.[5] On the other hand, wealthier areas will also tend to be populated by those with much higher opportunity costs for criminal behavior, thereby resulting in less criminal activity. Wealthy individuals will also probably spend more on protection from private sector markets for such goods as guards, alarms, etc., which also deter crime. The type of wealth effect which dominates is not clear.

The second category of factors which affect crime rates are opportunity cost variables. Since a property crime is committed to either have command over the good which is stolen or derive income from the sale of the good, this second category will include those factors which determine the possible returns from legal activity. The first of these is the return from legal employment. We would expect higher legal wage rates to have a negative influence on a potential criminal's decision to commit crimes. However, the ability to earn legal incomes will be determined by general labor market conditions. Areas with higher levels of unemployment will offer fewer legal income earning opportunities, suggesting that illegal activity may be more prevalent in those areas. Differences in reported legal income may also be a function of the racial makeup of the population. This is not meant to suggest the existence of an inherent predilection towards crime by any racial group; rather it is viewed as a result of the lack of economic opportunity (possibly due to discrimination) not picked up

by the other variables.

The third major category of factors reflect other general socioeconomic or environmental variables. The first of these is the age distribution within a given community. According to Wilson and Herrnstein (1985), "Criminal behavior depends as much or more on age than on any other demographic characteristics -- sex, social status, race, family configuration, etc. -- yet examined by criminologists." (Chapter 5, 126) Community size and population density may be an important determinant of the property crime rate (Hoch 1974). Densely populated urban areas are expected to have higher crime rates than rural areas. This may be due to the fact that densely populated areas offer larger net returns to criminal activity since traveling distance between targets is low, or because of the relative anonymity offered by an urban setting.

Measuring Spillovers. Measurement of the crimes in *j* committed by those who enter from jurisdiction *i*, minus those criminals who either dropped out of the market or moved to jurisdiction *j*, would thus give the "net spillover" effect of an increase in jurisdiction *i*'s police activity. Thus, from a measurement point of view, the net spillover effect would give the true cost of the externality imposed on *j* as the result of policy changes in *i*. Unfortunately, this can not be measured directly. Instead, we assume that differences in the level of police resources act, in essence, as relative prices to potential criminals. In order to capture this spillover effect, we include a police resource differential variable, DIFR, in the crime supply equation. DIFR is calculated as follows:[6]

$$(5)\quad DIFR = \frac{\Sigma_{j=1}^{n} (I_j/N_j)/n}{(I_i/N_i)}$$

where:
I = measure of police inputs
N = population
n = number of contiguous or "nearby" jurisdictions
i = home jurisdiction
j = other jurisdictions

The emphasis on drug arrests may also have an effect on the incidence of property crime across communities. Other studies have explored the possibility that drug arrests influence the level of property crime (Benson and Rasmussen 1991, Sollars et al. 1991, Benson et al. 1992). It may also be the case that this influence might extend into other jurisdictions. For example, suppose that as police crack down on drugs within one jurisdiction, both drug dealers and drug users turn toward surrounding areas as locations where they can either sell or purchase drugs and commit property crimes. Residents of *j* are not limited to committing crimes only in *j*. If they cross over to community *i*, then reported crime in *i* will increase.

On the other hand, a rise in drug arrests in *j* may result in drug suppliers in *j* moving to *i* to continue their trade. If drug supplies in community *i* increase, then drug prices in *i* will decrease, resulting in a reduction of the need on the part of

drug users to finance their drug consumption via property crime. Hence, the effects of a relative crackdown on drugs across communities *i* and *j* are ambiguous. Drug suppliers can be spilled into community *i* if police crackdown in *j* (which should reduce the level of property crime in *i*), but drug users in community *j*, now facing higher drug prices, may also move to community *i* to commit property crimes or in search of a more abundant supply of drugs. To measure the influence of the relative emphasis on the drug trade by police across jurisdictions, a variable intended to capture the relative drug emphasis effects, DRDIFR, is included in the crime supply function. DRDIF is calculated in the same fashion as DIFR with the number of drug arrests replacing police resources:

$$(6)\ DRDIFR = \frac{\Sigma_{j=1}^{n} (D_j/N_j)/n}{(D_i/N_i)}$$

"Nearby jurisdictions" in both (5) and (6) are those jurisdictions within a five mile radius of the home jurisdiction.[7] The other equations (arrests/offenses and police resources) specified are variants of (2) and (3). Given space limitations, these equations are not explored in detail. Further discussion of the empirical model, with respect to these equations and the empirical results, can be found in Sollars (1991).[8]

4. Data and Estimation

The data set consists of the political jurisdictions in the state of Florida for the years 1984 to 1987.[9] Of the 357 jurisdictions, there are 66 county sheriffs offices and 291 municipal police agencies.[10] We assume that the sheriff's jurisdiction is the area within the county not covered by a municipal police department. Due to missing data for some of the observations for some of the years, less than 350 observations are available.

The offense and arrest statistics are from the Uniform Crime Reports series collected by the Florida Department of Law Enforcement (FDLE, various years). There are three measures of the level of police resources. Sworn officers per capita, SWPP, is a measure of the labor component used by police agencies, and is dominant in terms of total budget allocation (approximately 75 percent). This data is provided by FDLE. Alternative measures of the level of law enforcement activity are municipal or county noncapital and total expenditures for law enforcement. This data is provided by the Comptroller, Bureau of Local Government Finance, Florida Department of Banking and Finance (various years). Given the lumpy nature of the capital expenditures, we focus only on noncapital expenditures.

Total municipal revenues, population, and assessed property value data are also provided by the Comptroller, Bureau of Local Government Finance (various years). Measures of other types of socioeconomic data, such as per capita income, age and racial distributions, unemployment, and average wages are only available at the county level for

the years 1984-1987. Since municipality data of this type is not available for the time period under consideration, all of these variables are calculated at the county level so that each of the communities within the county are assumed to have the county level characteristics. For variables such as UR and AVWAGES, this is not necessarily a problem as labor markets are geographically large and labor quite mobile within these markets. PCY, UR, and AVWAGES are provided by Bureau of Economic and Business Research, University of Florida (various years). The age distribution variables are provided by the Population Program, Bureau of Economic and Business Research (various years) based on their intracensus interpolations and other standard demography techniques. The black population percent variable ABLKPCT is also from the BEBR. Again, these are county-level variables.

Estimation of the empirical model is dependent upon the specification chosen. The three equation model suggests that simultaneous equation bias could occur. If simultaneity is not assumed, then the parameter estimates can be estimated by ordinary least squares (OLS). On the other hand, assumed simultaneity of the endogenous variables calls for the use of simultaneous equations techniques. When using a simultaneous equations estimation procedure, identification is logically prior to estimation (Hoenack and Weiler, 1980). In the three equation model discussed above, identification by the order condition is met--that is, the number of exogenous variables excluded from the ith equation must be at least as large as the number of included endogenous variables. Since only one endogenous variable is included on the right hand side of both the crime supply and arrest/offenses, this is obviously not a problem. Below, we report the regression results for the OLS and two-stage least squares (TSLS) estimations. The variables were converted to natural logarithms, so the estimated coefficients reported below are interpreted as elasticities.

5. Empirical Results

Table 1 reports the OLS results of the crime supply equation (4) where aggregate property crime (OTP) is the dependent variable and noncapital expenditures is used to calculate the differential variable (NCDIFR).[11] As hypothesized, AOTP has a negative coefficient and is statistically significant for each year. The coefficients on AOTP range from -0.178 in 1986 to -0.407 in 1985. The interpretation given this outcome is that potential criminals are indeed rational--higher probability of arrest leads to less property crime, ceteris paribus. PVALUE has a positive, significant coefficient (except for 1987), implying wealthier areas suffer from more property crime (or at least report it more) than do poorer areas, holding other factors constant. Areas which are more densely populated, and those with a larger black population also suffer from more property crime, holding everything else constant. The other labor market and

Table 1. Property Crime Determinants, Noncapital Expenditures as the Measure of Police Resources, OLS.

Regression No.	(01)	(02)	(03)	(04)
Year	1984	1985	1986	1987
CONSTANT . .	-0.439	2.691	4.314	3.900
	(0.17)	(1.84)	(1.77)	(1.52)
AOTP	-0.208	-0.407	-0.178	-0.307
	(3.97)	(6.22)	(2.41)	(4.70)
ASPP	0.048	0.002	0.051	0.056
	(1.61)	(0.05)	(1.56)	(1.75)
PVALUE	0.174	0.173	0.274	0.059
	(4.13)	(3.17)	(5.09)	(1.33)
AVWAGES . . .	0.444	0.208	-0.060	0.252
	(1.58)	(1.30)	(0.21)	(0.89)
UR	0.328	-0.017	0.061	0.063
	(3.31)	(0.17)	(0.59)	(0.56)
ABLKPCT	0.118	0.118	0.128	0.067
	(6.20)	(5.66)	(6.65)	(3.37)
TPA1524	0.040	-0.087	-0.101	-0.205
	(0.24)	(0.46)	(0.60)	(1.26)
DENS	0.224	0.221	0.233	0.189
	(11.09)	(10.72)	(10.80)	(8.92)
NCDIFR	0.224	0.166	0.119	0.106
	(3.92)	(2.56)	(2.25)	(1.54)
DRDIFR	0.093	0.158	0.135	0.196
	(2.85)	(4.65)	(3.84)	(5.13)
$\bar{R}^2$	0.618	0.610	0.600	0.525
F-statistic	34.011	34.252	32.493	26.712
N	205	214	214	234

t-statistics are in parentheses

Table 2. Property Crime Determinants, Sworn Officers as the Measure of Police Resources, OLS

Regression No.	(01)	(02)	(03)	(04)
Year	1984	1985	1986	1987
CONSTANT . .	-0.573	2.835	4.083	4.114
	(0.22)	(1.92)	(1.69)	(1.57)
AOTP	-0.205	-0.411	-0.162	-0.307
	(3.84)	(6.09)	(2.18)	(4.61)
ASPP	0.048	0.003	0.048	0.055
	(1.56)	(0.08)	(1.47)	(1.68)
PVALUE	0.199	0.201	0.295	0.077
	(4.86)	(3.75)	(5.78)	(1.74)
AVWAGES . . .	0.435	0.151	-0.052	0.208
	(1.52)	(0.95)	(0.19)	(0.74)
UR	0.302	-0.021	0.072	0.046
	(3.00)	(0.20)	(0.70)	(0.40)
ABLKPCT	0.126	0.126	0.137	0.073
	(6.52)	(5.96)	(7.15)	(3.64)
TPA1524	0.049	-0.058	-0.125	-0.193
	(0.29)	(0.31)	(0.75)	(1.19)
DENS	0.222	0.224	0.235	0.194
	(10.75)	(10.67)	(10.96)	(9.07)
SWDIFR	0.175	0.126	0.155	0.066
	(3.44)	(2.25)	(3.03)	(1.19)
DRDIFR	0.100	0.161	0.119	0.198
	(2.99)	(4.56)	(3.42)	(5.35)
$\bar{R}^2$	0.620	0.610	0.614	0.527
F-statistic	33.612	33.344	34.039	26.274
N	201	208	209	228

t-statistics are in parentheses

Table 3. Property Crime Determinants, Noncapital Expenditures as the Measure of Police Resources, TSLS.

Regression No.	(01)	(02)	(03)	(04)
Year	1984	1985	1986	1987
CONSTANT ..	4.767	2.682	4.084	3.337
	(1.29)	(2.09)	(1.57)	(1.21)
AOTP	-0.918	0.032	0.132	-0.224
	(4.18)	(0.17)	(0.62)	(0.98)
ASPP	0.049	0.006	0.049	0.051
	(1.16)	(0.19)	(1.40)	(1.49)
PVALUE	0.154	0.231	0.346	0.063
	(2.63)	(4.18)	(4.98)	(1.16)
AVWAGES ...	-0.248	0.250	-0.048	0.340
	(0.59)	(1.73)	(0.16)	(1.08)
UR	0.190	0.088	0.007	0.028
	(1.34)	(0.95)	(0.06)	(0.24)
ABLKPCT	0.142	0.110	0.129	0.068
	(5.23)	(5.79)	(6.39)	(3.33)
TPA1524	0.267	-0.264	-0.126	-0.248
	(1.09)	(1.46)	(0.72)	(1.35)
DENS	0.226	0.234	0.250	0.189
	(8.00)	(11.83)	(10.57)	(8.86)
NCDIFR	0.123	0.189	0.250	0.189
	(1.43)	(3.17)	(2.15)	(1.83)
DRDIFR	0.146	0.114	0.090	0.170
	(3.03)	(3.70)	(2.30)	(4.15)
$\bar{R}^2$	--	--	--	--
F-statistic	--	--	--	--
N	199	210	209	229

t-statistics are in parentheses

Table 4. Property Crime Determinants, Sworn Officers as the Measure of Police Resources, TSLS

Regression No.	(01)	(02)	(03)	(04)
Year	1984	1985	1986	1987
CONSTANT ..	4.214	2.576	2.893	4.354
	(1.24)	(1.73)	(1.03)	(1.57)
AOTP	-0.750	0.342	0.355	0.432
	(3.63)	(1.46)	(1.52)	(1.84)
ASPP	0.047	-0.005	0.047	0.058
	(1.24)	(0.15)	(1.27)	(1.71)
PVALUE	0.171	0.317	0.404	0.055
	(3.33)	(5.03)	(5.67)	(1.01)
AVWAGES ...	-0.170	0.230	0.067	0.176
	(0.44)	(1.39)	(0.21)	(0.56)
UR	0.197	0.102	-0.001	0.047
	(1.55)	(0.94)	(0.01)	(0.39)
ABLKPCT	0.142	0.127	0.144	0.081
	(5.89)	(5.80)	(6.65)	(3.84)
TPA1524	0.232	-0.329	-0.193	-0.161
	(1.06)	(1.59)	(1.04)	(0.88)
DENS	0.227	0.252	0.257	0.191
	(8.87)	(10.80)	(10.15)	(8.84)
SWDIFR	0.082	0.116	0.175	0.980
	(1.21)	(1.89)	(2.97)	(1.71)
DRDIFR	0.145	0.108	0.048	0.181
	(3.37)	(2.91)	(1.11)	(4.63)
$\bar{R}^2$	--	--	--	--
F-statistic	--	--	--	--
N	199	204	204	223

t-statistics are in parentheses

age variable coefficients (AVWAGES, UR, TPA1524) are generally not statistically significant.[12] ASPP, the stolen property market control variable, has a positive sign (not as anticipated) but low levels of statistical significance. The hypothesized sign was negative, the inference being that a crackdown on the fence market would reduce the returns to property crime thereby resulting in a lower crime rate. On the other hand, it may simply be the case that the positive correlation between OTP and ASPP reflects the fact that areas with higher levels of property crime give police more opportunities to make stolen property arrests.

The two spillover variables, NCDIFR and DRDIFR, have coefficients which are strongly positive. This is interpreted as a measure of the spillover of property crime resulting from the differential in police spending and drug arrests respectively across communities which are in close proximity to one another. In magnitude, the individual spillover effects are small (the elasticities are not large), a finding consistent with much of the literature. However, the combined coefficients are often as large as some of the other coefficients, such as AOTP. Moreover, the existence of the drug arrests spillover (police crackdowns on drugs in surrounding jurisdictions increases the property crime rate in the home jurisdiction) is important given the fact that the coefficient on DRDIFR increases over the four year period (0.098 in 1984 to 0.196 in 1987).

Replicating regressions 1-4 using sworn officers rather than noncapital expenditures as the measure of the police resources differential variable (SWDIFR) does not markedly change any of the outcomes of the coefficients in the crime supply equation (see Table 2). Once again, the AOTP coefficient is statistically significant and negative, and both spillover variables (SWDIFR and DRDIFR) have the expected positive coefficient (although the SWDIFR coefficient for 1987 is not statistically significant), indicating the presence of spillovers. As in the previous case, the coefficient on DRDIFR for 1987 is twice the size of the coefficient for 1984. In general, the explanatory power of the model is fairly good as evidenced by the adjusted (for degrees of freedom) R-squared and F statistic. The adjusted R-squared is approximately 0.60 over the four years.

In order to control for the possibility of simultaneity bias which might result, the system is estimated via a TSLS/recursive technique. This entails the following. First, the predicted values of the police resource equation are used in the arrest/offenses equations. Next, two-stage-least-squares (TSLS) regressions are run on (4) and the arrests/offenses equation with the fitted values of SWPP and NONCAP. Use of TSLS gives results which are biased but consistent, and purged of simultaneity bias.

The results for the TSLS equations are given in Tables 3 and 4. Most strikingly, the use of this estimation model renders the deterrence variable, AOTP, insignificant in more than one-half of

the years. The rest of the crime supply equation results are similar to those reported using the other estimation techniques. ASPP is not significant, and PVALUE's coefficient is positive and generally statistically significant. ABLKPCT and DENS have coefficients which are positive. The coefficients on the spillover variables are generally significant and positive. The TSLS results suggest, again, that spillovers may indeed a problem. The coefficients remain roughly the same size.

Of course, the estimation techniques used are determined by the actual specification of the model. Unfortunately, the "true" specification of the model is never known. In general, the much debated deterrence hypothesis is generally supported by the evidence (a result usually found in the economics of crime literature and much debated by other social scientists). Secondly, a good case can be made that geographic property crime spillovers do exist as a result of relative differences in the level of police resources and drug-law enforcement.

6. Implications and Conclusions

The hypothesis that geographic spillovers of property crime could result if there were location-based differentials in the level of police resources and drug arrests has evidence in the Florida data. Criminals appear to respond to differentials in police activity by moving to areas where police are less abundant or where there was less emphasis on making drug arrests. The data employed in this study to capture the possibility of the spillover effects were somewhat unique to the crime spillover literature. Rather than focus on a central city or metropolitan area, the spotlight was instead on a variety of types of communities located within a single state.[13] The results reported here suggest that spillovers do exist, and that these spillovers may be larger than some of the previous studies in this area suggest. More importantly, spillovers might occur over distances larger than a city precinct or metropolitan area.

Economic theory offers a number of solutions for spillover problems arising from private activity. For example, smokestack pollution creates an efficiency problem since the owners of the plant do not bear the full cost of the resources used in production (clean air is used up by the smoke). Hence, the firm produces more than the socially optimal amount. Neighbors adjacent to the factory bear the cost of the pollution. To increase efficiency, economic theory suggest partial solutions ranging from taxation to merger to payment of damages. The goal of these schemes is to force the spillover generator to bear the full costs of their activities, thereby bringing the optimal private decision making calculus in line with the maximization of social welfare.

An analogy to the smokestack problem can be found in the case of law enforcement activity. From a policy perspective, the evidence presented above suggests that an individual police agency does not exist

in a vacuum. The enforcement choice of one agency within one jurisdiction affects not only individuals in that jurisdiction but others in surrounding jurisdictions as well. While a "get-tough" policy within a given jurisdiction may achieve desired goals for the jurisdiction, surrounding jurisdictions must cope with the new influx of crime which is analogous to the smokestack pollution. What is desirable from the viewpoint of a single jurisdiction may not be desirable for the surrounding jurisdictions.

The spillover phenomena suggests that decisions concerning the allocation of police resources cannot be made independently; coordination of police activity across jurisdictions may be required if true crime deterrence is to take place. This is not to suggest that local law enforcement must be controlled by state and Federal officials, since this type of dominance creates a whole other range of problems. It is possible, however, for local governments and law enforcement agencies to share information and resources, coordinate policing strategies, and plan for future corrections facilities. How this coordination would work is beyond the scope of this study, but is an issue that must be considered by policy makers.

ENDNOTES

1. For a review of this literature, see Sollars (Chapter 2, 1991).

2. For example, of a police department increased the number of officers assigned to a shopping mall in order to increase protection for the mall, it may be the case that the criminals simply move down the street to the next mall. If both malls are in the same jurisdiction (or unit of observation), then spillovers would be measured.

3. This does not imply that all crime perpetrators are always the rational, cost/benefit calculator of economic theory. What it does imply is that criminal behavior can be influenced in a predictable way be changes in the incentive structure.

4. The arrests/offenses ratio is a proxy for the subjective probability of being arrested. In the crime literature, this variable has been called the probability of arrest as well as the clearance rate. It would seem, however, that these definitions imply a precision that is not necessarily justified. For example, AOTP can exceed unity, which violates the notion of probability that the variable is supposed to represent. With respect to the term "clearance ratio," this term has a precise definition in police terminology -- the number of cases closed by arrest, or by some other means.

5. Many previous studies use the value of reported stolen goods as a proxy. Note, however, that this statistic is, in part, determined by reporting behavior which may be a function of police activity.

6. This formulation is similar to the one used by Mehay (1977).

7. Estimates of land area and the maps used to construct the variables are from Purdum and Anderson (1988).

8. The arrests/offenses equation contains the following explanatory variables: property

crime rate, measures of police resources, percentage of arrests which are drug arrests, and population density. The police resources equation contains both the property and violent crime rates, property value and income, drug arrests, and the number of "nearby" police agencies.

9. The time frame is in part determined by the data. Comparable police expenditure data for earlier years are not available, and due to changes in Uniform Crime Reports for 1988, the 1988 arrest and offense data are not consistent with earlier data.

10. Other law enforcement agencies include state agencies, such as the Florida Highway Patrol, university police, and airport police departments. Both the number of offenses reported to and the number arrested by these agencies is small. Thus, they are not included in the data set.

11. OTP is the sum of robbery, burglary and larceny crime rates.

12. TPA1544, another measure of the crime-prone population (ages 15-44) performs just as poorly as TPA1524.

13. Interestingly, Florida's geographic makeup as a peninsula and lack of large population centers along Florida's northern border reduced the need to control for interstate influences.

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Moral Panics and the Vocabularies of Motives: A Content Analysis of the Cyclical Nature of the Drug Crisis, 1970-1985

Myrna Cintron, Ph.D.

INTRODUCTION

The recently reported rise in drug abuse in the United States has led to a national perception of a "drug crisis" that requires immediate and far reaching control efforts. Anti-drug efforts have received major media coverage and presidential endorsement. A national campaign has been directed toward educating the public to "just say no" to drugs. A drug-free America by 1995 has become the stated policy of the United States government (Anti-Drug Abuse Act of 1988).

From the early 1900s to the present, most observers argue that various United States anti-drug strategies have been ineffective in controlling the so-called menace or crisis. On the one hand, the efforts are thought to have amplified the drug problem while failing to curb their illicit availability. On the other hand, legal responses have stimulated a series of what Gusfield (1963) has termed symbolic crusades. Skolnick (1967) refers to the enforcement of symbolic crusades as "coercion to virtue" because they set standards of moral conduct upon the population. Assessments of these crusades have raised questions about the wisdom of enforcing laws that are directed at victimless crimes (Schur, 1965), which in turn may precipitate secondary deviance (Lemert, 1951).

Despite past experiences with drug control, the current drug crisis is occurring at a time of unprecedented adversarial relationships between the high demand for a single drug --cocaine, crack-- and the national and international efforts to thwart the supply of narcotics.

The theoretical assumptions of the labeling and critical perspectives laid the ground for empirical inquiry to clarify the interests that are embodied in legislative or moral reforms. Previous studies have attempted to single out the significant elements underlying the development of reforms to control illegal drugs in the United States. These studies tend to give particular weight to the historical context in which control takes place. Overall, the development of this

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literature can be divided into three categories (i.e. the symbolic moral crusader, organizational legitimacy or survival and the policy decision making process). Underlying these studies is the importance of a single factor as being responsible for the adoption of particular anti-drug policies (for example, the Marijuana Tax Act of 1937).

By 1970 a growing number of studies had been developed supporting the symbolic nature of drug controls (Becker, 1963; Dickson, 1973, 1968; Duster, 1970; Helmer, 1975; Morgan, 1978a, 1978b; Musto, 1973; Norland and Wright, 1984; Reasons, 1974).

The organizational legitimacy theme assumes that criminal laws are determined by powerful groups. These groups, social control agencies in particular, use criminal laws to advance their interests and professional preferences. Agents of social control, "may not be interested in the content of the rule itself, but only in the fact that the existence of the rule provides [them] with a job, a profession, and a raison d'etre" (Becker, 1963, p. 156). Social control organizations have a vested interest in the amplification of the problem. Dickson (1973, 1968) has suggested that drug legislation is a bureaucratic response to environmental pressures. Deviance outcomes reflect the organization's day-to-day working environment. Its legitimization efforts to gain public and political support and bureaucratic needs for survival when faced with decreasing budget appropriations. Under these terms, then, control strategies create the conditions they are formally charged to eliminate. They also shape the public's attitudes, beliefs, and reactions toward the labeled behavior.

More recent drug control studies give particular attention to the policy decision making processes in which control policies are developed (Blumberg, 1973; Himmelstein, 1978; Morgan, 1983; Reasons, 1974; Reinarman, 1983). Researchers assume that the nature of drug use; its threats; ideological, political, and economic factors; and interest groups all bear upon the federal government's control efforts (Reinarman, 1983). Moreover, these studies suggest that some of these elements serve to facilitate control efforts, while others impede the process.

PURPOSE AND METHOD

The mass media (newspaper, radio, television, magazines) is significant in generating public concern about what becomes defined as a social problem. The news stories content not only gives visibility to an issue, it is also in a position to influence what society thinks about and how society reacts about a problem. Through the mass media representation of a social problem the public becomes vicarious participants in the definition of the problem. It has been documented how public campaigns have been generated through the mass media to bring about the support and convinced the public that a specific problem (i.e., crime) is a serious and growing threat to society (Bortner, 1984; Braden, 1973; Cohen, 1973a, 1973b; Davis, 1973; Fishman, 1984, 1978; Hall, et al., 1978; Lewis,

1984; Linsky, 1973; Nunnally, 1973; Pearce, 1973; Phillips, 1973; Sheley and Ashkins, 1984; Terry, 1984; Young, 1973a, 1973b).

The appearance of newspaper stories regarding drug abuse is heightening the official and public sensitivities about the existence and nature of the drug crisis. For this study newspaper stories will be the channel through which the current drug crisis will be interpreted and analyzed. In this capacity the study's purpose is twofold. First, it will describe the natural history of a social problem. This study will cover the period between 1970 and 1985. Secondly, it will quantify the newspaper coverage of the drug crisis and the social context as it is expressed in the press as they promote a social problem that is considered newsworthy. The study is important because it critically assesses the interplay of issues and interests that have merged in the current war on drugs being waged by the United States.

A simple random sample was selected for the study period between January of 1970 and December of 1985. To decide how many cases were needed form each one of these years, the total sample was distributed according to the proportion of news stories within each of these years. That is, from each year a sample proportional to its size was selected. This sample was selected based on a table of 4,000 random days for a 366-day year published by Rosander (1977, pp. 409-417).

RESULTS

Of the two hundred and twenty-five articles sampled, 28.0 percent (sixty-three articles) were published during the first period of study (1970-1974), 33.8 percent (seventy-six articles) were published during the second period of study (1975-1979), and 38.2 percent (eighty-six articles) in the last period (1980-1985). Nineteen Seventy-Nine was the peak year for articles sampled with thirty-one drug related stories; 1973 had only four stories sampled. On the average, fourteen news articles were sampled for each year.

Over fifty percent of the sampled articles were categorized as news of general interest. These included, within the same article, topics such as drug-related crimes, descriptions of users, federal and local agencies work, seizures, task forces, and technological help.

Almost thirteen percent of the drug-related stories dealt with survey results, either at the state or national level. Over nine percent of the articles discussed legislation, either bills that were proposed or were being discussed at the state or federal levels. Only fifteen articles were classified as having human interest. That is, only 6.7 percent of the articles dealt with an emotional or personal coverage of the devastating consequences of drugs in terms of human toll. Eleven editorials (4.9 percent) were sampled, and only eight news articles dealt with drug abuse prevention (3.6 percent).

The format of presentation sets the pace by which an article will be of

interest to the reader and from which knowledge will be gained. Since most of the articles were classified under the general interest category, the readers might get a blurred picture of the drug problem. The more general an article, the least prepared the readers might be to understand the problem at hand.

Ninety-five of the sampled news articles had drug-related stories that pertained to the state of Florida (42.2 percent). Sixty-nine articles (30.7 percent) dealt specifically with the drug crisis in the Miami -- Dade County -- area, and only 1.3 percent of the articles made reference to regional connections (other southern states); however, even when such a reference was made, the emphasis was on the state of Florida, either as the entry port for drugs or levels of drug use in the Dade county area. When the state and local categories are collapsed, 72.9 percent of the articles provided information on Florida's drug problem, and very little information was offered on the regional, national and international implications of the drug problem. It is interesting to note that the public was informed only about Florida's efforts and problems while the articles tended to ignore the foreign nation's own drug problems, for example, the economic impact of drug trafficking for foreign countries. As a result, we can say that the media portrays a nativist orientation toward the drug crisis.

Code categories were created for the subjects or topics that were discussed in the drug-related news articles. Three code categories were created, and subcategories were developed within these. When the three categories were collapsed (national, state, and international), the state was the subject of 71.5 percent of the drug-related stories, the nation was the main topic in 32.7 percent of the articles, and international subjects were featured in 3.1 percent of the drug related articles. Once more the newspapers' tendency was toward emphasizing the local and state drug crisis, isolating or making no connection with the national or international scene.

The Webster's dictionary defines a crisis as "a serious or decisive stage of things, or a turning point when an affair must soon terminate or suffer a material change ... a situation whose outcome decides whether possible bad consequences will follow" (1983, p. 432). In the sociological literature, social crises, such as the drug crisis, have generally been referred to as "moral panics." For example, according to Cohen it is "a condition [that becomes] ... defined as a threat to societal values and interests: Its nature is presented in a stylized and stereotypical fashion by the mass media and ... experts pronounce their diagnoses and solutions; ways of coping are evolved, or (more often) resorted to; the condition then disappears, submerges or deteriorates and becomes more visible" (1973a, p. 9).

The development of a crisis or a moral panic depends on a few factors. It implies the notion of a process or stages, whereby the drug problem becomes identified, develops and is reacted to. The research question,

"How was the crisis described?" dealt with the first stage, where a condition -- drugs -- became identified "as problematic, posing a danger or containing the seeds of future difficulties" (Becker, 1966). In the content analysis of the drug crisis, two vocabularies ran through the sampled articles: the first identified drugs as reaching epidemic proportions in society, the second described Florida as the world's drug capital.

Society: the drug epidemic. In October 1970, five articles described the abuse of drugs as having reached epidemic proportions in society. The articles reported that while man had used drugs for centuries, never before in history had society been faced with the massive misuse of so wide a spectrum of drugs at all levels of its population. But drugs, the articles reported, were not the problem. Drugs are a symptom of decay in society, and people use drugs as escape mechanisms. If it were not illicit drugs, people would use something else. It was reported that drug abuse was not a benign disease; it was a cancer sapping vital energies and eroding precious human and social resources.

Another reason for the epidemic was a society well oriented toward the drug scene in one form or another. The drug scene orientation had its roots on the impact television advertisements had on its audience, particularly for children, who spend four to six hours a day watching the commercials. The effects of the commercials were reinforced when children watched their parents "put down" everything, from martinis to pep-pills.

By 1973, it was reported that the reason why drugs "had gotten out of hand" was due to the laxity of laws and the difficulty of enforcing these laws. Law enforcement efforts were blamed for not getting at the man who sells the drugs. While in 1971 heroin wholesalers were described as the biggest menace the country had ever faced, marijuana continued to be a major peril to the fabric of the American society in 1975, but by 1977 the flow of cocaine crossing the United States' borders had reached crisis proportions. By 1973, the "wave of terror" that was sweeping the nation was being spread by non-addicts who tried to hook young people and adults on drugs. Non-addicted drug wholesalers were described as cold, calculating and ruthless criminals who, when arrested and convicted, should receive long, mandatory prison sentences. But the size of the government's problem became apparent long before the wave of terror swept the nation. In November 1970, $30,000 could buy a half-ton of marijuana that could bring $150,000 on the United States illicit marijuana market. For Florida, the problem was pressing. Law enforcement officials were watching Florida's overcrowded sky for airborne smugglers, while some 2,200 miles of ragged, almost unprotected coastline, enticed the sea traffic in cocaine.

Florida: The world's drug capital. By the end of the 1970s, it became apparent that drug abuse had not only reached epidemic proportions in

society, but that some states had more at stake than others. From February 1975 to February 1985, twenty-five sampled articles used in the headings vocabularies describing Miami as the "world's drug capital." As a major port of importation of illegal drugs, the result was drugs from every direction, in every way imaginable, on the water, on the land, and as some headings described it throughout the years (in 1975, 1976, and 1977), drugs even rained from heavens.

In March of 1979, the environment in South Florida was described as a natural disaster area. The same vocabulary ran again in May of 1980 and June 1981, but this time South Florida had become a law enforcement disaster area. If the federal government had a crime disaster law, it was argued that Miami would have probably gotten relief assistance. Drugs were blamed as the number one contributing factor for the increase in violent crime in Dade County. It was also reported that by 1970, more than eighty percent of the cocaine and marijuana entering the country came through Florida. By October 1979, South Florida was categorized as the combat zone in the United States' drug war. By 1980, ninety percent of all the drug smuggling involved Florida either as destination point, as center of international banking (money laundering), or as site for making narcotics deals. It was reported that drug smugglers had entrenched every aspect of life in the area.

In March of 1970, Governor Graham publicly admitted that Florida had become the major center for organized crime in America. According to the governor, other states had been more aggressive than Florida in their fight against drugs. That month the governor declared a war on drug smuggling.

Law enforcement officers reacted to the declaration of war arguing that narcotic smuggling had become Miami's largest and most lucrative industry, as measured by the amount of drugs law enforcement agents seized every month. Officials estimated that they were five years behind the drug smugglers, as far as financial resources, sophisticated equipment and manpower were concerned. For example, drug smugglers could afford to buy a $200,000 "stash" house for cash and walk away from it as law enforcement officers were getting close to making an arrest. However, because of bureaucratic impediments, undercover agents ran into appropriations problems just trying to rent a one-hundred dollar a month apartment to observe a drug operation. It was also reported that not since the repeal of prohibition had so much money been made in an illegal enterprise.

Between September 1979 and December 1983, Florida was fighting the "cocaine war." Not only had Florida developed a reputation as a free-trade zone for drugs where federal, state, and local officers made daily seizures of illegal narcotics, but also violent crimes attributable to drug trafficking were common. The cocaine war was no longer made up of skirmishes carried out in isolated areas

or in the hangouts of the Colombians who, by now, dominated the multi-billion dollar cocaine smuggling operations. The war was being carried out in plain daylight on the streets crowded with innocent people.

During this time, newspapers recounted the failures of the war on drugs. In spite of the periodic multimillion-dollar drug seizures, South Florida continued to be flooded with high-grade cocaine. In August, 1983 the South Florida market had so much cocaine that it seemed that sellers were cutting their prices down. Drug enforcement agents were reported as saying that drug wholesalers were cutting their prices so much that it looked like an end of the year clearance sale. By the end of the year the flood had not leveled off in South Florida, but had spread to other areas of the Southeast. The spread led drug enforcement officers to suggest that while seizures had gone up through the year, the demand for cocaine continued to be strong.

Ninety-three of the sampled news articles discussed, to some extent, the measures that needed to be taken to control the drug epidemic. In the analysis procedure, it was found that the control measures reported in the newspapers fell into two categories: legal changes and the coordination of resources and efforts.

Legal changes. From 1971 through 1983, it was found that the legal changes being implemented or being proposed at the state level fell into three categories. The first category runs from 1971 throughout 1975 and could be called the decriminalization movement. The second category, a short period in 1973, called for the involuntary commitment of addicted persons. The last period, 1979 throughout 1983, called for mandatory minimum sentences for drug trafficking. During this period it was found that the control measures being implemented or being proposed at the state level ran parallel to the drugs being abused in society.

Coordination of Resources and Efforts. In an effort to achieve some cohesion on the drug abuse fight, the Dade County Metro Commission created the Drug Abuse Advisory Board in February of 1970. By county ordinance the Advisory Board was given the task of the coordination of all county programs dealing with drug abuse, such as screening these programs to avoid the duplication of efforts. Additionally, the Board was to make recommendations on policy matters after the programs had been evaluated. In October 1972, two years after the Advisory Board had been in existence, it was reported that the Board had been unable to accomplish its mission. It had been almost impossible to identify all of the local drug abuse programs, let alone evaluate any of them.

While local control efforts were described as uncoordinated and ineffective, federal law enforcement efforts were reported as having positive results. After the consolidation of several departments into the Drug Enforcement Agency, the federal government increased the budget for drug abuse programs to $419 million by 1973. From 1975

through 1978, Florida representatives in Washington urged the federal government to augment the Drug Enforcement Agency's South Florida forces by moving agents and equipment into the area from elsewhere in the nation. There were also plans to form a new anti-smuggling task force for Florida, composed of the Drug Enforcement Agency, the Coast Guard, Customs, the State Department, the Justice Department, even the Air Force and Navy patrols. By 1980 a Presidential Task Force had been created. Under the command of then Vice-President Bush the South Florida Task Force received wide publicity. It was reported the Task Force's anti-drug campaign was responsible for the drop in crime rates in South Florida. Drug-related homicides in Dade County were down fifty percent, largely because the Task Force steered drug traffickers away from the area. By 1983 drug seizures had increased fifty-two percent, and it was estimated that drug smugglers in South Florida had lost drugs worth $4.4 billion because of the federal government efforts.

Despite the above efforts, there was no doubt that the law enforcement authorities were making only a small dent in the illicit drug smuggling operations; estimates of drug seizures were never higher than ten percent.

SUMMARY AND CONCLUSIONS

By using the periodic cycle of crisis approach, this work followed a sociological tradition whereby what becomes defined as a social problem -- the use of drugs in society -- must be interpreted as a product of the vocabularies that motivate what to do about the problem. This tradition implies that drug crises are not just about the drug problem. Rather, it embraces the notion that the problem is the product of a number of factors that together have created the particular social context from which the drug problem is defined and from which strategies of social control are generated.

Several findings are consistent with the research literature. Over fifty percent of the sampled articles were categorized as news of general interest, the media reports only on certain issues associated with the problem. Since the format of presentation sets the pace by which the article will be of interest to the reader and from which knowledge is gained, the readers might get a blurred picture of what the drug crisis is all about.

Another finding that is consistent with the literature is that the articles' tendencies is toward isolating the problem. Over seventy percent of the sampled articles emphasized the drug problem form the Florida perspective, ignoring the national, regional, international and foreign connections that exist.

The state and local impact level of the articles is also reflected in the topics/subjects covered in the drug-related news articles. When the state, national, and international categories were collapsed, the drug problem in Florida was the subject of over seventy percent of the articles. Since the newspapers' tendencies were toward

an emphasis of the local/state drug problem, it could be said that the media portrays a nativist orientation toward the drug crisis.

Two vocabularies motivated the description of the drug problem as a crisis. The first identified drugs a reaching epidemic proportions in society; the second identified Florida as the world's drug capital. The drug crisis came as a result of the impact and consequences that illegal substances had for society in general and Florida in particular.

Another stage in the process or development of the drug problem is the recognition that the drug crisis must be controlled. Proposals toward the control of the drug crisis fell into two categories. The first category ran from 1971 to 1983 and was identified as the need for legal reforms. The second group of proposals called for the coordination of resources and efforts. Local and state control efforts were described as uncoordinated and ineffective, while federal law enforcement efforts were reported as having positive results. Federal efforts, in particular those of the South Florida task force, were credited as being responsible for a decrease in the criminal and drug trafficking rates in the area.

It could be concluded that the vocabularies and motives that fuelled the drug crisis between 1970 and 1985 led the way to the control strategies that were proposed after 1985. For example, old stereotypical notions of the drug users are being challenge today; drug testing has been legally approved as a condition for employment in several government agencies, serious concerns about drugs and their consequences is on the increase. However, the international, deterrence and economic implications of the drug problem continue to be ignored at the federal and state levels.

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Correlates of Police and Correctional Officer Performance

Tracy L. Griffith, Ph.D.

A growing number of police and correctional agencies are utilizing psychologists and objective personality assessment in the selection process of officer candidates (Behrens, 1985). Although most professionals in the field regard the addition of psychological assessment favorably, validation efforts have yielded mixed results. Comprehensive reviews may be found in other sources (Spielberger, 1979; Burbeck & Furnham, 1985). These reviews generally conclude that most inventories (ie., MMPI, CPI, 16PF and others) fail to indicate a significant relationship between objective personality assessment and job performance, although some supporting results have been reported.

The Inwald Personality Inventory (IPI, 1980) was designed specifically to aid in the selection of police and correctional officers, and has shown promise in early validation efforts (Inwald & Shusman, 1984a, 1984b). However, little independent validation research has focused on long-term comparisons of the MMPI (the most widely used instrument) and IPI using objective job performance measures.

In the current study, 590 road patrol (police) and correctional candidates completed both the MMPI and IPI, and provided a variety of demographic information, during a pre-hiring screening program utilizing a consulting psychologist. A large number of the candidates (n=375, 64%) were subsequently hired, allowing for performance evaluations to be collected and relationships analyzed. Subsequent performance measures of employment status and disciplinary infractions were gathered from official end-of-year evaluations. The length of employment varied for each officer, ranging from one (1) to 52 months. Based on the performance evaluations, each officer was assigned to one of four performance groups for analyses. Officers not hired were necessarily excluded from certain analyses due to a lack of follow-up data.

Results of the analyses indicated that the MMPI was not significantly related to subsequent job performance of either the road patrol or the correctional officer samples. The IPI was not found to be significantly

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related to performance for the road patrol sample, although it was found to be significant in predicting performance for the correctional officers. Ten IPI scales were significantly different between the correctional officer groups. Stepwise Discriminant Analysis revealed that seven of the IPI scales were able to correctly classify 53 percent of the correctional officers. Implications for further research are discussed.

INTRODUCTION

Behrens (1985) reports that a large number of criminal justice agencies have been adding a psychological screening component to their pre-hiring evaluative process. In his nation-wide survey of state agencies, 50 and 25 percent of police and correctional agencies were currently conducting psychological screenings of their officer candidates, respectively. Eleven of the states mandated such screenings. Over one-third of the agencies had implemented their psychological component after 1981, with most being introduced since 1984.

It is clear that the use of psychological screening is increasing in spite of its expense, and is due in large part to a series of legal cases in which agencies were held responsible for the inappropriate behavior of their officers (i.e., Bonsignor v. City of New York, 1981). This position of holding municipalities responsible for the wrongful actions of their employees (under some circumstances) was upheld by the United States Supreme Court in a 1978 decision (Fabricatore, in Spielberger, 1979).

Further, professional and accrediting agencies have encouraged the addition of psychologists in the pre-hiring decision, beginning in 1973 when the National Advisory Commission on Criminal Justice Standards and Goals included a psychological examination recommendation. More recently (1985), the Commission on Accreditation for Law Enforcement Agencies published "Standards for Law Enforcement Agencies" requiring a psychological component for agencies seeking accreditation.

Finally, widespread negative publicity and the resultant loss of public trust have lead many agencies to include psychological testing in the hiring process. At the time of this writing, national attention remains focused on the Los Angeles, California case involving a brutal videotaped beating of Rodney King, suffered at the hands of four police officers. Allegations of excessive use of force are one of many ways in which public trust is lost through acts of individual officers.

Although the addition of this psychological component is generally recognized as a positive step by psychologists and criminal justice administrators, the specific objective assessment instrument(s) to be used remains in question. Behrens notes that, "[t]he choice of objective personality inventories to include in a pre-hiring psychological screening program is typically at the discretion of the agency and psychologist, with few

relating assessment and decisions of psychological suitability to subsequent job performance are stressed (Burbeck & Furnham; Inwald, in More & Unsinger, 1987; Hiatt & Hargrave, 1988). A major point focuses on the fact that these instruments were simply not designed to be used in the area of employee selection (Spielberger, 1979). Rather, they were typically developed to assist in the area of mental health diagnosis, treatment and evaluation.

A second deficiency in the selection research focuses on the use of inconsistent and varied performance measures. Varying definitions of "successful" versus "unsuccessful" officers have been used. It must be noted that this criterion difficulty is based largely on the difficulty of actually rating or evaluating officer performance. With no simple or consistent method of rating performance, previous studies have used a variety of subjective and objective performance criteria, leading to methodologically inconsistent studies and results that are difficult to interpret.

Related to this performance discrepancy, a variety of settings have been used in validation efforts. Much of the research has been conducted in training academies or other short-term performance settings. Although such a study minimizes the time and expense needed, it fails in providing long-term and direct "on-the-job" performance validation. Such studies have been scarce.

Finally, the Inwald Personality Inventory (1980) is a relatively young instrument. Early reports have been optimistic in the use of the IPI in the area (Inwald & Sakales, 1982; Inwald & Shusman, 1984a, 1984b; Shusman, Inwald & Landa, 1984), although clearly further research is needed to directly compare the effectiveness of the MMPI and IPI using long-term and objective on-the-job performance criteria.

PREVIOUS RESEARCH

Although a variety of objective personality instruments have been utilized in this area, the focus of the current study is on the MMPI and IPI. Reviews of related instruments may be found in other sources (Spielberger, 1979; Burbeck & Furnham, 1985; Hargrave, 1984).

Historically, the MMPI has been the most widely used inventory in the area. Some of the earliest research using the MMPI with police and/or correctional officer selection or evaluation suggested that several scales were related to serious misconduct (Blum, 1964). Others (Marsh, 1962; Azen, Snibbe & Montgomery, 1973) reported modest, although statistically significant, relationships between MMPI scales Ma (9) and De (2) and automobile accidents.

Other MMPI research has found differences when comparing officers who were employed for over three years with those not hired and those who resigned or were terminated (Saxe & Reiser, 1976). Training academy performance was used as a criterion measure by Hargrave (reported in Yuille, ed., 1986) who reported that scales F, Hs (1), De (2), Pt (7) and Si (0) were able to differentiate between

cadets who completed the academy and those who did not.

Further, Hiatt & Hargrave (1988) reported MMPI scales Pa (6) and Ma (9) to be significantly higher among officers who had more than one formal unsatisfactory rating, had been suspended or asked to resign or had been involved in off-duty violations of the law.

However, just as results indicating that valid prediction may be found, studies failing to observe significant differences between successful and unsuccessful officers are also readily found in the literature. For example, Mandel (1970), Hess (1972), Balch (1977) Lester, et al., (1980), Schoenfeld, et al., (1980), Gettinger (1981) and others failed to find significant differences between their groups of officers on any of the MMPI scales.

Contrasting results such as those described above have lead several reviewers to conclude that relationships have been modest and inconclusive, and that the practical validity of the MMPI in predicting success is limited (eg., Spielberger, 1979; Burbeck & Furnham, 1985). Overall, as suggested by Spielberger, it is possible that some weak relationships may exist, although the practical validity of the MMPI as a predictor of job performance for police officers is questionable.

While the MMPI has been the inventory most widely used in the area of criminal justice pre-hiring screening, IPI validation efforts have typically utilized both inventories in comparative studies. The IPI is a 310 item true-false inventory designed, according to the author, to yield scores on a variety of personality, behavioral and biographical characteristics of the test taker. Designed specifically to assess criminal justice applicants, the IPI is composed of 25 original scales and one validity scale.

A series of studies conducted by Inwald and others have suggested that the IPI may be more effective than the MMPI in predicting job performance of officer candidates. Inwald & Sakales (1982) presented results showing that the performance of correctional officer candidates (using absences, latenesses and formal disciplinary infractions as criterion) was significantly predicted by IPI scales TL (Trouble with Law), JD (Job Difficulties) and DG (Drugs).

Next, Inwald & Shusman (1984a) reported that IPI scales TL (Trouble with Law), AS (Antisocial Attitudes), AA (Absence Abuse) and RT (Rigid Type) were significantly higher for male correctional officers who were terminated than those who were not. Female correctional officers who were terminated were reported to differ from successful female officers on scale LA (Lack of Assertiveness). A predictive component of the same study indicated that the IPI was able to correctly classify 72 and 83 percent of the officers (male and female, respectively) on the termination criterion; compared to 62 and 66 percent predictions using the MMPI. The two inventories combined provided the highest degree of accuracy, correctly predicting 73 and 92 percent of the subjects.

Inwald & Shusman next

conducted a similar study (1984b) using the IPI and MMPI with police recruits in a training academy setting and reported a number of performance differences using latenesses, absences, injuries on the job, formal disciplinary infractions, assignments to restricted duty, negative and positive reports, overall supervisor ratings and supervisory ratings on "leadership ability." Similar findings suggested the IPI to be more effective than the MMPI in predicting "success", with the most accuracy coming through the use of both instruments.

Again, similar results were reported by Shusman, Inwald & Landa (1984) when male correctional officers were analyzed on performance measures of retention/termination, absences, latenesses and formal disciplinary infractions.

THE CURRENT STUDY

The current study used independent data collected as an ongoing screening program from October, 1985 to December, 1989. 590 Road Patrol and Correctional officer applicants completed a pre-hiring psychological screening interview during the 52 month period. The screening evaluation consisted of the completion of a questionnaire (providing a variety of demographic information), completing both the MMPI and IPI and meeting with the consulting psychologist. A brief intelligence measure was obtained during the interview as each applicant completed the Comprehension subtest of the Wechsler Adult Intelligence Scale - Revised Edition (WAIS-R).

Dependent information was compiled by the employing criminal justice agencies and provided to the consulting psychologist and this writer for use in the study. The dependent measures will be discussed further in a later section. Briefly, however, performance was collected on each subject annually, allowing for the assignment of subjects to one of four performance groups. Of the 590 candidates, 64 percent (375) were subsequently hired, allowing for the analysis of the relationships of performance with the MMPI and IPI. Because of the nature of such a design, the data currently being used was compiled from a variety of time periods and sources.

Table 1
Subject Position and Gender

	Road Patrol		Corrections		TOTAL	
	n	%	n	%	n	%
Male	200	33.9	304	51.5	504	85.4
Female	16	2.7	70	11.9	86	14.6
Total	216	36.6	374	63.4	590	100

Subjects. Both Deputy Sheriff (also called Road Patrol) and Correctional Officer applicants from two county agencies in Southeastern Florida, and Road Patrol officers from a neighboring city were included in the current study. A total of 590 officer applicants were referred to the consulting psychologist over a 52 month period. Each officer candidate had completed several subsequent stages of the hiring process and would be processed further pending the psychological testing and a medical

evaluation. Table 1 provides a breakdown of the subjects by position and gender. Of the 590 subjects, 81 percent (479) were caucasian, 16 percent were black and two percent were of Hispanic origin. Three (.5%) reported themselves as Asian/Oriental.

Regarding marital status, 189 (32%) were single and never married. An additional 325 (55%) were either married a first time or remarried. Twenty (20) of the 325 (3% of the total) were separated from their spouses at the time of their evaluations. Seventy one (12%) were divorced from their spouses and currently unmarried. Spouses of two subjects were deceased and three subjects failed to provide data on marital status.

Subjects ranged in age from 18 to 65 years (See Table 2). A majority of the subjects had previously been employed in the criminal justice field (59%), typically in the police, correctional or private security areas. Thirty-nine percent had no previous experience in the criminal justice area, with thirteen subjects (2%) providing no information.

Concerning the educational levels of the subjects, 296 (50%) reported possessing a high school diploma or an equivalent. An additional 256 (44%) reported attending some post high school program, either college or vocational-technical. Twenty eight (5%) possessed a Bachelor's degree, with three (.5%) having completed a graduated degree. Four (.7%) had not completed high school and three (.5%) failed to provide data.

Additionally, a score on the comprehension subtest from the Wechsler Adult Intelligence Scale (Revised edition) was obtained from each subject. This score is included as a raw score, with subjects ranging from 5 to 15. Seventy two subjects (12%) had no scores on this measure due to their evaluations being completed prior to its implementation. See Table 3 for Subject IQ.

Table 2
Subject Age

Age (years)	n	%
less than 21	52	9
21-25	181	31
26-30	114	19
31-35	78	13
36-40	61	10
41-45	47	8
46-50	29	5
51-55	14	2
56-60	11	2
61-65	3	1
Total	590	100

Table 3
Subject IQ

WAIS-R Comprehension Score	n	%
5 - 7	30	6
8 - 9	126	24
10	144	28
11 - 12	171	33
13 - 15	47	9
Total	518	100

Length of Employment. As the current study involved an on-going screening program, length of employment varied by subject, ranging from one (1) to 52 months. Table 4 presents data on job performance groups (described more fully below) and the number of months since each candidate had completed the evaluation process. Given the variance in the length of employment, it is assumed that performance would be significantly related to the number of months employed; i.e., subjects who were employed for longer periods of time are more likely to suffer some sort of misconduct. Conversely, subjects employed for brief periods of time (i.e., less than one year) would be less likely to suffer similar misconduct, due to the relative brevity of their employment.

As may be seen in Table 4, subjects employed less than 12 months typically performed without difficulty, with only one (1) of 37 employed officers actually suffering any sort of disciplinary infraction. It is likely that this exceptional performance during the first year is related to the brief period of employment and is not indicative of future performance in general. For this reason, Exemplary officers employed less than 12 months (n=36) were excluded from further performance analyses. Similarly, Not Hired officers were excluded from further between-group comparisons, although descriptive statistics will be provided as information.

Instruments. The MMPI is a 566 true-false item inventory yielding results on a variety of personality scales. Included in the current study were three validity scales (L, F & K), the ten major clinical scales and two additional scales (MacAndrews Alcoholism and a critical items score). A large body of validity and reliability research has accumulated on the MMPI over the years (Greene, 1980; Buros, 1982). Generally, the MMPI has been found to possess satisfactory levels of reliability and validity (Buros, 1982) and has been included in the current study due to its extensive use and study. As stated previously, Behrens (1985) reports the MMPI as the most widely used objective personality inventory in the criminal justice pre-hiring screening field. Further, MMPI/IPI relationships are of interest in order to provide additional information on the IPI, discussed below.

The IPI is a 310 true-false item inventory which yields scores on a variety of personality, behavioral and biographical characteristics of the test taker. Designed to "screen in" effective candidates, the IPI is composed of 25

Table 4
Group Membership and Months Employed

Months	1 Exemplary	2 Acceptable	3 Dropout	4 Failure	Total
1-11	36	1	0	0	37 10%
12-23	60	7	12	7	86 23%
24-35	48	12	26	8	94 25%
36-52	42	40	48	28	158 42%
n	186	60	86	43	375
%	50%	16%	23%	11%	100%

candidates, the IPI is composed of 25 original scales and one validity scale. An additional score on the number of IPI critical items was included. The author describes the IPI as an inventory, "...designed specifically to aid law enforcement agencies in selecting new officers who satisfy psychological fitness requirements (Inwald, 1982:1)." Further, the author states that the IPI attempts to "...document combinations and patterns of historical life events which studies suggest correlate significantly with occupational failure in law enforcement (p.1)."

Additional information on the development, reliability and validity issues and norming of the IPI is provided in the IPI manual (Inwald, 1982). Despite its relative youth, it appears that the IPI possesses sufficient reliability and validity levels to warrant use and study in this area. Difficulties of the IPI include its reliance on largely face valid items, a reliance on self-reported background information and the fact that a number of scales are comprised of very few items. Few items per scale may lead to a large variation of scores based on responses to a few items, leading one to question the validity. Finally, questionable inter-scale reliability issues have been raised and must be considered in evaluation efforts using the IPI.

Dependent/Performance Criterion. As stated previously, a number of the officer candidates were not offered positions, with a few offers being turned down by candidates for various reasons. In these cases, no follow-up performance measures were available. This lack of follow-up performance data is an inherent limitation in research of this type. For candidates subsequently employed, agencies provided information on the current job status of each candidate and the number and nature of formal disciplinary infractions. This data was compiled from annual performance evaluations and allowed the researcher to group each officer into one of four performance groupings, described below, with a fifth group not being hired.

PERFORMANCE CRITERION GROUPINGS

(1) EXEMPLARY officers: Those candidates who had been hired by the agency, had no formal disciplinary infractions during their employment and continued to be employed at the time of follow-up.

(2) ACCEPTABLE officers: Those candidates who had been hired by the agency, had one or more formal disciplinary infractions during their employment, yet had continued to be employed at the time of follow-up.

(3) DROPOUTS: Those candidates who had been hired and employed without formal disciplinary infraction, yet had left the department voluntarily. These officers had left the agency under positive conditions and would be considered for re-employment, should they desire.

(4) FAILURES: Those candidates who had been hired by the agency but were no longer employed due to termination or forced resignation. These officers would not

be considered for re-employment.

(5) NOT HIRED: Those candidates who either were not offered positions or declined offers.

Unlike previous studies in this area, the criterion grouping described above allowed for comparisons of officers integrating both their performance and their employment status. While IPI results reported to date have focused on the prediction of individual performance criterion (such as disciplinary infractions, sick days, termination/retention and others), typically as a dichotomy, the current study was designed to integrate the two major criterion measures to form four unique and independent performance groups.

Statistical Analyses. Analyses were conducted using the Statistical Package for the Social Sciences (SPSS, Nie et al., 1970). Briefly, Pearson Bivariate correlations were conducted to understand MMPI/IPI scale inter-relationships. Hotelling's T results were next obtained to determine any overall multivariate relationships between the inventories and job performance, with separate analyses for road patrol and correctional officers. Follow-up univariate ANOVA's were performed on significant overall relationships. Stepwise Discriminant Analyses (using Rao's V criteria) were next conducted to determine the contributions of the significant univariate scales. Finally classification accuracy of the derived functions were determined.

Limitations of the Current Study. A major limitation of the current study lies in the fact that a large number of subjects were not hired by the referring agencies, to some degree due to their assessment and/or interview data. Obviously no follow-up performance criteria was available for this group, although MMPI/IPI scale correlations of this "not hired" group were included. Preliminary analyses of a sample of this group (Griffith, unpublished thesis) confirmed that this "not hired" group does, in fact, significantly differ from other groups on a number of scales. This "restriction of range" problem is an inherent limitation of the methodology of the current study and in similar research.

A second limitation of the study lies in the fact that subjects experienced different lengths of employment (months) due to the fact that this was an ongoing program. As a result, some subjects were employed up to 52 months with others as few as one month. Such a design does not allow for the control of external variables as an experimental design might.

Regarding the specific sample used, it is important to note that the officer candidates were employed by agencies in Southeast Florida; the two counties are populated by approximately 95,000 residents and the neighboring city has approximately 49,000. Generalization of current results to officers and candidates in various sizes and locale should be done with caution.

Finally, validity issues inherent in the instruments themselves and to their use in the area of pre-employment screening are inherent limitations to research of this type. As described previously, the IPI may be faulted due to the number of scales

comprised of only a few items, the questionable inter-scale reliability and the reliance on self-report to largely face valid items (particularly to biographical items).

RESULTS

Following a preliminary examination of all variables to verify assumptions of normality, linearity and homogeneity of variance, four major questions were addressed using each of the officer groups (road patrol and corrections) with each of the inventories (MMPI and IPI). As a result, four separate null hypotheses were tested:

Hypothesis 1: There are no statistically significant relationships between MMPI scales and job performance of road patrol officers.

Hypothesis 2: There are no statistically significant relationships between IPI scales and job performance of road patrol officers.

Hypothesis 3: There are no statistically significant relationships between MMPI scales and job performance of correctional officers.

Hypothesis 4: There are no statistically significant relationships between IPI scales and job performance of correctional officers.

A final question addressed in the current study involved the utility in classification of the MMPI and IPI with the samples of road patrol and correctional applicants, as follows:

Hypothesis 5: There is no statistically significant interaction among significant variables with respect to job performance of a) road patrol and b) correctional officers.

Pearson Bivariate Correlation Results. Information on Pearson Bivariate coefficients (r values) for all MMPI and IPI scales used in the study may be found in Appendix A. Critical values necessary for significance are indicated. All candidates were included in the bivariate correlations (n=590).

Multivariate Tests of Significance. Next, Hotelling's T scores were calculated to determine overall differences between the four groups of subjects. Three analyses using the 15 MMPI variables, the 27 IPI variables and the 42 combined MMPI and IPI variables were analyzed with job performance, using separate samples of police and correctional officers. The six resulting omnibus measures are presented in Table 5 and were used to address the first four (4) hypotheses.

Table 5
Hotelling's T Results

	Value	Approx F	Hypoth d.f.	Error d.f.	Sign of F
Police					
MMPI	.52	1.09	45	284	.33
IPI	1.10	1.12	81	248	.25
Combined	2.07	1.11	126	203	.25
Corrections					
MMPI	.27	1.24	45	617	.14
IPI	.71	1.69	81	581	<.001
Combined	.98	1.40	126	540	<.001

As may be seen in Table 5, there was no significant overall relationship observed between the 15 MMPI scales and job performance of the road patrol sample (.52, F=1.09, p=.33). Similarly, no significant overall differences were

job performance of the road patrol officers (1.10, F=1.12. p=.25). Combined, the two inventories were not significant (2.07, F=1.11, p=.25).

Regarding the job performance of the correctional sample, again no overall group differences were observed using the 15 MMPI variables (.27, F=1.24, p=.14). A significant overall difference was observed between the four groups of correctional officers using the 27 IPI scales, however (.71, F=2.23, p<.001). The 42 combined MMPI and IPI variables were also significant (.98, F=1.40, p<.001).

Follow-up univariate F tests were next conducted on the 27 IPI variables; significant (<.05) differences were observed on ten of the IPI scales and are presented in Table 6. Follow-up univariate measures of the 15 MMPI variables (in the combined 42 variable model) were not significantly different between the groups of correctional officers.

Discriminant Analyses. Finally, Hypothesis 5 was concerned with the interaction among the significant variables with respect to job performance of a) police officers and b) correctional officers. As results on Hypotheses 1 and 2 were not significant, the conclusion was that there was no significant variable interaction between job performance of road patrol officers using either the MMPI or IPI scales.

Given that ten IPI scales were found to be significantly different between the groups of correctional officers (Hypothesis 4), these scales were introduced into a reduced model

Table 6
Significant IPI Univariate Results: Correctional Officers

	IPI Scale x Performance Group mean (standard deviation)					
	1 Exemplary	2 Acceptable	3 Dropout	4 Failure	F	p
Critical Items	6.61 (4.67)	5.08 (5.86)	4.15 (3.74)	6.31 (4.80)	4.04	.00
Guardedness (GD)	7.68 (3.77)	8.64 (3.94)	8.84 (3.46)	10.45 (4.08)	4.25	.00
Job Difficulty (JD)	2.78 (1.93	3.11 (2.05)	2.12 (1.94)	3.07 (1.69)	3.02	.031
Substance Abuse (SA)	3.64 (2.18)	3.83 (2.55)	4.21 (2.59)	5.21 (2.47)	3.31	.021
Antisocial Attitudes (AS)	4.97 (2.63)	5.81 (3.33)	5.57 (3.04)	7.28 (2.72)	4.78	.003
Hyperactivity (HP)	8.50 (4.10)	8.64 (5.55)	9.29 (4.90)	11.55 (4.30)	3.38	.019
Rigid Type (RT)	6.23 (2.28)	6.83 (2.42)	6.34 (2.32)	7.62 (2.26)	3.04	.030
Unusual Experiences (UE)	1.21 (1.25)	1.33 (1.55)	1.31 (1.32)	2.07 (1.53)	2.74	.044
Undue Suspiciousness (US)	3.63 (2.50)	4.22 (2.80)	3.82 (2.92)	5.45 (3.15)	3.36	.020
Family Conflicts (FC)	1.83 (1.57)	2.89 (2.62)	2.65 (2.51)	2.62 (1.95)	3.25	.023

d.f. 3,221

discriminant analysis to determine the contributions of the individual variables and their values, with results presented in Table 7. Next, seven of these variables were introduced into a stepwise discriminant analysis (using Rao's V criteria). These seven were chosen due to their contribution to optimal separation of the groups. IPI scales RT (Rigid Type), UE (Unusual Experiences) and US (Undue Suspiciousness) were excluded from these analyses due to their lack of additive value. The reduced model is presented in Table 8.

Table 7
Reduced Model Discriminant Function Coefficients

IPI Variable	Function 1	Function 2
Critical Items	-.59	-.48
Guardedness (GD)	.58	-.52
Job Difficulties (JD)	-.19	-.65
Substance Abuse (SA)	.51	.38
Antisocial Attitudes (AS)	.13	-.14
Hyperactivity (HP)	.33	-.44
Rigid Type (RT)	-.06	.06
Unusual Experience (UE)	.20	-.17
Undue Suspiciousness (US)	.05	-.13
Family Conflicts (FC)	.18	.58

Two significant reduced stepwise discriminant functions, presented in Table 9, indicate that the seven IPI variables contributed to two discriminant functions in their ability to classify the correctional officer sample. Finally, the derived discriminant functions were found to be successful in classifying 53.33 percent of the correctional cases, as shown in Table 10.

Table 8
Rao's V Canonical Discriminant Function Coefficients

IPI Variable	Function 1	Function 2
Critical Items	-.57843	.48925
Guardedness (GD)	.57801	.57475
Job Difficulties (JD)	-.18254	.69884
Substance Abuse (SA)	.50588	-.40378
Antisocial Attitudes (AS)	.21236	.29807
Hyperactivity (HP)	.28576	.44570
Family Conflicts (FC)	.24730	-.52766

DISCUSSION

As seen in the previous section, significant between-group differences were observed only with the IPI and the correctional sample. The MMPI was not found to significantly differentiate between performance groups of either correctional or road patrol officers. Likewise, significant findings with the combined MMPI and IPI model were found to be due to the contribution of the IPI variables. Significant differences between the four correctional officer performance groups were found on IPI

Table 9
Rao's V Stepwise Discriminant Model Results

Function	Eigen value	% Variance	Wilks Lambda	d.f.	p
1	.21	58.75	.72	21	<.001
2	.11	30.13	.87	12	.002
3	.21	11.12	.96	5	.13

Difficulties (JD), Substance Abuse (SA), Antisocial Attitudes (AS), Hyperactivity (HP), Rigid Type (RT), Unusual Experiences (UE), Undue Suspiciousness (US), Family Conflicts (FC) and the critical items score. Generally, the correctional officer Failure group (4) scored higher than the others on these scales.

Table 10
Discriminant Model Classification Results

Actual Group	Number of Cases	Predicted Group n (%)			
		1	2	3	4
Exemplary (1)	92	62 (67.4)	5 (5.4)	13 (14.1)	12 (13.0)
Acceptable (2)	36	8 (22.2)	12 (33.3)	7 (19.4)	9 (25.0)
Dropout (3)	68	26 (38.2)	4 (5.9)	26 (38.2)	12 (17.6)
Failure (4)	29	3 (10.3)	2 (6.9)	4 (13.8)	20 (69.0)
Total n	225				
Percent of Grouped Cases Correctly Classified: 53.33%					

It is important to note, however, that differing responses on only one or two items may lead to significant between-group differences on scales FC, JD and UE, leaving validity and reliability questions open in their use in employee selection. With this in mind, current significant findings on IPI scales JD, AS, HP, RT and UE are consistent with significant findings reported in previous IPI validation efforts. Of these, RT, UE and US were not found to contribute additively to the stepwise discriminant functions.

The two derived functions were found to be significant at the .05 level and were able to explain 88.88 percent of the variance observed. The functions shared information provided by the Guardedness (GD) scale, which weighed heavily in both functions and is the major validity indicator. The unique contributions are discussed below.

Function 1 accounted for 58.75 percent of the variance and was largely composed of the Substance Abuse (SA) and critical items scores. Interpretation of this function is made difficult by the presumed variety of the critical items, and might best be described as a "Red Flag" model. Correctional administrators would likely concur that officers should be substance free and relatively free of behavior making up critical items to reduce the likelihood of manipulative or dangerous situations.

Function 2 contributed an additional 30.13 percent of the explained variance and was made up of IPI scales FC (Family Conflicts), HP (Hyperactivity), JD (Job Difficulties) and AS (Antisocial Attitudes). Together these scales may represent "Conflict" and make compliance with the para-military structure of the correctional agency difficult. Hence these correctional officers may have difficulty complying with rules and regulations or in their interpersonal relationships.

Regarding the classification of the correctional officers using the discriminant functions derived from the seven IPI variables, it was found that 53.33 percent of the officers were correctly placed in the four groups. More importantly, however, the IPI was found to be especially accurate in classifying to groups 1 (Exemplary;

67.4 percent) and 4 (Failure; 69 percent). These are the problem free officers of at least twelve months (Exemplary) and those who were terminated or forced to resign due to improper behavior or serious disciplinary infractions. Identification of the Failure group is theoretically essential to minimizing the "high visibility" negative events some officers may engage in.

Given the theoretical make-up of groups 2 (Acceptable) and 3 (Dropout), it is not surprising that classification was less accurate (33.3 and 38.2 percent, respectively). Recalling that group 2 subjects had no serious misconduct while employed, these officers would likely pose little risk to the safety of the institution, staff or inmates. Likewise Dropouts (3) had resigned without disciplinary infractions and could be re-hired. Their reasons for leaving a seemingly successful position are difficult to predict, and would be interesting further study.

Several issues are raised in the current study. It is clear that the MMPI was not successful in predicting job performance of road patrol or correctional officers. This could be due to an inherent validity problem (possibly due to a "curvilinear" relationship of both high and low scores being related to job performance) or a criterion problem.

On the other hand, the IPI was successful in predicting performance of correctional, but not police, officers. Several explanations are again possible; perhaps the use of either inventory is invalid with road patrol officers, as some previous studies suggest. However, without any way of knowing how the "Not Hired" group might have performed, it is premature to discount the inventories as useless. On the contrary, the instruments may successfully screen out a large percentage of potential Failures.

Because the IPI was successful in predicting the correctional sample, it is possible that the failure of the IPI with the road patrol sample was due to a criterion deficiency, indicating the need for unique criterion measures for the occupations. This would seem to indicate a validity problem in using the MMPI with correctional officers, although this question cannot be sufficiently addressed unless a long-term study in which all officers are hired, regardless of test results.

Given that the goal of most criminal justice agencies is to typically "screen out" potential problem employees, the IPI in the current study seems to be quite effective with this correctional sample, although future researchers may wish to consider unique criterion measures for road patrol officers. Further, the current study provides support for the need for long-term investigations (i.e., over one year) due to the homogeneity of officers employed less than one year.

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An Analysis of Differences in Role Perceptions Among Senior Patrol Officers and Campus Judicial Officers in Selected Public Higher Education Institutions in the United States

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INTRODUCTION

Campus police/public safety officers, like officers of the law in any state, county, or municipal agency, exercise a certain amount of discretion in deciding what course of action is to be followed in enforcing the law (Banton, 1964; Reiss 1971; Teasley, 1973). The disposition of offenders however, may differ in a campus setting because of the unique nature of the population served, and the interests and expectations of the institution (Meadows, 1982). According to Bordner and Petersen (1983), "university administrators assume a proprietary responsibility for institutional members and, thus, encourage a discretionary, non-punitive approach to policing" (p.209). For example, policies have been established at most institutions for handling student conduct issues as an alternative to formal criminal charges. Although this practice is very common in institutions of higher learning across the nation, many would argue that assuming a posture of differential law enforcement on a campus places a limit on the officers' authority and creates role ambituity and a resultant feelin of frustration (Bordner & Petersen, 1983; Powell, 1981; Rousch, 1981).

The purpose of this study was to determine whether differences exist in the attitudes of senior patrol officers and campus judicial officers regarding the role of campus police/public safety. The role perceptions of senior patrol officers and campus judicial officers at selected public higher education institutions of the United State were assessed through the use of a survey instrument containing questions and several case scenarios. This study was directed by the following research questions:

1. What are the perceptions of senior patrol officers and campus judicial officers regarding the role of campus police/public safety relative to the service versus law enforcement

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orientation?

2. What are the demographic correlates of variations in perceptions?

3. Do significant differences exist in the perceptions of senior patrol officers and campus judicial officers relative to the service versus law enforcement function?

METHOD

Population

Four-year public research and doctoral-granting institutions of higher learning with an enrollment of 10,000 or more students was the focus of the study. Institutions of this classification became the unit of study for this research because of their relatively homogenous nature as classified by the Carnegie Commission (1976). Institutions of this size generally employ their own campus law enforcement department and also have an established position responsible for student conduct. This study was limited to those institutions that were members of the International Association of Campus Law Enforcement Administrators (IACLEA) during the calendar year of 1990-1991. According to the bylaws of IACLEA, membership in this association endorses the promotion of "professional ideals and standards so as to better serve the educational objectives of institutions of higher education (p. 104)." The criteria for membership also stipulates the member institution must "provide its own functional, administrative organization to care for its needs involving law enforcement" on campus (p. 104). These criteria were advantageous to this study because members have established their commitment to upholding the mission of the institution and they constitute one identifiable group. The researcher secured the endorsement of IACLEA and the Association of Student Judicial Affairs (ASJA) to encourage a high participation rate. Seventy-nine institutions were included under these guidelines. These institutions enroll approximately 1,800,600 students in 39 states.

The sampling procedure included the use of a survey questionnaire. A perceptual survey was administrated to three senior patrol officers and the campus judicial officer on each campus. Police organizations in general are described as bureaucratic with a formalized hierarchy. The senior patrol officer position was chosen as the position to study because this position assumes the responsibility of making the decisions regarding the means of adjudication of incidents in the field. The captain, lieutenant, sergeant or corporal positions are the positions charged with this responsibility as they are generally assumed by more seasoned officers.

The researcher received 260 returned questionnaires from the total of 316 questionnaires mailed, yielding an overall rate of return of 82.3 percent. Of this total, 184 of the returned questionnaires were from senior patrol officers, and 76 were from campus judicial officers. Three of the returned questionnaires from senior patrol officers were not included in the

data analysis because they were returned after the established cut-off data. The usable responses therefore consisted of a total of 257 questionnaires, of which 181 were from senior patrol officers, and 76 were from campus judicial officers.

Dillman's Total Design Method was used as a guide for survey construction and mail processing (Dillman, 1978). The survey consisted of a modified version of a questionnaire that was developed and validated by James Allen Telb (1980) and later used by Robert J. Meadows (1982) and William David Nichols (1985). The researcher requested the permission of the original author of the instrument to utilize the instrument with modification to fit the needs of this particular study. Since the modification of the instrument was drastic, efforts were made to validate it. Content validity was established by: (1) asking the central staff of the Division of Housing at the University of Florida to critique it, (2) asking members of the executive board of ASJA to critique it, and (3) pretesting the instrument with three senior patrol officers from the University of Florida Police Department. The purpose of these three steps was to review for correct spelling, grammar, readability and content validity. All feedback was carefully considered and changes were made accordingly. According to Babbie, "any members of the population under study or any persons similar to that population may serve as pretest subjects" (1970:207). Dillman (1978), notes that three types of people should be utilized in the pre-test step of questionnaire design. The first group is a group of colleagues, the second is a group of potential "users" of the data, and the third group includes individuals drawn from the population under study.

Reliability was established using the Cronbach Alpha formula (MacMillan & Schumacher, 1984). Questions were assigned a label of law enforcement or service for analysis purposes. In applying the Cronbach Alpha test, internal consistency is measured by the use of a split-half correlation in which the questionnaire is divided into two subsets (Borg and Gall, 1983). A logical division of the questionnaire for the purpose of this study was a division between the role criterion (questions 1-16) and the behavior criterion (questions 17-26) with their respective labels as noted above. The role items revealed a coefficient of internal consistency of .72 and the behavior items a .79.

Analysis and Results

Research question one. In examining the frequencies, means, standard deviations, and t values for all of the questions in the survey, the data indicated that senior patrol officers and campus judicial officers appear to vary in their perception of the role of campus police/public safety relative to the law enforcement versus service orientation. When tetests were applied to the 26 questions, 21 of the 26 questions yielded significant values indicating possible differences between the means of the two groups for individual questions.

Research question two. The

demographic variables of size of institution, rank, age, gender, length of time employed as a campus law enforcement officer, prior employment experience, total number of years in law enforcement, previous experience in military, training, and educational level were analyzed for senior patrol officers. The same demographic variables were analyzed for campus judicial officers with title substituted for rank, length of time employed as a judicial officer substituted for campus law enforcement officer, total number of years in student affairs substituted for years in law enforcement, and the training variable was excluded. Several analyses were undertaken to accommodate the differing types of data. The variables of age, size of institution, length of time employed as a campus law enforcement officer/campus judicial officer, total years in law enforcement/student affairs, and level of education were considered to be ordinal or interval data. Therefore, the application of a regression analysis was appropriate to determine if there was a relationship between these variables and the respondents preference towards the law enforcement versus service orientation. The results are indicated in Table 1. Significance was based on the Critical Values for Pearson's Product-Moment Correlation (r) Table (Best & Kahn, 1986, p.342) at an alpha level=.05 for n=200. Age, time employed as a campus law enforcement/campus judicial officer, and education showed a degree of interaction. Age showed a weak but positive relationship to role criterion items, indicating that the younger professional favored the law enforcement orientation. A weak but negative relationship existed between time employed in the profession and role and behavior criterion items. As time employed in the profession increased in a negative direction, the law enforcement orientation decreased. A strong positive relationship existed between education and role criterion items, and a weak but negative relationship existed between the behavior criterion items. As the level of education increased, so did the mean of the group towards the service orientation.

Table 1
Regression Analysis for Demographic Variables

Variable		r	r^2	Signif.
Age	R	.18761	.03520	.0030*
	B	.00611	.00004	.9237
Size of Institution	R	.06933	.00489	.2736
	B	.03265	.00107	.6096
Time Employed	R	-.15871	.02519	.0132*
	B	.18174	.03303	.0046*
Total Years	R	.06972	.00486	.2780
	B	.07062	.00499	.2719
Education	R	.37493	.14057	.0000*
	B	-.18681	.03490	.0033*

R = role criterion, B = behavior criterion, * = significant at 0.05

The variables of gender, previous experience in the military, prior employment experience, and attendance at the police academy

constituted categorical or nominal data. Therefore, the application of the Chi-Square test was appropriate. The data is reported in Table 2. Gender was the only variable that showed a relationship to the law enforcement versus security orientation. Females tended to favor the service orientation of the behavior criterion items.

Table 2
Chi-Square Values Analysis for Demographic Variables

Variable		d.f.	n	χ^2
Gender	R	1	249	.64670
	B	1	249	5.95338*
Military Experience	R	1	246	.45143
	B	1	246	3.70854
Law Enforcement Experience	R	1	177	.02742
	B	1	175	.69760
SA Experience	R	1	71	.0000
	B	1	73	.12094
Police Academy	R	1	176	2.73199
	B	1	174	.00998

R = role criterion, B = behavior criterion, * significant for $p < 0.05$

Research question three. T-tests were computed to determine if significant differences existed between the two sample means of senior patrol officers and campus judicial officers as groups. The data indicated that a significant difference existed between the two sample means of senior patrol officers and campus judicial officers for both role and behavior criterion items. Senior patrol officers supported the law enforcement orientation for role items, and campus judicial officers favored the law enforcement orientation for behavior items.

CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

The modern college and university community demands multiple serves from a professional campus police force. The individual officer who perceives his/her role to be more law enforcement oriented than service oriented, may have a difficult time in meeting the demands of this diversified community. The interpersonal relationships between officers and the community may be jeopardized when officers appear to have an inconsistent approach to their role, as perceived by other constituents of the community. The following guidelines have emerged from this study:

1. Beginning with the initial inquiry by potential applicants for a position with a department of campus police/public safety, it may be valuable for the institution to provide accurate information which clearly defines departmental and university philosophy and the uniqueness of the population to be served.

2. In the recruitment process, it may be valuable for departments to actively recruit a diverse staff of campus police/public safety officers. Diversity should be reflected in the area of gender, and should accurately represent the population served.

3. Departments may want to actively recruit applicants with advanced degrees, or applicants who

have the desire to further their education. They may also want to be supportive of the individual who actively furthers his/her education while employed.

4. If the orientation of the institution is towards service, it may be valuable for younger recruits who are fresh out of the police academy to receive additional specialized training in courses pertaining to human development and student development theory.

5. It may be of value for departments to conduct an annual review of their operational procedures including all policies, programs, and practices to ensure that they are effectively serving the university community.

6. Officers and administrators are encouraged to jointly attend periodic in-service training programs to provide for opportunities for continuous dialogue and involvement.

7. If departments of campus police/public safety tend to be image conscious, efforts to recognize and reward campus police/public safety departments for the job they do may be valuable. Raising morale may have a positive effect on overall university relations, and the retention, and recruitment of officers.

8. It appears that basic training in the police academy and other specialized programs may need to be reviewed. If training is misdirected, then it should be amended to fit the specialized needs of a university setting.

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An Analysis of Factors Influencing Probation Outcome

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THE PROBLEM

For much of correctional history, there has been reliance upon various programs designed to serve as alternatives to incarceration. Probation has been and continues to be used as an alternative to corrections. Recent statistics published by the Department of Justice (1990) indicate that in December, 1990, there were approximately three million offenders under federal and state probation supervision with 83% of the total under active supervision. Petersilia (1985) estimates that between 60% and 80% of all convicted criminals are sentenced to probation. Despite the proliferation of intermediate punishments such as intensive probation, home confinement and electronic surveillance, probation has survived as a sentencing alternative.

Although used extensively, probation has been the center of much controversy and criticism for its failure to rehabilitate and deter offenders placed under the supervision of probation departments. Many studies have shown that the failure rate for probationers under supervision is high. Tippman (1976), who studied 790 male felons, found the failure rate to be 40%. Rogers (1981), with a sample of 1,014 probationers, concluded that 60% of those placed under probation supervision fail. Many studies have cited such factors as age, gender, employment, educational attainment and marital stability as related to probation success or failure. Roundtree (1984) and Tippman (1976) found prior criminal record to be the most significant predictor of probation outcome. Other studies have identified probation supervision variables including the length of sentence and types of conditions assessed as being predictors of probation outcome.

The Present Study

The present study was prompted by two major concerns: the continuing and widespread use of probation as a sentencing alternative, and the paucity of research devoted to the examination of probation effectiveness.

The focus of this study has been to identify factors related to the success

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or failure of probationers while under probation supervision. Efforts were made to determine if significant relationships exist between: (1) offender characteristics and probation outcome; (2) prior criminal record and probation outcome; or (3) probation sentence characteristics and probation outcome. Offender characteristic variables refer to those sociodemographic characteristics of probationers including age, gender, marital status, employment status, hourly wage, educational status, and race. Prior criminal record variables include prior misdemeanor and felony convictions, prior juvenile or adult probation sentences, and previous institutional commitments. Probation sentence variables include conviction offense, length of probation term, supervision level at the time of termination and behavioral and financial conditions of probation. Therefore, this study attempted to identify variables most significantly related to the success or failure of those under probation supervision.

Discussion of Variables Used in the Study

Offender Characteristic Variables: the sociodemographic variables gender, age, marital status, educational attainment and race.

With the variable, **gender**, empirical evidence indicates that females have lower violation and revocation rates and are more successful under probation supervision. Hirschi (1969) contends that females are more attached and less likely to deviate. Because of the greater attachment to conventional society and more sensitivity to the opinions of others, females are not as likely as males to deviate from conventional norms. Empirical evidence has also shown that females perform better under probation supervision and have more successful outcomes. Davis (1964), Wisconsin Department of Corrections (1972), and Frease (1964) all concluded that females are more successful under probation supervision than males. Norland and Munn (1984) found that female probationers have lower violation and revocation rates with a majority of violations by female offenders being technical or the violation of some administrative rule (failure to report, failure to pay assessed fees).

There is much empirical support for the association of **age** with probation outcome. With age as a predictor of probation outcome, most studies have concluded that older offenders are often more successful under probation supervision than younger ones (England, 1955; Caldwell, 1951; Davis, 1964; Kusuda, 1976; McCarthy and Langworthy 1988). Petersilia (1985) found that probationers between the ages of 26 and 30 are less likely to recidivate and older offenders are less likely to be reconvicted for property offenses. Only one study (Menard and Covey, 1983) found that age was not significantly related to probation outcome.

Numerous studies have shown the existence of a relationship between **marital status** and probation outcome. These studies have shown a stable marriage as being a significant factor

associated with probation success (Landis, 1969; Frease, 1964; Kusuda, 1976; Missouri Department of Corrections, 1976) Landis (1969) attributed the probation success of married offenders to the stability and "settling down" effect resulting from family life.

Educational attainment has also been shown by research to be significantly related to probation outcome. The empirical evidence offered by Frease, 1964, Landis, 1969 Petersilia, 1985, and the Missouri Department of Corrections suggests that the higher the educational attainment, the lower the possibility of failure. Lower educational attainment is likely to result in fewer "stakes in conformity".

In traditional criminological theory, the variable **race** has always been associated with serious persistent criminal conduct. However, the data seem to be ambigious in explaining the relationship between race and performance under probation supervision. Some studies conclude that there is no major difference between the races regarding probation performance; while some indicate that there are significant racial differences especially between blacks and other groups. Other studies infer that being non-black or non-minority improves the chances of probation success (Irish, 1977). Petersilia (1985) found that when predicting probation success or failure, the variable race contributed nothing to the model. Other research has also found no significant racial differences between probation successes and failures (Landis, 1969). Davis (1964) concluded that being in a racial group other than "white" significantly increases the chances of probation and post-probation failure as measured by revocations and reconvictions.

There is much evidence to support the importance of **employment** as a predictor of probation outcome (Kusuda, 1976; Caldwell, 1951; Landis, 1969; Wisconsin Department of Corrections, 1972; and Petersilia, 1985). Still other evidence (Caldwell; 1951; England, 1955) refers to low socioeconomic status as being related to probation failure.

Prior Criminal History: includes prior probation, prior incareration, and the number of felony commitments.

Many studies and prediction instruments have used prior criminal history as a significant factor in predicting probation outcome. In their study of a group of Wisconsin adult probationers, Gillin and Hill (1940) found that prior arrests and juvenile criminal history were significantly related to probation failure. Other research has also concluded that there exists a significant relationship between probation failure and prior criminal history (Caldwell, 1955; England, 1955; Davis, 1955; Frease, 1964; Landis, 1969; Irish, 1972; Irish, 1977; Missouri Division of Probation and Parole, 1976). Petersilia (1987) concluded that the greater the number of convictions, the higher the probability of failure. Scott and Carey (1983) suggested that prior incarcerations were likely to result in probation failure; while prior convictions showed no significant relationship to probation outcome. Bartell (1977) found that prior arrests

for burglary serve as one of the best predictors of probation failure.

Probation Sentence Variables: includes conviction offense and sentence length. Past research indicates that they are significant in explaining probation outcome. Prior research has shown a relationship between property offending and recidivism; property offenders are more likely to recidivate. Likewise, research examining probation outcome has indicated higher probabilities of failure for property offenders. In comparing property and violent offenders who were on probation, Holt and Beckett (1982) concluded that failure among nonviolent property offenders is more common. They suggested that whereas a violent act represents a transitory psychological state and is usually a one time occurrence, persistent nonviolent property offending is an indicator of a propensity for criminality. Petersilia (1987) concluded that property offenders are more likely to fail. Property offenders tend to be arrested more quickly than violent offenders - usually within five months of being placed under probation supervision. Cuniff (1986) reported that those probationers convicted of burglary, a property offense, had the highest rearrest rate with the new offense often being for another burglary. Bartell (1977) concluded that one of the best predictors of probation failure is the number of prior arrests for burglary.

The length of the probation sentence influences probation outcome. Some studies have reported that the longer the probation sentence, the greater the likelihood of probation failure. As probation sentence length increased up to five years, probabilities of success increased with each year. After five years, the success rate steadily declined. (Frease, 1964; Landis, 1969; Renner, 1978).

Research Hypotheses

The present study has attempted to identify factors influencing probation outcome. Relationships between offender characteristics and probation outcome; prior criminal history and probation outcome; and probation sentence characteristics and probation outcome.

- Hypothesis 1: Females will experience more success on probation than males.
- Hypothesis 2: As age increases, the likelihood of probation success increases.
- Hypothesis 3: Married offenders will have more success on probation than unmarried probationers.
- Hypothesis 4: The higher the educational attainment, the greater the likelihood of probation success.
- Hypothesis 5: Whites are more likely to be successful than blacks.
- Hypothesis 6: Being employed increases the likelihood of probation success.
- Hypothesis 7: The higher the hourly wage, the greater the likelihood of probation success.
- Hypothesis 8: The greater the number of felony commitments, the lower the probation success rate.
- Hypothesis 9: Probationers with prior probation experience will be less likely

to succeed on probation.
- Hypothesis 10: Probationers with prior institutional commitments are less likely to succeed on probation.
- Hypothesis 11: Probationers convicted of property offenses are more likely to experience probation failure than offenders convicted of other crimes.
- Hypothesis 12: The longer the probation sentence the greater the likelihood of probation failure.

RESEARCH METHODS AND PROCEDURES

Study Population and Sample

The population for the study consisted of convicted adult felony probationers in the Southeast Region of Tennessee whose probation cases were terminated in the period January 1, 1980 through December 31, 1989. This Southeast Region encompasses six counties: Hamilton, Bledsoe, Sequatchie, Bradley, Grundy and Marion.

The study population consisted of 2508 adult felony probationers who had been given probation terms of two years or more and whose cases had been terminated in the specified time period by completion of the probation term, revocation or administrative closure. Administrative closure occurs when the supervising officer terminates supervision of the case because the probationer has died, absconded, or has been sentenced for another offense within the jurisdiction or in another jurisdiction. In the present study, death cases are excluded; but absconders and those sentenced for new offenses are counted as probation failures.

A random sample of 350 cases was drawn from the population. Because of lost files; files whose last names differed from those on the reference cards; cases closed because of death; and cases actually terminated prior to 1980, 266 (N=266; 75% of the original sample) probationers make up the final sample used for the study. A majority of the 25% of the cases not included in the final sample were lost or misplaced case files.

Data Collection

The test instrument was divided into five sections: Personal Data; Prior Criminal History; Probation Sentence; Probation Adjustment; and Probation Outcome. For the 266 subjects selected for the study, closed case files were used to secure the information needed for the study. Information was transferred from the case files to the data-gathering instrument. There was no direct contact with the probationers.

FINDINGS

Bivariate Analysis

On the bivariate level, Chi-square was used to determine if relationships between the dependent variable, probation outcome, which was measured by success or failure, and selected independent variables were statistically significant at the .05 probability level (see Table 1).

Offender Characteristics. With regards to offender characteristics, data indicated that significant relationships

Table 1
Chi-Square Values for Independent Variables and the Dependent Variable PROBATION OUTCOME

Independent Variables	Chi-Square Values		Statistical Significance (p<.05)
Gender	5.37	d.f.=1	Significant
Age	6.19	d.f.=3	Not Significant
Marital Status	13.83	d.f.=1	Significant
Education	6.45	d.f.=3	Significant
Race	2.85	d.f.=1	Not Significant
Employment	43.46	d.f.=1	Significant
Hourly Wage	47.51	d.f.=2	Significant
Prior Felonies	24.70	d.f.=2	Significant
Prior Probation	15.70	d.f.=1	Significant
Prior Institutional	17.05	d.f.=1	Significant
Conviction Offense	5.47	d.f.=2	Not Significant
Length of Sentence	3.59	d.f.=1	Significant

existed between the variables marital status, gender, employment status, hourly wage, educational attainment and the dependent variable, probation outcome. Not surprisingly, males were more likely to experience probation failure than females (35% versus 19% respectively: Chi-Square = 5.37, df=1, p=.05). Those probationers who were not married which included the single, never married; and the divorced had higher failure rates than those who were married (37% versus 15%: Chi-Square = 13.83, df=1, p=.05) indicating that stability and commitment to family are possible related to conformity. Likewise, the data also indicate that those who were unemployed (49%), failed to complete high school (35%), and had a lower income (26%) had higher failure rates. These findings support the fact that when individuals have more to lose and a greater stake in conformity, the likelihood of deviation diminishes.

Prior Criminal Record. The data showed that prior criminal history significantly affects probation outcome. The data showed that probationers with three or more prior felony commitments were more likely to fail than those with none or 1-2 prior felonies (58% versus 20% and 37% respectively: Chi-Square = 24.7, df=2, p=.05)). Each felony commitment increases the likelihood of failure (None - 20%; 1-2 - 37%). Those who had prior juvenile or adult probation sentences (50%, Chi-Square = 15.70, df=1, p=.05) and those with previous incarceration terms (47%, Chi-Square = 17.05; df=1, p=.05) are more likely to experience probation failure.

Probation Sentence. Regarding variables related to the probation sentence -- conviction offense and sentence length -- the data supported only the hypothesis which predicted a relationship between sentence length and probation outcome. Probationers receiving probation terms of more than five years (> 5) had slightly higher failure rates than those given sentences of five years or less (39% versus 27%: Chi-Square = 3.59, df=1, p=.05). Although the relationship between conviction offense and probation outcome was not statistically significant, the data did go in the predicted direction. Property offenders

had higher failure rates (35%) than violent offenders (28%) or public order criminal offenders (6%).

Multivariate Analysis: The Logit Model

Because the dependent variable probation outcome is dichotomous and consists of only two categories -- success and failure, the use of Ordinary Least Squares regression is inappropriate because it would yield misleading estimates. Therefore, the logit model is used in the present study to determine the relationship between probation outcome and a group of independent variables.

The full logit model contained all of the variables used in the bivariate analysis. With the exception of age, race and conviction offense, all of the variables in the full model were statistically significant in the bivariate analysis. All of the relationships including those which were not statistically significant went in the predicted direction.

T-ratios were used to determine the statistical significance of the logit coefficients. The computed T-ratio was compared with the critical value of 1.96 (.05 probability level) to determine the significance of the coefficient. The logit coefficients represent the odds of an individual failing under probation supervision given a particular independent variable. This is represented by the equation:

$$\text{odds(failure)} = \frac{P}{1 - P}$$

These values are indirect probabilities. In order to determine the probability that probation outcome will be failure, i.e., Pr(Y = 1), another equation will be used:

$$Pr(Y = 1) = \frac{e^x}{1 + e^x}$$

where e is the base of the natural logarithm with a value of 2.718. It is raised to the power of the odds coefficient as represented by x. The result of the computation represents the probability of failure given a particular independent variable. As a result, the interpretation of the coefficients for logistic regression is similar to that for linear regression. Although less straightforward, the interpretation states that "with a unit's increase or decrease in the value of x, the probability of failure increases or decreases by the computed value of Pr(Y = 1)". In interpretation, the computed value bears the same positive or negative sign as the logit coefficient (x) (Aldrich and Nelson, 1984:32-35).

To determine the fit of the model, logit and probit do not have the R-Square as OLS regression. However, there are measures "in the spirit of the R-Square" which can be considered. A measure proposed by Aldrich and Nelson is a Psuedo R-Square which is computed by taking the Chi square statistic that measures the overall fit of the model and dividing it by the Chi-Square statistic added to the sample size.

Pseudo R-Square = C/(C + N),

where

C is the Chi-square statistic
N is the sample size

The value ranges from 0 to 1 with zero showing evidence of poor fit and one indicating good fit. Aldrich and Nelson (1984:57) caution that care must be exercised when using this statistic because it is not universally used or accepted. The advantages of this statistic are that it is easily computed from data given in the computer output and it ranges between zero and one "approaching zero as the quality of the fit diminishes and 1 as it improves" (Aldrich and Nelson:1984:57).

Table 2 presents the results of the first logit model containing twelve variables. Coefficients for the variables sex, hourly wage and employment status are significant leading to the conclusion that those who are female, full-time employed and making minimum wage or above have a better chance of succeeding on probation. These variables are the only ones that are significant at the .05 level (1.96). The coefficients for variables marital status and probation sentence length are just below this significance level. The Pseudo R^2 of .48 indicates that the fit of the model to the data is not very good.

The second model was estimated with ten variables, excluding age and race whose coefficients continued to be statistically insignificant. Table 3 gives the results which indicate that sex, employment status, and hourly wage were still the only variables in the model whose coefficients were statistically significant. Marital status remains slightly below the significance level of 1.96. Correlation coefficients showed that employment status and hourly wage (.91) and prior felonies and prior probation (.54) were highly correlated. Results also showed that the fit of the model has not significantly improved (P-suedo R^2 = .48).

The third model is presented in Table 4. It was estimated with six variables: sex, employment status, education, marital status, prior felonies and conviction offense. Hourly wage and prior probation were deleted because of being highly correlated with other predictors in the model. Hourly wage was the less significant of the two correlated variables (employment status and hourly wage). In the bivariate analysis, prior probation had a weaker association with the dependent variable; therefore, it was dropped from the model. Prior institutional commitment was deleted because of its consistently low level of significance in all of the models. Results in Model 3 showed that sex, marital status, employment status, and prior felonies were statistically significant; conviction offense was slightly below the significance level. The fit of the model has improved as the Pseudo R-Square approaches a value of 1 (.5311).

In the final model, the most statistically insignificant variables were deleted from the model, education (1.70311) and probation sentence length (1.74031). The model was reestimated

Table 2
Logit Estimates for Felony Probationers Terminated from Probation Between 1980 and 1989
FULL MODEL

Variable	Coefficient (P/1 - P)	Standard Error	T-Ratio	P(Y=1)
Sex	-.53871	.21615	-2.49235	.3685
Race	.01603	.19383	.08269	.5040
Age	-.10734	.10477	-1.02456	.4732
Employment Status	2.04553	.50281	4.06819	.8854
Hourly Wage	-.74161	.31892	2.32539	.3226
Education	-.24931	.14833	-1.68078	.4380
Marital Status	.40003	.21751	1.83912	.5986
Prior Probation	.24588	.24432	1.00640	.5611
Prior Institutional	.09701	.22910	.42342	.5242
Prior Felonies	.14242	.17531	.81238	.5355
Conviction Offense	-.16001	.14428	-1.10901	.4600
Probation Sentence Length	.35132	.18925	1.85618	.5869
Constant	2.71782	.69289		
PEARSON GOODNESS-OF-FIT				250.805
PSEUDO R-Squared				.4852

Table 3
Logit Estimates for Felony Probationers Terminated from Probation Between 1980 and 1989
MODEL 2

Variable	Coefficient (P/1 - P)	Standard Error	T-Ratio	P(Y=1)
Sex	-.53525	.21444	-2.49603	.3693
Employment Status	1.98791	.49804	3.99146	.8795
Hourly Wage	-.70470	.31654	-2.22627	.3308
Education	-.24815	.14570	-1.70311	.4383
Marital Status	.40713	.21452	1.89786	.6003
Prior Probation	.25687	.24291	1.05749	.5633
Prior Institutional	.09019	.22699	.39732	.5224
Prior Felonies	.17241	.17172	1.00404	.5430
Conviction Offense	-.20651	.13930	-1.48249	.4485
Probation Sentence	.29102	.18326	1.58796	.5722
Constant	2.56371	.66606		
PEARSON GOODNESS-OF-FIT				252.945
PSEUDO R-Squared				.4874

Table 4
Logit Estimates for Felony Probationers Terminated from Probation Between 1980 and 1989
MODEL 3

Variable	Coefficient (P/1 - P)	Standard Error	T-Ratio	P(Y=1)
Sex	-.46556	.20911	2.22639	.3856
Education	-.24862	.14207	-1.74997	.4381
Marital Status	.46363	.20988	2.20907	.6138
Employment Status	.97057	.18615	5.21383	.7252
Prior Felonies	.34402	.10944	3.14355	.5851
Conviction Offense	-.24535	.13326	1.84118	.4389
Constant	2.89769	.55723		
PEARSON GOODNESS-OF-FIT				284.407
PSEUDO R-Squared				.5311

Table 5
Logit Estimates for Felony Probationers Terminated from Probation Between 1980 and 1989
FINAL MODEL

Variable	Coefficient (P/1 - P)	Standard Error	T-Ratio	P(Y=1)
Sex	-.50575	.20748	-2.43764	.3762
Marital Status	.44278	.20756	2.13324	.6089
Employment Status	1.00143	.18450	5.42771	.7313
Prior Felonies	.35595	.10773	3.30398	.5880
Conviction Offense	-.28476	.12996	-2.19120	.4292
Constant	2.61343	.53237		
PEARSON GOODNESS-OF-FIT				294.194
PSEUDO R-Squared				.5396

with the variables sex, marital status, employment status, prior felonies and conviction offense. Results in Table 5 show that all of the variables are statistically significant at the .05 significance level. According to the final model, the best predictors of probation success are sex, marital status, employment status, prior felony commitments, and the offense for which the individual was placed on probation. Goodness-of-fit statistics indicate that the fit of the model has improved.

Holding other variables constant in the model, a unit change in the variable sex decreases the probability of probation failure, {P(Y=1)}, by .3762. Therefore, the probability of probation success is greater for females than males. This finding is consistent with previous research. A unit change in the variable marital status increases the probability of probation failure by .6089 when other things are held constant in the model. Increased probabilities of probation failure occur when the marital status is single, divorced, or separated. This finding has also been consistent with previous research as well as the findings of the present study. The variable employment status has consistently been correlated to probation outcome both in this study and in previous studies. Holding the effects of other variables constant, the probability of probation failure increases by .7313 with a unit change in work status. If the employment status is less than full time employment, the probability of failure increases. A unit change in the variable prior felony commitments increases the probability of probation failure by .5880 when the effects of other variables are held constant in the model. The final variable in the model is the conviction offense which resulted in probation. When the effects of other variables are held constant in the model, a unit change in the conviction offense decreases the probability of probation failure by 4292. A probationer placed on probation for a violent offense or a public order crime has a better chance of succeeding on probation than the property offender. According to the final model, probationers who are married, employed, with no prior felonies, and are on probation for offenses other than property offenses have a greater probability of succeeding on probation.

Conclusions

The sample under study consisted primarily of males under the age of thirty who were either single or married and lived with family members. The largest percentage of the probationers were unemployed; and over half did not have a high school education. Regarding prior criminal history, over half of the probationers had at least one misdemeanor commitment; while less than fifty percent had previous felony commitments. Small percentages of probationers in the sample had previous probation supervision and institutional commitments.

Over seventy percent of the probationers had been placed on probation for property offenses; and a majority were given sentences of five years or less. Very few were given

behavioral conditions; and when behavioral conditions were assessed, probationers were usually required to attend AA meetings, receive mandatory drug treatment or do community service.

Regarding probation adjustment, many of the probationers in the sample had no misdemeanor or felony arrests or court referrals while under probation supervision. When probationers were arrested, it was usually for a felony offense and court referrals were most often the result of a new arrest violation.

A majority of the probationers in the sample completed probation and were considered probation successes; a smaller percentage were considered failures due to revocation, absconding or being sentenced for another offense. Felony rearrest was the primary reason for revocation with the majority of those revoked being sent to prison. The data also showed that when probationers did commit a new offense, it was usually a property offense.

Confirmation of Hypotheses

The research hypotheses predicted relationships between probation outcome and selected independent variables. For offender characteristics, the data supported predicted significant relationships between probation outcome and the variables gender, marital status, and educational attainment. The data supported hypotheses which predicted that females would have greater success on probation than males; married probationers would be more successful; and the higher the educational attainment the greater the likelihood of probation success. The data supported these hypotheses and showed them to be significantly related to probation outcome. Hypotheses which predicted significant relationships between race and age and probation outcome failed to be supported even though the relationships were in the predicted direction. Consistent with previous research, the data were supportive of hypotheses which predicted that full-time employment and adequate wages would result in probation success. Probationers who were employed either full-time or part-time were more likely to be successful on probation than those who were unemployed.

Regarding prior criminal history, hypotheses which predicted significant relationships between prior criminal history variables and probation outcome were supported as statistically significant by the data. The data not only supported the hypotheses but also demonstrated that prior felonies, prior probation and prior institutional commitments were significantly related to probation failure for they diminish the likelihood of probation success.

The hypothesis which predicted that property offenders would be less likely to experience probation success failed to find support in the data. Even though the data showed that a larger percentage of property offenders fail when compared to other offense categories, the relationship was not statistically significant. The data did support the prediction of a significant relationship between probation

sentence length and probation outcome.

In all of the hypotheses the relationships went in the predicted direction even when they were not statistically significant.

Selection of "Best" Predictors of Probation Outcome. On the multivariate level, there was an attempt to determine the "best" set of predictors of the dependent variable. Using logit regression, several models were estimated. The full model contained the twelve variables used in the bivariate analysis. In each succeeding model, variables were deleted for two reasons: coefficients fell below the significance level (1.96); and correlation coefficients indicated that they were highly correlated with other variables in the model. The final model contained five variables which were all statistically significant and cited as the "best" predictors of probation outcome in the present study. The "best" predictors were sex, marital status, work status, prior felonies, and conviction offense. Goodness-of-fit statistics used in the present study showed that this final model had explanatory and predictive ability.

Discussion. The purpose of this study was to determine factors that influence probation outcome. A major underlying theme of this research and past research has been whether probation as a nonincarcerative alternative is fulfilling its objectives. Recognizing the limitations of past probation research, there is a tremendous need for more empirical investigation of probation as a correctional alternative. Questions which should be addressed by probation research in the future are:

1. To what extent does probation "widen the net" of social control? Blomberg (1980:582), who sees net-widening as increasing the numbers of people subject to some kind of social control makes this observation:

> "The net-widening trend can be associated with a number of turn-of-the-century correctional reforms, including parole, probation and the juvenile court. Since the early nineteenth century, there have been a series of reforms considered as alternatives to imprisonment. Thus, it is not surprising that the history of U.S. correctional reform has consistently resulted in net-widening whereby an increasing proportion of the population has become subject to some form of institutional or community-based control."

2. What can probation do or not do, and for whom does probation work best? Is there a "type" of offender who is likely to benefit most from probation supervision? Although this present study identifies some characteristics associated with success or failure, more research needs to be done in this area.

3. What are unanticipated outcomes of probation supervision?

There are other research questions that can best be answered through evaluation research. Babbie (1964) defines evaluation research as applied research when the primary purpose is to evaluate the impact of some social intervention. Lawrence Bennett (1978) argues that evaluations of correctional programs are very poor. Most program evaluations do not go beyond statistical headcounting,

describing activities or offering subjective opinions of the value of and contributions made by the program usually without supporting evidence. Evaluative research can provide understanding of program outcomes, unanticipated consequences, programs and services and client types. Ultimately, evaluation research can help to "tell the story" of the program.

Practice. In the present study, it seems that probationers who have little commitment to conformity are those who are unemployed. Perceptions of "low stakes in conformity" lead individuals to conclude that there is little to lose. Without employment, conditional freedom is often insufficient to ensure conformity. With the perception that there is little to lose, many offenders are free to deviate from society's norms and ultimately from the rules and regulations governing their conditional freedom.

A major finding of the study shows that inadequate employment and unemployment to be major impediments to achieving successful probation adjustment and ultimately successful probation outcome. For many of the probationers who were revoked and even a substantial number of those completing probation successfully, employment was a major problem. Although unemployment is a major issue, inadequate employment also has implications for probation supervision. The study has shown that a majority of those under supervision have been convicted of property offenses. The data have further shown that most of the new arrests were for property offenses. Job counseling and job referral services represent some alternatives to addressing this major problem.

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Did I Cause This and Can I Change It: The Role of Perceived Responsibility in Treatment of Adolescent Offenders

Cynthia Cupit Swenson, Ph.D.

INTRODUCTION

Juvenile crime represents astronomical costs to society considering damage to property and persons, as well as treatment of delinquents and their victims. In addition to criminal behavior, adolescent offenders tend to exhibit a higher prevalence of learning disabilities, hyperactivity, attention deficit disorders, mental retardation, and substance abuse problems; and they are less skilled in problem-solving than the general adolescent population (Farrington, 1983; Kazdin, 1985; Larson, 1988; Quay & Werry, 1986; West, 1982).

Even though billions of dollars are spent annually in the United States to operate the juvenile justice system, costs to society continue when delinquents reach adulthood due to the propensity of this population for unemployment, accidents, divorce, and welfare services (Caspi, Elder, & Bem, 1987).

Presently, published studies on treatment of antisocial adolescents in particular are generally pessimistic regarding success rates. To encourage more productive adult lives for adolescent offenders and to decrease the emotional and physical costs to society, the search for successful intervention strategies must continue. Among the many treatment programs utilized with juvenile offenders, problem areas such as anger control, sexual identity problems, substance abuse, and institutional adjustment have been addressed (Davis & Leitenberg, 1987; Feindler, Ecton, Kingsley, & Dubey, 1986; Friedman, Glickman, & Morrissey, 1986; Phillips, Phillips, Fixsen, & Wolf, 1971; Swenson, Butler, Kennedy & Baum, 1989). However, alterable factors that predict which treatment will be successful with which individuals remain unknown. Intellectual level, chronicity, and severity of the problem have all been related to treatment outcome (Quay & Werry, 1986);

This paper is from Dr. Swenson's dissertation, "Perceived Control as a Predictor of Treatment Outcome with Chronic Adolescent Offenders." Wallace Kennedy, Ph.D., her major professor, is co-author of the paper. Cynthia Cupit Swenson completed her Masters degree in Clinical Psychology at Northeast Louisiana University in 1981. She practiced psychology in the school system in Louisiana for five years. In 1991, she earned her Ph.D. in Clinical Psychology at the Florida State University, where she worked with severe juvenile offenders for three years. Dr. Swenson completed an internship in child clinical/pediatric psychology at the Medical University of South Carolina, where she currently holds the position of post-doctoral fellow in clinical psychology. *The authors gratefully acknowledge the administrative staff of the Dozier School, Roy McKay, Danny Pate and Billy Baxter, as well as colleagues who provided support, Congressman Pete Peterson, Joseph G. Baum and Marshall E. Swenson. They note their appreciation for Pat Kennedy's editorial assistance and Ron Polland's assistance in statistical analysis, and thank the FSU undergraduates who assisted in data collection and entry.*

however, these factors are not alterable.

One alterable factor which appears promising in predicting individuals who will potentially benefit from treatment is perceived control. Weisz (1983, 1986) defined perceived control as a joint function of outcome contingency (perceived contingency) and personal competence (perceived competence). Outcome contingency involves the degree to which outcomes depend on the behavior of the individual (i.e., does what I do make a difference in what happens to me). Personal competence refers to the individual's capacity to produce the behavior upon which the outcome is contingent (i.e., can I do what it takes to be successful on this task). These two factors are reported to be independent, with a nonsignificant correlation of .18. Research indicates that children as young as seven years of age can make the distinction between these concepts (Weisz, 1986).

The distinction between perceived contingency and perceived competence is important because the two beliefs have different implications for behavior and treatment. For example, perceived contingency has been shown to predict progress in treatment among primarily externalizing-problem children (Weisz, 1986). In contrast, studies addressing internalizing-behavior problems show a positive correlation between depression and low perceived competence but not between depression and perceived contingency (Weisz, et al., 1989; Weisz, Weiss, Wasserman, & Rintoul, 1987). Therefore, when treating depressed children, the therapy of choice may be oriented toward building or strengthening self-concept. With aggressive children, on the other hand, strategies emphasizing personal responsibility for behavior might be more appropriate.

Given the empirical data indicating the importance of perceived control beliefs, that this construct has not been studied as a possible predictor of treatment outcome with chronic adolescent offenders is surprising. These individuals may hold maladaptive control beliefs contributing to and intensifying their problems, as well as negatively influencing their progress in solving these problems. If perceived control, an alterable factor, relates to psychotherapy success, this variable may indicate those chronic adolescent offenders who would be amenable to treatment (Kazdin, 1987). Those adolescent offenders who appear unamenable to treatment when initial assessments are conducted, may be prepared to benefit from specific skills treatment through perceived control training.

The present study concerns the relationship between perceived control and treatment outcome with chronic adolescent offenders who exhibit two broad types of behavior difficulties, internalizing and externalizing problems. Perceived control was addressed from the recently reconceptualized two-dimensional model (Weisz, 1983,1986; Weisz & Cameron,1985;Weisz & Stipek,1982).

METHOD

Population

Three hundred seven (307) adolescents committed to a state training school in the southeast participated in this study. Criteria for commitment to this facility consists of commission of a felony plus a previous criminal history, and includes an expected stay ranging from six months to several years, depending on the severity of the offense (Dozier Classification, 1988). All students were males between the ages of 14 to 18 (M 15.5); 97 were White, 201 were Black, and 9 were Hispanic.

Therapeutic Milieu

Upon commitment to the state training school, each student undergoes a psychological evaluation to aid in development of an individual treatment plan. Following psychological assessment, each student is assigned to participate in weekly individual and/or group therapy, based on his/her presenting problem at the time of commitment. Therapists are clinical psychology graduate students and/or social workers under the supervision of a licensed psychologist. Group therapy focuses on individual problems, such as substance abuse, anger control, or commission of a sexual offense. Students also attend an on-campus high school featuring cooperative or team learning and computer assisted instruction, with a Reality-Therapy-based discipline program.

In addition to psychotherapy and academic intervention, the campus operates a behavior-management system focusing on positive reinforcement. Students can earn daily points for performing certain tasks or for exhibiting specific positive behaviors. Points are traded for valued items on a weekly basis at the campus point store. Positive write-ups are earned for appropriate behavior; negative write-ups, for inappropriate behavior (see inset). Release from the facility is contingent upon meeting certain criteria, including number of negative write-ups.

Actions Warranting Major Write-Ups

1.* Student inflicts physical harm to self or others or causes permanent damage to property.
2.* Student steals or has in possession something that he does not have permission of the owner to have.
3.* Student engages in sexual misbehavior, such as indecent exposure, public masturbation, or coercing or bartering for sexual acts.
4.* Student attempts to escape.
5.* Student pops electric sockets.
6. Student engages in behavior that threatens the security of self or others.
7. Student has 4 minor write-ups in 1 hour.
8. Student possesses harmful or controlled substances or objects (such as smoking material or sharp objects).
9. Student threatens the health or safety of others (such as excessive horseplay, threatening a fight with closed fist or weapon).
10. Student refuses to attend crew, school, group, or individual therapy.
11. Student is off-bounds without permission.
12. Student fails to complete assigned detail.
13. Student directs profanity toward staff or peers.
14. Student is truant, i.e., departing cottage, school, crew, group, or therapy without permission or without intending to escape.

* Double Majors

All students reside within cottages and are supervised by houseparents. Students who indicate

they may be a danger to themselves or others are placed in a time-out cottage, the "Intensive Supervision Program," until the problem is resolved.

Measures

Child Behavior Checklist. The teacher report form of the Child Behavior Checklist (Achenbach & Edelbrock, 1983) lists 118 child behavior problems and provides summary scores for internalizing and externalizing problem areas. This scale has been shown to classify effectively the different behavioral patterns of juvenile offenders (Brannon & Williams, 1986).

Multidimensional Measure of Children's Perceptions of Control (MMCPC). This scale measures perceived contingency assessed through 48 items, yielding a global perceived contingency score and subscale scores across three domains: social, cognitive, and physical (Connell, 1985). In addition, the scale addresses three possible sources of control for outcomes, including internal, powerful others, and unknown.

Perceived Contingency Behavioral Domain Scale. To measure perceived contingency concerning behavior, a 12-item scale was used (Hartsfield, Licht, Swenson & Thiele, 1989). This scale had not been used previously with juvenile delinquents; therefore, internal consistency measures were computed on the present data, yielding coefficient alphas ranging from .43 to .71.

The Piers-Harris Self-Concept Scale. The Piers-Harris (Piers, 1984), assesses perceived competence through 80, yes or no questions, and yields a global measure of self-concept, along with six individual domains: 1) Behavior -- acknowledgement or denial of behavior problems; 2) Intelligence -- self assessment of intellectual or academic abilities; 3) Physical-self assessment of physical competence; 4) Anxiety-assessment of self as anxious, worried, or sad; 5) Popularity -- assessment of popularity with peers; and 6) Happiness -- reflection of general satisfaction with life.

Treatment outcome. Treatment outcome was measured by decrease in negative write-ups. Because positive write-ups typically are earned for doing extra work and do not appear to represent significant behavior change, they were not considered a treatment-outcome measure. Data from negative write-ups during the two week period prior to initiation of treatment and data during the two week period following treatment were used to gauge treatment outcome.

Procedure

This study includes data gathered over a one-year period. Following an adjustment period of at least three weeks, teachers completed the Child Behavior Checklist on all students assigned to their classroom.

Perceived-control measures were administered to small groups of 4-6 students. Questionnaires were read aloud to all students by the first author with assistance from upper-level undergraduates majoring in psychology at a nearby university. Points were provided to students for completion of questionnaires and these

points could be spent at the campus canteen for snacks or other items.

RESULTS

To determine the relationship between internalizing and externalizing scores on the Child Behavior Checklist and perceived control measures, zero-order correlations were calculated (Table 1). Six perceived-competence measures were significantly related to student behavior problems as rated by teachers. Scores on the Child Behavior Checklist Internalizing Scale (CBCLI) negatively correlated with total self-concept, denial of behavior problems, self-assessment of intelligence or academic skill, self-assessment of physical competence, selfassessment as worry free or nonanxious, and self-perception as generally happy. No CBCLI scores related significantly to perceived-contingency scores on the Multidimensional Measure of Children's Perception of Control.

The Child Behavior Checklist Externalizing Scale (CBCLE) related significantly to subscales of both the perceived-competence and perceived-contingency measures. Specifically, the CBCLE correlated negatively with overall self-concept and denial of behavior problems. On perceived-contingency domains the CBCLE correlated negatively with attributing successful outcomes of behavior to self and attributing cognitive failures to self. A significant positive correlation was found between CBCLE and attributing successful outcomes of behavior to unknown causes. Further analysis revealed a strong, positive correlation (.63) between the CBCLI and the CBCLE, indicating overlap among these students in the two problems areas.

To assess the relationship of perceived control to treatment outcome, a stepwise multiple regression model was used. The dependent variable (treatment outcome) was the decrease in absolute

Table 1
Perceived Control Belief Measures as Correlates with Child Behavior Checklist Scores

Global Measures: DOMAIN	CBCLE	CBCLI
Overall self-concept	-.14*	-.21**
Specific Domain Measures on the Piers-Harris		
DOMAIN	CBCLE	CBCLI
Denial of behavior problems	-.20**	-.18*
Self-assessment of intelligence	-.12	-.15*
Self-assessment of physical competence	-.07	-.17*
Assessment of self as nonanxious	-.06	-.14*
Assessment of self as generally happy	-.13	-.21**
Specific Domain Measures on MMCPC Success Scales:		
DOMAIN	CBCLE	CBCLI
Attributing successful outcomes of behavior to self	-.15*	-.06
Specific Domain Measures on MMCPC Failure Scales:		
DOMAIN	CBCLE	CBCLI
Attributing cognitive failures to self	-.19**	-.08

* Significant at .01 level, ** Significant at .001 level

number of behavioral write-ups before and after treatment. Perceived-competence and perceived-contingency variables, age of the student, number of commitments to previous programs, Full Scale Wechsler IQ, and Reading Achievement were assessed also as predictors of treatment outcome.

Predictors of All Students Treatment Outcome. First, a forward stepwise regression was done using all students because the overlap on the Child Behavior Checklist Internalizing Scale and Child Behavior Checklist Externalizing Scale indicated high comorbidity. In this procedure each variable was entered one at a time on the basis of its F to enter (i.e., the proportion of variance explained by each independent variable). An analysis of the residuals indicated all assumptions were met except a normal distribution. The normal probability plot was s-shaped. Therefore, to normalize the distribution, natural logs were computed for each score.

Three variables were significant, albeit weak, predictors of treatment outcome for all students. Self assessment of Physical Competence accounted for 5 percent of the variance in treatment outcome (adjusted R^2 = .04954). Age added significantly to the explanatory power of the model (adjusted R^2 = .08113), contributing 3 percent of the variance in treatment outcome. The third significant predictor of treatment outcome, attributing social failures to unknown factors, contributed 1 percent of the variance (adjusted R^2 = .09496).

Predictors of Externalizers. The second regression was conducted on those subjects with Child Behavior Checklist Externalizing Scale scores higher than their Child Behavior Checklist Internalizing Scale scores, indicating their primary behavior problem to be external in nature. Two variables were significant predictors of treatment outcome. The first was perception of self as generally happy, accounting for 7 percent of the variance (adjusted R^2 = .06658). The second was attributing overall successful outcomes to self, contributing 5 percent of the variance (adjusted R^2 = .11689).

Predictors of Treatment Outcome for Internalizers. A third regression was conducted on students whose CBCLI scores were higher than their CBCLE scores, indicating their primary behavior problem to be internal in nature. Two variables were significant predictors of treatment outcome for these students. The variable accounting for most of the variance (9 percent) was self-assessment of physical competence (adjusted R^2 = .09319). Attributing overall failure outcomes to self contributed 6 percent of the variance in treatment outcome (adjusted R^2 = .15960).

Predictors of Treatment Outcome for Severe Externalizers. A fourth regression was conducted on students rated by teachers as exhibiting severe forms of externalizing behavior problems. The criteria for admission into this group included CBCL externalizing T scores of at least 70 and CBCL internalizing T scores no more than 60. One significant predictor was revealed in this analysis. Assessment of self as anxious or worried contributed

63 percent of the variance in treatment outcome (adjusted R^2 = .62642). A regression was not conducted on severe internalizers due to the small sample size.

DISCUSSION

This study assessed the relationship between perceived control and type of behavioral difficulty and addressed whether perceived contingency and perceived competency were differential predictors of treatment outcome with adolescent offenders whose behavior problems were either primarily internalizing or externalizing.

Perceived Control and Externalizing Problems. Both perceived competence and perceived contingency were significantly related to externalizing, maladaptive behavior in these adolescent offenders. In the area of perceived competence, students with externalizing problems tended to have a low overall self-concept. On the Piers-Harris, overall self-concept encompasses all domains, including the behavior problem domain. These particular adolescents tended to acknowledge their behavior problems. Therefore, the overall self-concept score may have been lowered by items endorsed on the behavior problems domain. Rather than a reflection of low self-concept, the low total score may have been a reflection of acknowledgement of behavior problems.

In the area of perceived contingency, students with externalizing behavior problems tended to not attribute successful outcomes of behavior to their own actions and they tended to not attribute responsibility for failure outcomes on cognitive tasks to themselves. They did tend to attribute successful outcomes of behavior to unknown factors.

Perceived Control and Internalizing Problems. Perceived competence was significantly related to internalizing behavior problems in these offenders. Specifically, students with internalizing problems tended to have poor overall self-concepts and to assess their ability or academic skill, as well as physical competence, as low. They also tended to view themselves as having a lot of worries and fears, being unhappy and they acknowledged behavioral problems. Perceived contingency was not significantly related to internalizing behavior problems in these adolescent offenders.

Predictors of Treatment Outcome for Externalizers. Offenders with primarily externalizing problems tended to have a better treatment outcome when they attributed overall successes to their own behavior. On the other hand, they tended to do worse in treatment when they attributed overall negative consequences to their own behavior. These results suggest that claiming responsibility for one's failures may be maladaptive, while perceiving one's self as responsible for one's successes may be adaptive. The offenders in this study have likely met with much failure in their history in school, home, and relationships. To focus on their responsibility for failures may lead to decreased hope for the

future and they may give up in their treatment programs.

While focusing on one's own responsibility for failure was a negative predictor of treatment progress, the more Externalizers viewed themselves as worried or anxious, the more successful was their treatment. In fact, this variable was the strongest predictor of treatment outcome for Externalizers, highlighting the importance of acknowledging one's problems.

Further, the more Externalizers viewed themselves as generally happy and physically competent, the less progress they made in treatment. Externalizers who viewed themselves as happy and perhaps without problems may be entrenched in denial, believing they do not need assistance in changing behavior problems that in their view do not exist. The latter finding suggests that aggressive students may see themselves as invincible and may associate strength and physical competence with being untouchable by consequences. It is also plausible that with their focus on how physically competent they are, they may tend to use physical means (aggression) for solving problems, reinforcing a "macho image."

Predictors of Treatment Outcome for Internalizers. Consistent with Externalizers, Internalizers who tended to attribute overall failures to themselves and those who viewed themselves as high in physical competence did not do well in treatment. However, if the Internalizers attributed their physical failures to themselves, the treatment outcome was improved.

In contrast, Internalizers who attributed social failures to internal factors tended not to do well in treatment. Internal factors include the attribution of effort. Physical failures, such as missing a thrown ball, may have less impact if explained as caused by insufficient effort. However, if a student attributes social failures, such as poor peer relations, to lack of effort (i.e., self) and conveys that attitude to authority figures, then those authority figures may be less likely to offer assistance. In the present study, the measure of treatment outcome was number of negative write-ups, which were administered by houseparents and teachers, as well as by therapists. It is possible that if students viewed themselves as not trying to make friends or to get along socially, and conveyed this attitude to staff, then staff would be less likely to be lenient in write-ups. Several lines of research have shown that those who are perceived as acting deliberately are less likely to receive help (Piliavin, Rodin, & Piliavin, 1969) and more likely to receive criticism and punishment (Brophy & Rohrkemper, 1981).

SUMMARY

Overall, global measures of perceived competence did not predict treatment outcome. However, global perceived contingency measures were significant predictors of treatment outcome for both Internalizers and Externalizers. That is, success in treatment for both Internalizers and

Externalizers was related to viewing overall outcomes of their behavior as contingent on what they do. In addition, several domains of perceived contingency and perceived competence did predict treatment outcome.

The results of this study support the importance of considering domains of perceived control. The efficacy of using two measures of perceived control for predicting treatment outcome appears warranted. However, using the two measures to predict treatment for different types of disorders is not as strongly supported, at least with chronic adolescent offenders.

One influence on the results of this study appears to be the relationship between the Child Behavior Checklist Externalizing Scale (CBCLE) and the Child Behavior Checklist Internalizing Scale (CBCLI). These results were contrary to previous studies using the Child Behavior Checklist with juvenile delinquents. In a study assessing juvenile offenders committed to a state juvenile services agency, Brannon and Williams (1986) found that the Child Behavior Checklist effectively substantiated differential behavioral patterns: 61 percent of their subjects were classified as Externalizers; 11 percent as Internalizers. Students in this study were from three levels of the agency, including training schools, non-secure park camps, and community group homes. They may have differed from students in the present study in severity of behavior problems and length of criminal history. If their behavior problems were less severe, then perhaps the group in the Brannon and Williams study did not exhibit a general pathology and were therefore, more likely to show primarily internalizing or externalizing problems than were students in the present study, who with their perhaps greater pathology, were not so clearly defined by this rating scale.

Consistent with previous studies, Edelbrock and Costello (1988) also found that the Internalizing and Externalizing Scales related to different diagnoses with psychiatric in-patients. However, depression correlated significantly with both Internalizing and Externalizing Scales. As in the current investigation, studies with children who were psychiatric in-patients indicated a high level of comorbidity on the Child Behavior Checklist (Jones, Latkowski, Kircher, & McMahon, 1988; Woolston et al., 1989).

A possible explanation for the high correlation between the CBCLI and the CBCLE in this study is that the teachers who completed the ratings do not teach nondelinquent students and therefore have little basis for a day to day comparison of various degrees of behavior problems. Therefore, they may view their students as exhibiting a general pathology because they all are involved with delinquency. A second explanation may be that many of these chronic delinquents do exhibit general pathology, displaying worried, anxious behavior as well as aggression.

The present study is consistent with theories supporting the importance to treatment of accepting responsibility, at least for one's successes. If Internalizers and

Externalizers attribute their failures to self, but do not perceive successes as contingent on their behavior, they may minimize their role in improvement. This attribution style has been shown to be common among depressed children, who are more likely to show self-blame for negative events than nondepressed children (Seligman et al, 1984). Similarly, those offenders who blame themselves for negative events may feel helpless to solve their problems, which may in turn further exacerbate their difficulties.

The present results suggest that treatment for juvenile delinquents should focus on changing perceived contingency beliefs to teach adaptive belief styles. Brickman et al. (1982) make a distinction between control beliefs for the source of the problem and for the solution of the problem. They assert that an individual is not responsible for the source of the problem, but is held responsible for the solution. When this model is applied, Brickman et al. argue that individuals view themselves as having to compensate, through effort, ingenuity, and collaboration, for the handicap imposed on them. This model allows the individual to focus on solving the problem without dwelling on guilt feelings for creating the problem.

A predictor of treatment outcome for Internalizers and Externalizers was attributing successes to self. Given that attributing successes to self is important to treatment, perhaps treating delinquents based on the compensatory model would best emphasize this belief. If therapy focuses on the student's being the cause of the problem, the student might concentrate attention on negative self-blame. This focus on negative behaviors may elicit feelings of hopelessness in solving the problem. For some students, targeting blame for the problem may lead to denial, thus avoiding solving the problem. On the other hand, if the focus of therapy were on teaching students that they are responsible for solving their problems and successes are contingent on their behavior, they may feel more hope for improvement.

If students believe that solving their problems is contingent on their behavior, but they lack the skills to solve the problem, they probably will incur failure. A combination of training in skill deficits plus training to attribute responsibility for problem-solving to one's self may be the most valuable treatment for adolescent offenders. To work first on changing faulty beliefs and then provide skill training may be the most beneficial strategy. If adolescent offenders view themselves as responsible for solving their problems, they may be more receptive to skills training.

In summary, the present study has implications for treatment and future research. For treatment, two important points emerge. First, guiding offenders to view themselves as having a problem is essential to improvement in treatment, especially for aggressive students. Second, focusing on their successes and the view that they are responsible for their successes and resolving their problems appears important for actual treatment gains.

In an institutional setting, where

numerous students have treatment needs and placement is time-limited, triage methods may be most effective. That is, students who score low on the Piers-Harris Anxiety Scale, indicating acknowledgement of anxiety and worries, may be immediately amenable to a combination of attribution and skills training. Other students, who score high on the Piers-Harris Anxiety Scale, will be less amenable to treatment. They will require work on the denial of their problems before attribution and skills training can occur. Given the limited resources often found in institutions, students in the former group should be first priority for treatment programs.

The second important point from the present study relates to directions for future research. Considering the overlap between the internalizing and externalizing behavior problem areas shown in this study, future research is needed to further clarify the efficacy of making the distinction between perceived contingency and perceived competence beliefs for different behavior disorders. Measures that more clearly differentiate internalizing and externalizing problem behaviors should be used. For example, self-report measures of depression and aggression in lieu of, or in addition to, teacher reports may better distinguish the groups. With the severe juvenile offenders in this study, the Child Behavior Checklist did not distinctly diagnose internalizing and externalizing behavior problems.

Research in the treatment area is also needed. The present study verifies that control beliefs predict treatment outcome. Past research has shown that various therapies change control beliefs (Long & Sherer, 1984; Thatcher, 1983; Waksman, 1984; Yarish, 1986). Additional work is needed to determine which therapies are most effective in changing perceived control beliefs with chronic adolescent offenders. Development of a perceived control attribution training package for behavioral areas (as opposed to academic attribution training) may be helpful in guiding these offenders toward significant behavior change.

Consistent with previous research, the value of teaching self-responsibility for behavior through therapy is highlighted. Intensive training of perceived control beliefs may bring about an increase in positive behaviors and perhaps elicit adaptive coping and long-term maintenance of behavior change.

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DUI Offenders' Perceptions of Recovering and Nonalcoholic Counselors

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INTRODUCTION

Driving a motor vehicle is associated with leisure, pleasure, necessity, aggravation, danger, and sometimes death. Elements of danger and death are compounded when psychoactive substances impair driving ability (Donelson, 1988).

Of all the drugs which affect mood, reasoning, and control, alcohol is the most socially acceptable (Ray, 1983). It is readily available for legal purchase to those of age and also accessible directly or indirectly to many minors. When drugs are implicated in automobile accidents, alcohol is most often the culprit (Podolsky, 1985).

Although previously tolerated in the United States, drunken driving and its consequences have become a national problem (Borkenstein, 1985). The Surgeon General's Report of 1979 helped bring this issue to the national forefront. Organizations such as Mothers Against Drunk Drivers (MADD), Remove Intoxicated Drivers (RID), and Students Against Driving Drunk (SADD) have been largely responsible for increased public awareness of the problem (Haskins & Haskins, 1985). Politicians, employee assistance programs, other private and public health care industries, and the media (Bradstock, Marks, Forman, Gentry, Hogelin, Binklin, & Towbridge, 1987) have also joined forces in efforts to prevent the maiming and/or death of many innocent victims of drunken drivers (Roizen, 1982).

Approximately every twenty minutes someone dies in an alcohol - related traffic accident and another 650,000 are injured yearly (Podolsky, 1985). Although alcohol is implicated in over 50 percent of all traffic fatalities, it is unknown to what extent other drugs, like marijuana and cocaine, may be involved. Routine testing for other drugs is currently ineffective and inexpensive. Unlike alcohol, for which the legal limit is .10% in Florida and in most other states, dangerous levels of other drugs have not been established (Fitzgerald & Hume, 1987).

Driving Under the Influence Countermeasures. Attempts at controlling the substance abuse driving problem have included such suggestions as imposing insurance sur-

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charges and denying insurance benefits to guilty drivers (Jacobs, 1988). Bartenders and owners have been charged with the liability of serving "one for the road" in some instances. Besides taverns and bars, private hosts have also been held responsible when injury occurred after an impaired driver left their parties (Bonnie, 1985).

Random breath testing to deter the potential drinking driver has been used in some locations (Homel, 1988). In Massachusetts automatic inpatient treatment has been court-ordered for multiple offenders as an alternative to jail (McCarty & Argeriou, 1988). But the single greatest countermeasure, aside from the actual charge of driving under the influence (DUI) (e.g., Florida Statute 316.193) and subsequent license revocation, probation, fines, possible jail, and community service, is mandatory education and rehabilitation of the offender (Wilde, 1985).

Malfetti and Yaksich (1984) reported the existence of at least 1,500 rehabilitation programs in the United States and Canada. While these programs are geared toward imparting of general information, many include referral for more intense treatment when an alcohol/drug problem exists.

According to Pursch (1981), approximately 50 percent of first offenders display alcoholic behavior which would require rehabilitation beyond education. However, arrest rates of drinking drivers vary from precinct to precinct, depending on factors such as politics, community and national interest, funding, and police sophistication (D. Manning, personal communication, July 29, 1989). Additionally, as arrest rates fluctuate within a precinct, the percent of offenders with a drinking problem diagnosis also varies (B. Gross, personal communication, August 10, 1989). For example, when officers arrest relatively few drinking drivers in a given month, the chronic alcoholic with a high breathalizer reading is more likely to receive police attention.

Florida's Rehabilitation Program. In Florida's rehabilitation system, first offenders are required to attend a primarily didactic secondary prevention course for a minimum of 12 hours. Multiple offenders, or individuals who have previous DUI convictions, must successfully complete at least 21 hours of group-process oriented education.

Both courses include an evaluation of the offender to determine if more extended rehabilitation services are needed. The ultimate question each counselor must as is, "Will education alone be enough to prevent another DUI arrest?" Throughout the procedures of arrest and rehabilitation, the offender may experience reactions of "resentment, indignation, shame, frustration, and fear" (Malfetti & Winter, 1980, p. 5). How he or she perceives the counselor may exacerbate or diminish these negative reactions.

Statement of the Problem. Offenders are mandated to complete a substance abuse course and an alcohol/drug screening through the DUI program by the judiciary. This action often makes them resistant, uncooperative, and even hostile. Course registrars, instructors, and particularly the counselors are the main

recipients of mild to aggressive verbal assaults when they do occur. Even when no word are spoken, the "I'm angry!" message is often conveyed through door slamming and tire squealing once the evaluative interview is concluded.

Hostility toward personnel may be viewed as a defense (Malfetti and Winter, 1980). Typically, the more defensive or hostile an offender, the more likely he or she is to be referred by the counselor for treatment beyond the twelve or twenty-one hours required for DUI course completion. More expenses arise from the cost of treatment and the probability of extended probation, contributing to offenders' feelings of frustration, being out of control, and misunderstood. The counselor, attempting to be a helper, is frequently viewed by the offender as being in an adversarial role similar to the legal system. How might this problem be addressed? Perhaps empathy plays a vital role.

A prevalent assumption in the alcohol/drug counseling field is that, "It takes one to know one." In other words, alcoholics are best suited to diagnose and rehabilitate other alcoholics, by modeling recovery, recognizing and confronting defenses they once used themselves, and offering hope (Kirk, Best, & Irwin, 1986). Are these factors likely to enhance DUI offenders' perceptions of empathy in counselors in the DUI setting?

Of all the facilitative dimensions in therapy, empathy has been described as the prime ingredient for establishing rapport and building a bond in counseling relationships (Rogers, 1975). Moreover, Kirk, Best, and Irwin (1986) stated, "It has been assumed that some similarity in background helps to enhance empathy" (p. 82). Alcoholism may provide the common bond.

Patterson (1988) further believed that empathy is a method of delaying judgment. Since DUI clients are prone to be hostile, especially because they feel judged, would DUI counselors presented as "recovering" be received more readily and regarded as more empathic than "nonalcoholic" counselors? Does referral or nonreferral by a recovering or nonalcoholic counselor play a role in perceived empathy?

Purpose of the Study. The purpose of this study was to examine the effects of two counselor presentations (types) as perceived by DUI offenders. More specifically, this study focused on how male DUI offenders in a Florida evaluation center perceived counselor empathy and helpfulness based on how the counselors were introduced to them, as either recovering or nonalcoholic themselves. Evaluation outcome, or referral status to extended treatment, was also examined.

Need for the Study. The specific assumption that " . . . the recovered alcoholic's drinking history is thought to give him or her something in common with his subjects . . . has remained untested" (Kirk, Best, & Irwin, 1986). Kirk et al. (1986) conducted the only study found in the literature regarding client perception of empathy and helpfulness in

"recovering" counselors. Examining DUI offenders' perceptions of empathy in counselors presented as recovering and nonalcoholic will not only help fill a gap in the literature, but may be directly useful for treatment in this setting.

The results of the present investigation have contributed to the knowledge regarding offenders' perceptions of empathy in counselors presented as recovering and nonalcoholic. It has helped answer the question, "Is it a positive or a negative attribute to be recovering in assessing substance abusers in the DUI population?" Can we manipulate perceptions of the offender to view counselors as more empathic and helpful so they become more cooperative? Is there a way to create bonding with the helper, promoting compliance and reducing hostility and resistance?

Theoretical Framework. Existential, Gestalt, and client-centered approaches to psychotherapy rely heavily on the philosophical premise of phenomenology (Waldron-Skinner, 1986). Inherent in this phenomenological psychology is the attempt to evaluate perceived internal and external events. Client-centered therapy, on which this study is based, performs evaluative tasks by analyzing the helper's power of social influence through a number of facilitative dimensions.

Social influence, or change, then, occurs when the therapist competently conveys certain attributes, such as respect, genuineness, and empathy to the client (Egan, 1975). Through this process the counselor becomes more and more attractive and a power base is established, much like the parent-child relationship (Strupp, 1973).

How the therapist exerts an effect upon the client is a social influence phenomenon (Corrigan, 1980; Heppner & Dixon, 1981; Heppner & Heesacker, 1982). Empathy and helping are the therapeutic elements to be directly examined in this investigation from the social influence model of intervention (Barak, Watkin, & Dell, 1982; Heppner & Heesacker, 1982; Vargas & Borkowski, 1982).

The Offenders. Offenders may fall anywhere on the drink-user continuum from social to alcoholic (Hoffmann, Ninonuevo, Mozey, & Luxenberg, 1987). But the typical DUI offender is not the friendly neighbor and outstanding citizen next door, one who just happened to have one sip too much. Rather, this person is more likely to be a man with a rather shady history and symptoms of problem drinking (McCord, 1984).

Men are the more represented gender in the adjudicated or the adjudication-pending drinking-driver population (Clay & Swenson, 1978; Hoffmann, Ninoneuvo, Mozey, & Luxenberg, 1987). Several reasons may account for the difference of 9-20 more men than women being arrested for driving under the influence of alcohol.

When there is a couple in the car, the male is more likely to be driving. In addition, there are more licensed drivers who are male and, as in the past, more men than women tend to drive after drinking (Cosper &

Mozersky, 1968; Hoffmann, Ninoneuvo, Mozey, & Luxenberg, 1987).

As a consequence, men have been more intensively studied as the drinking-driver offender (Shore, McCoy, Toonen, & Kuntz, 1988). Some research on drinking drivers also focuses on youth, but less often, women.

Assessing the Offender. The professional counselor must stand ready to use every skill acquired in training during the clinical interview (S. Reed, personal communication, July 1, 1990). Offenders expect to be condemned for their behavior and as a result most often present a defensive, defiant, and obstinant posture, especially during feedback. Additionally, other psychopathology frequently accompanies substance abuse (Meyer, 1986; Mirin, Weiss, Michael, & Griffin, 1988), requiring a "dual diagnosis," a swift accurate assessment by the counselor, and proper routing for assistance.

Robert W. Davis (1985) offered a correctional assessment and treatment stage model which fits nicely with the perceptions of counselors employed in the DUI field (L. Armstrong, personal communication, March, 1991). Similar to Elizabeth Kubler-Ross' (1969) model, the "Stages of Incarceration" include (1) denial and disbelief, (b) bargaining, (c) anger, (d) depression, and (e) acceptance. The majority of clients enrolling in the DUI program appear to be in an angered state (Malfetti & Winter, 1980).

Helpers. For many years alcoholics have been helping each other, particularly through group fellowship (Alibrandi, 1982). Those with established sobriety have also long been contributors on treatment teams, regardless of profession or credentials (Royce, 1981). Yet, the premise on which they operate, the intangible bond of alcoholism, has mainly been assumed to be effective during intervention. As Zimberg (1982) stated, "There is no scientific, medical, or psychological theory that serves as the basis for the folk psychotherapy . . . " (p. 1002). The model for this folk psychotherapy is Alcoholics Anonymous. Of the leaderless peer group, Zimberg (1982) further added, "Alcoholics Anonymous, or "AA," has been one of the most successful treatment approaches for alcoholism . . . because it (AA) implicitly understands the psychological conflicts and psychological needs of the alcoholic" (p. 1001-1002).

Though the self-help group is widely lauded (e.g., McInerney, 1973; Nace, 1987; Staub & Kent, 1973), their anonymity makes it difficult to more objectively define the term "success," and little hard data contribute to the validity of such statements. Mental health professionals and physicians have historically not been effective in treating alcoholics. As a result, a rift between recovering and nonalcoholic and professional and paraprofessional helpers has ensued (Royce, 1987). Each extolls the merits of his approach, and scarce research exists to warrant endorsing one philosophy and background over another. Recovering counselors, with or without credentials, are widely employed for generally

accepted rationale.

Many recovering individuals, regardless of academic background, have attempted to abolish the para-professional image and create a new profession (e.g., Certified Addictions Professional) through credentialing in various states (Staub & Kent 1973). Some are even considering lobbying for insurance reimbursement for their counseling services (B. Gross, personal communication, August, 1990).

METHOD

Participants. Eighty first-offender male volunteers were solicited from the Tampa-Hillborough DUI Counterattack program to participate in the study. Their age ranges were 18 to 72. All were Caucasian.

Instruments. Offenders' perceptions of counselor empathy were measured by the Barrett-Lennard Relationship Inventory (Barrett-Lennard, 1962). Counselor helpfulness was assessed by the Client Opinion Questionnaire. The 64-item Relationship Inventory scales measure empathy, regard, unconditionality, and congruence in a Likert-type format. The total score reflects the subject's overall perception of the relationship. This study employed a 28-item version of the inventory previously used by Kirk et al. (1986) in their study of perceptions of empathy in therapists presented as recovering and nonalcoholic. The modified form yielded a .78 coefficient at an interval of two weeks in a test-retest study by this investigator.

The helpfulness scale, specifically devised for this study, rated a .82 coefficient at a test-retest interval of two weeks. It, too, employs Likert-type responses.

Procedures. The four groups compared were: (a) recovering counselor/clients referred, (b) recovering counselor/clients not referred, (c) nonalcoholic counselor/clients referred, and (d) nonalcoholic counselor/clients not referred. Subjects viewed a 15 minute segment of a simulated screening interview of counselor "A" or "B" interacting with a male posing as a client. Both middle age, nonalcoholic, female counselors possessed at least a bachelors degree, were certified as evaluators by Florida's DUI rehabilitation system, and held more than 4 years experience in the DUI system. The confederate offender was actually a certified DUI instructor.

At random, 20 volunteers were told counselor "A" was recovering, while another 20 were told counselor "A" was nonalcoholic. Likewise, 20 volunteers were told counselor "B" was recovering, while another 20 were told counselor "B" was nonalcoholic. Also randomly, half the subjects from each condition were told the client was referred to extended rehabilitation by the counselor. The other half were told the client did not need further intervention for a drinking or a drug problem, according to the counselor. Upon viewing the tape, program registrars administered the two instruments.

RESULTS

A between-subjects factorial MANOVA was performed to evaluate the null hypotheses. Because of the lack of hypothesized intercorrelation between the two dependent variables, counselor helpfulness and counselor empathy ($r = .05$, $p < .66$), the univariate results from the MANOVA procedure were also examined for each individual dependent variable.

Four parallel tests of significance were evaluated for each of the three effects: client disposition (referred or not referred), counselor status (recovering or nonalcoholic), and the interaction between counselor status and client disposition.

Table 1
Between-Subjects Factorial Multivariate Analysis: Univariate Result

Dependent Variable: Counselor Helpfulness			
Source	d.f.	F-Value	p-Statistic
Model	3	0.86	0.4672
Error	76		
Counselor Status	1	0.47	0.4940
Client Disposition	1	1.42	0.2373
Status x Disposition	1	0.68	0.4121
Dependent Variable: Counselor Empathy			
Source	d.f.	F-Value	p-Statistic
Model	3	0.71	0.5481
Error	76		
Counselor Status	1	0.83	0.3659
Client Disposition	1	1.20	0.2760
Status x Disposition	1	0.10	0.7494

Both univariate and multivariate analyses on the dependent variables were employed. The results of the two separate univariate analyses are given in Table 1.

No effects are statistically significant for counselor empathy as measured by the Barrett-Lennard Relationship Inventory, or for counselor helpfulness, as measured by the Client Opinion Questionnaire.

MANOVA test criteria and exact F statistics for the hypothesis of no overall effect are given in Table 2 for the three effects utilizing Type III sums of squares and cross-products matrices.

No statistically significant results are present for any of the effects. Because the Client Opinion Questionnaire originated with this study, however, it was analyzed on the same dimensions. Of the 10 items, the following two were found to be significant on univariate ANOVAS.

Item Two: *From the way the counselor assisted the client,it seemed like she also had a DUI at one time.*

A significant main effect was found for counselor status F (1,76) = 17.94, $p < .001$ (Table 3). A comparison of means indicates that recovering counselors were perceived as having had a DUI at one time more than nonalcoholic counselors (2.92 and 4.32, respsectively). (See Table 4.)

Item Six: *The counselor was judgmental.*

A significant main effect was found for counselor status, f, (1, 76) =

Table 2
Results of Between Subjects Factorial Multivariate Analysis: Manova Statement

Hypothesis of No Overall Counselor Status Effect				
Statistic	F-Value	Num d.f.	Den d.f.	p-Statistic
Wilks' Lambda	0.60	2	75	0.5492
Pillai's Trace	0.60	2	75	0.5492
Hotelling-Lawley Trace	0.60	2	75	0.5492
Roy's Greatest Root	0.60	2	75	0.5492
Hypothesis of No Overall Client Disposition Effect				
Statistic	F-Value	Num d.f.	Den d.f.	p-Statistic
Wilks' Lambda	1.38	2	75	0.2572
Pillai's Trace	1.38	2	75	0.2572
Hotelling-Lawley Trace	1.38	2	75	0.2572
Roy's Greatest Root	1.38	2	75	0.2572
Hypothesis of No Overall Status x Disposition Effect				
Statistic	F-Value	Num d.f.	Den d.f.	p-Statistic
Wilks' Lambda	0.40	2	75	0.6686
Pillai's Trace	0.40	2	75	0.6686
Hotelling-Lawley Trace	0.40	2	75	0.6686
Roy's Greatest Root	0.40	2	75	0.6686

Table 3
Results of Univariate Analysis

Dependent Variable: Item Two
(From the way the counselor assisted the client, it seemed like she also had a DUI at one time).

Source	d.f.	F-Value	p-Statistic
Model	3	6.20	0.0008
Error	76		
Counselor Status	1	17.94	0.0001
Client Disposition	1	0.57	0.4518
Status x Disposition	1	0.09	0.7631

Table 4
Results of Univariate Analysis

Dependent Variable: Item Six (The counselor was judgemental).

Source	d.f.	F-Value	p-Statistic
Model	3	3.71	0.0151
Error	76		
Counselor Status	1	6.03	0.0164
Client Disposition	1	4.19	0.0442
Status x Disposition	1	0.19	0.3428

6.03, $p < .01$ and a main effect was found for client disposition f (1, 76) = 4.19 $p < .04$. (See table 4.) A comparison of means indicated that recovering counselors were perceived as judgmental more than nonalcoholic counselors (3.50 and 4.30, respectively. For client disposition, a comparison of means revealed that those who were told the client was referred perceived the counselor as more judgmental than those who were told the client was not referred (3.48 and 4.22, respectively).

DISCUSSION AND IMPLICATIONS

Improved techniques and methods of influencing DUI offenders to address their psychoactive substance abuse are sorely needed in the DUI population. The premise of this study, the powerful social influence theory inherent in Client Centered Therapy (Egan, 1975), suggests that DUI clients might be persuaded to cooperate, change, or otherwise reduce their resistant stance if the therapist competently conveys empathy and helpfulness. The counselor would become more attractive, thus establishing a power base (Strupp, 1975).

This study, which has examined actual DUI students' responses to perceived counselor status as well as their reactions to client disposition, provided information where little has existed. However, the efficacy of using one type of counselor over the other for the DUI population was not supported by either dependent variable on the measures used.

The Barrett-Lennard Relationship Inventory and the Client Opinion Questionnaire may have failed to detect any significant differences because first offender DUI students who really have a drinking problem (an estimated 50 percent), versus those who do not fit criteria for further referral, may have answered questions at opposite extremes. This phenomenon would serve to cancel out effects of the combined group.

Analyses of the items on the Client Opinion Questionnaire, however, offer clues as to how DUI clients perceive counselor status and the effect of client disposition. Subjects perceived recovering counselors as more likely to have had a DUI themselves, a shared commonality. Theoretically, then, the counselor should have more credibility and influence with DUI students because of a membership-group similarity effect (Atkinson, Ponce, & Martinez, 1984; Atkinison & Schein, 1986; Porche & Banikiotes, 1982).

On the other hand, responses on Item 6 suggest that counselors posing as recovering were perceived as more judgmental than their nonalcoholic colleagues. A possibility exists that these students viewed the recovering counselor as "the pot calling the kettle black." In other words, how dare recovering counselors attempt to evaluate others since they have made the same mistake.

Results on Item 6 also reflect that both types of counselors who referred clients for further treatment were seen as more judgmental than those who failed to refer. This finding is entirely consistent with the clinical experience conveyed by seasoned recovering and

nonalcoholic counselors in the DUI field. To this investigator's knowledge, the present study is the first experimental attempt to objectively evaluate DUI students' perceptions of the evaluative and referral process.

Whether a counselor is recovering or nonalcoholic represents a type of therapist self-disclosure. Choosing to make this information known to the client, even upon request, is apt to make a difference in offenders' perceptions of the counselor on the dimension of being judgmental (and possibly other, as yet untested, dimensions). Moreover, true differences may exist between recovering and nonalcoholic counselors. Self-disclosure is a much studied source of research interest, one which has yielded mixed results (Peca-Baker & Friedlander, 1989; Watkins & Schneider, 1989).

SUMMARY AND SUGGESTIONS

Neither the Barrett-Lennard Relationship Inventory or the Client Opinion Questionnaire offered significant data on the four experimental groups. Two items, however, on the Client Opinion Questionnaire tentatively suggest that offender resistance and defense mechanisms (as reflected most frequently by anger) may be triggered by perceiving the counselor as recovering and judgmental. All referred clients seemed to also be viewing the counselor as more judgmental, regardless of counselor status.

Dorpat (1987) believed that defenses are largely unconscious and automatic, serving to mitigate anxiety, guilt, remorse, embarrassment, humiliation, and other feelings which are painful. The DUI offender would have ample reason to call on his defenses to deal with the consequences of sustaining a DUI. More research is needed to identify and thus modify factors in the evaluative process which seem to dredge up these behaviors.

Performing an analysis of respondents in the four experimental groups who were ultimately referred to treatment and those who were not referred to treatment could provide insight into any bias their own psychoactive substance use may have contributed. The present study solicited only Caucasian volunteers age 18 and over. Although these are by far the most common DUI offenders, future studies should also include women, minorities, and youthful offenders.

There is also a possibility that responses may differ in those who have accumulated more than one offense. Examining the variable of not only the first offender, but those with multiple arrests would be wise. Using male counselors may also make a difference.

Matching problem drinkers with recovering counselors and pairing those without drinking problems (those not in need of additional intervention) with non-recovering counselors may be informative. Finally, the social influence premise is credible from logical and research perspectives. The ways in which the pertinent variables of empathy and helpfulness are measured need to be refined.

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The Fight for Victim's Rights in Florida: The Realities of Social Reform

Susan Louise Sayles, Ph.D.

Events, ideologies and social reform movements do not occur in an historical vacuum. External forces and events pave the way for synergistic ideas to take root. Sometimes, all the factors which appear to be necessary for a thought to become nurtured and take fruition are present, and yet the fragile idea is unable to germinate.

Many forces present during the late 1960's and early 1970's nurtured the formation of the victim's rights movement. The setting was ripe for change. This dissertation explores why, after centuries of neglect, the victims of crime finally became a popular cause, and how a coalition group, the Florida Network for Victim Witness Services, facilitated this development in Florida.

The victim's movement in Florida was spearheaded by factors which were very similar to those responsible for sparking its birth nation-wide. In the 1982 book, Megatrends, John Naisbitt explained this phenomenon. Using content analysis, Naisbitt (1982) monitored changing social trends in America by examining the space provided to them in local newspapers. Because the amount of space provided for news items remains relatively constant, popular causes, i.e., reform movements, generally are allotted only so much space. Newspapers are continually adding and subtracting popular causes. This establishes a forced choice, and one becomes able to measure the "share of the market" commanded by competing societal concerns. Societies, like human beings, can only stay concerned about a relatively short list of issues at a time. The most striking problems rise to the forefront, while other issues spiral downward into ultimate oblivion. Naisbitt found that most social invention in the United States takes place in just five "bellwether" states. California is the key indicator state, Florida a close second, followed by Washington, Colorado and Connecticut. All of these states have interesting mixtures of ethnic and demographic populations which tend

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to be more willing to listen to differing ideas, creative and innovative experimentation, and change.

The victim's rights movement confirms Naisbitt's predictions: other states model their legislation and organization upon Florida's example. Indeed, Florida recently led the nation when it passed a constitutional amendment recognizing the rights of victims to be heard at all crucial hearings in the processing of criminal cases.

The history of the Florida movement for victim's rights began with factors and forces congruent with those that took place nationally. In their infancy, programs for victims were distributed in various agencies, with differing concerns, all across the state of Florida -- from law enforcement and probation departments to county comprehensive facilities, mental health agencies and prosecutorial offices. This brought considerable confusion and infighting between agencies. In the beginning the battles centered around limited funding and were fought between the institutionalized, Florida Prosecuting Attorneys Association (FPAA) and the less well organized, grass roots, service-oriented programs.

The creation of the Florida Crimes Compensation Commission in the Executive Office of the Governor in the mid-seventies was the Legislature's confirmation that victims were a valid political issue. The Commission was established to raise funds via fines imposed upon convicted criminals; the proceeds of such revenues were to be placed in a fund to reimburse victims of violent crime who faced "serious financial hardship." The major problem with crimes compensation was that it had too few funds and, what funds were available were limited to specific, extreme circumstances. No one could receive money for property damage or monetary losses. Only medical injuries were reimbursed, and then only at a fraction of the amount needed. When a victim was related to the defendant, either as a spouse or child, reimbursements were, by law, systematically denied. Doerner (1978) found that victims reimbursed under these conditions, receiving small payments and having to deal with a very slow, bureaucratic process, actually resented the meager sum more than if there had been no promises of funds at all.

The collapse of the Law Enforcement Assistance Administration (LEAA) and related funding around 1982-83 initiated even fiercer competition among governmental and grass-roots agencies. As a result of the loss of funds, many programs perished. Some programs, having established themselves as integral parts of the criminal justice system, were able to cut back or to find more permanent funding within local communities. Agency heads found that the time involved in the crucial efforts of fund raising, left them little time and energy for administration and program development. A more serious side effect of chasing too few resources was the over-use of staff and volunteers. This caused a great many talented and dedicated agents of change to fall by the way-side, the victims of acute

burnout.

Prosecutors who, when funding sources were available, encouraged and promoted witness management agendas, were now left to their own budgets to provide monetary support. Most State Attorney's offices abolished whatever previously-established programs existed in favor of hiring additional support staff or prosecutors. Any State Attorney, such as David Bludworth of the 15th Judicial Circuit, who left his or her program intact, was severely criticized for misappropriation of funds and lack of efficiency (Bludworth, 1990.; Braddy, 1991). Those prosecutorial-based programs that remained concentrated on indicted defendants and witness facilitation for persons who had filed cases. The purpose of these programs was to keep in better touch with witnesses, reduce waiting time for canceled or delayed trials, and reintroduce a more outwardly appearing concern for the victim as a witness. The reasons for its approval among some prosecutors was the perception of an increased conviction rate, reduced victim or witness attrition, loss of contact, or hardships encountered during the trial processes. Prosecutors, as elected officials, were not unaware that the platform of victim concerns could be seen as a viable and successful argument towards reelection.

Because of the sporadic, loosely-formed foundation caused by a conglomeration of grass-root and governmental agencies, a need developed for some type of cohesive structure. Representatives of whatever agencies existed in the state haphazardly began to call upon one another to discuss the inherent dilemmas caused by a severe lack of any previous examples (Gusfield, 1989). The Florida Network for Victim Witness Services (FNVWS) evolved in 1979 as a result of this need. The FNVWS is an umbrella network consisting of service providers, self-help groups and individual survivors from across the state. It is also comprised of other "networks" and "coalitions" from across the state, which include the Refuge Information Network (RIN) and a loosely-based sexual assault "network." The expressed purpose of the organization is to provide training and technical assistance, and to act as a unified mass to educate the Legislature for the funding, creation, and continuation of the already-existing programs (McCormack, 1987). The latent, unexpressed motive is what Blumer (1969) refers to as "peer group counseling," and "esprit de corps." Later, the more "grass roots" victim organizations, such as Mothers Against Drunk Driving (MADD), Justice for Surviving Victims (JSV), and Parents of Murdered Children (POMC), joined the Network to give the more professionally oriented programs, i.e., programs with paid staff, an emotional and physical boost in terms of power and statewide recognition (McCormack, 1987).

This dissertation examined the leaders of the Florida Network and found, as Blumer (1969) did, that there appeared to be a need and function for typical personality types which included the charismatic, statesman,

agitator and bureaucrat. Examples of the agitators came with the loud, vocal "survivor" or feminist who became the squeaky wheel that needed to be oiled. They were instrumental in creating the needed attention to the cause, but with a few exceptions, did not stay within the mainstream for long. Agitators, while very dedicated to the cause, did not compromise, made enemies and burned bridges in order to get their needs met. These tactics worked in the short run but advocates found they had to distance themselves from these personalities in order to navigate the political waters.

Of particular interest are the individuals whose identities became so very ingrained within the cause that they were unable to let go even after they had either lost their jobs or were removed otherwise from the core of the network. This is an indication of the degree of "esprit de corps" which the movement established. Although women still dominate both locally and nationally, the feminists, who were largely responsible for the initiation of crisis response centers, are largely absent from present leadership. They were the initial catalyst which gained media and legislative attention. Because they were unable to compromise, they were unable to work the system to their advantage, and thus, lost out to the more sophisticated statesmen and bureaucrats (Waters, 1989; Dressel, 1987; Weber, 1968).

Initially the FNVWS attempted to establish a niche within the governmental bureaucracy in order to create job security for a newly-emerging social welfare problem (Gusfield, 1989). Some of the individual leaders began to view themselves as representing the best interests of the movement, acting beyond the accepted scope of others. Resulting conflicts illustrate Michael's theory of the "iron law of oligarchy" by the ruling members of a movement (Michels, 1949; Selznick, 1966).

The Florida coalition presents a pattern which is consistent with previous literature concerning collective behavior and social movements (Turner and Killian, 1957; Blumer, 1969; Selznick, 1966; 1948; 1943; Messinger, 1955; Tilly, 1978; Zald and Ash, 1969; Weber, 1968; 1947; Perrow, 1972; Michels, 1949). A typical "life cycle" or "growth pattern" can be seen in the formation, organization process and subsequent development of the FNVWS. This dissertation examined the coalition work of the FNVWS, documenting its gain in momentum, forced transitions, bureaucratization, institutionalization, advances, setbacks, and flirtation with the dangers of cooptation (Staggenborg, 1986; Perrow, 1972; Selznick, 1966).

Elias (1986; 1983) has noted that the progress which has been made by victim advocates is largely symbolic in that new laws are on the books, and advocate positions are available in most large metropolitan areas, but that the focus on victims is largely rhetorical. Funding is not being afforded in large enough amounts to really accomplish any more than band-aid treatment. Proof that the victim movement has been truly ensconced within the system will be evident when

the money is actually provided insuring adequate protection under the law. Resources are extremely limited. Witness an excerpt from the St. Petersburg times in May of 1991 disclosing a rape victim's displeasure over her remuneration from crimes compensation:

> "Anna Resnick, 75, is not ashamed to reveal that she was raped five years ago. What upsets her is the $28.81 check the state victim's assistance office just sent her as compensation.
>
> 'This is what they're offering me after five years,' Resnick said. 'I don't know what to do with it.'
>
> The awards are based on an analysis of the victim's medical bills, income, insurance, and ability to pay. The money comes from convicted criminals who are ordered to pay restitution to a trust fund for the victims."

Many victims would be satisfied knowing that the state provided no compensation rather than have an incorrect anticipation of adequate reimbursement. In reality, it cost the state more than the amount reimbursed to cut the check and process the claim.

Many similarities exist between the victims' movement and other past reforms. Marwell et al. (1988) stated that movement mobilization tends to be more successful when participants were related to each other through social circles and friendships. Essentially, major figures behind the victim's movement came from members of the middle class. This mirrors Gusfield's (1963) analysis of the Prohibition reform movement in the 19th and 20th centuries. Prohibition became the symbolic reform of this dominant population, with the intent of urging the lower classes to assimilate, or to become controlled through abstinence.

The poor in this country have been used to an abusive criminal justice system, and saw it as being the norm. Persons form the middle class were brought up to believe in the police and the courts as the upholders of their values. When unexpectedly confronted with an unsympathetic, bureaucratic, often hostile court system, many middle class participants felt betrayed and thus began to mobilize. Taking this argument further, one can make comparisons between the women's movement claim of rape as a symbol of the oppression and domination of men, and other reform movements in this country's history. It was women who spearheaded the child saver movement at the turn of the century (Platt, 1969), the prohibition movement (Gusfield, 1963) and the asylums for the poor and mentally ill (Rothman, 1971).

Perrow (1986) noted that, like people, organizations experience "drift." Unforeseen consequences of what seemed to be harmless concessions, derail the original goals of an agency. The danger of this type of "evolution" is that it eventually erodes the autonomy of the institution. Those organizations who fail to make concessions do not survive. Thus, a "Catch-22" situation occurs causing idealistic goals to be doomed to eventual cooptation. In Florida, the Attorney General's Office has taken over almost all of the Statewide victim issues including crimes compensation. The Governors's Office retains one advocate that was not statutorily moved at the time of the

consolidation in 1991. The FNVWS has circumvented some of the problem by removing the "heavy hitters" from the board and having them placed as "advisory" members. The reality of the victim's movement as social reform, unfortunately, is that it is destined to become one more institutionalized, symbolic, and rhetorical arm of government.

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APPENDIX A

Inwald Personality Inventory (IPI) Scales		
IPI SCALES Purpose	ELEVATED SCORES may indicate:	LOW SCORES may indicate:
I. VALIDITY SCALE		
1. GD (Guardedness). To identify persons who have minimized short-comings, denied faults, and answered items in a "socially desirable" manner.	Guardedness, denial, desire to appear socially "correct." Possibly invalid profile due to defensiveness of responses. Lack of insight.	Candor, self-awareness, ability to admit to minor shortcomings, maturity regarding self-assessment.
II. "ACTING OUT" BEHAVIOR MEASURES		
A. SPECIFIC "EXTERNAL" BEHAVIORS		
2. AL (Alcohol). To identify individuals who may use alcohol excessively.	Alcohol abuse, admission of habitual and/or excessive use of alcohol.	Denial of habitual use of alcohol. Infrequent use of alcohol.
3. DG (Drugs). To identify individuals who may use drugs excessively.	Drug abuse, admission of habitual and/or excessive use of drugs.	Denial of habitual use of drugs. Denial of experience with drugs.
4. DV (Driving Violation). To document problems in adhering to the law with regard to the operation of a motor vehicle.	A pattern of moving violations, fines, accidents, and/or possible disregard for the law regarding motor vehicle regulations.	No evidence of driving violations, or difficulty following rules related to motor vehicles.
5. JD (Job Difficulties). To indicate those persons who have had a history of difficulty in the area of job performance.	Past difficulties holding jobs, history of being terminated from job, problems with coworkers or bosses, and/or spotty employment record.	Little apparent difficulty obtaining or keeping employment. No evidence of job adjustment difficulties.
6. TL (Trouble with the Law and Society). To identify any history of brushes with the law and with social norms.	Antisocial behaviors and incidents including arrests, convictions, school suspensions, fist fighting and other brushes with authority.	Denial of a pattern of anti-social behaviors in conflict with societal rules and norms.
7. AA (Absence Abuse). To document tendencies towards excessive absence and/or lateness on the job.	Pattern of difficulty meeting job responsibilities regarding attendance and/or punctuality. History of abusing sick leave privileges may be evident.	Little evidence of absenteeism, frequent minor illness, or lateness on past jobs.
B. ATTITUDES AND TEMPERAMENT		
8. SA (Substance Abuse). To identify individuals with substance abuse and risk-taking tendencies.	Impulsivity, thrill-seeking, willingness and tendency to take risks, pattern of a gambler who may be a substance abuser as well..	No apparent tendency towards risk taking or gambling. May be a mature individual who is unlikely to abuse substances.

Inwald Personality Inventory (IPI) Scales		
IPI SCALES Purpose	ELEVATED SCORES may indicate:	LOW SCORES may indicate:
9. AS (Antisocial Attitudes). To measure expressed antisocial attitudes which may affect behavior and compliance with social rules.	Antisocial attitudes, skepticism, feeling that those who break the rules in order to "beat the system" are justified.	Denial of antisocial attitudes in conflict with the norms of society. Positive and mature outlook regarding general need for authority and regulations.
10. HP (Hyperactivity). To identify persons with impulsive, hyperactive behavior patterns.	Restless, overactive, impulsive patterns of behavior. highly energetic individual who may be outspoken and/or impatient with others.	Apparently average or below average activity level. Little evidence of tendency to overreact or become unusually restless under stress.
11. RT (Rigid Type). To indicate a quality of rigidity; strict adherence to rules, and inflexibility in interpersonal relations.	Impatient attitude towards others for minor discretions, easily irritated person who has tendency to keep emotions hidden.	Flexible, nonrestricted; patience with minor shortcomings in self and others. May show tolerance of others.
12. TA (Type "A"). To identify characteristics similar to "Type A" personalities.	Driven, restless, competitive personality with high standards and "workaholic" tendencies. May be prone to heart ailments or other physical stress reactions.	Non-competitive, relaxed attitudes towards work and recreation. Little evidence of a driven, aggressive personality.
II. INTERNALIZED CONFLICT MEASURES		
13. IC (Illness Concerns). To document tendencies towards physical ailments or unusual concerns about illness or bodily harm.	Frequent health concerns and/or chronic physical symptoms or illness. Unusual or unwarranted preoccupation with health issues. Minor ailments may tend to develop under stress.	No apparent tendency to develop physical symptoms or illnesses under stress. Few complaints regarding current physical condition.
14. TP (Treatment Programs). To identify persons who have had past psychological counseling, substance abuse treatment, and/or mediation for nervous conditions.	Endorsement of at least one of three items indicating past psychotherapy, drug/alcohol treatment and/or history of taking tranquilizers for a problem.	No history of past therapy or counseling, drug/alcohol treatment program participation and/or taking of medications for an emotional problem.
15. AN (Anxiety). To indicate individuals suffering from a high level of anxiety.	Admission of frequent anxiety and worry over problems. Poor coping skills in stressful situations may be evident.	Denial of anxiety or symptoms related to chronic worry. May have sufficient stress coping skills.
16. PH (Phobic Personality). To identify a tendency towards fearful avoidance of situations not classified as dangerous or fearful by most people.	Symptoms characteristic of phobic patients in outpatient clinics. Strong anxiety reactions when facing situations such as crowds, closed spaces, and/or travel.	Little evidence of phobic reactions of avoidance behavior as coping mechanism. Denial of symptoms common to phobic individuals.

Inwald Personality Inventory (IPI) Scales		
IPI SCALES Purpose	ELEVATED SCORES may indicate:	LOW SCORES may indicate:
17. OB (Obsessive Personality). To identify individuals who are particularly concerned with details and order, who may react to unstructured situations with anxiety.	Desire for a highly structured environment in order to function. Anxiety over details may be evident, as well as anxiety when there is confusion or disorganization.	Denial or strong concern with details and order. May be able to handle disorganized situations without excessive anxiety.
18. DE (Depression). To indicate those persons who appear depressed and who exhibit a generalized dissatisfaction with life.	Expressed discouragement and depression. perceived difficulty coping with daily stresses, and difficulty achieving personal goals. General dissatisfaction with progress in life.	Little expression of dissatisfaction with life, or discouragement regarding the attainment of goals.
19. LO (Loner). To identify individuals who tend to keep to themselves, who may be "loners" with limited social contact with others.	Tendency to spend time alone, have few close friends, and avoid such socializing with others. In times of stress, human support network may be quite limited.	Apparently social and outgoing, may have a network of friends and social contacts.
20. UE (Unusual Experiences/ Thoughts). To document unusual experiences and thoughts commonly associated with emotional disturbance or thought disorders.	Positive endorsement of items rarely answered by non-clinical patients. May have unusual or bizarre thoughts and experiences. High scores may be evidence of emotional disturbance.	Denial of unusual or bizarre thoughts and experiences. Does not admit to symptoms characteristic of thought disorders.
IV. INTERPERSONAL CONFLICT MEASURES		
21. LA (Lack of Assertiveness). To measure level of assertiveness in social interactions.	Tendency to avoid confrontations with others. May be easily intimidated and lack assertiveness in social interactions.	Little apparent difficulty being assertive in social interactions. May be able to react to others in a straightforward manner.
22. ID (Interpersonal Difficulties). To identify individuals who have demonstrated a pattern of interpersonal conflicts and troubled relationships with others.	Indication of problems getting along with others. May be moody, impatient, and demanding, with strong expectations as to how others should behave.	Denial of difficulty getting along with and relating to others. May be able to work easily in a group setting.
23. US (Undue Suspiciousness). To identify a tendency to be unusually suspicious and wary of the motives and actions of others.	Pattern of reacting with undue suspiciousness regarding the behavior of others. Tendency to feel few can be trusted. Paranoid ideas may be present.	Little apparent suspicion of others or evidence of paranoid thoughts. May be open and easygoing.
24. FC (Family Conflicts). To document a history of family difficulties and personal conflict.	Positive endorsement of items indicating conflicts with family members, resentment towards one or both parents and/or relatives.	Few serious family conflicts or resentments evident. Apparently stable family background.

Inwald Personality Inventory (IPI) Scales		
IPI SCALES Purpose	ELEVATED SCORES may indicate:	LOW SCORES may indicate:
25. SC (Sexual Concerns). To identify individuals having difficulty relating to members of the opposite sex.	Expressed hostility and/or confusion with regard to the opposite sex. May have some difficulty working with members of the opposite sex.	Few endorsements of items indicating difficulty relating to or working with members of the opposite sex.
26. SP (Spouse/Mate Conflicts). To document a history of troubled relationships with spouse or mate.	Admission of history of problems in relationship with spouse or mate.	Denial of difficulties getting along with spouse or mate.

Minnesota Multiphasic Personality Inventory (MMPI) Scales

L = Lie
F = Infrequency
K
Hs = Hypochondriasis
D = Depression
Hy = Hysteria
Pd = Psychopathic Deviate
Mf = Masculinity-Femininity
Pa = Paranoia
Pt = Psychasthenia
Sc = Schizophrenia
Ma = Hypomania
Si = Social Introversion
MacAndrews Alcoholism Scale
Critical Items

MMPI x IPI Pearson Bivariate Correlation Matrix

IPI Scale	MMPI Scale														
	Critical Items	L	F	K	1(Hs)	2(De)	3(Hy)	4(Pd)	5(Mf)	6(Pa)	7(Pt)	8(Sc)	9(Ma)	0(Si)	Mac
Critical Items	.73	-.32	.33	-.45	.07	.17	-.08	.05	.17	.24	.25	.21	.26	.22	.28
GD	-.08	.60	.04	.21	.13	.07	-.03	-.08	-.16	-.14	-.04	.08	-.02	-.01	-.09
AL	.20	-.22	.19	-.24	-.04	.01	-.12	-.05	-.05	.06	.06	.06	.22	-.03	.26
DG	.14	-.20	.11	-.12	.05	-.02	.02	.11	.06	.12	.07	.11	.20	-.07	.21
DV	.02	-.15	-.11	-.02	-.04	-.02	.05	.04	-.08	.12	-.07	-.08	-.07	-.07	.10
JD	.27	-.24	.22	-.30	.01	.05	-.07	.03	.15	.11	.09	.07	.12	.14	.14
TL	.24	-.25	.15	-.23	.00	.01	-.05	.15	-.05	.15	.06	.11	.20	.05	.29
AA	.31	-.35	.24	-.36	.04	.07	-.08	.00	.13	.12	.11	.07	.19	.15	.21
SA	.35	-.30	.23	-.41	-.02	.01	-.12	.01	.15	.10	.04	.08	.39	.02	.24
AS	.42	-.26	.35	-.64	-.12	.07	-.40	-.15	.12	-.01	-.01	.01	.33	.35	.31
HP	.45	-.38	.29	-.63	-.12	.07	-.23	-.10	.16	.11	.01	-.03	.34	.19	.28
RT	.30	-.13	.26	-.48	-.19	.01	-.42	-.19	.01	-.03	-.05	-.07	.23	.29	.25
TA	.42	-.30	.29	-.60	-.13	.12	-.26	-.13	.17	.15	.02	-.08	.21	.32	.23
IC	.46	-.17	.34	-.41	.19	.23	-.09	.01	.26	.18	.21	.16	.18	.28	.18
TP	.17	-.18	.13	-.11	.12	.09	.10	.14	.20	.15	.10	.07	.03	.07	.10
AN	.38	-.25	.30	-.47	.00	.26	-.12	-.07	.16	.20	.17	.00	.03	.36	.04
PH	.52	-.26	.36	-.56	-.02	.26	-.26	-.10	.21	.15	.18	.08	.02	.56	.13
OB	.42	-.26	.33	-.60	-.11	.17	-.30	-.19	.13	.08	.03	-.08	.16	.39	.19
DE	.52	-.26	.42	-.51	.07	.39	-.11	.06	.28	.26	.30	.18	.13	.47	.11
LO	.23	-.07	.27	-.31	-.03	.26	-.25	-.04	.09	.06	.11	.04	-.05	.54	.05
UE	.51	-.10	.44	-.45	.10	.22	-.23	-.04	.09	.11	.24	.26	.26	.43	.22
LA	.12	-.10	.19	-.08	.11	.21	.02	.06	.11	.11	.18	.11	-.28	.37	-.13
ID	.43	-.28	.35	-.59	-.08	.20	-.28	-.09	.12	.12	.04	-.02	.14	.43	.20
US	.44	-.22	.33	-.63	-.16	.13	-.45	-.18	.16	.00	.06	.01	.29	.41	.28
FC	.32	-.14	.34	-.34	.05	.17	-.11	.14	.30	.17	.14	.17	.13	.22	.15
SC	.29	-.03	.26	-.34	.01	.15	-.23	.00	.14	.06	.10	.13	.16	.30	.05
SP	.27	-.15	.21	-.32	-.01	.15	-.12	.05	.21	.13	.11	.07	.14	.21	.12

n = 590
Pearson (r) values of:
0.07 significant at .05 level.
0.09 significant at .01 level.
0.11 significant at .001 level

APPENDIX B

Criminal Justice-Related Doctoral Research in Florida, 1991

Barlow, David. (1991). The Political Economy of Criminal Justice in the United States: 1948-1987. (Criminology, Florida State University)

Barlow, Melissa. (1991). Popular Ideologies of Crime in the United States: 1947-1987. (Criminology, Florida State University)

* Bullock, Carol. (1991). The Effect of Florida's Post Furman Executions on Homicide Rates. (Criminology, Florida State University)

Cable, Eric. (1991). Reconceptualizing Government Growth: An Examination of Three Alternative Models of Criminal Justice Expenditures in the American States for the 1948-1985 Period. (Public Administration, Florida State University)

* Cintron, Myrna. (1991). An Assessment of an Evolving Control Strategy: Cocaine, the United States and Latin America. (Criminology, Florida State University)

Daly, Charles. (1991). Coordination of Child Abuse Services: Beyond the Structural Determinants. (Social Work, Florida State University)

Deitchman, Mary Ann. (1991). Factors Affecting Competency-for-Execution Decision Making in Florida Forensic Examiners. (Psychology, Florida State University)

* Griffith, Tracy. (1991). Correlates of Police and Correctional Officer Performance. (Counseling Psychology and Human Systems, Florida State University)

* Morgan, Kathryn. (1991). An Analysis of Factors Influencing Probation Outcome. (Criminology, Florida State University)

Park, Won-Kyu. (1991). Patterns of Criminality in Postwar Japan: A Structural Perspective. (Criminology, Florida State University)

Partyka, David. (1991). Analysis of the Link Between Delinquent Behavior and Reading Developmental Disorders in a Sample of Chronic Male Juvenile Offenders. (Psychology, Florida State University)

Ruckman, Jr., Peter. (1991). The Confirmation of Supreme Court Justices: Constructing and Testing a Theoretical Model of a Dynamic Process. (Political Science, Florida State University)

Savestanan, Naras. (1991). Thai Police Cadets' Attitudes Toward Police Corruption in Thailand. (Criminology, Florida State University)

*Sayles, Susan. (1991). The Fight for Victim's Rights in Florida: The Realities of Social Reform. (Criminology, Florida State University)

Shaw, Theodore. (1991). Offender Variables and Treatment Outcomes of Participants in a Residential Sex Offender Program. (Counseling Psychology, University of Florida)

* Sollars, David. (1991). The Allocation of Law Enforcement Resources, Spillovers, and the Illicit Drug Market. (Economics, Florida State University)

* Spooner, Shirley. (1991). DUI Offenders' Perceptions of Counselor Empathy and Helpfulness. (Agency, Correctional and Developmental Counseling, University of Florida)

* Swenson, Cynthia. (1991). Perceived Control as a Predictor of Treatment Outcome with Chronic Adolescent Offenders. (Psychology, Florida State University)

* Waryold, Diane. (1991). An Analysis of Differences in Role Perceptions Among Senior Patrol Officers and University Judicial Officers in Selected Public Higher Education Institutions in the United States. (Higher Education, Florida State University)

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* *Asterisks indicate a paper based on the dissertation is included in this volume.*