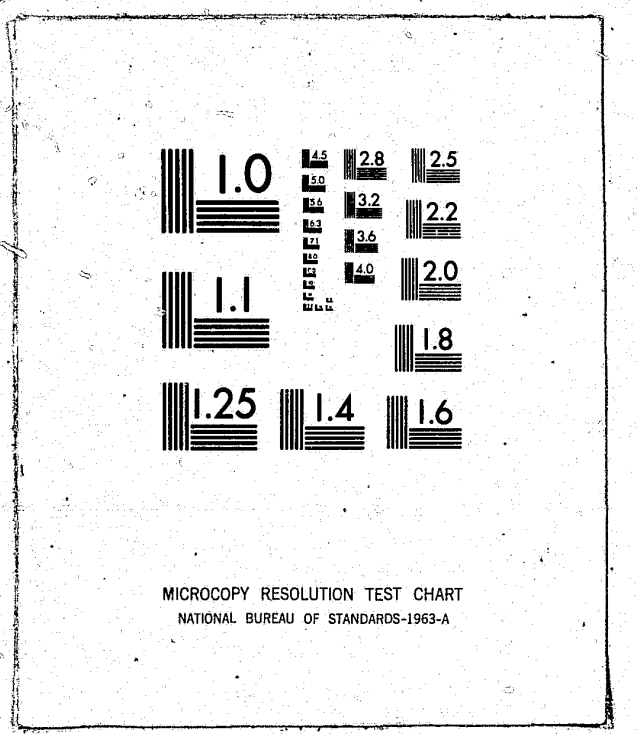

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IN PURSUIT OF SAFETY:

ALTERNATIVE PATTERNS OF POLICE PRODUCTION IN THREE METROPOLITAN AREAS

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"According to the Great Equation, Medical Care equals Health. But the Great Equation is wrong. More available medical care does not equal better health. The best estimates are that the medical system (doctors, drugs, hospitals) affects about 10 percent of the usual indexes for measuring health: whether you live at all (infant mortality), how well you live (days lost due to sickness), how long you live (adult mortality). The remaining 90 percent are determined by factors over which doctors have little or no control, from individual lifestyle (smoking, exercise, worry) to social conditions (income, eating habits, psychological inheritance), to the physical environment (air and water quality). Most of the bad things that happen to peoples' health are at present beyond the reach of medicine."

Aaron Wildavsky,
"Doing Better and Feeling Worse:
The Political Pathology of
Health Care."

There is another Great Equation: Police Services equals Crime Control or Public Order. While no precise estimates of the impact of police can be offered, we do know that social, economic and political characteristics of communities explain a large proportion of their measured crime and disorder, leaving little to be accounted for by the police, or indeed, the entire criminal justice system. Yet, for a variety of reasons, the police are inextricably linked with public safety in the minds of many, much like physicians are with health. This general perception is mirrored (and probably reinforced) by the extent to which public policies over the past two decades have responded to fear of crime and disorder by placing ever greater emphasis on the public police. Now, as communities and the nation as a whole perceive a need for fiscal restraint, pressure mounts on all public agencies, including the police, to use the resources allocated to them more productively. However, the central thesis of this paper is that the production of public order and safety cannot be significantly improved without a better understanding of the production process than is provided by the "Great Equation."

To what extent is public order and safety produced by the police? One view is that police in modern societies are the specialized instrumentality designed to maintain order and enforce laws in the community. Harlan Hahn (1970: 97) reflects this conception when he observes: "The capacity of the police departments to fulfill their responsibilities might be measured by the extent to which citizens are willing to rely on policemen rather than on forms of self-defense to protect their lives and property." The conventional use of crime rates as the measure of police performance is consistent with this conception of the police. A different view is that most safety and order in the community, that is, most social control, is produced by a great variety of institutions and practices imbedded in the everyday lives of citizens in the community and that the police play a minor but important role in responding to relatively rare incidences of failure in the larger institutional structure. In the former view, the role of citizens, if they are assigned any place at all, is to help the police by providing information and support as directed by these official agents. In the latter view, citizen action is central and the role of the police is to assist them in achieving their objectives.

Implications for Productivity Assessment

These alternative perspectives on the nature of the production process have implications for the measurement of productivity. They imply different foci and different measures. Within the two broad perspectives we have outlined, further differentiation in terms of the role ascribed to citizens is evident. Those who view police as the producers may discount citizens almost entirely, even question their competence to evaluate the service they receive. "Service" in this case, means what the servant chooses to do. As is reflected in Stipak's recent article, "Citizen Satisfaction with Urban Services: Potential Misuse as a Performance Indicator," the long-time conventional view in public administration is that the definition of what constitutes "service" falls within the province of administrators. Thus, warning against the use of surveys of citizen satisfaction Stipak contends, "If the characteristics or quality of the service actually provided do not affect citizen satisfaction or evaluations, policy makers cannot logically use such indicators to measure service performance." (emphasis added.) The "objective" service characteristics measures he uses instead for police are exclusively police centered: clearance rates, property recovery

rates, per capita expenditures, per capita employees, and crime rate. (Stipak, 1979: 46)

A less extreme position of the police-as-producers perspective acknowledges citizens' capability to assess the quality of public service received. The role of citizens is to consume the service and provide "feedback" to the producers. Scholars at the Urban Institute, in particular, have developed this argument. Webb and Hatry (1973:17) assert, "Many quality aspects of government services cannot be measured in any practical way other than through citizen surveys. For many local government services, citizens' perceptions constitute a major aspect of service effectiveness." For these scholars, citizen feedback obtained through systematic surveys is one among a number of relevent measures of what <u>agencies</u> produce.

A major departure in the conception of the process of producing public goods and services is to view citizens as providing <u>essential</u> input into the production of such services as education, health care, fire production, and policing. Reiss (1971) contributed to the development of this view with respect to police with his findings on the dependence of the police on a variety of citizen actions to be able to do their job of policing. (For example, he found that more than 80

percent of police input into the criminal justice system were initiated by citizen calls for service). This conception of citizens as "co-producers" has been most explicitly developed by Vincent Ostrom and Elinor Ostrom (1977) and a number of other scholars associated with them at the Workshop in Political Theory and Policy Analysis at Indiana University (Bish and Neubert), 1977; Smith and Baillargeon, 1977; Pennell, 1978; Percy, 1979a; 1979b).

From this point of view, assessment of productivity involves measures of official action with complimentary indicators of citizen participation with police (or other agencies). The emphasis is on harnessing citizens into the production process and leads to an examination of the organizational arrangements which are associated with citizen cooperation with police (See Bish and Neubert, 1977; Percy, 1979).

Even less conventional is the view that public safety is primarily produced by citizens with police forces playing a helping role. It is this last perspective which we will begin to develop in the analysis which follows.[1]

Producing Public Safety

A study which addressed the factors that determine the level of public safety in urban communities would have a very different focus than an inquiry into police productivity. Attributes of the culture, of social organization and of the economy, which consistently show high correlations with measures of disorder, strife and crime, are the most obvious factors to explore. While organizations created specifically to produce order maintenance and law enforcement play a role, order is maintained and laws are enforced for the most part without direct participation of police. Architects and planners may be more responsible for crime prevention than police (Newman, 1973; Jacobs,1961). Designers and manufacturers of wheel lock and ignition key buzzers probably prevent car theft more effectively than any patrol force. We have studied citizens' decisions not to call the police when victimized, but citizens also decide to handle most family disputes without involving the police. Similarly, Emerson and Messinger, drawing upon research using the labelling approach to understanding deviance have demonstrated the importance of the informal processes whereby citizens define the nature of trouble or a problem situation independently of, but influencing formal processes. (Emerson and Messinger, 1977)

A study (Feagin, 1972) of national samples of blacks and whites in the late 1960's found that most citizens did not feel they could depend exclusively on the police to protect their life and property, but took instead precautions for home defense. Feagin interpreted this finding to mean there is an imperfection in the "state," following Max Weber's definition of a state as a "human community that (successfully) claims the monopoly of the legitimate use of physical force within a given territory." For Feagin, (1970:101), "the extent to which people feel secure in their own homes and are willing to leave the protection of home and family to the government established police forces may well be one important indicator of the extent to which a given human community can be viewed as an integrated 'state.'" An approach which defines the quality of the state in terms of the omnicompetence of its bureaucracies naturally emphasizes the organizations of police forces in studying the production of public safety. An approach which defines the quality of the polity more in terms of how citizens use state agencies (rather than what they leave to them) has to make citizen decision-making and actions a more central concern.

Such a perspective focuses sharply on the role of citizens. It implies the use of citizen conceptions of what is "service" as primary and citizen decision-making and action as the heart of the public safety production process. Acknowledgement that "service" may have different meanings for different citizens suggests an alternative set of questions with respect to productivity assessment. The major question is what factors (attributes of citizens or communities, or characteristics of agencies) are associated with citizen attainment of feelings of safety in their home and community. Under what circumstances, for example, do police cooperate with citizens and to what extent does this help citizens' achieve their objectives regarding the form of order in the community? It is this latter perspective which we will begin to develop in the analysis which follows, focussing primarily on what we see as "laying the ground work" for subsequent productivity analysis.

Our hypothesis is that though there may be some commonly shared general understandings about what is involved in "policing" and producing public safety, diverse patterns of action (and non-action) are undertaken by police as well as citizens in "doing policing" and securing safety. Although some would see production patterns as falling along a continuum ranging from least to most efficient

or desirable, we suggest that distinct types of production patterns or styles are possible and that by implication multiple meanings of policing and producing safety, at the level of specific action as opposed to widely held preferences for outcomes, exist among as well within different communities. The implications of this perspective for the assessment of productivity are substantial. The acknowledgement of alternative meanings at the level of action despite consensus on broad goals, highlights policing and securing safety as phenomena which are temporarily and situationally located within a complex of resources and status relationships. A multiplicity of patterns of production, continuously produced and reproduced by the police and citizen actors, frustrates the imposition of any single model of production across all agencies and communities in the assessment of productivity. Except for the most global, the use of common measures of performance raise critical questions of interpretation. Our perspective is that productivity assessment in the public sector needs to be grounded in an understanding of the dominant citizen-agency production pattern peculiar to the case under consideration. In the analysis which follows we develop a typology of patterns of production, a necessary antecedent to the conduct of productivity analysis.

The Study

The findings described below are based on data from a comparative study of service delivery in twenty-four police agencies across the St. Louis, Missouri, Rochester, New York and Tampa-St. Petersburg, Florida metropolitan areas. The intent of the study was to assess the effects of various organizational arrangements and resource and personnel inputs on diverse policing outcomes. In pursuit of these objectives data relating to patterns of policing in sixty neighborhoods within the study departments were collected during the summer of 1977. Neighborhoods (typically an agency beat or zone) as well as departments were selected so as to ensure a range of both service conditions (socio-economic characteristics of neighborhoods) and organizational types including as many diverse combinations of conditions and types as possible. Table 1 contains a matrix of the study neighborhoods distributed by condition and type.

A number of data collection strategies were employed, including: patrol observation by trained, non-police observers of more than 5,000 individual encounters or interactions between police and citizens; in-person interviewing of more than 1,400 sworn police officers engaged in the provision or

supervision of police patrol services about various background characteristics and about perceptions of and attitudes toward the community served and issues in law enforcement policy; and a telephone survey of more than 12,000 citizens residing in the study areas. Citizens were asked about their perceptions of neighborhood safety, the quality of police service and their experiences and activities with respect to crime, the police and matters of personal security. The data are used, here, to develop a typology of police-citizen patterns of public safety production.

Our attempt to develop a typology of production patterns is necessarily an exploratory one.[2] We begin by positing four police-citizen production modes or types: 1) passive, 2) co-productive, 3) adversarial/self-productive, and 4) omniplex. The four types are paired reciprocal production activities derived from sixteen possible combinations of safety relevant police and citizen patterns of behavior, each aggregated at the neighborhood level. Table 2 presents the activity combinations. Based upon the internal distributions of activity indicators across study neighborhoods, the areas are allocated to the sixteen production categories. As Table 2 indicates, with the exception of two, all possible combinations are represented in the data. The reciprocal modes are found on

the left to right diagonal. Note the extremely low frequency (three of sixty neighborhoods) of production combinations that might be described in terms of Max Weber's ideal type organization - police producing some form of service and citizens passively consuming. Yet, this is the production model implied by most studies of police productivity.

The distribution of the neighborhoods on each of the activity items is contained in Appendix A. We recognize that the creation of distinctions between sometimes limited ranges of values, particularly among citizen activity items, is somewhat arbitrary. Given the exploratory nature of this analysis and the lack of precedents as to what constitutes a high or low level of activity in this field, some arbitrariness in definition was inescapable.

The following analysis proceeds on two levels. First, the four production types manifesting reciprocal police/citizen action are described in considerable detail, suggesting indicators or component activities appropriate to each type. These four police/citizen activity combinations are selected because a substantial majority of the neighborhoods exhibit a tendency toward police and citizen modes which are reciprocal or approximate reciprocity. Only seven of the sixty neighborhoods have counter-reciprocal patterns of production (the right to left diagonal in Table 2). In addition, the selection of the four reciprocal types allows us to describe each of the four citizen modes and the four police modes within a production framework rather than each being viewed as isolated enterprises. The activity indicators we suggest are confined to data available related to policing

and producing safety in the sixty study neighborhoods, and thus should be seen as merely illustrative of the kinds of activities which might distinguish one mode from another. None of the police or citizen modes within the study neighborhoods conforms perfectly with any of the proposed types. The typology is meant to suggest extreme distinctions in the abstract. Just as few citizens resort to such extreme behavior as simultaneously having a watch dog, putting bars on windows and extra locks on doors, carrying a gun, having a light timing device and staying home at night because of fear, so too, few neighborhoods exhibit activity patterns in the extreme. Four study neighborhoods which we have categorized as responding to each of the reciprocal types are selected and described to suggest the magnitude of the distinctions among production patterns being raised here.

Second, we present statistical analysis of the relationships between police and citizen patterns of production and police organization, police attitudes, socio-economic characteristics of neighborhoods, and citizen attitudes and perceptions. The intent here is to suggest possible factors associated with the adoption of a particular production pattern within a neighborhood.

All of the analysis of patterns is conducted at the neighborhood level. We have several reasons for selecting neighborhoods as the unit of analysis. We suspect that individual police and citizens base their decisions for action and contact, not primarily on the peculiarities of the officer or citizen participant involved in an immediate situation, but rather each officer and citizen relates to the whole set of citizens and the "whole set of officers," respectively. That is, each brings to an interaction or to the choice not to have an interaction, a complex of preconceived notions about an appropriate plan of action (or non-action) derived from previous experience, stereotypes and community norms. What is at issue is not individual level differences, but differences in conceptions of sets. We think the neighborhood is an appropriate level of analysis for capturing these differences. The ways in which sets of individual police and citizen actions and non-actions, taken together, vary represent alternative patterns of producing policing and community safety. Since these patterns may not be the same in all neighborhoods served by a department, for our purposes the department aggregates data at too high a level.

Reciprocal Patterns of Production

For the purposes of ease of presentation and in order to avoid repetition we will describe the co-productive and adversarial/self-productive patterns first, followed by the passive and omniplex patterns. This does not imply any evaluative assessment or a continuum of productivity.

Co-Productive

A co-productive police-citizen production mode involves actions by both sets of actors which can be described as primarily mutually supportive and interdependent. Within this production mode police tend to be reactive as opposed to pro-active. That is, they rarely initiate encounters with citizens but instead, restrict their activities to responding to citizen calls for service. A relatively high proportion of their encounters with citizens involve the provision of assistance, such as minor repairs to motor vehicles. Also, such police know by name relatively larger numbers of citizens in the neighborhood and tend to be acquainted with citizens in encounters as well. Contacts with citizens involving arrest or some other form of labelling, such as removal to a psychiatric facility, the use of physical force against citizens, and verbal abuse are not prevalent within this mode. Citizens, on the other hand, are relatively more likely to report victimizations

to the police, have the police watch their homes while away on vacation, put identification marks on their property and install burglar alarms. They tend not to engage in safety strategies which do not involve the police, such as carrying a weapon, or staying home at night because they are fearful. Thus, for the most part, policing and procuring safety within co-productive neighborhoods is an undertaking where police and citizens rely considerably upon each other. Police depend upon citizens to make most of the decisions regarding what is police business and to notify them accordingly. At the same time, citizens depend upon the police to maintain security within the neighborhood when involved, rather than taking matters into their own hands.

Adversarial/Self-Productive

The aggressive/self-productive pattern of production is characterized by relationships between police and citizens which presume the relative independence of each of the sets of actors. Unlike the co-productive mode where police and citizens depend upon each other for the successful accomplishment of activities and contacts, here each engage in high levels of activity which are generally unrelated. It might even be said that in such production circumstances police and citizens

are engaged in the creation of separate products or outcomes, of which the eventual points of intersection are obscure. Police in adversarial/self-productive neighborhoods are more likely to invoke their law enforcement authority or otherwise label citizens, to use force against citizens and to be verbally abusive. They tend less frequently to provide general assistance to citizens and traffic regulation activities aside, they are less likely to be reactive to citizen calls for service. Instead, the police here are proactive, initiating encounters with little or no citizen input into the decision to intervene. They claim to know few citizens by name and tend not to know citizens they meet in encounters. Citizens in these neighborhoods are less likely to report victimizations and less likely to have the police watch their homes when away, but they are more likely to engage in such activities as having and carrying weapons, joining citizen groups, having bars on windows, having watch dogs, installing extra locks and staying home at night because of fear. Thus in these

Passive

Patterns of production where police engage in low levels of aggressive as well as supportive contacts with citizens and where citizens tend to engage in neither co-productive nor self-productive activity is described here as passive. This is not to say that police and citizens have relatively fewer encounters, but rather encounters in the passive mode tend not to involve contacts of much consequence. Arrests or labelling, police use of force, police verbal abuse or police rendering special assistance to citizens, are less frequent than in other neighborhoods. At the same time, police tend to claim to know few citizens by name and tend not to be acquainted with citizens in the observed encounters. Citizens are more likely not to engage in co-productive activity such as reporting victimizations; however, they are also less likely to engage in self-productive activity such as carrying weapons. In this production mode police and citizens alike appear to be doing very little, other than passively encountering each other.

Omniplex

In the omniplex production mode police engage in both supportive and aggressive contacts with citizens and at the

same time, citizens engage in both co- and self-productive activities. In other words, everyone is doing everything. Police simultaneously rely upon arrest, force and verbal abuse as well as render special assistance, claim to know people and have acquaintances in encounters. Within this production pattern police have numerous encounters with citizens of both a reactive and proactive nature. Citizens tend to provide input into the police process by such activities as reporting victimizations, putting identification marks on property, having burglar alarms and having the police watch their homes when they are away. They also tend to engage in security measures which do not involve the police. They join citizen groups, put extra locks on doors, have watch dogs, put bars on windows, carry weapons and stay at home at night because they are afraid. Thus, in neighborhoods where an omniplex production mode predominates, co-productive efforts and aggressive/self-productive patterns are maintained within the same unit of production.

Four Examples

Tables 3 and 4 present the proportions of surveyed citizens and police as well as observed encounters which

correspond to the various activity items across four example neighborhoods, one from each of the hypothesized reciprocal production relationships. Again, neighborhoods were categorized according to the internal distributions of activity items. Thus, the intent here is to examine the magnitude of the differences between types evidenced in the examples in order to make some preliminary judgement as to whether the data suggests genuinely distinct production patterns or whether the proposed typology merely reflects minor variations on the same theme. A second, related intent involves a post-construction review of each of the indicators used to create the typology for consistency with the other set of indicators.

Distributions of police activity patterns in the four neighborhoods are found in Table 3. Adversarial contacts in encounters range from four to eleven times more frequent in omniplex and adversarial/self-productive neighborhoods. Substantial differences are also evidenced with respect to the percent of encounters involving special assistance, especially between co-productive and adversarial self/productive neighborhoods, where assistance is almost two and a half times as likely in the former than in the latter neighborhood. Similarly, the mean number of people

officers claim to know by name is nearly five times the number in omniplex and co-productive neighborhoods than in adversarial/self-productive and passive neighborhoods. The remaining three indicators appear to be less discriminating. However, the proportion of encounters where police know one or more of the citizen participants is suggestively lower in passive neighborhoods than in other neighborhoods. Also, the focus of police attention on outsiders as opposed to residents in passive neighborhoods (a 1:19 ratio of the proportion of non-whites in the population to the proportion of non-whites in encounters) is equally suggestive.

Table 4 presents the distributions of citizen activity patterns in the four neighborhoods. Among the indicators of co-productivity the percent of citizens who put identification marks on property and the percent who have the police watch their homes when they are away in omniplex and co-productive neighborhoods is substantially greater than in adversarial/self-productive neighborhoods and passive neighborhoods. The other two indicators of co-production are more ambiguous. Among the indicators of self-production, citizens in omniplex and adversarial/self-productive neighborhoods exhibit a range of 1.2 to seven times greater likelihood of joining citizens groups,

purchasing watch dogs, putting bars on windows, sometimes or always staying home because of fear, and sometimes or always locking doors when home during the day. The four remaining indicators of self-production appear to be less distinctive with respect to purchasing and carrying weapons, however, it is worthwhile to note the relative prevalence of these activities in adversarial/self-productive neighborhoods, even though the pattern is not borne out in omniplex neighborhoods.

At this point, we suggest that the patterns of production within the four example neighborhoods are distinctive and furthermore that this distinction is maintained in the categorization of the sixty study neighborhoods according to the typology of sixteen possible activity combinations (four police and four citizen modes). To be sure, none of the neighborhoods corresponds perfectly with any one hypothesized type or production pattern. Yet in our judgement, the example neighborhoods exhibit differences of sufficient magnitude to warrant an analytic assumption that different models of production predominate in different neighborhoods, and that no single conception of policing or producing safety can appropriately be applied across all agencies and communities.

Factors Associated with Patterns of Production

Table 5 presents the measures of association among police and citizen production patterns or styles. In general, the production style adopted by police serving a neighborhood appears to be significantly related to the style adopted by citizens residing in that neighborhood. Those patterns with either adversarial or self-productive features tend to be associated with each other while those with predominantly supportive, co-productive or passive features are likely to be found together. To an extent, these relationships reveal a reciprocity between police and citizen production patterns, suggesting at least tentatively, the mutual impact of the actions of one set of actors on the other.

Relationships between patterns of production and citizen/neighborhood characteristics are presented in Table 6. The consistent set of significant relationships between patterns of production and citizen/neighborhood characteristics suggests that strategies employed to police and secure safety are, to an extent, context-bound. Policing involving supportive or passive contacts and citizen activity oriented toward co-production is more prevalent in predominantly white, higher income neighborhoods where the perception of the probability of victimization is low and police are highly rated. Conversely,

lower income, minority or racially mixed neighborhoods where the perceptions of the probability of victimization are relatively higher and police are evaluated less positively, tend to be associated with policing styles which include both supportive and adversarial contacts as well as primarily adversarial contacts and citizen styles which are primarily self-productive. There is no strong pattern of relationship between citizen/neighborhood characteristics and citizen actions involving both co and self-productive actions and passive actions. Because of the high correlation among the various citizen/neighborhood variables, it is difficult to separate which factors have a preponderance of influence on the maintenance of a police/citizen pattern of production. Nonetheless, the set of characteristics taken together, indicate some association between the conditions of life within a community, including the status and resource position of its members, and what it means at the level of action to police and secure safety in that community.

Relationships between patterns of production and department/officer characteristics are found in Table 7. Department size is related to two of the police styles - a positive relationship with primarily adversarial contacts and a negative relationship with primarily co-productive contacts - and with two of the citizen styles: a negative relationship with primarily co-productive action and a positive relationship with primarily self-productive action. There is no discernable pattern of relationships among officer perceptions of the communities they serve and their assessments of the desirability of co-productive police-citizen styles. On the other hand, officer perceptions of the community tend to be related to citizen styles, especially strategies that are both co and self-productive and those that are primarily self productive. Here, officer perceptions of the distinctiveness of these two citizen patterns is evident. In general, however, the attitudes of officers who serve a neighborhood do not appear to be associated with police or citizen patterns of production, nor is there a consistent pattern of relationships between department size and patterns of production.

Examination of the factors associated with different police and citizen production strategies suggest two related conclusions. First, patterns of production appear to exhibit some characteristics of reciprocity, as evidenced by the moderate relationships between police and citizen patterns. Also, the citizen evaluations of the police and the police perception of citizens suggests some "taking into account" of the production strategy employed by the other. Second, the contextual or circumstantial conditions under which policing is conducted appear to be strongly related to police-citizen production patterns, with citizen/neighborhood characteristics playing a much more predominant role than traits of the police agency, that is department size and officer perceptions.

Conclusion

The basic contention in this paper is that models of the production process derived from the private sector, especially industrial production processes, do not fit the circumstance under which policing is produced in American communities. Such models are misleading in specification of relevant producers and the simplicity with which they handle the problem of developing evaluative criteria for identifying

valued "product." The measurement of productivity in manufacturing and other private enterprises proceeds on assumptions imbedded in scientific management that the personnel or the firm's roster are the producers and that each firm has a single authoritative source for defining desired output.

These scientific management assumptions, when applied to the production of human services in the public sector, lead to underestimation or complete neglect of the central role citizen/consumers play in the production process. They suggest the development of a single source of value in judging output, whether employing single or multiple measures. But what constitutes "service" to one group in the community may be little or even negatively valued by others. If one assumes the legitimacy of potentially diverse preferences for services of diverse publics within and between communities, no single value perspective can be used to guide productivity analysis. Clearly, expanding the concept of "producers" and including diverse value preferences complicates the process of measuring police productivity. But efforts to improve productivity which fail to include variables (e.g. citizen inputs) and values, may

reduce the cost associated with official (police) producers at significant expense to citizen producers, or may yield increased levels of negatively valued output, at least from the perspective of some publics.

In our analysis of policing in sixty neighborhoods, we sought to identify patterns of production which incorporate the actions of police and citizens. We found distinctive patterns and have shown that they are not randomly distributed. In particular we found that patterns varied with characteristics and perceptions of the residents of the neighborhoods but not with attributes (e.g. the size of the department or the attitudes of the officers) of the departments serving those neighborhoods. This suggests that if as a matter of public policy, one chose to alter the pattern of production in the community, addressing the effort at citizens might yield more results than the traditional focus on reforming the police.

The analysis presented in this paper does not fully implement the approach to productivity measurement it calls for. In part, the data are not available: no studies to date adequately describe the range of activities of citizens in the production of their own safety, including their use of discretion

on when and how to involve the police. Nor do we have adequate techniques for gauging the preferences for service and the values diverse citizens place on their own and on police actions related to the production of public safety. However, the data which are available from the present study of sixty neighborhoods make possible further exploration of this citizen-centered approach. We recognize the difficulties but are confident of the return on the investment.

Table 1
Research Design Matrix[a]
(Distribution of Study Neighborhoods)

Neighborhood Characteristics	Department Size		
	small	medium	large
Low Income/ minority	2	1	8
Low Income/ mixed	3	0	5
Low Income/ white	1	2	8
Middle Income/ minority	1	0	0
Middle Income/ mixed	1	2	1
Middle Income/ white	4	4	7
Upper Income/ white	4	2	4

[a] adapted from John McIver (1978), internal memo, Police Services Study, Indiana University, Bloomington.

TABLE 2

DISTRIBUTIONS OF NEIGHBORHOODS AMONG COMBINATIONS OF POLICE AND CITIZEN PRODUCTION PATTERNS

Police	Citizen: Self and Co-Productive Actions	Citizen: Primarily Co-Productive Actions	Citizen: Primarily Self-Productive Actions	Citizen: Passive Actions	TOTAL
Adversarial and Supportive Contacts	4	0	6	0	10
Primarily Supportive Contacts	2	7	3	1	13
Primarily Adversarial Contacts	7	2	8	2	19
Passive Contacts	2	7	3	6	18
TOTAL (n=60)	15	16	20	9	

TABLE 3

POLICE ACTIVITY PATTERNS IN FOUR EXAMPLE NEIGHBORHOODS

	Adversarial Action:				Supportive Action:			
	% Encounters Police Label	% Encounters Police Use Force	% Encounters Police Use Verbal Abuse	Ratio Non-Whites in Pop. to Non-Whites Enc.	% Encounters Spec. Asst.	% Encounters Police Know Partic.	% Encounters Reactive	x # of People Police to Know
An Omniplex Neighborhood	7.0	9.0	15.0	64:69	19.0	17.0	79	204
A Co-Productive Neighborhood	1.8	1.8	4.5	2:1.8	30.9	11.8	71	234
An Adversarial/Self-Productive Neighborhood	8.0	11.0	18.0	30:35	13.0	15.0	91	48
A Passive Neighborhood	1.4	0	8.9	1:19.4	16.4	5.9	75	81

TABLE 4

CITIZEN ACTIVITY PATTERNS IN FOUR EXAMPLE NEIGHBORHOODS

	Oriented Toward Co-Production:				Oriented Toward Self-Production:								
	% Call Police When Victim	% Have Burglar Alarms	% Put I-D Markers on Property	% Have P.D. Watch Home When Away	% Put Extra Locks on Doors	% Join Citizens Group	& Purchase Watch Dogs	% Buy Light Timing Device	% Put Bars on Windows	% Purchase Gun	% Carry Weapon	% Sometimes or Always Stay Home Because Afraid	% Sometimes or Always Lock Doors When Home Days
An Omniplex Neighborhood	56	15	38	40	52	9	23	32	15	8	10	24	65
A Co-Productive Neighborhood	59	3	29	40	39	2	19	43	2	11	8	9	27
An Adversarial/ Self-Productive Neighborhood	56	4	23	5	60	13	27	12	16	15	15	35	73
A Passive Neighborhood	57	3	23	24	59	4	16	36	4	7	12	14	56

TABLE 5

ASSOCIATIONS AMONG POLICE AND CITIZEN PRODUCTION PATTERNS

Police	Citizen: Co and Self-Productive Actions	Primarily Co-Productive Actions	Primarily Self-Productive Actions	Passive Actions
Supportive and Adversarial Contacts	[a] .18*	-.25*	.25*	-.21*
Primarily Supportive Contacts	-.05	.29*	-.26*	.02
Primarily Adversarial Contacts	.10	-.25*	.29*	-.16*
Passive Contacts	-.21*	.18*	-.25*	.31*

n=60

a The statistic is Kendall's tau

* a non-negligible relationship

TABLE 6

PATTERNS OF PRODUCTION AND CITIZEN/NEIGHBORHOOD CHARACTERISTICS

	POLICE				CITIZEN			
	Supportive and Adversarial	Supportive	Adversarial	Passive	Co and Self-Productive	Co-Productive	Self-Productive	Passive
Socio-Economic Characteristics of Neighborhood								
% Income	-.28*	-.30*	-.23*	.16*	.10	.48*	-.50*	-.08
% White	-.39*	.20*	-.24*	.36*	-.12	.37*	-.42*	.19*
Citizen Perception of Crime								
% Think Burglary Likely	.32*	-.11	.25*	-.40*	.22*	-.49*	.39*	-.13
% Think Vandalism Likely	.22*	-.11	.25*	-.33*	.12	-.44*	.39*	-.02
% Think Robbery Likely	.35*	-.23*	.30*	-.36*	.17*	-.53*	.50*	-.16*
Citizen Evaluation of Police								
% Rate Police Outstanding	-.22*	.14	-.20	.25*	-.03	.49*	-.39*	-.07
% Think Services Inequitable	.20*	-.25*	.31*	-.24*	.02	-.62*	.52*	.07
% Think Services Responsive	-.36*	.15	-.22*	-.24*	.01	.48*	-.47*	.07
% Think Police Respond Rapidly	-.13	.12	-.17*	.17*	.02	.43*	-.39*	-.07
% Think Police Honest	-.39*	-.00	-.06	.36*	-.05	.03	-.16*	.20*
% Think Police Courteous	-.35*	-.01	-.10	.38*	-.07	.03	-.16*	.22*
% Think Police Treat All Equally	-.27*	-.14	-.05	.38*	-.03	-.11	-.02	.18*

* Non-negligible Relationship.

TABLE 7

PATTERNS OF PRODUCTION AND DEPARTMENT/OFFICER CHARACTERISTICS

	POLICE				CITIZEN			
	Supportive and Adversarial Contacts	Primarily Supportive Contacts	Primarily Adversarial Contacts	Passive Contacts	Co and Self-Productive Actions	Co-Productive Actions	Primarily Self-Productive Actions	Passive Actions
Department Size	-.01[a]	-.01	.20*	-.18*	.13	-.39*	.30*	-.05
Officer Perceptions								
Likelihood of Citizen Abuse High	.33*	-.06	.07	-.28*	.06	-.12	.28*	-.24*
Most People Respect Police	-.23*	-.00	-.04	.22*	-.21*	.29*	-.21*	.14
Citizen Rating of Police	-.09	.16*	-.14	.07	-.19*	.37*	-.28*	.11
Citizen Willingness to Call if Something Suspicious	-.15	.26*	-.23*	.11	.19*	.29*	-.31*	-.19*
Most Residents Willing to Press Charges	-.10	.05	-.06	.10	.22*	.00	-.29*	.08
Most Citizens Report Victimizations	-.09	.15	-.11	.05	.23*	.16*	-.18*	-.22*
Strongly Agree Watch Groups Reduce Crime	.14	.01	-.11	-.00	.17*	-.03	-.16*	.03
Strongly Agree Only Police Can Judge Case of Too Much Force	.11	-.01	-.07	.00	-.03	-.05	.11	-.04*
Strongly Agree Auxiliary Police Big Help	.05	-.24*	.11	.07	.03	-.09	.02	.05
Strongly Agree Referring Citizen to Social Service Waste of Time	-.19*	.06	.13	-.03	-.26*	-.09	.17*	.18*
Strongly Agree Police Should Not Handle Personal Service Calls	.08	-.14	.28*	-.22*	.12	-.10	.02	-.05
Strongly Agree Politicans Too Influential	.17*	-.09	-.09	-.13	-.07	-.05	.22*	-.12

a The statistic is Kendall's tau.

* Non-negligible relationship.

Appendix A

Range of Distributions of Activity Items Based upon Aggregate Neighborhood Data (n=60)

Citizen Activities

1. % in a neighborhood who report victimizations to the police:
   38% to 74%

2. % in a neighborhood who join citizen watch groups:
   0% to 18%

3. % in a neighborhood who put identification marks on property:
   12% to 69%

4. % in a neighborhood who put extra lock on doors:
   34% to 70%

5. % in a neighborhood who purchase a watch dog:
   10% to 37%

6. % in a neighborhood who install a burglar alarm:
   2% to 22%

7. % in a neighborhood who have bars on windows:
   0% to 28%

8. % in a neighborhood with a light timing device:
   4% to 50%

9. % in a neighborhood who purchased a gun:
   6% to 24%

10. % in a neighborhood who have police watch property while they are away:
    4% to 57%

11. % in a neighborhood who carry a weapon:
    7% to 24%

12. % in a neighborhood who stay home at night because of fear:
    7% to 50%

13. % in a neighborhood who lock doors when home during the day:
    27% to 78%

Appendix A (Continued)

Police Activities

1. % of encounters in a neighborhood involving labeling:
   1.1% to 13.6%

2. % of encounters in a neighborhood involving police use of force:
   0% to 13%

3. % of encounters in a neighborhood involving verbal abuse by police:
   0% to 26.6%

4. % of encounters in a neighborhood involving special police assistance:
   8.5% to 30.9%

5. % of encounters in a neighborhood pro-active:
   9% to 60.6%

6. % of encounters in a neighborhood where police know citizens:
   1.0% to 40.2%

7. $\bar{x}$ number of citizens in a neighborhood police claim to know by name:
   16 to 1075

8. Racial disparity in encounters:
   0% to 66%

Notes

1 This citizen-centered approach to human service production processes also may be attributed to Vincent Ostrom. Over the past decade in a variety of forums he has questioned the tendency of scholars in public administration to use a monocentric perspective in their analysis, focusing exclusively on the bureaucracy and to assume the value perspective of those at the top. He has proposed a "worm's-eye view" as an alternative to the "bird's-eye view" usually adopted. The reasoning underlying his perspective is set forth in The Intellectual Crisis in American Public Administration (Alabama: Univ. of Alabama, Press, 1974).

2 There have been efforts to classify alternative patterns of policing by departments (for example, J.Q. Wilson, Varieties of Police Behavior, Cambridge: Harvard University Press, 1968), and by individuals (see W.K. Muir, Jr., Police: Streetcorner Politicians, Chicago: The University of Chicago Press, 1977), but none has included citizen action in their scheme. The only attempts to classify individual citizen actions regarding public safety production appears in discussions of co-production (See Percy, 1979), and we know of none developed at the level of neighborhood or community.

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