The Effect of a Local Drug Enforcement Program upon the Availability of Illicit Drugs

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Preface

This report meets the requirement for evaluating the impact of the law enforcement component of the Law Enforcement Assistance Administration Discretionary Grant 72-DF-94-0058 (Comprehensive Drug Abuse Prevention Program). The impact of the prevention component of this grant is reported separately.

The police provided much of the information summarizing the operation and outputs of this drug enforcement program. Some of the information that they shared with us had to come out of their heads instead of out of their files, and we appreciate their willingness to spend a considerable amount of time helping us. We would particularly like to thank Captain J. O. Bowman, Lieutenant A. J. Europa, Lieutenant B. J. Smith, Lieutenant Howard White, and all the officers in the Vice Control Bureau who ranked arrestees in the drug distribution network. Sergeant John Horton gave us summary arrest data and Mr. William Best provided the quantities of drugs confiscated.

Data used to track three years of drug arrestees was collected by Susan Jay, Ramona Cuthbertson, Beth Young, Tim Murphy, Ronald Boykin, and Denny McGuire. The staff and volunteers of the Drug Education Center did most of the organizational and coding work that made possible the two countywide school drug surveys. We also want to thank each of the "local knowledgables" who estimated drug availability and to whom we pledged anonymity. Janet Faltz, of the UNC-CH Computation Center, did the computer programming for both the drug arrests and the school surveys. And Louise Clayton, also of the Computation Center, supervised the keypunching of the data.

At the Institute of Government, several people helped to transform a mass of data into a program evaluation. Mary Jon Lloyd bore the brunt of the statistical calculations and proofing drafts. Douglas Gill critiqued the draft. Ted Clark designed the cover and prepared the figures; Carolyn Haith did the typing; and Jack Atwater supervised the printing.

Table of Contents

In Charlotte-Mecklenburg the local program developed to cope with drug abuse has three major components -- reducing the availability of illicit drugs, reducing the propensity of individuals to become drug abusers, and rehabilitating drug abusers. Reducing the availability of drugs is a responsibility that falls partly to the private sector and partly to the public sector. Members of private organizations, such as the medical society and the pharmaceutical association, can affect the illicit diversion of legal drugs, depending upon what practices they follow in prescribing drugs, filling prescriptions, and receiving and storing drugs. In the public sector, the basic instrument for curtailing the availability of illicit drugs is enforcement of the North Carolina Controlled Substances Act. This act makes illegal and establishes penalties for the sale and possession of a wide range of drugs, excluding alcohol.

Local responsibility for enforcing the Controlled Substances Act falls to the Charlotte Police Department and the Mecklenburg County Police Department. While the uniform bureaus of these two departments make a number of drug arrests, the primary responsibility for concerted action in reducing drug availability falls to the joint city-county Vice Control Bureau. In 1972, the Law Enforcement Assistance Administration awarded to Mecklenburg County a grant whose purpose was to beef up the Vice Control Bureau's drug program. This grant provided three additional officers, beginning December 17, 1972, and terminating January 31, 1974,

and $10,000 in buy money (funds used by undercover agents and informers to purchase drugs) beginning June 23, 1973, and terminating January 31, 1974.[1]

Expected Consequences of Increased Drug Enforcement

The Vice Control Bureau carries out several tasks intended to reduce the availability of illicit drugs in the community. Most prominent among them are the surveillance of known sellers, using undercover agents and informers to make buys from sellers, confiscating drugs, arresting sellers, and arresting users. These methods might be expected to affect availability in different ways.[2] Surveillance has an indirect effect upon availability when used to build a case resulting in the arrest of a seller. But surveillance might also restrict the movements of the seller and make him less willing to sell to new customers, thus increasing the time required by the user to locate a willing seller. Confiscations would have the effect of reducing the quantity of illicit drugs in the community, which might in turn (assuming stable demand) drive up the dollar price that the user must pay for illicit drugs. Arresting sellers might increase the seller's perceived risk of doing business, leading him either to increase his selling price in order to pay himself for undertaking the additional risk, stop selling because he

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[1]The grant as originally awarded provided for $43,662 in buy money, but difficulties in developing a procedure for accounting for the funds that was satisfactory to LEAA delayed the first draw down of buy money for six months and limited the amount used during the remaining seven months.

[2]For a more complete description of the differential effects of enforcement policies, see Mark H. Moore, "Policies to Achieve Discrimination on the Effective Price of Heroin," American Economics Review, 63:2 (May, 1973), pp. 270 - 277.

is unwilling to accept greater risk, or become more circumspect in selling drugs. Using undercover agents and informers to purchase illicit drugs from sellers has as one objective the acquisition of evidence needed to charge a person with selling illicit drugs, but it can also affect the time required by the user to locate a seller willing to sell. Fearing entrapment, the seller may suspect the new customer of being an undercover agent and the old customer of being an informer.

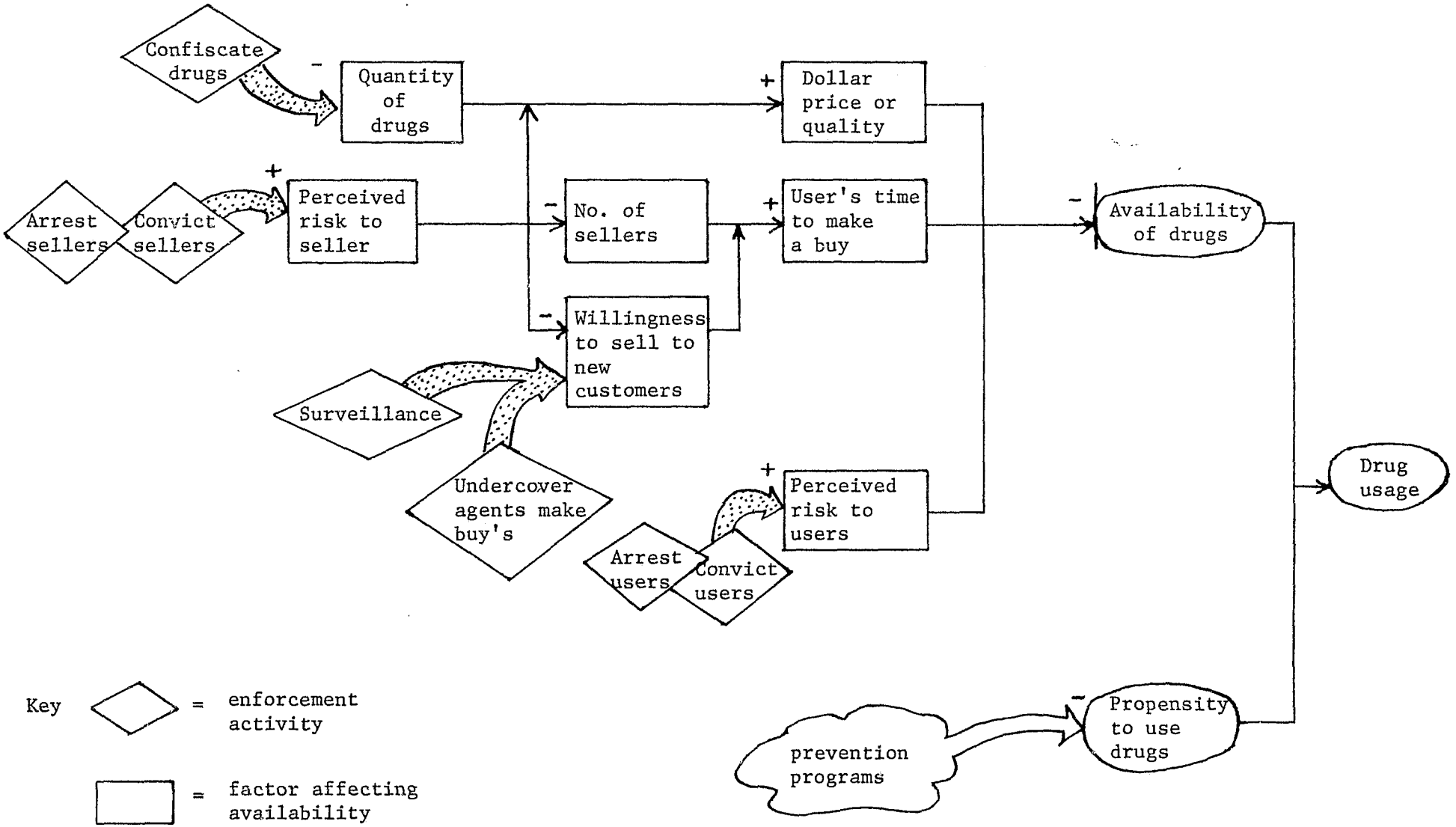
Surveillance, drug confiscations and buys, and arrests of sellers all serve to affect the seller's behavior in such a way that the seller will make it more time consuming and expensive for the user to obtain drugs through the illicit drug market. In contrast, arresting users might be expected to affect the user directly by increasing the risk that the user perceives of being arrested for possessing drugs illegally. These expected relationships between enforcement activities and availability of illicit drugs are diagrammed in Figure 1.

The purpose of the LEAA grant was to increase the Vice Control Bureau's ability to obtain the evidence needed to arrest sellers by beefing up its surveillance and undercover capabilities. A thirty percent increase in the number of officers could substantially increase the Bureau's surveillance capability. A large increase in the amount of buy money available to the Bureau was considered a prerequisite to identifying and arresting sellers located above the retail level (street level) in the illicit drug distribution network. Generally, the method used is for an undercover agent to begin by making buys from a retailer, to ask to make buys in larger lots and get the retailer to put him in contact with a middleman or wholesaler, and thus continue working his

Figure 1

EXPECTED RELATIONSHIP OF DRUG LAW ENFORCEMENT ACTIVITIES

TO AVAILABILITY OF ILLICIT DRUGS



way up the distribution network. Only with large sums of buy money would undercover agents be able to make the large purchases required to work their way up this network.

The purpose of this paper is (a) to estimate the availability of illicit drugs in Charlotte-Mecklenburg in 1972 and in 1973 and (b) to determine the extent to which the LEAA-funded augmentation to the Vice Control Bureau's program is responsible for the change in availability from 1972 to 1973. Methods used to estimate availability are described in the next section.

Methods Used to Estimate the Availability of Drugs

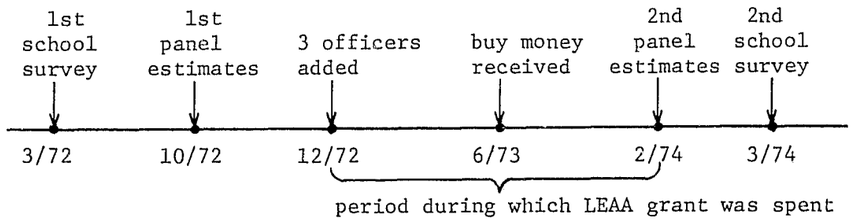
Three factors play a role in considering how available illicit drugs are to the user: the dollar price the user must pay the seller, the amount of his time required to find and make a buy from a seller, and the user's perceived risk of being arrested for possessing illegal drugs. The fact that the market is illegal makes it difficult to obtain the data needed to measure the change in availability from 1972 to 1973. No official records on volume of drugs imported and sold, on number of sellers, or on prices are available as would be the case for commodities sold in legal markets. The concealed nature of illicit drug transactions requires that a variety of indirect approaches to measuring availability be used. It is important that these measures be considered in relation to each other in order to determine their consistency in painting a total picture of the illicit drug market.

Several approaches were taken in obtaining information about drug availability. People in the community who by their position or activities were presumed to be informed concerning the local drug scene formed a

panel that provided estimates about availability. The people on this panel (hereafter referred to as local knowledgables) included vice control officers, drug education and treatment personnel, and former sellers and users. In October and November, 1972, and again in February, 1974, this panel estimated the price of drugs, the number of sellers, and the ease or difficulty of obtaining drugs, and suggested reasons for price changes during the previous year.

Another approach was to tap the opinions of the junior and senior high school students who responded to the countywide drug surveys given in March of 1972 and 1974. These students (numbering 32,995 in 1972 and 30,501 in 1974) answered questions about how easily they could obtain drugs, the frequency with which they used selected drugs, sources from which they obtained drugs, and reasons for not using drugs.

Finally, additional discussions were held with a number of local knowledgables to learn about the quality of drugs being sold illicitly and the number and duration of panics resulting from temporary shortages of heroin. The data obtained are used in the next section to estimate the change in dollar price, ease of locating a seller, and perceived risk during the year that the augmented drug enforcement program began. The diagram sketched below shows when the data were collected and when the augmented drug enforcement program began:



How Has the Availability of Drugs Changed?

Of the three factors that affect availability, dollar price is the one surrounded by the least uncertainty. Prices are fairly stable and there is a high degree of consensus among local knowledgables as to what those prices are. Table 1 lists the prices (for quantities commonly sold to the consumer) for the six drugs that were monitored -- amphetamines, barbiturates, cocaine, heroin, LSD, and marijuana. Prices for four of these drugs were the same in February, 1974, as they were in October, 1972. Amphetamine prices increased 50 cents a capsule, and LSD prices went down 75 cents a tablet.

Two approaches were used to determine whether it became more difficult for a potential user to buy drugs, assuming that he had the money and the desire to do so. Local knowledgables estimated the difficulty by type of use and by source. Students reported on the difficulty of getting drugs and where they got them. The picture that emerges for marijuana is that it was easier to get the drug in 1973 than in 1972 from friends or from growing your own, but not necessarily from sellers. Local knowledgables estimated that the experimental user would find it about as hard to get marijuana from a seller in 1973 as in 1972 but that the frequent user would find it more difficult. Both types of marijuana users would find the drug easier to get from friends or by growing it.[3] The proportion of students who answered "very easily" to the question, "How easily could you get marijuana if you wanted it and had the money to pay for it?" rose from 43.7% in 1972 to 50.3% in 1974.

[3]These figures and those for the other drugs are contained in Table A in the appendix.

Table 1

ESTIMATED* PRICE OF DRUGS AND NUMBER OF RETAIL SELLERS IN CHARLOTTE-MECKLENBURG

Drug Type	Price*			No. of Street-Level Sellers**			
	1972	1973	Change	1972	1973	Change	% Change
Amphetamine	$1.00 cap	$1.50 cap	+ $.50	70	270	+200	+286%
Barbiturate	1.00-1.50 cap	1.25 cap	- 0 -	75	430	+355	+473%
Cocaine	10.00 bag	10.00 bag	- 0 -	16	48	+32	+200%
Heroin	12.00 bag	12.00 bag	- 0 -	63	125	+62	+98%
LSD	3.00-5.00 tab	2.25 tab	-.75	100	157	+57	+57%
Marijuana	20.00 ounce	20.00 ounce	- 0 -	190	980	+790	+416%

*Median estimate of local knowledgables for 12-month period preceding the date of estimate - October, 1972, and February, 1974.

**Dealers plus pushers.

But 77.0% of the students who indicated both that they used marijuana and the method of obtaining their drugs said that they got them from a friend. Only 8.8% said they got them from a dealer. Although one cannot determine from the wording of the source question ("If you have tried drugs, how did you obtain them?") whether marijuana users who also use other drugs are referring to some drug other than marijuana, the responses suggest that most marijuana users are not getting that drug directly from the seller.

Students were asked a single question to get some idea of how much easier or more difficult it had become to obtain other drugs: "How easily could you get other drugs (amphetamines, barbiturates, heroin, etc.) if you wanted them and had the money to pay for them?" Unlike the responses to the marijuana question, the proportion of students saying that they could get drugs very easily did not increase from 1972 to 1973. There was a slight shift from "very easily" and "don't know how" to "not too easily." (See Table 2.) The pattern estimated by local knowledgables differs by drug type. For both amphetamines and barbiturates, drugs are more difficult to acquire through illegal diversion -- forged prescriptions; taken from the home medicine cabinet; stolen from a drug wholesaler, drugstore, or physician's office; acquired from a pharmacist without a prescription. We would expect this change as a result of quotas set for manufacturers and rescheduling under the Controlled Substances Act. Both these drugs, however, were believed to be more easily obtained from sellers and friends in 1973 than in 1971. LSD was believed to be more easily obtained, except by frequent users, from sellers.

Table 2

HOW EASILY STUDENTS FEEL THEY CAN OBTAIN DRUGS
CHARLOTTE-MECKLENBURG JUNIOR AND SENIOR HIGH SCHOOLS

	1972 Survey	1974 Survey	Change
Marijuana			
All Students	N = 32,995	N = 30,501	
Very easily	43.7%	50.3%	+6.6%
Not too easily	12.9	13.5	+ .6
Don't know how	37.9	31.5	-6.4
No response	5.5	4.7	- .8
Users	N = 8,078	N = 12,240	
Very easily	77.4	73.8	-3.6
Not too easily	12.2	15.2	+3.0
Don't know how	6.3	8.2	+1.9
No response	4.1	2.8	-1.3
Non Users	N = 24,377	N = 17,803	
Very easily	33.1	34.6	+1.5
Not too easily	13.3	12.5	-0.8
Don't know how	49.0	47.9	-1.1
No response	4.7	5.0	+0.3
Other drugs			
All Students	N = 32,995	N = 30,501	
Very easily	26.9	26.3	-0.6
Not too easily	21.6	24.0	+2.4
Don't know how	45.7	44.5	-1.2
No response	5.8	5.1	-0.7

Changes for both heroin and cocaine were believed to have the same pattern. These drugs have become more difficult for the experimental user and easier for the frequent user to obtain from the seller. One would expect this outcome as a result of intensified surveillance and the use of undercover agents to make buys. Both these tactics should have the effect of making the seller less willing to sell to people he does not know, thus making it harder for the experimental user than the frequent user to make a buy.

Perceived risk to the user is the last of the three factors that determine how available drugs are to the person who wants to use them. One question was included in the school survey that has some bearing on the risk that a user believes he assumes when he buys drugs: "If you do not use drugs and never have, or if you have used drugs and stopped, which one, if any, of the following questions best applies to you?" Students currently using drugs were asked not to respond to this question. The usefulness of this question is lessened by the omission of the fifth choice from the 1974 survey -- "don't need drugs." The proportions of students selecting each of the responses are compared below:

Response Category	1972 Survey	1974 Survey
Afraid of being arrested	3.6%	6.0%
Afraid of hurting myself	13.3	44.6
Afraid of hurting my parents	4.9	11.3
Tired of the drug scene	2.1	9.0
Don't need drugs	57.2	omitted
No response	18.9	29.1

It is doubtful that the increase in the percentage of students giving fear of arrest as the reason for not using drugs reflects a real increase in perceived risk. The students in 1974 who might have said they don't use drugs because they don't need them, had they been given that choice, were forced to choose other categories. The arrest category shows the lowest proportionate increase of the four choices available to the student. This low increase compared to that of the other three choices suggests that the increase from 3.6% to 6.0% may have resulted solely from a change in the wording of the question.

Are these estimates on the cost of obtaining drugs consistent with estimates of other facets of the illicit drug market? Table 3 summarizes estimated changes in several characteristics of the drug market -- number of sellers, number of users, price, quality. First consider the picture painted for marijuana. Use the estimate for sellers as a measure of change in supply and the estimate for users as a measure of change in demand. More people are using marijuana now than two years ago, and a higher proportion of these users are frequent rather than experimental users. (See Table 4 for more data about usage.) If supply were constant, then either price or quality of marijuana should have changed. In fact, both price and quality remained stable, meaning that supply would be expected to increase along with demand. Supply did increase. The estimates so far are consistent -- demand up, supply up, price and quality stable.

Why did the local knowledgables say that it was as easy for an experimental user to get marijuana from a seller in 1974 as in 1972 but harder for a frequent user to do so? The activities of the police might

Table 3

CHANGE IN SUPPLY AND DEMAND ESTIMATES FOR ILLICIT DRUG MARKET IN CHARLOTTE-MECKLENBURG

Drug	Increase in No. of Sellers[d,e]	Change in Difficulty of Acquiring from Seller - Experimental[d]	Change in Usage - Experimental[a]	Change in Difficulty of Acquiring from Seller - Frequent[d]	Change in Usage - Frequent[a]	Change in Price[d]	Change in Quality[d]
Heroin	up 98%	More difficult	up 15%[b]	Easier	Down 10%[b]	same	Down
Cocaine	up 200%	More difficult	NA	Easier	NA	same	Down
Marijuana	up 416%	Same	up 32%	More difficult	up 97%	Same	Same
LSD	up 57%	Easier	up 17%[c]	More difficult[c]	Same	Down	Down
Amphetamine	up 286%	Easier	up 28%	Easier	up 26%	Up	NA
Barbiturate	up 473%	Easier	up 34%	Easier	up 87%	Same	NA

[a]Based upon responses to school surveys given in March, 1972 and March 1974.

[b]Any opiate, not simply heroin.

[c]Any hallucinogen, not simply LSD.

[d]Based upon median estimates provided by a panel of local knowledgables.

[e]These figures are likely to contain a wider margin of error than the others, requiring that the user interpret them carefully. Their most appropriate use may be to indicate relative increase among the different drug types instead of absolute increases.

Table 4

CHANGE IN DRUG USAGE REPORTED BY JUNIOR AND SENIOR HIGH SCHOOL STUDENTS IN CHARLOTTE-MECKLENBURG

	% Who Used Drugs Frequently Within Last Year			% Who Used Drugs Once or Twice Within Last Year		
	1972 (N=32,995)	1974 (N=30,501)	% Change	1972 (N=32,995)	1974 (N=30,501)	% Change
Opiate	1.0	.9	-10%	2.0	2.3	+15%
Marijuana	7.3	14.4	+97%	5.9	7.8	+32%
Hallucinogen	2.2	2.2	0	3.5	4.1	+17%
Amphetamine	2.3	2.9	+26%	4.0	5.1	+28%
Barbiturate	1.5	2.8	+87%	3.5	4.7	+34%

provide one plausible explanation. If police concentrated their surveillance, undercover, and arrest work upon sellers of marijuana instead of upon users who share with their friends, it might become harder to get marijuana from a seller. But once having gotten the drug from a seller, a student might experience no greater difficulty in distributing it within friendship circles. The school survey data are consistent with this interpretation but do not prove that it is the correct interpretation. More students responding to the survey in 1974 said that it was very easy to get marijuana than did 1972 respondents. Most students say they get their drugs from friends instead of a seller (Table 5). Frequent users are more likely to get their drugs from sellers than experimental users (see the last column of Table 6).

Next consider the heroin picture. According to the school drug survey, frequent usage of opiates has decreased and experimental usage has increased. Price is the same and the quality has gone down. According to local treatment personnel, the time period during which addicts had a hard time getting heroin (called a "panic") was about the same in 1972 as in 1973. The number of sellers increased, but at a much smaller rate than for marijuana, amphetamines, and barbiturates (see Table 3). The experimental user had a harder time getting heroin from a seller in 1973 than in 1972, but the frequent user had an easier time.

Has the demand for heroin increased or decreased? It seems to have decreased slightly, if you are willing to make two assumptions. First assume that opiate usage reported by students is some constant proportion of total heroin usage. Next assume that attaching these weights to levels of usage is a satisfactory way of estimating the amount of opiates

Table 5

COMPARISON OF SOURCES FROM WHICH STUDENTS OBTAINED DRUGS
CHARLOTTE-MECKLENBURG JUNIOR AND SENIOR HIGH SCHOOLS

Source	1969 Survey (N = 2,883)	1972 Survey (N = 7,464)	1974 Survey (N = 10,516)
Friends	71.2%	76.2%	76.1%
Seeking on own initiative	14.7	14.5	15.2
Dealer	14.1	9.4	8.7

Table 6

SOURCE OF DRUGS USED, BY FREQUENCY OF USAGE AND
DRUG TYPE, 1974 STUDENT SURVEY

Frequency of Usage	Total in Category	Source of Drugs: Friends	Seek on My Own	Through Dealer
	Amphetamine			
Once or twice	2522	74.6%	17.1%	8.3%
Occasional	1793	69.0	18.1	12.9%
Frequent	985	56.9	21.3	21.8
	Hallucinogen			
Once or twice	1966	72.0	17.2	10.8
Occasional	1351	64.8	21.0	14.1
Frequent	725	53.1	20.6	26.3
	Barbiturates			
Once or twice	2206	74.6	17.3	8.1
Occasional	1634	66.8	19.5	13.7
Frequent	953	57.3	21.3	21.4
	Opiates			
Once or twice	1230	61.2	19.9	18.9
Occasional	460	51.3	23.7	25.0
Frequent	280	40.0	26.4	33.6
	Marijuana			
Once or twice	2209	84.2	11.0	4.8
Occasional	3180	81.4	12.1	6.5
Frequent	4107	69.7	17.6	12.8

used: 50 times a year for those who say they use opiates frequently; 10 times a year for occasional users; once for experimental users. Using this method of converting reported usage on the school survey to amount of usage shows a decrease of about 8% on total usage (from 20,460 in 1972 to 18, 752 in 1974). While it would be inappropriate to say that these figures accurately estimate the amount of heroin being used, the percentage decline in reported opiate usage may be a fair approximation of the percentage decrease in demand for heroin.

If the demand for heroin has gone down and price and supply (as measured by the number of estimated sellers) have not gone down, why has quality gone down? One way that a seller can increase his profits is to put less heroin in each bag he sells instead of increasing the dollar price per bag. The seller might resort to diluting the potency of his heroin if police activities resulted in either a smaller supply of heroin reaching him or in an increase in his perceived risk of doing business. If the seller feels that he is running a greater risk of being arrested, he may become more careful about whom he sells to. His increased caution may make it more difficult for the experimental user (who might in reality be an undercover agent) to make a buy than his regular customers. As with marijuana, these estimates make this interpretation of the change in the heroin market plausible, but they do not prove the interpretation to be correct. The picture suggested for cocaine is much the same as for heroin, except that no data for estimating demand and panics are available.

The LSD market has changed in a different way. Number of sellers increased less for LSD than for any other drug. Total usage, calculated

by the method described for heroin, remained substantially the same. Both price and quality declined. If LSD users are not addicted to their drug as heroin addicts are assumed to be to theirs, then one would expect demand to be more responsive to changes in price for LSD than for heroin. If demand stabilized while supply continued to increase, we might expect the price of LSD to fall -- as it did. We cannot, however, explain why quality also declined.

Demand and supply for barbiturates and amphetamines have increased (Table 3). The estimated number of sellers increased at a faster rate for barbiturates than for amphetamines. The price of barbiturates stayed the same, and the price of amphetamines increased. Data on quality are not available. As the number of sellers increased, it became easier for users to get drugs from sellers. That these estimates are consistent with each other makes them more credible. But consistency alone does not prove their accuracy.

Summary of Change in Availability

Using information provided by local knowledgables and junior and senior high school students, we have tried to assess the change in the supply of drugs available in the community from 1972 to 1973. Our conclusions can be summed up by looking at the increase in usage that students reported (Table 7). The supply of opiates (primarly heroin) appears to have decreased and hallucinogens (primarily LSD) to have remained about the same. The supply of amphetamines, barbiturates, and marijuana seems to have increased, with the largest increase being for marijuana. Other estimates of prices, quality, number of sellers, and the ease with which drugs can be acquired from sellers are consistent with these estimates of demand.

Table 7

CHANGE IN DRUG USAGE REPORTED BY JUNIOR AND SENIOR HIGH SCHOOL STUDENTS

Drug	Usage for Year Ending 3/15/72[a] (N = 32,995)	Usage for year Ending 3/5/74[a] (N = 30,501)	Percentage Change
Opiate	20,460	18,752	- 8%
Hallucinogen	48,263	48,164	0
Amphetamine	52,729	60,293	+ 14
Barbiturate	35,658	60,103	+ 69
Marijuana	145,368	258,561	+ 78

[a]Estimate based upon arbitrary weighting of illicit drug usage reported by students: frequent usage assumed equal to 50 times a year; occasional usage, 10 times; experimental usage, once.

We have suggested ways in which police enforcement activities could have affected the drug market. To determine what effect the augmented enforcement program did have upon the availability of drugs, we must consider two other questions. First, what were the outputs, or immediate products, of the enforcement program? Outputs include investigations, arrests, confiscations, and other tasks performed as a part of the program. Second, what impact did these outputs have upon the availability of drugs? Answering this question requires linking the outputs to changes in availability and considering events other than the enforcement program that might also have affected availability.

What Steps Did the Enforcement Program Take to Reduce Availability?

If augmenting the Vice Control Bureau's drug enforcement program by providing additional officers and buy money had any effect upon the availability of illicit drugs, we would expect one or more of the following conditions to hold:

a. Vice control officers made more drug arrests in 1973 than in 1972.

b. A greater percentage of the arrests made in 1973 were of high-level sellers than in 1972.

c. The percentage of arrests resulting in convictions was higher in 1973 than in 1972.

d. The value of drugs confiscated was greater in 1973 than in 1972.

This section describes the change in the outputs of the program -- i.e., arrests, convictions, confiscations. The next section will look at the

impact that these outputs had upon the availability of illicit drugs in the community.

Were More Drug Arrests Made?

Police arrest records kept in the Charlotte Police Department's Vice Control Bureau are the source of the arrest statistics discussed in this section. The Vice Control Bureau keeps individual records of all local drug arrests, including arrests made by the State Highway Patrol, the State Bureau of Investigation, and the city and county police departments. Nondrug vice squad arrests are excluded in this discussion.

In recent years, about three quarters of the Bureau's total effort has been devoted to enforcing the Controlled Substances Act.[4] Staffing in 1972 consisted of 1 lieutenant, 2 sergeants, and 10 to 11 officers. With the addition of three officers provided by the LEAA grant, staffing in 1973 included 1 lieutenant, 2 sergeants, and 12 to 14 officers. Multiplying 75% by the 157 manmonths of Vice Control effort in 1972 gives an estimated 118 manmonths of effort devoted to enforcing the drug law. Multiplying 75% by the 159 manmonths of locally financed effort in 1973 and adding the 36 manmonths financed by the LEAA grant gives an estimated 155 manmonths of effort devoted to enforcing the drug law in 1973.

Vice Control drug arrests increased from 422 in 1972 to 442 in 1973. Arrests per manmonth of effort declined from 3.6 in 1972 to 2.9 in 1973.

[4]Captain J. O. Bowman, who was in charge of the Vice Control Bureau in 1971, estimated drug law enforcement consumed about 75% of total effort in 1971. Sergeant H. R. Smith estimated the proportion of effort to be about the same in 1972 and 1973.

Was a Greater Proportion of Arrests Made of High-Level Sellers?

If the Vice Control Bureau aimed to penetrate the drug distribution network, we would expect the number of arrests per manmonth of effort to decline. Making arrests at higher levels in the network means spending much more time in investigations, surveillance, and undercover work than required to arrest drug users or street-level sellers. To find out whether a greater proportion of arrests was being made at higher levels of the network, we developed with the officers (a) a hierarchy for the drug distribution network and (b) a set of criteria for deciding at what level a person is in that network.

Figure 2 shows the hierarchy used. The producer or manufacturer is at the highest level in the network. He is identified by the presence of lab equipment or chemicals used to produce drugs, cutting tools, scales, or large quantities of marijuana plants. The producer sells his product in large quantities to wholesalers and retailers. The wholesaler sells mainly to people who sell drugs at the retail level (who may be users as well). He sells larger quantities of drugs than the retailer -- usually at a lower price per unit -- and he may have his own network of retailers. The middleman also deals large quantities of drugs. However, the drugs usually belong to a wholesaler, who pays the middleman off either in drugs or a cut of the profit. The retailer is the street-level seller, who sells directly to the user.

Figure 2

Hierarchy for the Illicit Drug Distribution Network

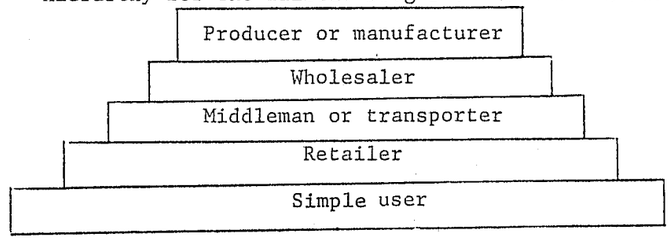
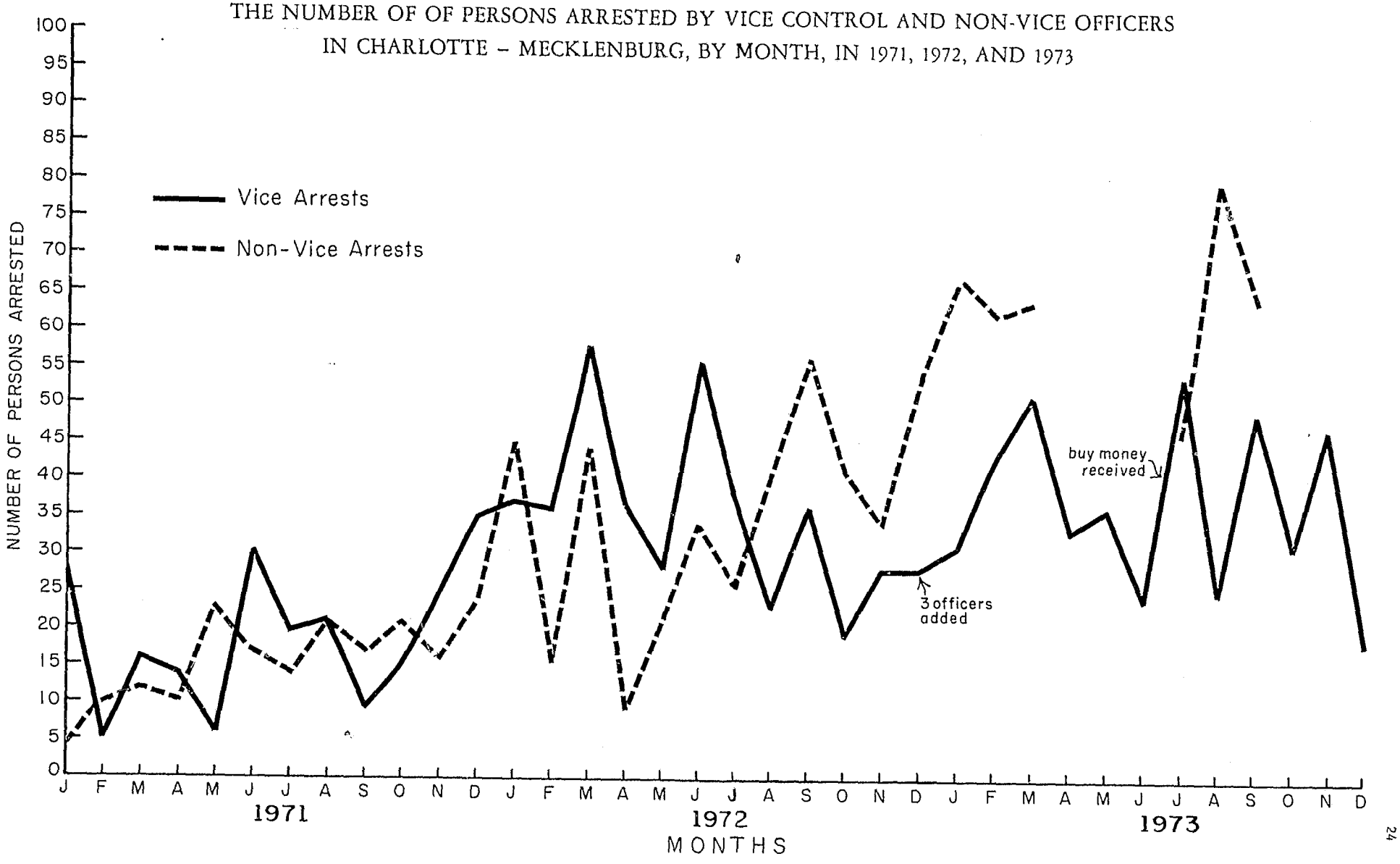


Figure 2

THE NUMBER OF OF PERSONS ARRESTED BY VICE CONTROL AND NON-VICE OFFICERS IN CHARLOTTE – MECKLENBURG, BY MONTH, IN 1971, 1972, AND 1973



Vice Control officers made almost 900 drug arrests during 1972 and 1973 -- too many for them to review each arrestee individually in order to assign him to a level in the network. We drew a simple random sample consisting of 25% of the arrests for each year. Each arrest in the sample was reviewed twice -- once with the most knowledgable officer in the case (the officer who signed the arrest warrant) and once with another officer familiar with the case. The two officers assigned an arrestee to the same level in the network in 70% of the 1972 cases and 78% of the 1973 cases.

Based upon the rankings that the officers made, two methods were used to estimate the proportion of arrestees at each level of the distribution network. Under the first method, the ranking used for each arrestee was the one made by the most knowledgable officer. Under the second method, the ranking used was the one that showed the deeper penetration into the network. If, for example, one officer rated an arrestee as a middleman and the other rated him as a wholesaler, he would be classified as a wholesaler under the deeper penetration method. The data sheet used in making the rankings is included in the appendix. Table 8 shows the percentage of arrestees that the officers assigned to each level.

Using the most knowledgable officer method, 22% of the 1972 sample was above the retail level, compared with only 12% in 1973. For the deeper penetration method, the comparable percentages are 27 for 1972 and 17 for 1973. The proportion of simple users in the 1973 sample is also lower than the proportion in the 1972 sample. The decrease is from 37% to 30% using the most knowledgable officer ranking and 26% to 24% using the deeper penetration ranking. Do these figures mean that there was a shift from both the high-level seller and the simple user to the

Table 8

PERCENTAGE OF ARRESTEES ON DRUG CHARGES LOCATED AT EACH LEVEL IN THE ILLICIT DRUG DISTRIBUTION NETWORK, BASED UPON RANKINGS BY VICE CONTROL OFFICERS

Level in Network	PERCENTAGE OF ARRESTEES			
	Most Knowledgable Officer Method		Deeper Penetration Method	
	1972 (N=105)	1973 (N=108)	1972 (N=105)	1973 (N=108)
Producer or manufacturer	1%	2%	2%	2%
Wholesaler	14	7	16	9
Middleman or transporter	7	3	9	6
Retailer	41	58	47	59
Simple user	37	30	26	24
Total	100%	100%	100%	100%

retailer? One must remember that these statistics describe samples instead of the total population of arrestees. When applying a statement made about a sample to the total population, one must consider the amount of sampling error involved. It is possible that a difference that exists between two samples might not exist between the two populations sampled.

To decide whether the difference in proportions between the samples is also a difference that exists in the total population, we must first decide how often we can afford to be wrong in making such a decision. A commonly accepted error level is 5%. At the 5% error level, we can be confident that such decisions will be correct 95% of the time, or 19 times out of 20. At the 95% confidence level, we can conclude that the difference between the proportion of arrestees who are retailers in 1972 compared to the 1973 proportion is statistically significant, using the most knowledgable officer method.[5] The shift from 41% to 58% of total arrests who are at the retail level is too large a shift to have been caused by sampling error. At the 95% confidence level, we can say that retailers comprise between 4% and 30% more of total arrests in 1973 than they did in 1972.

The deeper penetration method shows an increase from 47% to 59% in the proportion of arrestees who are retailers. This difference is not enough to be statistically significant at the 95% confidence level. It is statistically significant at the 90% confidence level.

From the results of the police rankings, we might conclude that high-level sellers (producers, wholesalers, middlemen) did not constitute a greater proportion of total arrests in 1973 than in 1972. If

[5]The equations used to compute statistical significance are contained in Table B of the appendix.

the absolute number of arrests had increased, then more high-level sellers could have been arrested even though their proportion of total drug arrests did not increase. Since the total number of arrests increased only slightly, from 422 to 442, it is unlikely that there were more arrests of high-level sellers in 1973.

Another indicator of whether higher levels were reached in the illicit drug distribution network is the average value of drugs confiscated per arrest. This value increased from an average[6] of $198 per arrest in 1972 to $460 per arrest in 1973. Converted to quantities of drugs, $460 would amount to about 23 ounces of marijuana or 38 bags of heroin. It would not be unusual for a retailer to have quantities of drugs this large. Although the value per confiscation has more than doubled, this change is not inconsistent with the police rankings that indicate that the shift in arrests is toward the retail level.

Did the Conviction Rate Increase?

One result of doing better investigative work can be a higher percentage of arrestees who are convicted. The quality of the evidence, however, is only one of several variables that affect whether an arrestee is convicted. Both the prosecutor and the judge can exercise substantial discretion in the judicial process. How good a lawyer the defendant has to plead his case can also affect whether he is convicted. We cannot, then, simply look at the change in the conviction rate and attribute the change to a change in the quality of police work.

[6]The mean value, calculated by dividing the total value of all confiscations by the total number of drug arrests involving confiscations, is the type of average used. The method of arriving at total value is described in the section that summarizes confiscations, beginning on page 31.

To get some idea about the effect that the augmented drug enforcement program had upon the conviction rate, we can compare the change in conviction rates for Vice Control officers with other officers in the Charlotte and Mecklenburg police departments. These other officers work in the same community and have their cases prosecuted by the same district attorney and decided by the same district and superior court judges. Since both vice and nonvice arrests are processed through the same judicial system, we would expect any changes in the way that system handles drug arrests to affect a Vice Control arrestee in the same way it would affect a nonvice arrestee. When we compare the change in conviction rates from 1972 to 1973 for the vice arrests with nonvice arrests, it seems reasonable to conclude that the difference was caused by some change in either the Vice Control or nonvice officers' activities.

Determining the conviction rate is a time consuming process. Police records and court records are located in different buildings and they have no common identifying number to link an individual's arrest record to his court record. The disposition of an arrestee's case can only be determined by manually searching the court records. We got court dispositions on all drug arrests for 1972 but did not have time to get dispositions on all 1973 nonvice cases. Instead, we looked at all nonvice cases for the first and third quarters of 1973.

If we assume that the conviction rate for nonvice arrests in the second and fourth quarters is the same as in the first and third quarters, then we can use the six-months average conviction rate as an estimate for the twelve-months conviction rate. Vice and nonvice drug conviction rates would then be as follows:

Annual Conviction Rates for Drug Arrests

	Vice	Nonvice	
1972	38%	51%	
1973	43	48	(estimate based on first and third quarters)
Change	+ 5%	- 3%	

While the conviction rate for vice arrests increased 5%, the rate for nonvice arrests decreased 3%. The relative improvement for vice arrests compared to nonvice arrests is 8%.

This comparison is probably unfair to the Vice Control Bureau. Court disposition data had to be collected in the spring of 1974, while a number of 1973 cases had not been closed. The open cases fall disproportionately into the fourth quarter. Including fourth quarter convictions from vice arrests and assuming that the fourth quarter conviction rate for nonvice arrests equals that of the first and third quarters would make the relative improvement look smaller than it may be. A second method of determining the difference in the change of vice and nonvice conviction rates is to compare first and third quarter arrests for both vice and nonvice in 1972 and 1973.

First and Third Quarter Conviction Rates for Drug Arrests

	Vice	Nonvice
1972	37%	55%
1973	45	48
Change	+ 8%	- 7%

The conviction rate for the first and third quarters increased 8% for vice and decreased 7% for nonvice. The relative improvement was 15%.

It seems reasonable to conclude that the Vice Control conviction rate for people arrested on drug charges improved from 8% to 15% relative to the nonvice conviction rate for drug charges. Was the relative improvement caused by a change in Vice Control activities or by a change in nonvice activities? A large proportion of nonvice drug arrests are incidental to nondrug police work. For example, an officer may stop a car for a traffic violation and find marijuana. We have no reason to believe that these officers have reduced the quality of their work during the past year -- e.g., becoming more careless in handling evidence. Rather, we suspect that the relative improvement is due to the more thorough investigation by Vice Control officers made possible by the three additional officers provided by the LEAA grant.

Were More Drugs Confiscated?

Drugs confiscated by the Vice Control Bureau cover a wide range of brand names and types. We converted quantities to dollar values for the six most common types - marijuana, heroin, amphetamine, barbiturate, LSD, and cocaine. The Bureau submits all drugs confiscated to the Crime Lab in the Charlotte Police Department. The Crime Lab keeps a record on each batch it receives, indicating what the drug is and either how much it weighs or, in the case of capsules, the number of units. We looked at the lab reports for all Vice Control arrests in 1972 and 1973 and recorded the types and quantity of drugs found for each.

The panel of local knowledgables estimated the street-level selling price of these six drugs for 1972 and again for 1973. (Table 1 lists these prices.) For each of the six drugs, the total quantity confiscated for each year was converted into the equivalent number of

units commonly sold at the street level -- bags for heroin and cocaine, capsules for amphetamines and barbiturates, ounces for marijuana, and tablets for LSD. These units were then multiplied by the prices furnished by the local knowledgables.

Table 9 shows the street value of these drugs that the Vice Control Bureau confiscated in 1972 and 1973. Total value almost tripled, rising from $44 thousand to $122 thousand. Confiscations per manmonth of effort rose from $373 to $789.

Summary of Outputs

The Vice Control Bureau's outputs under the 1973 augmented drug enforcement program differed from its 1972 outputs in several ways. Total arrests increased from 422 to 442, while arrests per manmonth of effort declined from 3.6 to 2.9. From 4% to 30% more of the 1973 arrests were of people at the retail level in the illicit drug distribution network, and a smaller proportion of 1973 arrests were of simple users and high-level sellers. Relative to the nonvice conviction rate for drug arrestees, the Vice Control conviction rate improved 8% to 15%. Total confiscations rose from $43,997 to $122,302; confiscations per manmonth of effort rose from $373 to $789.

Table 9

VALUE OF SELECTED DRUGS CONFISCATED FROM PERSONS ARRESTED BY VICE CONTROL OFFICERS, ASSUMING STREET VALUES AND QUANTITIES

Drug Type	Value of Confiscations*		Percentage Change
	1972 Calendar Year	1973 Calendar Year	
Cocaine	$ 950	$ 5,850	+ 516%
Marijuana	23,364	70,302	+ 201
LSD	5,068	3,926	- 23
Heroin	13,199	34,666	+ 163
Amphetamine	945	233	- 75
Barbiturate	471	7,325	+ 1455
	$43,997	$122,302	+ 178

*Based upon prices contained in Table 1.

What Effect Did the Enforcement Program Have Upon Availability?

Let us approach this question in two steps. First we look at the change in availability by drug type and compare the allocation of Vice Control effort to these changes. If the police effort caused the changes, then the drugs that the police concentrated upon the most should show the smallest increase. A finding that changes in availability corresponded to Vice Control emphasis makes the assumption that the drug enforcement program caused the change a reasonable one. But to say that the enforcement program is the cause, we must discount other causes that also seem plausible. Considering these other possible causes is the second step.

Did the Drug That the Vice Control Bureau Concentrated upon the Most Show the Least Increase in Availability?

Arrests and confiscations are two indicators of how the Vice Control Bureau allocated its enforcement effort among different drugs. Over three quarters of their arrests[7] were for two drugs--marijuana and heroin (Table 10). If all drug users had the same probability of being arrested, we would expect over three quarters of drug usage to be marijuana and heroin. Using reported usage by junior and senior high school students as a rough measure of total usage suggests that marijuana and heroin do not make up three quarters of total usage. Vice Control officers arrested about four times as many people for possessing or selling opiates (primarily heroin) as we would expect them to if their arrests had been spread across drug types in proportion to usage (Table 11). Marijuana arrests were about 20% higher than would have been

[7]See Appendix D for a description of the method used in tabulating arrests.

Table 10

PERCENTAGE OF ARRESTS BY DRUG TYPE AND CHARGE

	Vice Control Arrests[a]			Nonvice Arrests[a]		
Drug Type	1972	1973	Change	1972	1973[b]	Change
	N=422	N=442		N=420	N=383	
Marijuana	64%	66%	+2%	64%	79%	+15%
Heroin	15	11	-4	9	1	- 8
Other	21	22	+1	27	20	- 7
Charge						
Possession	82	90	+8	81	87	+ 6
Distribution or sale	14	8	-6	6	4	- 2
Other	4	2	-2	12	9	- 3

[a]Figures may not total to 100% because of rounding error.

[b]Six months only - first and third quarters of the calendar year.

Table 11

PERCENTAGE OF ACTUAL VICE CONTROL ARRESTS BY DRUG TYPE COMPARED WITH THE PERCENTAGE EXPECTED IF ARRESTS WERE PROPORTIONATE TO REPORTED STUDENT USAGE

	1972 Enforcement Program			Augmented Enforcement Program		
Drug Type	Expected[a] Percentage	Actual - 1972		Expected[b] Percentage	Actual - 1973	
		No.	% of total		No.	% of total
Opiate	6.8%	85[c]	20.9%	4.2%	73[c]	17.3%
Marijuana	48.1	269	66.1	58.0	293	69.6
Hallucinogen	16.0	24	5.9	10.8	25	5.9
Amphetamine	17.4	18	4.4	13.5	16	3.8
Barbiturate	11.2	11	2.7	13.5	14	3.3
Total	100.0%	407	100.0%	100.0%	421	100.0%

[a]Usage reported by junior and senior high school students in March 1972, weighted as follows: frequent usage - assumed equal to 50 times a year; occasional usage, 10 times, experimental usage, once.

[b]Same as note a, except usage reported in March, 1974.

[c]Includes arrests for heroin, other opiates, and needle or other narcotic equipment.

expected if arrests were in the same proportion as usage. Arrests for hallucinogens were about half of that expected, barbiturates and amphetamines were each about one fourth that expected.

The value of drugs confiscated shows a similar pattern. In terms of dollar value, marijuana made up 60% of the total confiscations (excluding cocaine). Heroin was second with 30%. LSD, barbiturates, and amphetamines combined accounted for 10% (Table 9).

These arrests and confiscation statistics suggest that Vice Control officers made a special effort to reduce the illicit distribution of heroin and gave much less attention to barbiturates and amphetamines. It is possible that more marijuana arrests were made than would be expected based upon reported student usage because the drug is more conspicuous. It is bulkier than other drugs and its use is easier to detect in public places. For example, officers can see people smoking marijuana inside an automobile and can smell the smoke. Table 12 supports the speculation that Vice Control officers made a more concerted effort to penetrate the heroin distribution network than the marijuana network. Police ranked 31% of the heroin arrests included in the 1973 sample of Vice Control arrestees as being wholesalers or middlemen. They ranked only 10% of marijuana arrestees as being producers, wholesalers, or middlemen. For the level of simple user, the proportions are reversed. While 36% of marijuana arrestees were ranked as simple users, only 13% of heroin arrestees were so ranked.

It seems fair to conclude that Vice Control officers made a much more concerted effort in 1973 to reduce the availability of heroin than they did for amphetamines and barbiturates. Does this emphasis correspond to how the availability of these drugs changed from 1972 to 1973? Table

Table 12

VICE CONTROL ARRESTEES BY LEVEL IN DISTRIBUTION NETWORK BY DRUG TYPE

Sample of 1973 Arrests

Drug Type	High-Level Seller		Retailer		Simple User	
	Number	%	Number	%	Number	%
Marijuana	10	10	49	54	32	36
Heroin	4	31	8	62	1	13
Barbiturate, Amphetamine, and hallucinogen	5	21	16	67	3	13
All drugs	13*	12	63*	58	32*	30

*Figures do not total because some people had more than one drug type in their possession when arrested.

Table 13

DRUG TYPES RANKED ACCORDING TO RATES OF INCREASE IN SELLERS AND USAGE AND PROPORTION OF POLICE EFFORT

Drug Type	Ranking of Rate That Drugs Increased[a]		Ranking of Police Effort[a]	
	Number of Sellers[b]	Reported Usage[c]	Number of Arrests[d]	Value of Confiscations[e]
Barbiturate	1	2	5	3
Marijuana	2	1	1	1
Amphetamine	3	3	4	5
Heroin	4	5	2	2
LSD	5	4	3	4

[a]Greatest increase or effort is ranked 1; smallest increase or effort (or greatest decrease) is ranked 5.

[b]Based upon estimates by local knowledgables shown in Table 3.

[c]Based upon usage reported by junior and senior high school students shown in Table 7.

[d]Vice Control arrests shown in Table 11.

[e]Confiscations shown in Table 9

13 shows that there is a negative correspondence between Vice Control effort and the increase in drug availability. Reported usage for heroin actually declined 8% in the two years between March 1972 and March 1974 (Table 7). Reported barbiturate and amphetamine usage, on the other hand, increased by 69% and 14%, respectively, during the same two-year period. Further, the percentage increase in the number of heroin sellers estimated for 1972 to 1973 was much lower than that number for barbiturates and amphetamines (Table 3). The drug that the Vice Control Bureau concentrated upon showed a decline in reported student usage and a low increase in the estimated number of sellers.

It seems reasonable to conclude that Vice Control activities (i.e., surveillance of traffickers, use of undercover agents and informers, drug confiscations, arrests of sellers and users) are associated with a reduction in the availability of illicit drugs in the community. But this question still needs to be addressed: Was the decline in heroin availability (relative to the availability of amphetamines and barbiturates) caused by what the Vice Control Bureau did or by some other factor?

Several other possibilities need to be considered. Other things besides the Vice Control enforcement program happened in 1973 that could have affected drug availability. Changes in the methods used to estimate drug availability and police efforts could have distorted the estimates. Or, the change could simply reflect an instability in availability over time that was not caused by any of these factors.

Were Changes in Availability and Vice Control Activity Estimates the Result of Measurement Changes?

If the method used to estimate the Vice Control Bureau's outputs in 1972 was different from the method used in 1973, the change shown for

these outputs could be due partly or totally to the difference in the methods used instead of to a real change in outputs. Police recordkeeping remained the same for drug arrests and confiscations. Court recordkeeping remained the same for disposition of drug cases. The methods used to link police arrest records to court records, to build a file for each arrestee, and to tabulate and analyze these records also remained the same.

Only one measure of Vice Control outputs could have been affected by a change in method -- estimates of the proportion of arrests made at different levels in the illicit drug distribution network. The person who interviewed the Vice Control officers in 1972 was different from the one who interviewed them in 1973. Also, some of the officers that ranked arrestees in 1973 were different from those who ranked arrestees in 1972. Ten of the 19 officers who ranked drug arrestees in 1972 also ranked arrestees in 1973. Fifteen of the 25 officers who ranked arrestees in 1973 did not rank arrestees in 1972. Although some individual officers are no doubt more likely to rank a higher proportion of a group as being high-level sellers than other officers, we have no reason to believe that 1972 officers as a group were more likely to do so. The criteria upon which the rankings were based remained the same, as did the procedure that the interviewers followed. We believe that the responses as a whole were not changed by either the change in interviewers or in some of the police officers who made the rankings.

Availability estimates were derived from written responses by junior and senior high school students to a questionnaire and from information provided by a panel of local knowledgables. The conditions under which the students answered the 1972 and 1974 questionnaires, the

format, the questions, and the data reduction methods remained the same. Although the wording of the questionnaire for the local knowledgables remained the same in 1973 as in 1972, the method of administration differed. In 1972, the information was obtained in three steps: participants were given two questionnaires spaced about a month apart that they filled out themselves; the questionnaires were then followed up with individual interviews. In 1973, both questionnaires were administered simultaneously through individual interviews. Although the interviewer in 1972 was different from the one in 1973, we do not think they conducted themselves differently in any way that would have caused responses to differ.

A more serious problem is that some of the panel members in 1973 were different from those in 1972. Because of agency personnel turnover and ex-addict relapses into their former lifestyles it was impossible to locate some of the 1972 panel members a year later. It seems plausible that those members who dropped out might have exaggerated or minimized estimates of community drug usage more than those who replaced them in 1973. To determine whether this was a problem, we took change estimates for the number of sellers for the subset of the panel who participated both years and compared these estimated changes with those based upon the total panel. Both the total panel and the subset showed that the number of barbiturate and amphetamine sellers increased at a much higher rate than did the number of heroin sellers.

We believe it unlikely that changes in the way outputs and availability were measured caused the differences in 1973 estimates compared to 1972 estimates.

Were Variations in Arrests and Confiscations Unrelated to the Augmented Program?

When we look at arrests or confiscations by month, several factors might account for the difference in the number from one month to another. A change in the amount of effort devoted to making arrests and confiscations is obviously one possibility. But there are also other possible factors unrelated to the amount of police effort. There may be seasonal variations in the amount of drug usage or trafficking. Or, there may be a long term increase in usage or trafficking that makes it easier to apprehend users and sellers now than it was in the past.

Comparing annual totals, as we have done in this paper, controls for seasonal variations but not for long-range trend. Let us examine the trend. If the number of people the police arrest simply reflects the level of drug usage and trafficking in the community, then both Vice Control Bureau and nonvice arrests should be increasing at the same rate. In fact, nonvice arrests increased at a considerably faster rate in 1973 than did Vice Control arrests - about 80% compared to about 5% (See Figure 2 and Table 14). This difference suggests that nonvice and Vice Control officers do not use the same methods of operation. It is possible that Vice Control officers are becoming more selective in whom they arrest, concentrating upon penetrating the distribution network instead of arresting the greatest number of people. Nonvice arrests, which are more incidental in character, may follow a pattern over time that is more closely related to the prevalence of drug usage in the community.

If the number of arrests responds to an increase in resources allocated to drug law enforcement, we would expect to see shifts at two

Table 14

THE NUMBER OF PERSONS ARRESTED BY VICE AND NON-VICE OFFICERS IN CHARLOTTE-MECKLENBURG, BY MONTHS, IN 1971, 1972, AND 1973

	1971		1972		1973	
Months	Vice	Non-vice	Vice	Non-vice	Vice	Non-vice
January	28	5	37	45	31	67
February	5	10	36	15	43	62
March	16	12	58	44	51	64
April	14	10	36	9	33	
May	6	23	28	21	36	
June	30	17	56	34	24	
July	20	14	37	26	54	46
August	21	21	23	41	25	80
September	9	17	36	56	49	64
October	15	21	19	41	31	
November	25	16	28	34	47	
December	35	24	28	54	18	
Total	224	190	422	420	442	383*

*6 months only.

points. We would expect an increase in arrests after three officers were added to the Vice Control Bureau in December, 1972. We would expect a second increase after the Bureau began to receive buy money in June, 1973. Figure 3 shows monthly arrest data adjusted to reduce the effect of irregular, unpredictable influences.[8] There was an increase in the number of arrests after the three new officers started. But the rate of this increase (measured by the slope of the line) does not seem to be any greater than the rate for either Vice Control arrests made during the same months of the previous year or for nonvice arrests made during the same months of 1973. There is no obvious shift in the slope after June, when the Vice Control Bureau began receiving buy money from LEAA.

The 5% increase in number of arrests does not match the 31% increase in manpower (118 manmonths in 1972 and 155 manmonths in 1973). We have already speculated that the decrease in arrests per manmonth could be due to more thorough investigations and more time spent on surveillance prior to arrest. We found that the increase in the average value of drugs confiscated per arrest (from $198 in 1972 to $460 in 1973) did increase substantially, supporting the assumption that Vice Control officers are devoting more attention to sellers and less attention to simple users. Is the increase in confiscations[9] a result of having the buy money or of having more manpower?

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[8] A three-month moving average was used to make this adjustment. The estimate for each month using this method is equal to 3 divided into the sum of the month, the month that precedes it, and the month that follows it.

[9] A single confiscation could include arrests of several people found in the presence of a cache of illicit drugs. In counting arrests, each individual arrested is counted separately, resulting in a higher number of arrests than confiscations. When several drug types are picked up at a single confiscation, a single combined value is given for all the drugs confiscated.

Figure 3

THREE - MONTH MOVING AVERAGE FOR NUMBER OF PERSONS ARRESTED BY VICE CONTROL AND NON-VICE OFFICERS IN CHARLOTTE–MECKLENBURG, BY MONTH, IN 1971, 1972, AND 1973.

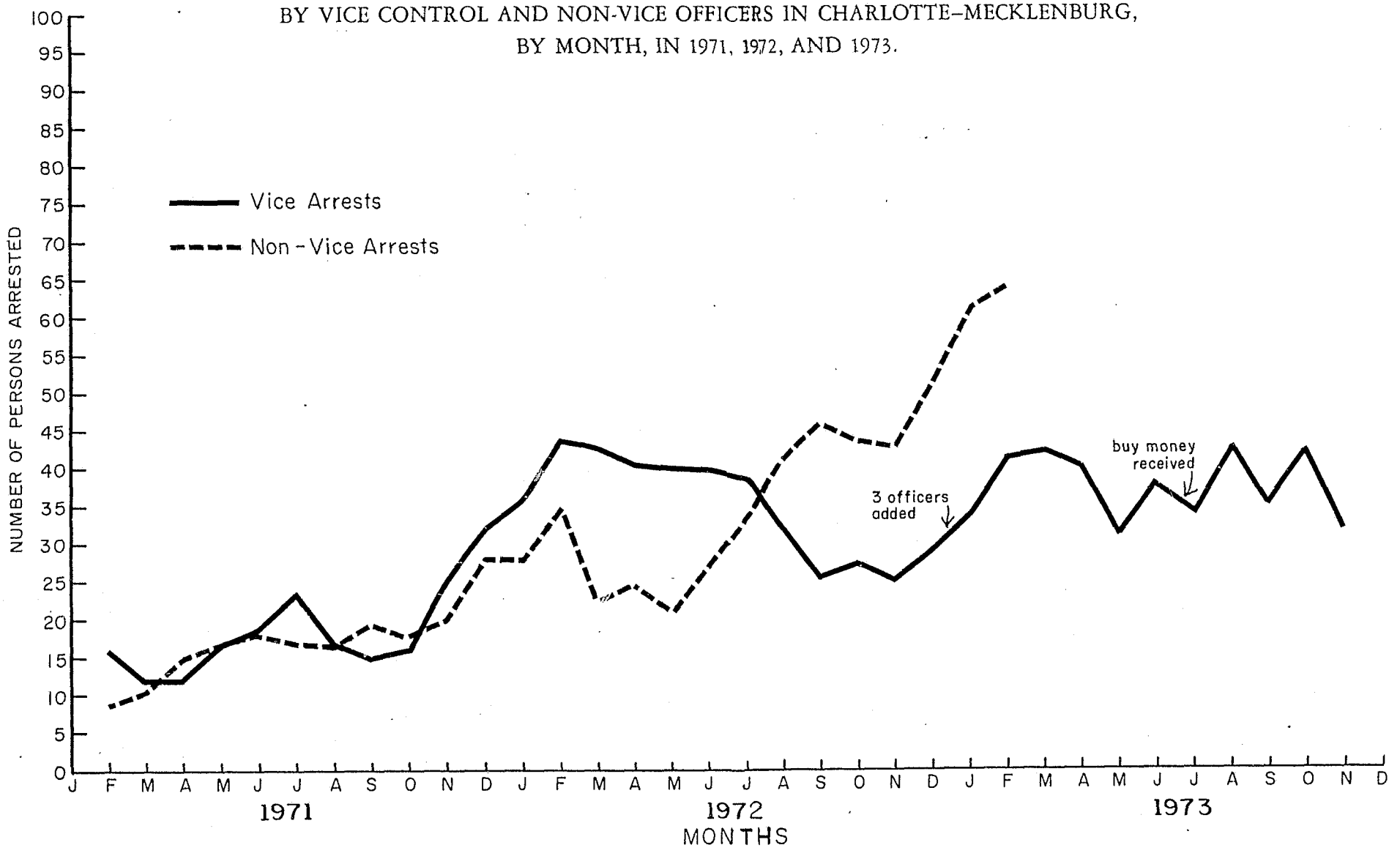

Table 15

SUMMARY OF VICE CONTROL CONFISCATIONS

	1972		1973	
	No. of Confiscations	Average value per confiscation	No. of Confiscations	Average value per confiscation
January - June	140	$122	115	$448
July - December	82	328	151	469
Total	222	$198	266	$460

One can see from Table 15 that the average value of drugs per confiscation was $326 higher during the six months after three officers were added to the Bureau than it was during the same six months of the previous year. Further, during the six months during which the Bureau had both the officers and $10,000 of LEAA buy money, the average value increased by an additional $21. Do these figures mean that putting resources into more officers is much more effective than putting them into buy money?

Note that the largest six-month increase in average value per confiscation is not during the first six months after the time that more officers were added to the Bureau. The largest increase occurs during the six months before the three officers were added. During the last half of 1972, the total number of confiscations decreased from 140 to 82 and the average value per confiscation increased from $122 to $328. It looks as though the shift in effort toward making larger confiscations actually occurred in the last half of 1972.

Sometimes illicit drugs are located and confiscated without using buy money. But the decrease in the number of confiscations between the first half and last half of 1972 suggests that the increase in average

value per confiscation resulted from a deliberate attempt to penetrate the distribution network. Penetrating the distribution network requires buy money. And assessing the effect of the $10,000 in LEAA buy money requires knowing something about buy money resources in 1972.

The amount of money budgeted to the entire Police Department for the purchase of information amounts to about $4,000. Only a small portion of this amount is spent by Vice Control officers to enforce the drug law, and this amount is likely to remain relatively constant from year to year. We can therefore ignore this amount and treat the $10,000 from LEAA as an increment to whatever the regular budget provides. In February, 1971, the courts started a new procedure that provided additional buy money to the police. When a person arrested on a gambling or drug charge was convicted and fined instead of imprisoned, the courts turned over the amount of the fine to the Police Department, to be used for the purchase of information or evidence. During the period that this procedure was followed (February, 1971, to June, 1973), the Police Department received some $12,000 from the courts and spent an estimated 70% of this money enforcing the drug law. In June, 1973, a different procedure started, whereby these fines went to the General Fund instead of to the Police Department. Another change in procedure, started in June, 1974, results in the money from fines going again to the Police Department but earmarked as to the purpose for which it may be used. Gambling fines must be used to purchase information or evidence about gambling; drug fines must be used to purchase information or evidence about drugs.[10]

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[10]This information was provided by Sgt. H.R. Smith, formerly in the Vice Control Bureau, and Lt. A. J. Europa, head of the Vice Control Bureau.

In sum, the Vice Control Bureau received about $8,400 from the courts that they used between February, 1971, and June, 1973. If spread out evenly on a monthly basis, this would amount to about $300 a month. This money might have made possible the larger confiscations reflected in the statistics for the last half of 1972. The LEAA grant raised the average monthly buy money allotment to about $1,700. Table 16 compares the results in terms of drug confiscations for the different levels of drug enforcement effort. Figure 4 shows the adjusted[11] value of confiscations for each month during 1972 and 1973.

Table 16

RESULTS OF ENFORCEMENT PROGRAM FOR DIFFERENT LEVELS OF EFFORT

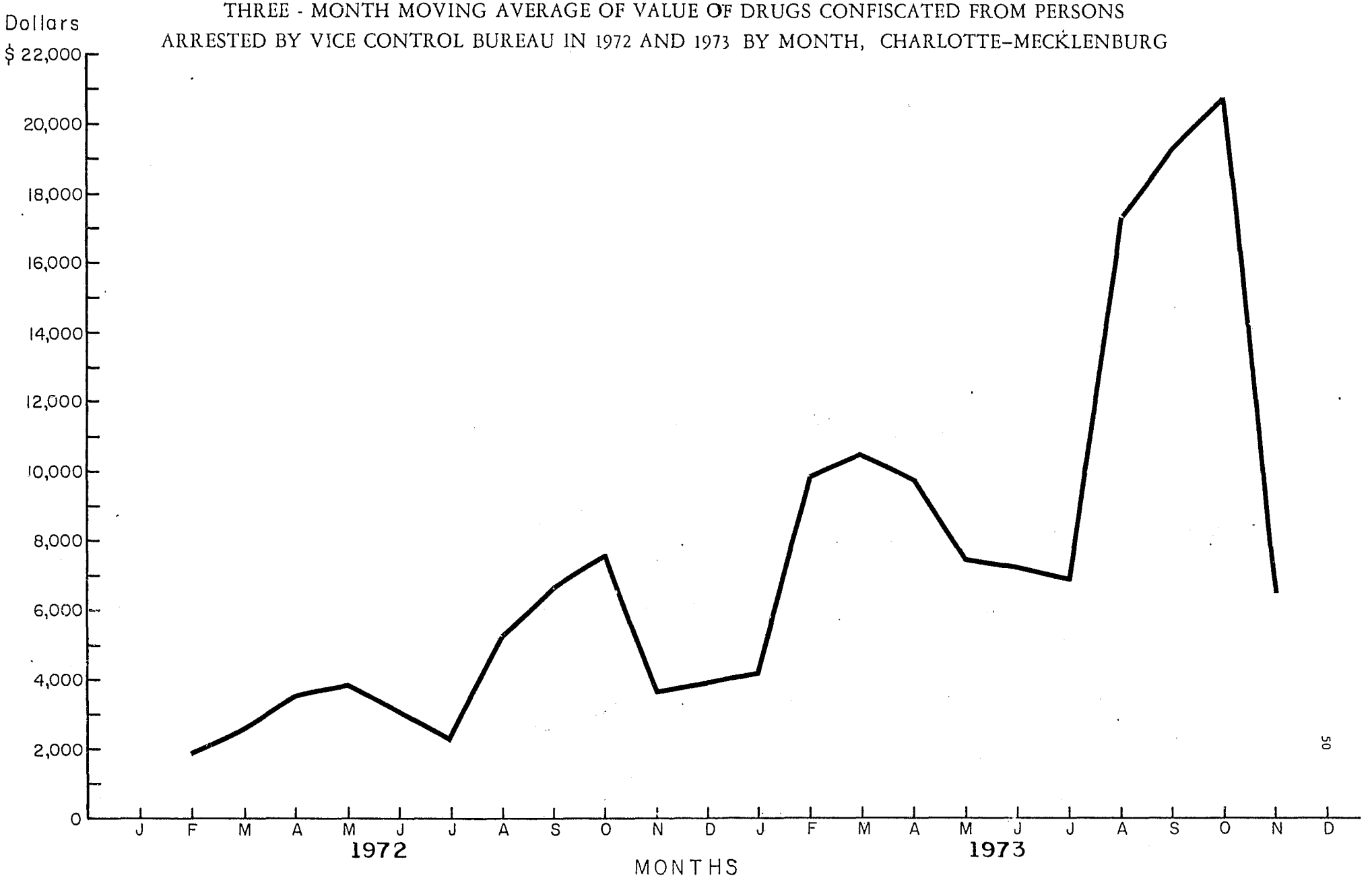
Level of Effort	Time Period	Average Number of Confiscations per Month	Average Value of Confiscations
Base program	Second half of 1972	13.7	$328
Base program plus 3 more officers	First half of 1973	19.2	448
Base program plus 3 more officers plus $1400 more buy money a month	Second half of 1973	25.2	469

One might argue that the increases in the average number of confiscations per month and the average value per confiscation are not the result of the augmented program but of a learning factor. As the

[11] Based upon a 3-month moving average.

Figure 4

THREE - MONTH MOVING AVERAGE OF VALUE OF DRUGS CONFISCATED FROM PERSONS ARRESTED BY VICE CONTROL BUREAU IN 1972 AND 1973 BY MONTH, CHARLOTTE-MECKLENBURG



officers in the base program became more experienced and built up their information networks, they became more effective in penetrating the network. Thus, some people might argue that the greater effectiveness of the officers in the base program, rather than the program augmentation, were really responsible for more and larger arrests. Personnel rotation policies in the Charlotte Police Department weaken this argument. Since we began collecting arrest data in 1971, four different lieutenants have been head of the Vice Control Bureau. The average tenure of an officer in the Bureau is a year to eighteen months. When an officer leaves, he takes his experience and his information network with him.[12]

Due to the Department's rotation practices, it seems unlikely that much of the increase in confiscations could be the result of greater experience instead of program augmentation. We conclude that changes in confiscations are the result of augmenting the program -- not simply a correlate of more drug usage and trafficking.

Was the Reduction in Heroin Usage Caused by Events Other Than the Vice Control Bureau's Enforcement Program?

A final step in examining plausible reasons for the reduction in heroin usage and trafficking relative to amphetamine and barbiturate usage and trafficking is to look at other events that took place at the same time that the drug enforcement program was augmented. The panel of local knowledgables frequently[13] gave arrest and conviction of sellers at the local level as a reason for the change in price or quality of heroin during the past twelve months.

[12]This information was provided by Lt. A. J. Europa, head of the Vice Control Bureau.

[13]At least 5 of the 12 panel members gave each of the reasons discussed in this section.

They did not list these as reasons for barbiturates or amphetamines. Could these heroin arrests have been made by nonvice rather than Vice Control officers? Table 10 shows that nonvice arrests for heroin actually declined from 9% of all nonvice drug arrests in 1972 to only 1% in 1973. Clearly, most local arrests for sale of heroin in Charlotte-Mecklenburg are made by Vice Control officers.

Drug confiscations, arrests, and convictions at the national level are other reasons that the local knowledgables gave for change in the quality or price for heroin, but not for barbiturates or amphetamines. For both amphetamines and barbiturates, local knowledgables mentioned public and private efforts to get physicians to tighten up their prescription practices. For amphetamines only, they mentioned national production quotas.

Table 17 summarizes national and state activities dealing with heroin, amphetamines, and barbiturates. If this sampling of newspaper articles adequately reflects what happened, we can draw several conclusions about the state and national enforcement effort. First, the local knowledgables accurately differentiated between the different types of enforcement activities at the national level. Second, national enforcement of heroin and amphetamine laws and regulations proceeded parallel to each other, continuing throughout both 1972 and 1973. Third, State Bureau of Investigation heroin arrests remained at roughly the same level in both 1972 and 1973. Fourth, barbiturates were largely ignored during both 1972 and 1973.

To argue that the change in heroin usage relative to amphetamine and barbiturate usage in Charlotte-Mecklenburg from 1972 to 1973 was

Table 17

CHRONOLOGY OF FEDERAL AND STATE DRUG ENFORCEMENT ACTIVITIES CONCERNING HEROIN, AMPHETAMINES, AND BARBITURATES EXCERPTED FROM NEWSPAPER ARTICLES*

1971

7-4 Ingersoll says heroin still plentiful; new drug money to go for industry compliance investigators

11-24 Meeting with drug industry to discuss amphetamine quotas

1972

1-19 New federal LEAA drug program announced to apprehend narcotic traffickers in 24 cities

1-22 government announces crackdown of black market amphetamine traffic with Mexico

1-27 amphetamine production quota cut 10% after Penwalt Co. agrees to stop shipments to Mexico

1-28 Nixon orders "assault" on heroin pushers; names Ambrose to head Drug Abuse Law Enforcement Office in Justice Dept.

2-11 amphetamine production quota cut 80%

2-24 Ambrose calls Turkey heroin ban ineffective

5-3 Ingersoll forms special unit to go after illegal manufacturing of barbiturates

7-20 Ingersoll to ask for methadone controls

7-28 East coast heroin supply and quality down sharply

7-28 Asian drug inflow higher than ever; project established to control docks

8-11 Despite efforts, heroin imports still at high level

9-22 SBI arrests 38--mainly in Wake and Durham--mostly heroin dealers

10-4 Turkish control efforts have little effect -- hoped for results in 1 to 3 years.

11-2 BNDD proposes controls on barbiturates -- quantity limits and non-refillable prescriptions

12-2 Jerome Jaffe of Federal Drug Abuse Office says heroin use levelling off

12-13 FDA restricts diet pills -- warnings sent to M.D.s, restrictions on injectables, nonrefillable prescriptions required

12-23 Laotion cutback on opium traffic ineffective

1973

3-4 U.S. Senate passes mandatory sentences for hard drug pushers

3-4 Florida man charged by U.S. Customs, SBI of smuggling cocaine, ending up in Hickory and Boone

3-6 SBI and Federal officials arrest 41 in heroin smuggling crackdown

3-20 Justice Dept. proposes tougher drug law -- no bail for sellers of opiates

4-2 BNDD planning to recall diet pills with amphetamine ingredients -- clear off market by 6-30

7-7 12 arrests by SBI and FBI "cripple" heroin traffic in N.C.

11-13 Barbiturates placed under Schedule 11, production quotas effective 1-1-74.

1974

6-11 heroin traffic up after 2 years of decline

*Primarily the Charlotte Observer, Charlotte News, and New York Times.

caused by national enforcement efforts requires these assumptions:

1. The heroin and amphetamine enforcement efforts of 1972 had a delayed impact, resulting in changes in availability in Charlotte-Mecklenburg in 1973 but not in 1972.
2. Since the increase in amphetamine usage and trafficking was much higher than for heroin, the national amphetamine enforcement efforts were ineffective but the national heroin enforcement efforts were effective in reducing availability.

Table 17 suggests that the second assumption is unwarranted.

A change in the number of people who want the drug was given as a reason for changes in quality or price for heroin, amphetamines, and marijuana. The number who want a drug is partly a function of availability and partly a function of the properties of the drug itself. A local treatment agency staff member suggests that there has been a shift in usage from both heroin and LSD to barbiturates. A shift away from heroin because of heroin's low quality and the greater availability and lower cost of barbiturates. And a shift away from LSD because of its inconsistent quality (resulting in a less predictable experience than occurs with barbiturates), higher cost, and lesser availability than barbiturates. Barbiturates and other sedatives comprised 20.5% of the total drug-abuse-related problems presented to the local Crisis Center during the first quarter of 1974. Heroin, amphetamines, hallucinogens, and alcohol each comprised between 11% and 12% of all drug-abuse-related calls and "walk ins."[14]

[14]The information in this paragraph was provided by Mike Graves, Director of the Open House Crisis Center.

Low quality and high cost contributed to the shift away from heroin and toward barbiturates. Drug law enforcement efforts served to lower quality and raise costs. We have been unable to discover any convincing evidence that the change in heroin availability from 1972 to 1973 in Charlotte-Mecklenburg was caused by national, state, or nonvice local enforcement efforts rather than the efforts of the Charlotte Vice Control Bureau.

Summary of Findings and Conclusions

1. During the past year, the availability of opiates (primarily heroin) has decreased, and hallucinogen availability has remained about the same. Availability has increased for amphetamines, barbiturates, and marijuana, with the largest increase being for marijuana.

2. The Vice Control Bureau's outputs under the 1973 augmented drug enforcement program differed from its outputs under the 1972 base program in several ways. Total arrests increased from 422 to 442, while arrests per manmonth of effort declined from 3.6 to 2.9. From 4% to 30% more of the 1973 arrests were of people at the retail level in the illicit drug distribution network, and a smaller proportion of 1973 arrests were of simple users and high-level sellers. Relative to the nonvice conviction rate for drug arrestees, the Vice Control conviction rate improved between 8% and 15%. Total confiscations rose from $44 thousand to $122 thousand; confiscations for each manmonth of effort rose from $373 to $789.

3. Both the number of confiscations and the average value for each confiscation increased after more officers were added (first six months of 1973) and again after buy money was received (last six months of 1973). For the base program (assumed to be the last six months of 1972), the average number of confiscations per month was 13.7 with an average value per confiscation of $328. For the base program augmented by three additional officers, there were 19.2 confiscations per month valued at $448 each. And for the base program augmented by three additional officers and $10,000 in buy money, there were 25.2 confiscations

per month valued at $469 each.

4. Vice Control officers made a much more concerted effort in 1973 to reduce the availability of heroin than they did for amphetamines and barbiturates. Reported usage of heroin declined 8% in the two years between March 1972 and March 1974. Reported barbiturate and amphetamine usage, on the other hand, increased by 69% and 14%, respectively, during the same two-year period. Vice Control activities (i.e., surveillance of traffickers, use of undercover agents and informers, drug confiscations, arrests of sellers and users) are associated with a reduction in the availability of heroin in Charlotte-Mecklenburg.

5. No convincing evidence was discovered that the change in availability of heroin in Charlotte-Mecklenburg from 1972 to 1973 was caused by any of these factors: national, state, or nonvice local enforcement efforts; any change between 1972 and 1973 in the methods used to estimate outputs and impacts of the enforcement program; seasonal variations or trends in the amount of drug usage and trafficking in the community; increased effectiveness of Vice Control officers not associated with the additional resources provided in 1973 (i.e., three additional officers and $10,000 in buy money.)

APPENDICES

Appendix A

CHANGE IN THE PERCENTAGE OF LOCAL KNOWLEDGABLES WHO BELIEVED THAT SELECTED DRUGS COULD BE OBTAINED EASILY, NOT TOO EASILY, OR WITH DIFFICULTY - NOVEMBER 1972 AND FEBRUARY 1974

Source	Ease With Which Drugs Can Be Obtained: Easily	Not Too Easily	Very Difficult	Not Given as a Source
Experimental User - Marijuana				
Seller	+.08%	-.17%	.00%	+.08%
Friend or homegrown	+.25	.00	.00	-.25
Frequent User - Marijuana				
Seller	-.08	+.08	.00	.00
Friend or homegrown	+.25	-.17	.00	-.08
Experimental User - LSD				
Seller	-.17	+.58	+.08	-.50
Friend	-.08	+.33	.00	-.25
Frequent User - LSD				
Seller	-.42	+.42	.00	.00
Friend	+.17	+.33	.00	-.50
Experimental User - Heroin				
Seller	-.42	+.58	+.08	-.25
Friend	+.25	.00	.00	-.25
Frequent User - Heroin				
Seller	+.17	-.17	.00	.00
Friend	-.17	+.08	+.17	-.08
Experimental User - Cocaine				
Seller	.00	-.33	+.42	-.08
Friend	.00	+.08	+.17	-.25
Frequent User - Cocaine				
Seller	+.08	.00	+.08	-.17
Friend	+.17	+.25	+.08	-.50

Source	Easily	Not Too Easily	Very Difficult	Not Given as a Source
		Experimental User - Amphetamine		
Seller	+.25	+.50	+.17	-.92
Friend	+.08	+.17	+.08	-.33
Illegal Diversion	-.58	.00	+.08	+.50
		Frequent User - Amphetamine		
Seller	+.25	+.08	.00	-.33
Friend	+.50	.00	.00	-.50
Illegal Diversion	-.42	+.08	.00	+.33
		Experimental User - Barbiturate		
Seller	+.33	+.33	+.17	-.83
Friend	+.25	+.17	.00	-.42
Illegal Diversion	-.58	.00	+.25	+.33
		Frequent User - Barbiturate		
Seller	.00	+.08	.00	-.08
Friend	+.50	.00	.00	-.50
Illegal Diversion	-.17	+.08	.00	+.08

Appendix B

COMPUTING STATISTICAL SIGNIFICANCE OF THE DIFFERENCE BETWEEN TWO PROPORTIONS

The equations listed below were used to determine whether the change in the proportion of drug arrestees who were retailers was statistically significant.

$$(1)\ \hat{p}_u = \frac{N_1 p_{s_1} + N_2 p_{s_2}}{N_1 + N_2} \qquad (2)\ \hat{\sigma}_{p_{s_1} - p_{s_2}} = \sqrt{\hat{p}_u \hat{q}_u}\sqrt{\frac{N_1 + N_2}{N_1 N_2}} \qquad (3)\ Z = \frac{(p_{s_1} - p_{s_2})}{\hat{\sigma}_{p_{s_1} - p_{s_2}}}$$

Where $\hat{p}_U$ is a pooled estimate of the proportion of arrestees who were retailers in both 1972 and 1973; N_1 is the number of arrestees in the 1972 sample and N_2 is the number in the 1973 sample; p_{s_1} is the proportion of arrestees who were retailers in the 1972 sample and p_{s_2} is the proportion in the 1973 sample; $\hat{\sigma}_{p_{s_1} - p_{s_2}}$ is the standard error of the difference between the 1972 and 1973 proportions; $\hat{q}_u$ is a pooled estimate of the proportion of arrestees who were not retailers in 1972 and 1973; Z is the difference in the proportions who were retailers in 1972 and 1973 divided by the standard error of the difference between the proportions.

I. Calculations for most knowledgable officer method:

$$\hat{p}_u = \frac{105\,(.41) + 108\,(.58)}{105 + 108} = \frac{43.05 + 62.64}{213} = .496$$

$$\hat{\sigma}_{p_{s_1} - p_{s_2}} = \sqrt{(.496)(.504)}\sqrt{\frac{105 + 108}{(105)(108)}} = \sqrt{.24998}\,\sqrt{.01878} = .068$$

$$Z = \frac{.41 - .58}{.068} = 2.50$$

II. Calcualtions for deeper penetration method:

$$\hat{p}_u = \frac{105\,(.47) + 108\,(.59)}{105 + 108} = \frac{49.35 + 63.72}{213} = .531$$

$$\hat{\sigma}_{p_{s_1} - p_{s_2}} = \sqrt{(.531)(.469)}\sqrt{\frac{105 + 108}{(105)(108)}} = \sqrt{.24904}\,\sqrt{.01878} = .068$$

$$Z = \frac{.47 - .59}{.068} = -1.76$$

To be statistically significant at the 95% confidence level, Z must be 1.96 or larger. The difference between the proportion of arrestees who are retailers in 1972 compared to the 1973 proportion is statistically significant, at the 95% confidence level using the most knowledgable officer method. This difference is not statistically significant at the 95% confidence level using the deeper penetration method. The difference using the deeper penetration method is statistically significant at the 90% confidence level.

APPENDIX C

CHARACTERISTICS OF DRUG OFFENDER

S C N_____ Name_____ Address_____

Age____ Race_____ Sex_____ Date of Arrest_____ Offense_____

1. Were laboratory equipment and chemicals used to manufacture drugs found? Yes

2. Were chemicals used to dilute drugs found? Yes

3. What quantity of drugs were found?

Amphetamines (in capsules)	≥1000 no mfg. name		200 - 1000	50 - 100
Barbiturates (in capsules)	≥1000 no mfg. name		200 - 1000	50 - 100
Cocaine			≈ 25 grams	
Heroin		ounce or more	< ounce	> 1/2 load (10 bags)
LSD	several 100 tablet bags		≥ tablets	> one 5-tablet bag
Marijuana	≥ 12 plants; qty:____	50 pounds or more		> lid

Was a source of controlled heat found? Yes

4. How were the drugs packaged?

Amphetamines				
Barbiturates				
Cocaine				
Heroin		ounce or more		
LSD	a number of 100-tablet bags		100-tablet bags	bags with more than 5 tablets
Marijuana		Footlockers or large garbage cans	bricks or lids	

5. What was the potency of the drugs?

Heroin	≥15%	≈5%	≈1%
Cocaine		>5%	

6. Were frequent visits observed from ...?		Known transporters and middlemen	Known street sellers	Known users	
7. Were cutting agents found?		Yes, in large quantities			
8. Were traces of drug found on smooth surfaces?		Yes			
9. Was a telephone book with number of known out of town supplier or retailer found?		Yes			
10. Were cutting tools or large scales found?		Yes			
11. Was a buy attempt made?			Yes	Yes	
12. What was the offender's style of life compared to known means of legal support?				Presence of needle marks and no known means of support of habit	
13. What role did the offender play in the drug distribution network?	Producer or Manufacturer	Wholesaler	Middleman	Retailer	Simpl User

Appendix D

METHOD USED TO BUILD A FILE OF ARRESTS AND COURT DISPOSITIONS FOR 1972 and 1973 DRUG OFFENDERS IN CHARLOTTE-MECKLENBURG

A single record was set up for each individual each time he was arrested. When an individual was arrested on two or more charges on the same date, the following procedure was used to select one of the charges for analysis.

1. The case that penetrated the criminal justice system the farthest was selected. This ranking of court disposition codes, in order of descending penetration, was used to make the selection: death, life, indeterminate sentence, definite term, youthful offender commitment, committed to a mental hospital, probation, suspended sentence, fine only, prayer for judgment continued, other, acquitted, dismissed, transferred to another jurisdiction, no indictment, no probable cause, and nol-prossed.

2. In the event that two cases had equal penetration, the case with the drug offense was selected. In the event that there was equal penetration for two or more drug offenses, the case with the most serious charge was selected. Charges were ranked as follows: most serious -- sale, distribution, manufacture; next most serious -- possession; least serious -- driving under the influence, obtaining a drug by fraud, transporting, conspiring to violate narcotic laws.

3. In the event that two charges with equal penetration were equally serious, the charge for the most serious drug was selected. Drugs were ranked as follows: most serious -- cocaine, methamphetamine, heroin, methadone; next most serious -- other hallucinogens than marijuana, amphetamine, barbiturates; next most serious -- marijuana; least serious -- other opiates (morphine, paregoric, demerol), needle or other narcotic equipment, inhalants.

4. When there was equal penetration of two or more cases in a single arrest and none of these cases was a drug case, the most serious case was selected, based upon the following listing in descending order of seriousness: homicide, rape, robbery, assault, burglary, larceny, stolen vehicle, arson or damage to property, forgery or fraud or embezzlement, worthless check, weapons offense, prostitution, sex offense, gambling, family offenses, driving under the influence, liquor violation, drunkenness, disorderly conduct, vagrancy, other moving violation (vehicle), driving without a license.

Appendix D

NUMBER OF PEOPLE INCLUDED IN DRUG ARREST AND CONVICTION ANALYSIS AND REASONS FOR EXCLUDING SOME PEOPLE

Year	Included In Analysis	Could not Find Police or Court Record	Invalid Code (Not a drug Arrest)	Arrested on out-of-county Warrant	Police and Court Records in Different Calendar Years	Total
1971	418	12			5 (1970 arrests)	435[a]
1972	842	19	5			866[b]
1973	826	12	24	3		865[b,c]

[a]Total number of drug arrests obtained from summary arrest tape maintained by Charlotte Police Department Records Division. Arrests on this tape are coded by the most serious offense, meaning that drug offenses cannot be identified on the summary tape when they were accompanied by more serious offenses, such as robbery or burglary. Drug cases are therefore underrepresented by about 10% in the 1971 data.

[b]Total number of arrests obtained from records maintained by Charlotte Police Department Vice Control Bureau. These records included drug arrests accompanied by more serious offenses.

[c]Includes Vice Control arrests for total year and non-vice arrests for first and third quarters of 1973 calendar year.

APPENDIX D
INFORMATION FROM POLICE ARREST REPORT

all/1 ☐☐☐☐☐☐ SAMPLING CONTROL NUMBER

1/7 ☐☐☐☐☐☐ ARREST NUMBER

1/13 ☐☐-☐☐-☐☐ DATE OF ARREST

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ DEFENDANT'S NAME (LAST, FIRST, MIDDLE)

☐☐☐☐☐ HOUSE NUMBER (RIGHT JUSTIFIED)

☐ STREET DIRECTION (N, E, S, W)

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ STREET NAME

☐☐ STREET TYPE (RD., LN., BV., ETC.)

1/23 ☐ SEX

1/24 ☐ RACE

1/64 ☐☐-☐☐-☐☐ DATE OF BIRTH

1/70 ☐ EMPLOYMENT STATUS (E,U,S,N)

2/26 ☐☐/☐☐☐☐☐☐ POLICE COMPLAINT NUMBER

_______________ FIRST COURT DATE AND COURT NUMBER

CHARGES LISTED ON ARREST REPORT ______ ______ ______ ______ ______ ______ ______ ______

1/73 ☐☐.☐☐ CENSUS TRACT NO.

1/79 ☐☐ CARD NO.

INFORMATION FROM COURT RECORDS

2/7 ☐ COURT IN WHICH CASE WAS DISPOSED (D,S,A)

______ ______ ______ ______ COMPANION CASE NUMBERS

2/34 ☐☐/☐☐☐☐☐☐☐ CASE NUMBER OF THIS CASE

2/42 ☐-☐☐☐☐ OFFENSE CODE EXAMPLE: F-7031

2/47 ☐☐☐☐☐☐☐☐ DATE OF FIRST RELEASE PRIOR TO COURT DISPOSITION OF THIS CASE

2/53 ☐ TYPE OF RELEASE (1 - BONDSMAN; 2 - P.T.R.; 3 - UNSECURED; 4 - RECOGNIZED; 5 - CASH BOND; 6 - PROPERTY BOND)

2/54 ☐☐-☐☐-☐☐ DATE OF FIRST CAPIAS PRIOR TO COURT DISPOSITION OF THIS CASE.

2/60 ☐☐-☐☐-☐☐ DATE OF COURT DISPOSITION OF THIS CASE

2/66 ☐☐ IF CHARGE IS REDUCED FROM FELONY TO MISDEMEANOR, ENTER "X" AND CODE NUMBER FOR NEW CHARGE.

2/68 ☐☐☐☐ PLEA (P, X, N) AND DISPOSITION CODE. EX: XNOL.

INFORMATION FROM POLICE CRIMINAL HISTORY FILE

1/31 ☐☐☐☐☐☐ DEFENDANT'S I. D. NUMBER

_______________ OTHER CHARLOTTE ADDRESS

2/72 ☐☐-☐☐-☐☐ DATE OF FIRST RE-ARREST PRIOR TO COURT DISPOSITION OF THIS CASE

2/78 ☐ ENTER "X" IF RE-ARREST IS BASED ON CAPIAS. (BLANK IF BASED ON WARRANT OR DIRECT RESPONSE BY OFFICER)

/79 ☐☐ CARD NUMBER

RI 38

DATA SHEET - DRUG OFFENDER TRACING STUDY
INSTITUTE OF GOVERNMENT, U.N.C.

APPENDIX E

Table 1

THE NUMBER OF PERSONS ARRESTED BY VICE OFFICERS IN CHARLOTTE-MECKLENBURG, BY DRUG TYPE, BY MONTH, IN 1971, 1972 AND 1973

	1971			1972			1973		
Months	Marijuana	Heroin	Others	Marijuana	Heroin	Others	Marijuana	Heroin	Others
January	9	6	13	21	5	11	24	1	6
February	3	2	0	19	2	15	25	2	16
March	10	5	1	37	13	8	46	0	5
April	6	1	7	21	12	3	20	6	7
May	3	1	2	21	3	4	23	7	6
June	5	8	17	29	17	10	15	4	5
July	6	7	7	22	3	12	37	6	11
August	7	6	8	15	2	6	17	3	5
September	6	1	2	28	2	6	24	10	15
October	5	1	9	17	1	1	19	4	8
November	14	2	9	20	3	5	34	3	10
December	20	4	11	19	2	7	9	4	5
Totals	94	44	86	269	65	88	293	50	99

Table 2

THE NUMBER OF PERSONS ARRESTED BY NON-VICE OFFICERS IN CHARLOTTE-MECKLENBURG, BY DRUG TYPE, BY MONTH, IN 1971, 1972, AND 1973

	1971			1972			1973		
Months	Marijuana	Heroin	Others	Marijuana	Heroin	Others	Marijuana	Heroin	Others
January	1	0	4	26	6	13	57	3	7
February	4	4	2	12	3	0	41	0	21
March	7	2	3	26	5	13	52	0	12
April	3	3	4	4	1	4			
May	8	4	11	15	1	5			
June	4	4	9	22	2	10			
July	5	5	4	17	4	5	35	0	11
August	10	3	8	24	2	15	64	1	15
September	8	6	3	42	2	12	54	0	10
October	4	3	14	22	8	11			
November	6	5	5	27	0	7			
December	7	6	12	32	4	18			
Totals	67	45	79	269	38	113	303	4	76

Table 3

THE NUMBER OF PERSONS ARRESTED BY VICE OFFICERS IN CHARLOTTE-MECKLENBURG, BY CHARGE, BY MONTH, IN 1971, 1972, AND 1973

	1971			1972			1973		
Months	Possession	Others	Distribution or Sale	Possession	Others	Distribution or Sale	Possession	Others	Distribution or Sale
January	18	1	9	22	0	15	30	0	1
February	5	0	0	24	1	11	42	1	0
March	12	2	2	53	2	3	49	2	0
April	11	0	3	33	0	3	31	2	0
May	6	0	0	25	2	1	36	0	0
June	12	1	17	37	4	15	23	1	0
July	15	1	4	33	1	3	29	0	25
August	13	1	7	20	2	1	19	2	4
September	8	1	0	32	0	4	43	1	5
October	13	0	2	15	1	3	31	0	0
November	15	1	9	25	2	1	45	1	1
December	22	0	13	25	2	1	18	0	0
Totals	150	8	66	344	17	61	396	10	36

Table 4

THE NUMBER OF PERSONS ARRESTED BY NON-VICE OFFICERS IN CHARLOTTE-MECKLENBURG, BY CHARGE, BY MONTH, IN 1971, 1972, AND 1973

	1971			1972			1973		
Months	Possession	Others	Distribution or Sale	Possession	Others	Distribution or Sale	Possession	Others	Distribution or Sale
January	4	1	0	42	3	0	57	6	4
February	10	0	0	15	0	0	54	7	1
March	11	0	1	34	8	2	62	2	0
April	10	0	0	8	1	0			
May	22	0	1	16	4	1			
June	13	1	3	27	5	2			
July	12	0	2	21	3	2	42	1	3
August	20	0	1	25	5	11	69	7	4
September	14	1	2	47	5	4	51	11	2
October	20	0	1	33	7	1			
November	14	1	1	30	3	1			
December	20	1	3	44	7	3			
Totals	170	5	15	342	51	27	335	34	14

Tabel 5

THE NUMBER OF PERSONS ARRESTED BY VICE OFFICERS, AND THE NUMBER OF THOSE PERSONS CONVICTED, IN CHARLOTTE-MECKLENBURG, BY MONTH, IN 1971, 1972, AND 1973

	1971		1972		1973	
Months	Arrested	Convicted	Arrested	Convicted	Arrested	Convicted
January	28	9	37	19	31	16
February	5	3	36	12	43	21
March	16	3	58	21	51	24
April	14	8	36	12	33	14
May	6	4	28	13	36	17
June	30	11	56	23	24	8
July	20	10	37	12	54	24
August	21	5	23	10	25	13
September	9	4	36	10	49	17
October	15	7	19	8	31	11
November	25	5	28	10	47	18
December	35	20	28	12	18	5
Totals	224	89	422	162	442	188

Table 6

THE NUMBER OF PERSONS ARRESTED BY NON-VICE OFFICERS, AND THE NUMBER OF THOSE PERSONS CONVICTED, IN CHARLOTTE-MECKLENBURG, BY MONTH, IN 1971, 1972, AND 1973

	1971		1972		1973	
Months	Arrested	Convicted	Arrested	Convicted	Arrested	Convicted
January	5	1	45	22	67	25
February	10	6	15	5	62	26
March	12	2	44	18	64	36
April	10	4	9	6		
May	23	4	21	11		
June	17	6	34	16		
July	14	4	26	10	46	19
August	21	6	41	29	80	47
September	17	8	56	40	64	29
October	21	8	41	23		
November	16	5	34	18		
December	24	8	54	18		
Totals	190	62	420	216	383	182

Table 7

THE PERCENTAGE OF PERSONS ARRESTED BY VICE AND NON-VICE OFFICERS IN CHARLOTTE-MECKLENBURG WHO WERE CONVICTED, BY MONTH, IN 1971, 1972, AND 1973

Months	1971		1972		1973	
	Vice	Non-vice	Vice	Non-vice	Vice	Non-vice
January	32%	20%	51%	49%	52%	37%
February	60	60	33	33	49	42
March	19	17	36	41	47	56
April	57	40	33	67	42	
May	67	17	46	52	47	
June	37	35	41	47	33	
July	50	29	32	38	44	41
August	24	29	43	71	52	59
September	44	47	28	71	35	45
October	47	38	42	56	36	
November	20	31	36	53	38	
December	57	33	43	33	28	
Totals	40%	33%	38%	51%	43%	48%

END