TRAFFIC AND THE COURTS: SOCIAL CHANGE AND ORGANIZATIONAL RESPONSE

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One of the consequences of urbanization for the legal system has been an enormous growth in the volume of cases it confronts each year. As a social and commercial system becomes larger, more heterogeneous, and more complex, more problems arise which require the intervention of the state for their solution. As society grows more interdependent, relationships between people who are otherwise strangers become more common and more complex, and more reliance is placed upon abstract and formal rules to govern those relationships. Utilitarian relationships between anonymous individuals are facilitated by the intervention of the law. In addition, the process of living together in urban communities generates problems requiring intervention. The regulation of land use, zoning and building code requirements, and many forms of waste disposal present serious problems only in the city. As more strangers rely more and more upon formal rules to regulate their relationships, and as there are more formal regulations to be followed, there is a continuous increase in the number of potential cases for the legal system, both in absolute numbers and per capita.

This increase in potential legal business has been paralleled in the United States by an expansion in the number of formal enforcement officials. There has

In Herbert Jacob (ed.). The Potential for Reform of Criminal Justice. Sage Publications 1975

been a steady increase over time in the number of policemen in cities, and a steady increase in the rate in which we invest public resources in formal social control. A consequence has been a vast proliferation in the number of cases generated for the legal system to process. An increase in potential enforcement situations, coupled with an increase in the number of authorities looking for violations, has produced a serious volume problem for the justice system.

This volume problem has been one of the forces shaping the evolution of urban court systems. The inexorable pressure generated by the increasing flood of cases entering the courts each year has goaded the development of a number of organizational innovations designed to alleviate "volume stress." In addition, we witness periodic waves of public discontent over the seeming inability of law enforcement officials to control many of the more undesirable consequences of social change. Sharp changes in social trends, episodic decreases in the apparent safety of city residents, produce demands for more effective law enforcement. These waves of public indignation spark rapid and often thoroughgoing reforms in the organization of the justice system, in contrast to the more gradual organizational reforms generated from within in response to volume stress. Together, these external and internal pressures help explain reform: the growth and specialization of urban court systems.

Court systems in Chicago and Illinois have reflected this trend. As the environment within which the legal system operates has grown more complex, the institutions of social control (the criminal courts) and dispute resolution (civil courts) have grown more numerous and more specialized.[1] The first judges to serve the people of Chicago were members of the state supreme court. So little legal business came to the courts during the early years of statehood that high court personnel spent several months each year riding the state's four judicial circuits. Traveling with a retinue of bailiffs, prosecutors, and defense attorneys, they set up court in this town and that, presiding over the disposition of cases which had accumulated since their previous visit. Before about 1830, none of the communities of Illinois were large or prosperous enough to demand more than part-time justice.

The growth of Chicago was so rapid that soon after its founding it became apparent that a more extensive local judiciary was required in the state's largest city. Under an early charter, the Chicago Common Council was empowered to name police magistrates to assist in the disposition of minor criminal cases, and the mayor of the city presided over a special "Mayor's Court," having jurisdiction over cases involving the violation of city ordinances. Over the years an extensive but haphazard collection of courts of limited and general jurisdiction developed to serve the needs of the growing metropolis. County, probate and juvenile judges, criminal, circuit, superior, recorder's and common

pleas courts, justices of the police and police magistrates abounded. By 1900 the city and county were served by over 200 different courts and 300 judges.

However, the independence of these courts, and the "peculiar and arbitrary" division and overlap of jurisdiction among them, made it impossible to develop consistent and coordinated responses to caseload problems. The dockets of some courts were hopelessly jammed, while justices of the peace hotly contested for minor civil cases and the marriage trade. Corruption and partisan finagling were greatly facilitated in either circumstance. In an attempt to lend some order to the process of justice, the state legislature authorized the creation of a unified Municipal Court of Chicago in 1905. Staffed with full-time judges and an administrative clerk of the court, the municipal court enjoyed original jurisdiction over all minor civil and criminal cases arising within the city. In addition, the court held preliminary hearings in all felony cases brought from the city, sending those indicted to the countywide criminal court for final disposition.

But despite this minor reorganization of judicial personnel, the resources available to the justice system in Chicago lagged behind the requirements of the age. The city and its legislature are usually at loggerheads over either partisan or policy differences, and the general assembly has never appeared overly responsive to urban needs. The new municipal court was understaffed from birth, and pleas for the expansion of its staff of judges were only occasionally heeded. The criminal court drew its staff on temporary assignment from other county courts, and backlog problems were endemic. The result was the development of a number of institutional short-cuts which enabled the courts to function efficiently as organizations.

The most widely known contemporary process for coping with the volume problems which arise in the criminal courts is the plea bargain. In many courts, guilty pleas on the part of defendants are exchanged for lesser charges and lighter sentences on the part of prosecutors and judges. The process appears to stretch limited court resources while maintaining high conviction rates (Jacob, 1973). The practice of granting numerous continuances in major criminal cases, thus encouraging defendants, witnesses, complainants, or arresting police officers to cease pressing their claims, has been a common Chicago practice since the turn of the century.[2] Both of these practices have supplanted an earlier custom in the criminal courts of Chicago, the outright dismissal of a large number of cases. For example, the *Illinois Crime Survey*, a massive study of criminal justice in Chicago during the 1920s, reports that in 1926 over 70 percent of all felony defendants in Cook County were dismissed at preliminary hearings or grand jury sessions. Only 11 percent were found guilty of lesser charges on a guilty plea, now the common practice.[3] A *Chicago Daily News*

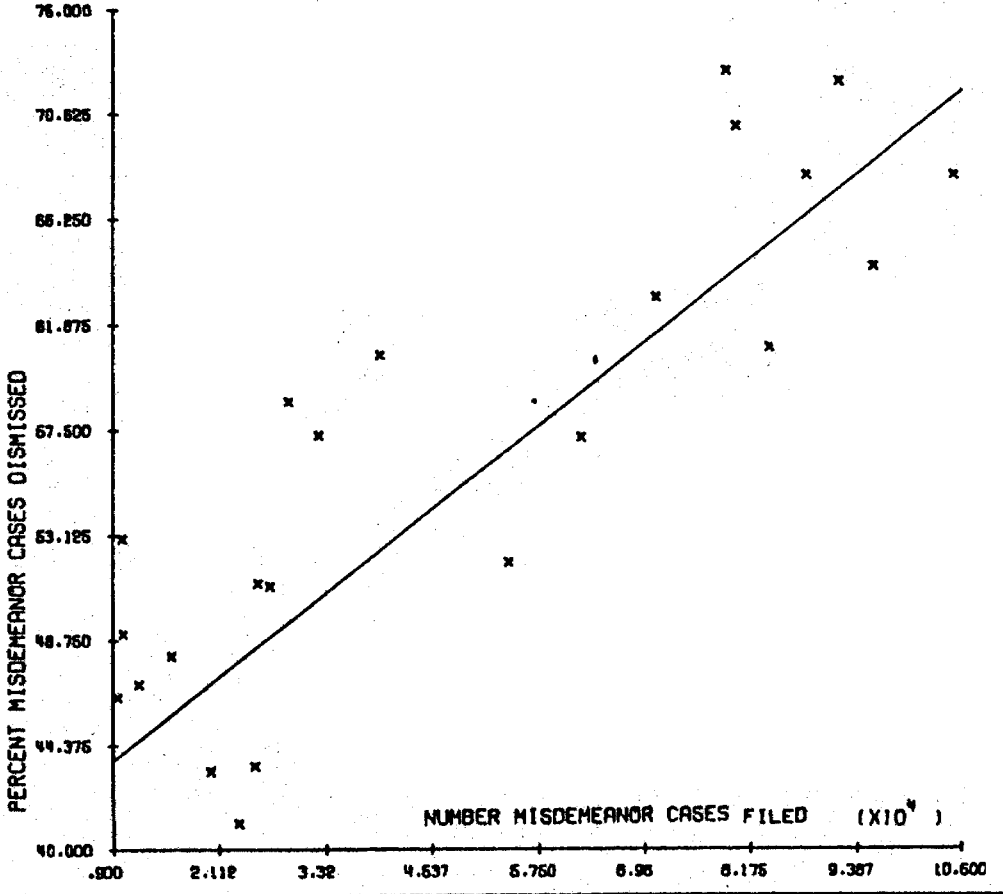
76.000
70.625
65.250
61.875
57.500
53.125
48.750
44.375
40.000
PERCENT MISDEMEANOR CASES DISMISSED
.900
2.118
3.32
4.537
5.750
6.96
8.175
9.387
10.600
NUMBER MISDEMEANOR CASES FILED (X10⁴)

Figure 1.

study of all arrests in the city of Chicago in 1924 revealed that 200,000 of 276,000 arrestees were dismissed in that year.[4]

A brief analysis of available court reports suggests that caseload volume serves as an excellent predictor of such procedures. If the dismissal of large numbers of cases proves an organizationally efficient way of coping with increasing caseloads in the face of limited resources, dismissal rates should closely parallel increases in the demand for court activity. The data to examine this relationship can be found in the *Annual Reports* of the Municipal Court of Chicago, 1908-1930. Figure 1 illustrates the relationship between one indicator of caseload volume in the court, the number of misdemeanor cases filed each year, and the proportion of the misdemeanor cases which were dismissed by the court in the same year. The correlation between input volume and this organizationally efficient form of output is .86. The line which best describes this relationship (the "line of best fit," or the "regression line") is also presented in Figure 1. Over the 1908-1930 period, each additional increment of 10,000 cases filed appears to have raised the dismissal rate 2.6 percent.[5]

That the dismissal rate was an "organizational maintenance" device, a procedure devised to enable the court to cope with volume problems, is suggested by a more complex analysis of the data. If we statistically control for the number of cases filed each year in the municipal court, the relationship between the misdemeanor dismissal rate and the number of judges serving on the court that year is negative; as judicial resources improve, organizational efficiency norms appear to have less impact upon disposition patterns.

But while courts, like other organizations, strive to do what they must to "get the job done," they are also expected to reflect less mundane values. Judicial decision-making is rule-bound, and perhaps more than most the official behavior of judges is legitimized by their adherence to formal decisional criteria. As we have seen, the courts face volume problems because of (1) the growth in scale of the social system within which they function, and (2) their limited ability to adapt their structure or resources in rapidly responsive ways. Pressures appear to exist for the invention of efficient procedures to circumvent this conflict, but somewhere there are limits upon the extent to which organizational norms can predominate in the legal system.

This essay examines the problems of caseload, volume stress, and organizational response in a particular legal arena. One of the major challenges to the ability of urban courts to effectively carry out their task has been the automobile. A most immediate social cost of the automobile, and one which produces legal problems which threaten to overwhelm local civil courts, is the personal and property carnage its use creates. Casualties on American highways outnumber those of all our wars. During both the Korean and Vietnam conflicts,

highway deaths on the domestic front outran those on the battlefield.[6] By 1970, even minor automobile damage and the cost it entailed led to a political dispute of considerable magnitude over the cost and operation of automobile insurance schemes. At the same time, personal injury cases accumulating in the courts had created a serious backlog problem. In Chicago, delay averages three to five years, and no decrease is in sight.[7]

I then examine the regulatory response of the legal system. Regulation of the ownership and use of the automobile challenges the ability of the city to keep order. Controlling the flow of motor vehicles through the city demands the attention of numerous police officers and an armada of vehicles and specialized equipment. They enforce a host of formal rules governing the use of automobiles, rules which were created to facilitate the use of the automobile in the city and control its more undesirable consequences.

Finally, I examine the organizational response of the courts to the volume stress this enforcement effort created. At one point, traffic offenses made up 75 percent of the business of the municipal court of Chicago. "Crimes" such as double-parking and speeding, serious social problems only in the city, jammed already overloaded dockets, and the court was hardpressed to dispose of its business. The eventual response was the creation of specialized, autonomous branch courts which could process traffic cases with assembly-line efficiency. The compromises with traditional procedure which this organizational transformation demanded highlight the difficulty that the legal system has encountered in adjusting to the realities of urban life. Traffic, like many emerging urban problems, seriously challenges traditional conceptions of criminality, guilt, the personal responsibility of individuals for their behavior, and the deterrent impact of punishment upon unlawful behavior. In civil and criminal traffic cases we witness most clearly the clash between often inappropriate legal models for the settlement of disputes or the "treatment" of offenders and demands for organizational efficiency. Reflecting this, future reforms will probably focus not upon further increases in organizational efficiency, but upon the removal of traffic problems from the courts entirely.

THE AUTOMOBILE AS A REGULATORY PROBLEM

Figure 2 charts the rise in motor vehicle registration in Chicago over time.[8]

Early records of the number of automobiles and trucks in the city are not available. Before World War I motor vehicle use was not extensively regulated, and thus not well recorded. The first separate official accounting of the automobile as a legal problem appears in 1908—68 traffic arrests—and as late as 1912 there were two and one-half times as many buggys, wagons, and carriages

in Chicago as there were motor vehicles.[9] The plot of available records documents the rapid increase in mechanized transport in the city after 1912. World War II, with gasoline rationing and severe restrictions upon the production of the motor car as a consumer good, accounts for the only substantial dip in the ever-increasing line. Even the Great Depression did not make serious inroads into our dependence upon the automobile.

Figure 2 also presents the distribution on a comparable scale of three major consequences of automobile use: accidents, injuries, and deaths.[10] The accident line, while rising with the number of automobiles, has a number of peculiar features, notably the enormous rise in the number of recorded accidents after World War II. This illustrates one of the difficulties of working with statistics of this kind: they are sensitive to reporting and recording contingencies which limit the inferences we can make from them. Accidents, first, are usually citizen-reported. Factors like the time of day, the condition of the parties involved, the "seriousness" of the affair, and whether drivers are insured or not, will have a major impact upon the tendency of people to report an accident to the authorities. Thus the expansion of the automobile insurance industry, and especially the requirement that drivers in Illinois carry liability insurance, may have had an enormous impact upon the apparent incidence of traffic accidents in the community. Further, even if they are reported, the capacity of the authorities to record accurately traffic statistics is problematic.[11]

This is nicely illustrated by the impact of automation upon accident statistics reported by the Chicago Police Department. In 1949, a mechanical tabulation system was installed to replace the old, cumbersome practice of filing multiple copies of often illegible carbons of police accident reports. A machine-readable computer card is now punched for each reported accident, and some accounting must be made for each accident report when statistical reports are generated from the accumulated data.[12] The impact of this change in recording procedures was dramatic. In 1947 the records unit of the department kept track of 17,424 motor vehicle accidents in the city of Chicago. In 1950, the first full year for the automated system, 78,153 accidents were recorded. At the same time, the State of Illinois' Division of Highways recorded an increase of only 14,837 accidents in Chicago on the basis of *their* record-keeping.[13]

It is not that one accounting is more accurate than another, but that every official statistic is shaped by the organization which collects, collates, and reports it. We will use these numbers, accordingly, not as indicators of the "actual" accident rate, injury rate, or other aspects of the legal environment; rather, we will use them as indicators of *potential inputs* into the legal system *which have come to the attention of the authorities.* An accident may have been reported or recorded because it was serious, or because one of the parties

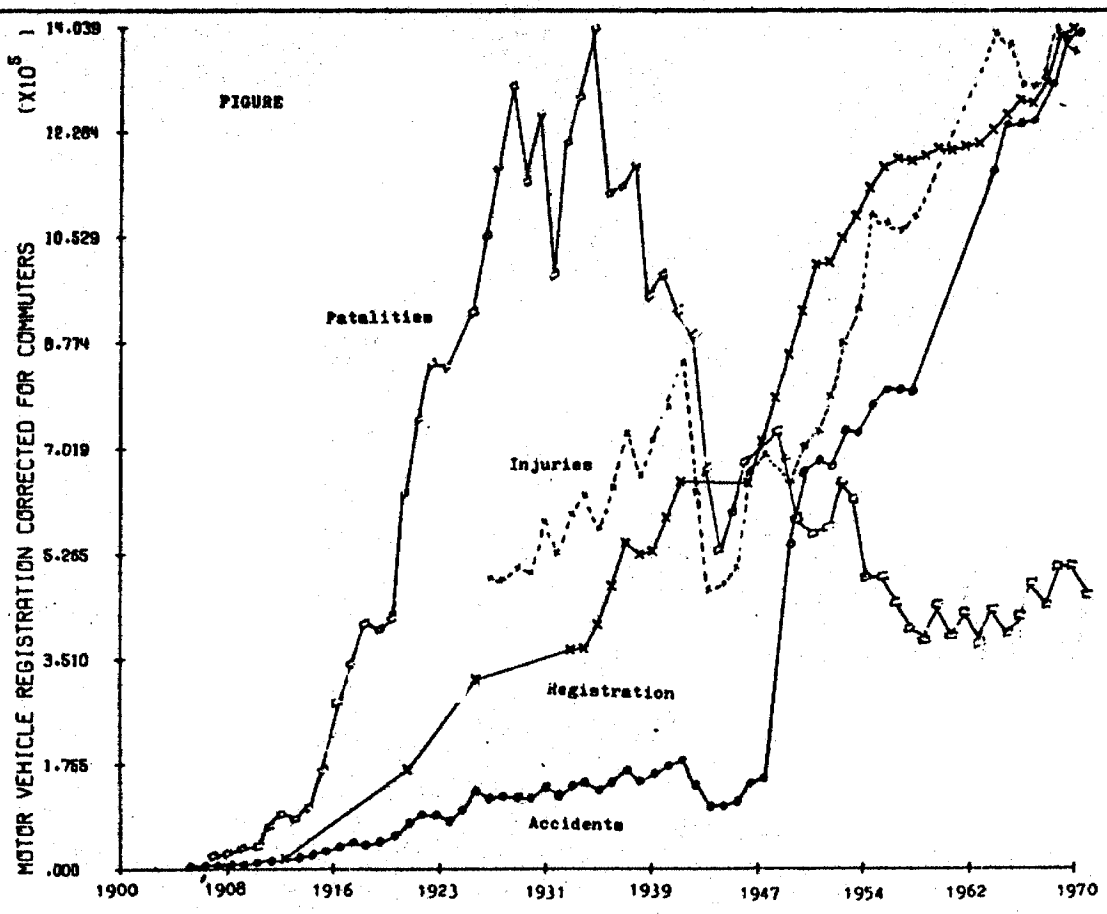
FIGURE
MOTOR VEHICLE REGISTRATION CORRECTED FOR COMMUTERS (X10^5)
14.039
12.284
10.529
8.774
7.019
5.265
3.510
1.755
.000
1900
1908
1916
1923
1931
1939
1947
1954
1962
1970
Fatalities
Injuries
Registration
Accidents

Figure 2.

involved insisted upon reporting it, or for a variety of other reasons. What is important is that these are the accidents (or injuries) which may become legal problems, and evoke the attention of the courts, the involvement of attorneys, and the authority of the state. And these potential inputs have increased enormously during the last two decades.

The number of injuries and motor vehicle fatalities recorded also rose steadily during the early years of the period for which we have systematic data. This steady rise was of some political importance, as we shall see. Deaths and injuries arising out of the introduction of large number of automobiles onto ill-prepared city streets spurred the definition of the automobile as a serious social problem. In 1921, the presiding judge of the traffic court lamented:

> Apparently life is held too cheaply in this community, and with the increase of the use of automobiles and the greater congestion of our streets, the toll of deaths, injury and misery will increase unless those public officials charged with the duty of enforcing the law stir up their consciences and give the masses the protection to which they are entitled.[14]

Deaths and reported injuries arising out of automobile accidents rose or remained at a high level until World War II. Again, wartime restrictions upon civilian automobile use and the greatly constricted supply of replacement units apparently curtailed their use and abuse, and both deaths and injuries appear to have dropped sharply during the war years.

But a curious pattern occurs following the war. While statistics on traffic injuries follow accidents, and the official figures skyrocket, the number of deaths arising from automobile accidents (probably as accurately reported a figure as we have) continued to decline. As a rate, computed as traffic fatalities per 10,000 motor vehicles, the decline is still more dramatic, for the number of cars on the road continued to increase. Increased reports of injuries, and even of the injury rate, probably reflects the same phenomenon we observed in the case of traffic accidents: the spread of insurance, improvements in police recording procedures, and the like. The fatality rate, on the other hand, is only partly a function of automobile use even when quite accurately reported and recorded. Advances in automobile design, the introduction of safety equipment, licensing and testing, improvements in highway construction, and the availability of increasingly sophisticated medical care in hospitals spread throughout the city, affect the death rate as well. The environment within which the automobile operates helps shape the consequences of its operation, and the nature and seriousness of the potential legal problems which it generates are influenced by a number of factors which interact in complex ways in the urban system.[15] But during the critical 1900-1930 period, during which the automobile became an

integral part of the American economy and life style, speed and congestion seemed inevitably correlated with ever-increasing injury and death. During this period the automobile became a social problem of considerable proportions, and thus inevitably a legal and regulatory problem as well.

The control of the flow of traffic is a serious burden upon the authorities only in the city. It is there that formal rules of priority (who stops, who starts, and when) and the rules of position (where one goes in relation to others) assume a crucial role in promoting coordinated human behavior.[16] Even before the advent of the motor vehicle, city congestion led to the enactment of formal rules of the road backed by the police power of the state. In 1837 the city posted its first speed limit: the drivers of horses crossing the Chicago River Bridge were enjoined to hold their pace to a "walk."[17] "Driving immoderately" was forbidden in 1851, and by 1861 it was necessary to post regular traffic policemen at downtown intersections to regulate the flow of wagons and buggys.[18]

The speeder and the carnage he wrought became an object of major concern only after the advent of the motor car, however. In the "teens," Mayor Carter Henry Harrison II blasted the "scorchers" of his day (Lewis and Smith, 1929: 275):

> Something must be done about these fellows who run their machines ten to twenty miles an hour. I'm in favor of compelling the gears of all machines to be not above eight miles an hour.

Speeding, especially by "Young America," was defined as a serious menace to the social order.

> Speeding has become a menace far greater than that of carrying a concealed weapon. . . . The death and injury toll from this violation is far less than that caused by speeding. An auto driven by a careless or reckless speeder is as dangerous to the community as a revolver in the hands of a burglar. It spells injury and death.[19]

Injury and death, observable and apparently direct consequences of speed and congestion, rapidly led to the enactment of state legislation and city ordinances defining appropriate and forbidden behaviors on the roadway. The first comprehensive speeding code came in 1908. By 1910 the major rules of the road (stopping at intersections, staying to the right, and the like) were formalized. The first parking ordinances were drafted in 1917 after a complete breakdown in the flow of traffic through the central business district. The registration of automobiles with the city became a requirement in 1919 as part of a campaign to identify ownership and afix responsibility for the operation of individual motor vehicles. By 1920, laws prohibiting driving while intoxicated and age

limits on the use of the motor car were found on the books. The environmental consequences of the motor car were also recognized by 1920: laws prohibiting glaring lights, excessive smoke, and the operation of a vehicle without a muffler were instituted. In that year, police department arrests and citation for these traffic-related offenses totaled 18,366.

The expansion of the regulatory power of the state in response to the social problem presented by the automobile in the city was inevitable. The nature of the behavior of man behind the wheel presents a particular problem in social control. Drivers are anonymous to one another. Their "interactions" are fleeting and narrowly defined. There is limited communication between parties, who are nevertheless attempting to coordinate their behaviors in a highly complex and interdependent environment. The formal rules of the road probably play a larger role in defining appropriate behavior behind the wheel than do laws for nearly any other public activity.[20] Moreover, most purposeful violations of driving rules result in positive short-run benefits for the violator (he gets there faster, makes a place to park his car, gets through the light) while having few negative consequences. Few pangs of conscience plague the traffic law violator, and a convicted offender does not appear disreputable to his neighbors, unfit for employment, or of questionable moral fiber. The kinds of informal sanctions and internalized norms which shape most of our behavior most of the time are not operative in this context.

The result is that responsibility for traffic law enforcement rests squarely upon the shoulders of the police. The nature of the activity is such that we must rely upon an abstract and often arbitrary set of laws to get along with one another, while at the same time the driver's decision to obey those rules is problematic. And, because of technology, individual citizens cannot play a major role in order maintenance. In the days of the horse-and-wagon, responsibility for enforcement lay partially in the hands of individuals. This was considerably encouraged by the practice of splitting fines for speeding and driving immoderately, one-half going to the city and one-half to the reporting citizen. But the anonymity of the city and the enclosed vehicle have conspired to foreclose this avenue for citizen participation in law enforcement, and the regulatory burden of the automobile must be born by law enforcement personnel.

One consequence of police traffic enforcement activity was a vast increase in the number of cases entering the local courts. More automobiles on the roadway, more policemen watching them, and advances in enforcement technology (most recently radar and the breathalyzer) conspired to produce an ever-increasing traffic arrest rate. This rate varied from year-to-year with fluctuations in police resources and changes in departmental leadership and organization, but the trend

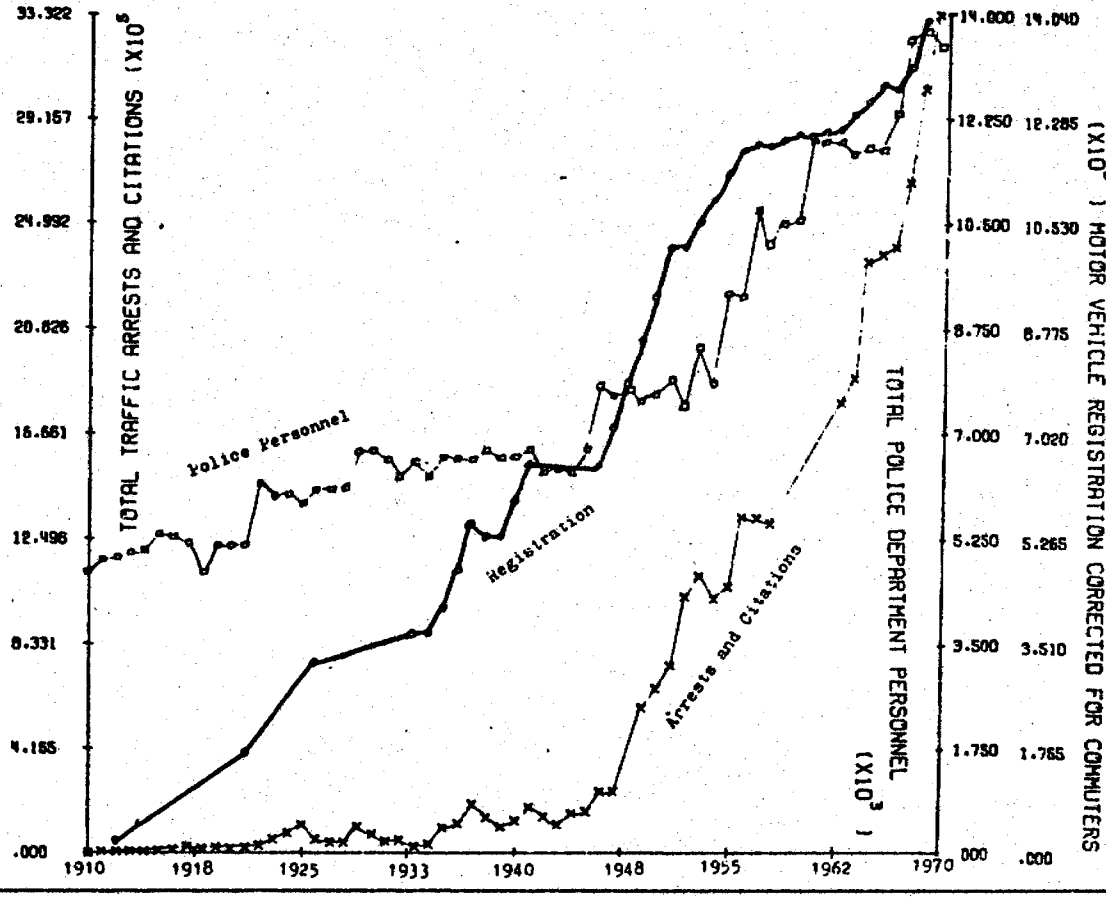
TOTAL TRAFFIC ARRESTS AND CITATIONS (X10⁶)
33.322
29.157
24.992
20.826
16.661
12.496
8.331
4.165
.000
1910
1918
1925
1933
1940
1948
1955
1962
1970
Police Personnel
Registration
Arrests and Citations
TOTAL POLICE DEPARTMENT PERSONNEL (X10³)
14.000
12.250
10.500
8.750
7.000
5.250
3.500
1.750
000
14.040
12.285
10.530
8.775
7.020
5.265
3.510
1.755
.000
(X10⁶) MOTOR VEHICLE REGISTRATION CORRECTED FOR COMMUTERS

Figure 3.

was inevitably upward. Figure 3 illustrates the rise in both motor vehicle registration and traffic arrests and citations over time.

The important fact about traffic crimes is that there are so many of them. Estimating the "true" or "underlying" crime rate for a population is difficult. All we can say with confidence is that much illegal behavior does not come to the formal attention of the authorities. Personal experience and observational studies of driver behavior suggest that most drivers violate most of the provisions of the traffic code quite frequently. The State of New York, for example, has estimated that at any given time about 36 percent of all drivers on the road are speeding.[21] Whatever the true figure, it is obvious that police enforcement activities merely sample a small proportion of all violations. The potential pool of offenders is enormous, and police squads simply dip into that pool to net violators. In this situation, the crucial determinant of the traffic arrest rate is the size of the scoop and the enthusiasm with which it is wielded. Assuming the widespread and relatively uniform tendency of motorists to violate at least some of the rules of the road some of the time, one indicator of the dimensions of this pool is the number of motor vehicles registered in the city, corrected to include the number of commuter automobiles entering the city each day. As Figure 3 illustrates, increases in this pool of enforcement situations is closely related to the number of traffic cases produced by the police.

The expansion of the pool of potential enforcement situations has been paralleled by an expansion in the size of the police department. Responding to increases in social scale—the size, density, and heterogeneity of the city—the department has grown over time. This widening span of formal social control, coupled with an increasingly dense traffic environment, generates an increasing number of traffic cases each year, cases which strain the processing capability of the local criminal courts.

SUMMARY: THE GENERATION OF INPUTS TO THE LEGAL SYSTEM

Environmental changes inevitably lead to changes in the nature of the cases which confront the legal system. The impact of technological and economic change has been an increase in the size, density, heterogeneity, affluence, and interdependence of urban communities; together we will call these factors "social scale." Increasing social scale has in turn produced new problems (as well as more of many of the old ones) to which the community must respond. New laws, and larger and more sophisticated law enforcement agencies, have been created as governments have attempted to shape social change, to take advantage of its benefits, and reduce the impact of its less desirable consequences. This has

led to an expansion in the scope of the criminal justic system, as new opportunities and technologies have demanded new regulatory responses. The complexity and anonymity of life in the city has also demanded the creation of new laws to facilitate the resolution of disputes among citizens who are essentially strangers to one another. The density, affluence, and interdependence of city life has guaranteed a lively business in the forums in which this resolution is achieved.

Figure 4 summarizes this argument and presents a set of correlations which estimate the strength of each of the conceptual linkages for the traffic problem. The Appendix reports the sources from which the indicators for each of the variables in this input model were derived.

Fundamental environmental changes are represented in Figure 4 by the Index of Social Scale, an indicator derived from nine measures of the conceptual components of the index: size, density, heterogeneity, affluence, and interdependence. The index is highly related to both the expansion of opportunities for law violation (motor vehicle registration, corrected for commuters) and the resources available to the community to apprehend law violators (police personnel). Vehicle use is further related to (1) the expansion of the legal code to regulate its abuse, and (2) a mounting toll of social consequences--injuries,

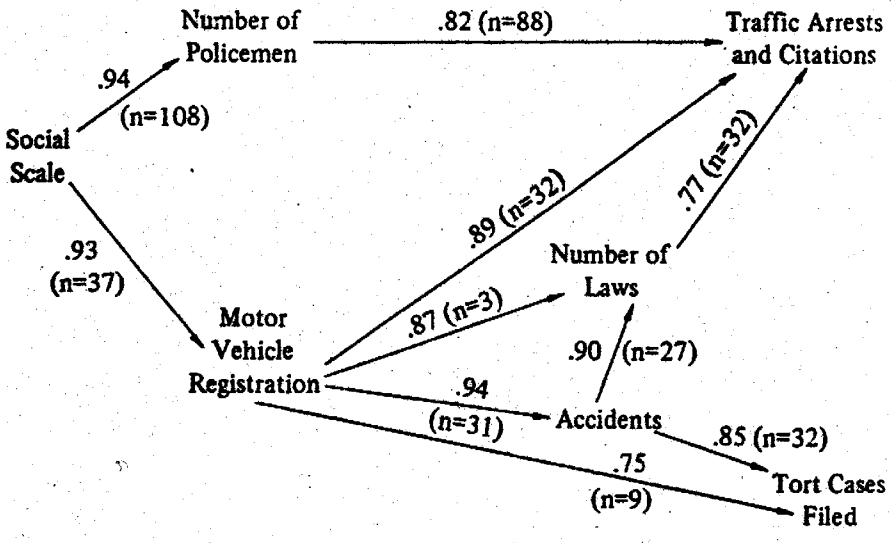

Figure 4: THE GENERATION OF INPUTS TO THE COURT SYSTEM: ZERO-ORDER CORRELATIONS AND THE NUMBER OF CASES UPON WHICH THEY ARE BASED

accidents, or fatalities. Together, the expansion of the legal code, the pool of potential law violators, and the resources of the formal agents of social control would appear to explain the growth of inputs into the criminal justice system over time. Likewise, expanded motor vehicle registration and the accident rate are highly correlated with the growth in the civil caseload in the Municipal Court of Chicago during the 1907-1938 period.

The strength of the relationship each linkage specifies is quite high, suggesting that the social-scale-and-legal-input model provides a useful explanation for the expansion of traffic-related legal business for the courts in Chicago over time. Due to the small number of observations (because of the limited motor vehicle registration data available before 1930), it is not possible to assess the predictive utility of the model's explanation of civil inputs. Correlations based upon the available data suggest that it is quite high.

The available data do enable us to estimate the relative impact of two crucial factors upon the expansion of inputs inot the criminal process: motor vehicle use and police resources. Again, in the broadest sense these measure crime opportunities and apprehension capability for this particular sub-set of illegal behaviors. As Table 1 suggests, variations in apprehension resources appear to be more important than variations in opportunities in the case of traffic. Table 1 estimates the impact of vehicle upon arrest and citation rates, all here expressed in per capita units to control for simple growth of the city over time. [22]

The simplest estimate of the relative contribution of each of our independent variables upon apprehension rates is the "elasticity" presented in Table 1. The

Table 1. THE DETERMINANTS OF INPUTS INTO THE CRIMINAL SYSTEM: TRAFFIC APPREHENSIONS PER CAPITA

	*Regression Coefficients**			
Variable	*b*	*B*	*Elasticity*	*F*
Motor vehicles per capita	.75	.29	.65	18.36 (.01)
Police personnel per capita	301.85	.73	2.71	117.38 (.01)
$R^2 = .96$				
N = 32				

*"b" is the unstandardized regression coefficient—a measure of the direct effect of a variable upon the dependent variable.

"B" is the standardized regression coefficient—an indicator of the relative strength of each of the independent variables.

"Elasticity" is the percentage change in the dependent variable associated with a one-percent change in the value of the independent variable.

"F" is a measure of the statistical significance of the effects of each of the independent variables.

observed figures suggest that a one-percent increase in the relative size of the police department yields a 2.7 percent increase in the traffic arrest rate, while a similar increase in auto and truck registration yields only a .65 percent increase in the dependent variable. This estimate of these coefficients should be quite accurate, for the simple model explains 96 percent of the variance in the apprehension rate. The findings are also in line with our theoretical expectations: given the extremely large number of violations taking place at any given time on city streets, the major determinant of variations in formal sanctioning is police activity.

THE RESPONSE OF THE COURTS: VOLUME STRESS AND ORGANIZATIONAL CHANGE

As a result of the ever-mounting level of inputs this police activity generated, "volume stress" rapidly became an organizational problem of major proportions in the courts of Chicago. Within the framework of the Municipal Court Act which governed them, it was difficult for the authorities to process this rising torrent of cases in an orderly fashion. Periodic breakdowns in the ability of the court to do so posed severe administrative and political problems for the city.

Volume stresses are problems which arise when an organism or an organization is unable to process satisfactorily the demands which are being made upon it (Meier, 1962: 69-71; Ashby, 1956; Haberstroh, 1960; Vickers, 1959). Factors in the environment which surrounds such an organization (called "stressors") are producing a greater volume of inputs than the agency can process (convert into acceptable outputs). Morale among members of such an organization typically suffers, they devise "short-cuts" which circumvent the agency rules, they lower performance standards, those who rely upon the organization to do its job properly complain, and outside investigations into the state of affairs begin (Meier, 1962: 73-78).

In the market economy, private organization, such as manufacturers or suppliers of services, have a ready response: they raise prices. By charging more, they reduce demand. Those who will not or cannot pay the price go elsewhere for satisfaction. Increased income from the remainder can be invested, enhancing the ability of the organization to meet demand through the expansion of its processing capacity. Public organizations, on the other hand, operate in a largely non-market context. Typically, they cannot impose severe limitations upon demands and they often cannot raise the prices charged those who demand their attention. Public organizations are rule-bound, and the rules are only partially responsive to market considerations. Courts, for example, are relatively open forums. If a problem meets certain criteria, which are historically and politically

determined, it can get a hearing. The processing capacity of the courts (manpower, resource) is also a historical and political, rather than a market, concern. This institutional inflexibility has been a major target of court reformers, and courts are increasingly able to adjust to changes in demands for their services. But as they (1) remain responsible for settling all disputes brought to them, and they (2) cannot radically change their mode of operation, volume problems continue to plague urban courts.

The automobile in the city was a stressor which strained the capacity of the court system to cope with both criminal and civil matters. There are at least two general classes of organizational responses on the part of non-market agencies to volume stress: the organization and its members can lower performance standards and "do the best they can," or they can improve the system's through-put with organizational innovations which increase their processing capability (Meier, 1962: 71-72). The first response of the municipal court was to compromise traditional standards, provide less acceptable service, and informally circumvent the rules which bound its performance and defined the legitimacy of its outputs. Responses involving more thorough-going organizational reform only followed widespread dissatisfaction with these procedures.

In the municipal court, criminal cases generated by the police department were heard in the branch courts which serviced the geographical areas within which they arose. Each branch housed one judge and a minor retinue of bailiffs and clerks. A number of forces were at work which led these decentralized courts to respond to the traffic problem by dismissing traffic cases in wholesale lots. The vast majority of traffic cases were classified as "quasi-criminal acts," a legal category encompassing motorists' violations of city and state motor vehicle regulations. The 1908 total for such prosecutions was 56,795, and in that year municipal court judges dismissed 54.5 percent of those cases.[23] By 1911 the case total had risen to 72,189, and 57.7 percent were dismissed in court. In 1912, the dismissal rate rose to 61.7 percent.

One explanation advanced by participants for this tremendous dismissal rate was that careful police work, close judicial attention, and the studied application of sanctions was futile. Given a primitive record-keeping system and the decentralized disposition of cases, it was impossible to identify repeated offenders and it was difficult to observe any consequences of such individual investments in traffic enforcement. As one municipal court judge lamented:

> So long as a dozen or more judges were responsible for enforcing the laws concerning the use of motor vehicles, no one of them had the opportunity to pursue a constructive policy.[24]

In addition, traffic cases competed daily in these courts with equally pressing, and more important, criminal misdemeanors and preliminary hearings for felony

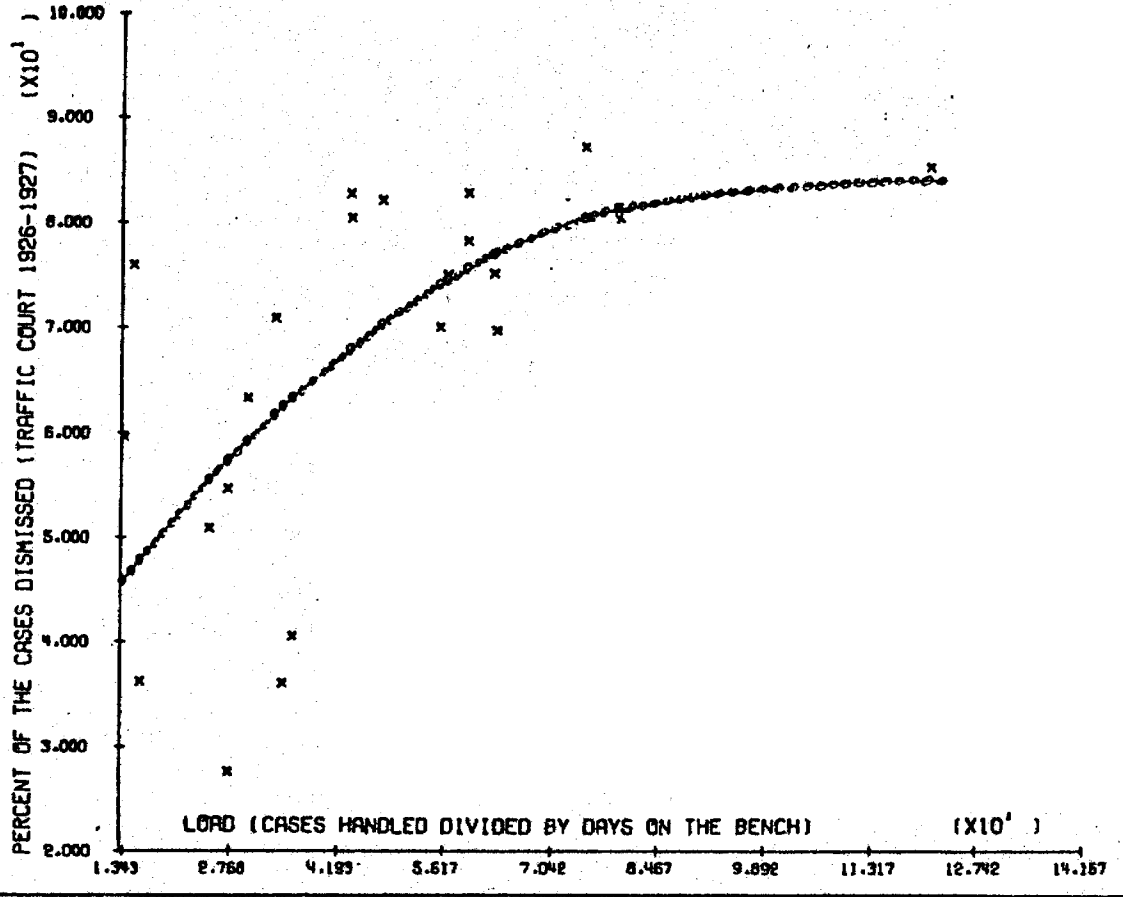
PERCENT OF THE CASES DISMISSED (TRAFFIC COURT 1926-1927) (X10¹)
10.000
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
LOAD (CASES HANDLED DIVIDED BY DAYS ON THE BENCH) (X10¹)
1.343
2.768
4.193
5.617
7.042
8.467
9.892
11.317
12.742
14.167

Figure 5.

cases. This competition facilitated the de-emphasis of traffic offenses in the court's list of priorities.

Perhaps the most important factor was the simple caseload problem. A standard organizational response to a growing queue of inputs awaiting processing is to summarily exclude low-priority items from consideration. The dismissal of difficult, or uncertain, or minor cases is one strategy by which courts can husband their resources. In general, we should find that, as caseloads increase, the proportion of them which are disposed of in organizationally efficient ways should increase as well. While prosecutors and the police do bring cases before the court which deserve rejection, the primary factor which is systematically related to the outright dismissal of large numbers of cases should be caseload. While the relationship between caseload and the dismissal rate reflects organizational processes, the hypothesis can be tested most adequately at the individual level. Data on the dispositional patterns of municipal court judges are presented in Figure 5.

The observations in Figure 5 illustrate the relationship between the traffic caseload facing individual judges (the cases they handled divided by the number of days they spent hearing traffic cases in 1926 and 1927), and the percentage of those cases they dismissed without punishment (fine, jail, or probation).[25] These were contested criminal and quasi-criminal cases, usually involving more serious charges to which the accused did not automatically plead guilty. Dismissed cases were "dismissed for want of prosecution," "non-suited," or a "nolle prose" was entered, dispositions which were variously selected for reasons of convenience rather than law. Judges on the municipal court heard these cases in rotation, serving various lengths of time and processing varying numbers of cases during each term of service.

While judges are scattered high and low, relatively low dismissal rates (below 50 percent) were found only when they handled less than about 40 cases per day. Above 50 cases per day, dismissal rates were uniformly high, averaging about 80 percent. The curved line in Figure 5 is the line which best represents the data statistically.[26] The curvilinear nature of the relationship between caseload and dismissal patterns suggests that caseload pressure affected individual judges only to certain limits. They continued to hear a few cases (the data suggest about 15 percent) which could not be dismissed regardless of load problems, and no additional increase in case volume (within the limits of the data available here) made serious inroads upon that core of legal disputes.

The curved line in Figure 5 explains 41 percent of the variance in dispositional patterns. It is interesting to note that there is substantial variation around that line (it fits the observed data points less accurately) at the lower end of the load continuum. There, it appears, individual variations in the policy

perspectives and personalities of judges may have affected their dispositional tendencies. Casual inspection of court reports suggests, for example, that Democratic judges were more likely to dismiss traffic cases than Republican judges. Also, it was widely assumed at the time that experienced judges, who had heard many traffic cases and had developed uniform sentencing policies, were less likely to dismiss cases wholesale. Although there are not enough observations here to test those hypotheses systematically, differences between judges on these and other dimensions may account for the variation we observe among them when caseloads are low. But when caseloads climb, this variation vanishes, and it appears that individual differences among judges become less important than their common occupational problem. At the high end of the load continuum, the dismissal rate is much more closely tied to case volume.

Given their low priority, it was relatively easy to dismiss many traffic cases which came before the municipal court. Given their enormous number, pressures for organizational efficiency encouraged such a response on the part of local judges. They were able to cope with the rising volume of traffic-related criminal cases during the early years of the court only by sacrificing many traditional standards of appropriate conduct. The formal rationale for the existence of courts, the needs for the studied application of the law to concrete circumstances, was lost in the frantic atmosphere of the Roaring Twenties.

The operation of the automobile in the city generated an increasing number of civil cases as well, and this caseload posed similar, if less intense, problems during this period. Although many civil disputes which enter the courts never come to trial, those which do consume an enormous amount of judicial attention. Those which do not still engage clerks and judges when papers are filed and conferences held. By the mid-1920s, civil litigation strained the physical capacity of the municipal court. Reported the chief judge in 1924:

> The high pressure operation of the court has been coincident with a very unfortunate lack of court rooms. The expectation that the city government would provide needed space to enable the additional judges to work advantageously has been defeated after a number of projects. The difficulty has been met, so far as possible, by holding court in certain judges' chambers, in some instances for half of each working day. This is a very unsatisfactory condition. It means that two judges are endeavoring to function with the court room facilities designed for but one, that litigants and attorneys are put to some trouble and it is difficult, if not impossible, to preserve the order and decorum to which judicial work is entitled.[27]

Civil accident claims and insurance disputes entered the municipal court as "torts," technically defined as civil claims not involving a contract. Not long after it became a standard piece of household equipment, claims arising from

automobile accidents made up the vast majority of all tort cases filed in the municipal court each year. Their numbers were constantly increasing. From the *Annual Report* of the court for 1921:

> More automobiles and more automobile accidents were reflected in the continued jump in tort cases of 800, or 21.5 percent to 4,523.

And in 1922:

> Increasing automobile accidents were doubtless responsible for the gain of 42 percent in tort cases filed, from 4,523 to 6,400.

Simple statistical analysis suggests that the relationship between the number of tort cases filed each year and motor vehicle statistics was indeed strong. Across the 1905-1938 time series, the correlation between torts and motor vehicle accidents was .85, and the correlation between torts filed and the number of registered motor vehicles was .75.

In the absence of any improvement in the processing capability of the court, the continued growth of the automobile industry and increasing congestion on the city's streets produced more legal claims each year which could not be settled. The mathematical function which describes the relationship between demands for service, or the number of cases entering the court system (the input rate), and the number of demands met, or the number of cases disposed of in one way or another (the output rate), is the "through-put" of an organization. When its through-put ratio is 1:1, an organization is processing inputs at an optimum rate, and no queue of unmet demands for service develops. When the through-put ratio drops, demands or cases build up on the input side, and the organization develops a "backlog." If the rules of the organization, or the norms of organization members, or the expectations of the public demand that backlogs do not grow, the through-put ratio is also a measure of volume stress. The greater the gap between the ideal input-output ratio and the actual performance of the organization, the greater the pressure for organizational innovations which improve the through-put ratio and limit the further expansion of the backlog.

The development of such a backlog of civil cases arising out of traffic accidents is presented graphically in Figure 6.

On the horizontal axis are charted the number of tort claims filed each year from 1908-1938. On the vertical axis are found the number of claims which were disposed of in the same year. This includes not only cases which were tried before a judge or jury, but all claims which were dropped earlier in the process after the negotiation of private settlements as well. As measures of backlog there is a certain amount of error in these figures: the cases which were filed late in a given year, for example, would not be decided until the next, and would appear

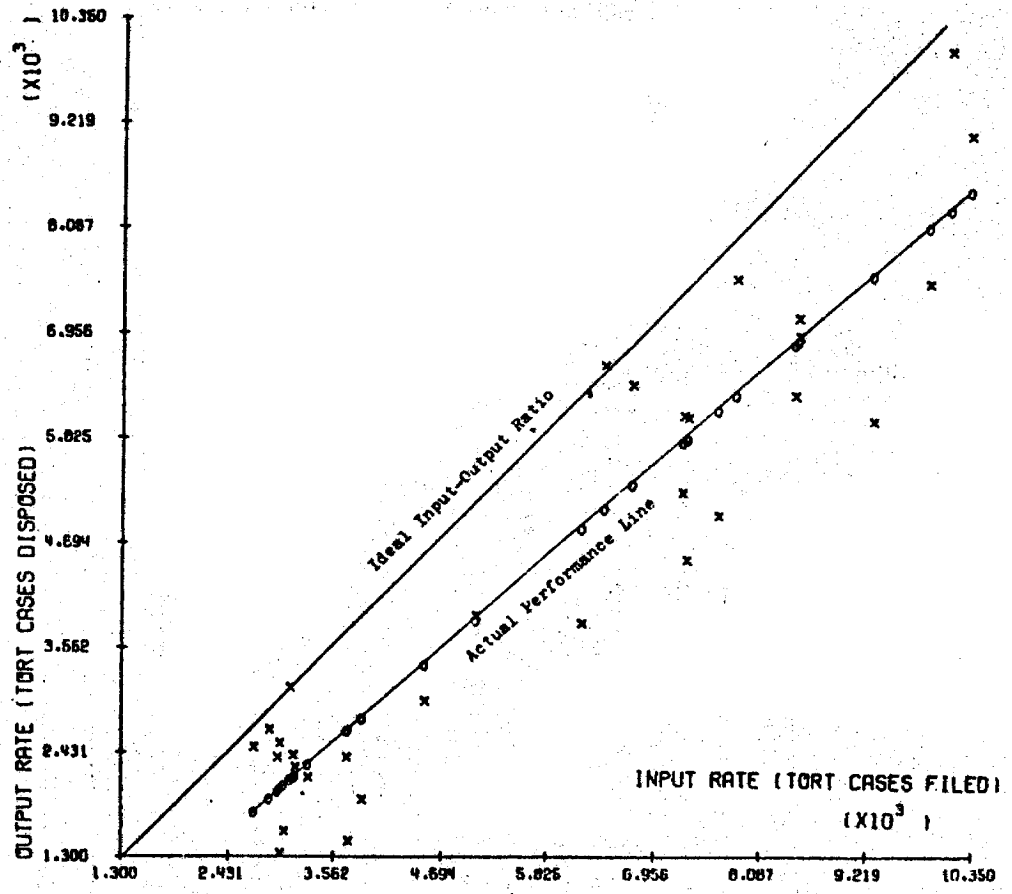
OUTPUT RATE (TORT CASES DISPOSED)
(X10^3)
10.350
9.219
8.087
6.956
5.825
4.694
3.562
2.431
1.300
Ideal Input-Output Ratio
Actual Performance Line
INPUT RATE (TORT CASES FILED)
(X10^3)
1.300
2.431
3.562
4.694
5.825
6.956
8.087
9.219
10.350

Figure 6

to be "delayed." But the same spill-over occurred from the previous year, and such effects should at least partially cancel themselves out over the series.

Figure 6 compares the distribution of these inputs and outputs with the "ideal performance" ratio. The ideal performance line describes a 1:1 through-put ratio, while the "actual performance" line illustrates the general match of the through-put experience of the court to that optimal standard. The actual performance line explains 88 percent of the year-to-year variation in the municipal court.[28] Comparison of the two suggests that as the volume of inputs into the court increased, the gap between them—the backlog—increased at a fairly uniform rate. Even during the first three decades of the court, when automobile registration was still low and when the absolute volume of civil liability claims was quite small (a maximum of 10,340 cases filed per year), the municipal court was falling steadily behind in the processing of those claims. In the absence of any discernible innovation in the handling of automobile-related cases, the court's through-put rate deteriorated steadily.

The absence of innovation suggests that the influx of civil accident claims was not yet stressful. The mounting volume of criminal cases arising out of traffic forced the court to undertake a number of organizational reforms to increase through-put. However, neither internal nor external pressures upon the municipal court produced comparable responses to the civil claim backlog until after World War II.

First, the number of cases which was accumulating was relatively small. By 1964, the backlog of cases awaiting jury trial in Cook County as a whole totaled 50,000, and the average delay before trial was 62 months.[29] The magnitude of the problem was quite different before the post-war leap in recorded accidents and injuries described in Figure 2. Stress was also alleviated by the existence of alternative forums for dispute settlement. Many larger claims were taken to the circuit or superior courts, which had backlog problems of their own.

In addition, the formal norms of the court de-emphasized the civil delay problem. However more attractive civil litigation for judges and lawyers alike, practical considerations dictated that the court focus upon the reduction of its criminal backlog. As the court's *Annual Report* (1922: 13) stated:

> The Municipal Court Act expressly enjoins the prompt disposal of all criminal and quasi-criminal cases, only such time of judges being available for civil cases as is not required for criminal cases. This policy of the act is based not merely upon the importance of trying criminal cases promptly but also on the fact that in the City of Chicago there is no other court having concurrent jurisdiction in the trial of quasi-criminal and misdemeanor cases and the preliminary examination in felony cases.

Finally, we cannot overlook the positive functions of large civil backlogs for the court as an organization. In the absence of any outside concern, civil delay may be an organizationally efficient device by which the courts can pass on some of the costs of deciding cases to litigants, and force those who cannot or will not pay those costs to seek the resolution of their problems in other forums. In short, they can thus gain some of the flexibility of market organizations.

Civil delay may discourage suits in the first place. Many minor claims may not be filed because they are not worth the effort, given the backlog situation. More important, civil delay encourages the private negotiation and settlement of outstanding suits before they reach the trial stage (Ross, 1970). Faced with years of waiting, plaintiffs (largely individuals) and defendants (largely insurance companies) resolve their own disputes. Each of these passes on costs to litigants or potential litigants which would be borne by the state if trial delays were brief and through-put ratios low. Plaintiffs might receive more money, and more suits might be filed, but justice of this sort would be organizationally inefficient.

The absence of recorded complaints about the backlog problem before World War II may reflect the satisfaction of the primary participants in the process with these outcomes. The attorneys involved appear, in fact, to be at least partially responsible for the apparent magnitude of the problem. Lawyers specializing in personal injury litigation (who today in Cook County number only about 150) frequently schedule many more cases than they can possibly bring to trial, and then, through a series of delays (which keep the cases on the books), use their ability to bring particular cases to court if necessary as a bargaining tool in private negotiations (Rosenberg, 1965: 36-37). Insurance companies may profit from the negotiation of minor cases without trial, and their ability to invest their potential losses while major cases await trial often counterbalances these losses when delay is lengthy (Zeisel et al., 1959). Individual accident victims, on the other hand, are irregular, one-time users of the courts. While they suffer the consequences of civil delay, they do not have the kind of continuing stake in the process which generates loud and organized protest. In the absence of such protest, organizational efficiency norms predominate.

Organizational innovations in the processing of civil liability claims came after World War II, when caseloads mounted at an increasing rate. Compared with other cities, Chicago has an extremely high litigation rate; studies in the 1950s placed it third among major cities in the ratio of traffic accidents to court claims (Zeisel et al., 1959). It also has a high trial rate; in a recent year, 27 percent of all cases filed demanding juries eventually reached the trial stage. These factors have conspired to produce an enormous traffic-case backlog, recently pronounced the worst in the United States.[30] This caseload, combined with

growing public and professional recognition of the dimensions of the problem, has produced a number of organizational reforms which only recently have begun to make inroads into the queue of cases awaiting disposition. These include a computerized system for assigning cases to judges, increased use of pre-trial conferences and impartial medical examiners, a specialized courtroom for the selection of jurors for civil panels, and other innovations. The ultimate goal is to reduce civil delay to "only" two years.[31]

One crucial element affecting the through-put problem in all civil and criminal cases was the court's manpower limitations. Dramatic improvement in the processing capability of the municipal court could be achieved only through organizational innovations which reduced the cost-per-case in judicial man-hours. Autonomous market organizations can increase their processing capability by adding personnel. Their willingness to do so will reflect the relative economies and diseconomies of scale this involves, and such expansion may not lower the total cost of processing additional units. The municipal court, on the other hand, was a creature of the state. The number of judges, the scarcest resource in the system, was determined by the Chicago City Council and the state legislature under the framework of the Municipal Court Act. In 1922, when the court received 287,438 cases, this number was fixed at 37. This figure remained unchanged until 1964. In 1963, the last full year of operation for the court, the 37 judges were faced with 1,500,000 new traffic cases alone. Given the unwillingness of the Republican-dominated state legislature to grant the city new Democratic judgeships, reforms which increased the efficiency of existing personnel were the only options open to the court.

The major organizational response to the criminal problem (there were others, as we shall see) was the creation of specialized courts and court-like agencies which could more effectively process inputs generated by the automobile. Differentiation and specialization are characteristic responses of organizations to stresses generated by volume overload. Such bodies are often able to reduce the cost-per-case ratio and alleviate volume problems without a tremendous increase in overall organizational resources. They can be delegated the power to schedule their own manpower allocations, direct the flow of inputs to appropriate offices, develop unique rules and procedures suited to the business at hand, focus administrative and supervisory attention on volume problems, and train a specialized staff organized to process a narrow range of inputs with maximal effectiveness. The difficulty in this case, of course, is that the resulting processing units no longer resemble courts.

The inevitability of specialization was recognized early by the municipal court. Its *Annual Report* in 1913 noted:

> When the territory was the type of political development in this part of the United States the court ordinarily consisted of a single judge, clothed with the fullest judicial power. The judge under these primitive conditions heard and determined every sort of case, both civil and criminal. As population increased and judges became more numerous specialization came into being. With the growth of our large cities more and more specialization came into being. The economic advantage of specialization is so obvious that it necessarily comes into use in the judicial field as well as in the industrial field.[32]

Separate, specialized courts offered several advantages for the processing of traffic cases. Early centralized court record-keeping systems were inefficient, costly, and retrieved documents at a slow pace. Traffic cases, on the other hand, came before the court in great volume and demanded rapid disposition. Decentralized records specific to the branch court hearing traffic cases enabled municipal court judges to identify "repeaters" and keep useful court records. Judge Fry, an early judge of the new automobile court, remarked upon these advantages:

> The Automobile Branch of the Municipal Court was established to bring about uniformity in dealing with the automobile problem. By segregating these cases in one court it was possible to keep tab on the frequent and reckless offenders.[33]

The branch developed an index card system to keep track of the offenses of all those who appeared in it, and boosted fines levied on repeated offenders.

Specialization also enabled judges and prosecutors to develop uniform sentencing policies. This paid two dividends: it was more "just" in their eyes (the law was at last being equally applied), and it reduced decisional costs. Specialized judges could develop uniform sentences for "similar" cases, and the experience needed to arrive at those sentences and identify similar patterns of events could be more easily obtained in a specialized court.

The first specialized branch of the municipal court to attempt to reap these advantages was the automobile court, a branch established early in 1913. This was a period in which the city's 16,859 motorcars still jockeyed for the right-of-way with over 40,000 horse-drawn carriages and wagons, but careening automobiles had already become a major social problem. The formation of a specialized branch court focusing resources upon a single class of cases, speeding, enabled the judiciary to attack the growing dismissal problem.

> Judge Fry says that at the outset of the year's work he found the prosecuting officers frequently exercising the right to enter *nolle prosequis* and non-suits. . . . More than eighty speeding cases had been dismissed by

nolle from December 2, 1912, up to March 1913. An investigation showed that the prosecuting officials had not in a single case interviewed the police officer who made the arrest, before the dismissal.[34]

While Judge Fry reportedly discouraged the wholesale dismissal of cases in his court, the extremely limited nature of this investment in specialization limited its overall impact upon the municipal court's increasing use of such practices. Figure 7 illustrates municipal court dispositional patterns before World War II.

Figure 7 is an example of an "interrupted time series" analysis of the impact of an institutional reform upon the pattern of decision-making in an organization (Campbell and Stanley, 1963: 37-43; Caporaso and Roos 1973: 3-35). In such analyses, the variable of interest—here the disposition of quasi-criminal cases—is plotted over time. Comparison is made of the pattern of events before and after the change. This pattern is revealed by the extended time series, and is a more accurate gauge of the extent of any change than a simple "before and after" comparison when the events fluctuate from year-to-year due to other influences in the system. Visual inspection and statistical tests may reveal changes in the distribution of the variable of interest, jumps in the level of the line, or shifts in its slope, the direction in which events had been changing. In the absence of other relevant factors which may have occurred at the same time as the reform and may serve as an alternative explanation for any observed changes, these changes may be causally connected to the reform.

While there are not enough observations in this brief time series to support any elaborate statistical tests, the data suggest that the opening of the automobile branch did not greatly affect the distribution of dismissals for the court as a whole. The dismissal line illustrated in Figure 7 dropped slightly from 1912 to 1913, but its slope (long-run direction in which the court was going) was unchanged and rising. Its small apparent impact on the overall dismissal rate was quickly lost in this rise. This increase in the face of a rising caseload occurred within the speeding branch as well. By 1921, automobile court was hearing 250 speeding cases each day, and its own record-keeping system had broken down.[35]

The stress generated by increasing caseloads was unabated. By 1926, the flood of traffic cases reached crisis proportions. In 1921 the court received 15,576 city traffic ordinance violation cases alone. In 1922 the total rose to nearly 20,000; in 1923 to 38,000; in 1924 to 45,000; and in 1925 to 64,000. The year 1926 saw the creation of the city's first "cafeteria court."

The Traffic Bureau of Chicago was a major organizational response to the volume problem, an innovation copied by cities across the nation. Under the Municipal Court Act, the chief judge possessed the power to appoint up to six "assistant judges," non-elected hearing referees empowered to preside over

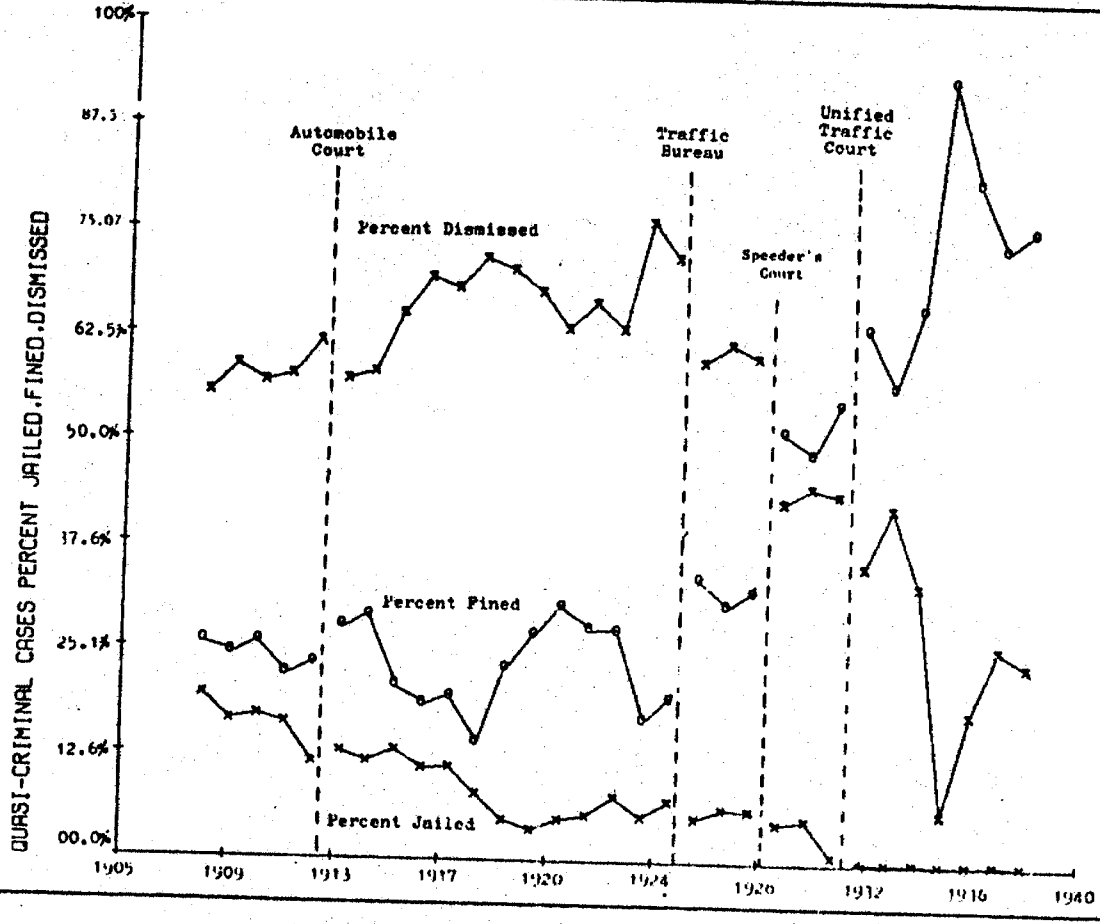
QUASI-CRIMINAL CASES PERCENT JAILED.FINED.DISMISSED
100%
87.5
75.0%
62.5%
50.0%
37.6%
25.1%
12.6%
00.0%
1905
1909
1913
1917
1920
1924
1928
1932
1936
1940
Automobile Court
Traffic Bureau
Unified Traffic Court
Speeder's Court
Percent Dismissed
Percent Fined
Percent Jailed

Figure 7.

minor proceedings. They were assigned to the traffic bureau, housed in city hall, where many errant motorists filed past a counter and paid their fines, uncontested, to a cashier. Fines for various categories of offenses were uniform and were published in booklet form.[36] The "cafeteria" imagery was established in the newspapers even before the bureau officially opened for business.

> From now on minor offenders will be handled like luncheon "tray hounds," it is promised, and fines of $1 to $10 will be administered quickly and without legal gas.[37]

The traffic bureau was created following a study of the volume problems of the municipal court by the street traffic committee of the powerful Chicago Association of Commerce. The problem was one of balancing organizational efficiency and traditional legality. If the court was to successfully cope with the rising flood of traffic cases, new processing procedures had to be developed. But courts, more than other agencies of government, are rule-bound. Their rule-boundedness, the extent to which their decisions are made in traditional and procedurally appropriate ways, is in fact the unique characteristic which legitimizes the solitary and discretionary role of the judge as the settler of disputes.

The formal structure which emerged balanced these two sets of potentially conflicting standards. Production-line procedures processed the bulk of traffic cases, and fines were kept low to encourage "guilty pleas" in minor cases. Traffic bureau fines averaged less than $2.00 in 1926 and 1927.[38] The parking ticket which could be returned with the fine by mail was instituted, greatly decreasing the number of people who passed through the bureau's cashier line. The bureau was dubbed the "Help Yourself Court," and justice was speedy. As the presiding judge of the bureau described it, "if a person knows he is guilty . . . we can dispose of his case in three minutes."[39] These production-line procedures enabled the court to survive the enormous influx of minor traffic cases. By the 1950s, successors to the traffic bureau were processing over one million cases a year.

Organizational efficiency was balanced by traditional legality in the traffic court, an appendage to the traffic bureau to which contested cases could be transferred. There, any citizen, regardless of the charge, could "have his day in court." The availability of a forum where the accused, with or without counsel, could challenge the action of the arresting officer provided an air of legality which lent legitimacy to the traffic program of the municipal court.

The impact of the traffic bureau upon dispositional patterns in the court is apparent in Figure 7. The percentage of quasi-criminal cases dismissed, a figure

which had been generally rising for a decade, dropped twelve percent during the first full year of the bureau's operation. The bulk of dismissals illustrated in Figure 7 came from the traffic court, where contested minor cases were mingled with major offenses (second offense speeding, drunk driving). During the 1926-1928 period the caseload in this court averaged over 54 per judge-day, a figure which, as we have seen, leads to high dismissal rates. In April 1929, a new speeder's court was opened with jurisdiction over all traffic misdemeanors (more serious charges). Their caseload considerably simplified, traffic court judges began convicting many more defendants in minor cases. During the years 1926-1927, traffic court judges dismissed over 70 percent of the contested cases transferred from the bureau, a figure which was encouraging such transfers at an increasing rate. After the opening of speeder's court, the figure dropped by 20 percent. The effect of this drop is reflected in the sharp increase in the percentage of defendants fined during the 1929-1931 period in Figure 7.

As before, organizational reform did not affect the rate at which defendants were jailed, as opposed to fined or dismissed. Throughout this period the size of the city's house of correction remained relatively constant, and as more persons came into the courts, a smaller proportion could be sent there regardless of the circumstances of their cases. The option of jailing offenders, unlike the others, was constrained by forces outside of the court organization, and remained unaffected by internal organizational processes.

While the internal operation of the court was now proceeding more smoothly, the environment which surrounded it was not. At the same time that the municipal court was learning to live with the problems of the automobile, the city was finding coexistence more and more difficult. The accident and death rate on the city's highways mounted throughout the late 1920s. In 1925, there were 11,319 reported accidents; by 1931 the total had risen to over 16,000, and over 18,000 were officially known to have been injured. The death toll mounted. In 1925, 649 traffic fatalities were recorded; in 1928, 918. In 1930, 886 were killed on the city's streets, and in 1931 a new unified traffic branch was created in the municipal court in order, as the headlines put it, to "Battle Rise in Auto Deaths."[40]

Formal plans for the unified traffic court were worked out by a task force representing several public and private agencies. Led by Mayor Cermak, representatives of the municipal court, the park commissions, the police, the Association of Commerce, and the Chicago Motor Club, planned a general attack upon the traffic problem through the courts.[41] Previous court reform efforts had come from within response to volume problems, and the innovations developed involved only court personnel. The involvement of outside parties led to a program coordinating the activities of other agencies and an increase in the resources allocated to court activity.

The new traffic court was to have jurisdiction over all quasi-criminal acts and misdemeanors defined in the State Motor Vehicle Act and the Municipal Traffic Ordinance. An improved record-keeping system was devised for the identification of repeated violators, and the bailiff of the court made assurances that warrants for the arrest of those who failed to appear in court would in fact be acted upon (a dramatic promise, given the fact that the "no show" rate often exceeded 50 percent).[42]

Municipal court officials assured that experienced traffic judges would be assigned to the new branch. While during the 1926-1927 period judges averaged 14 days of service on the court per year, the average rose to 80 days during the unified court's first year of operation.[43] Chief Judge Sonsteby demonstrated the new commitment to traffic law enforcement on the part of the court by personally presiding over the traffic bureau and taking his turn hearing contested traffic cases.

In operation, the court continued to encourage the automated disposal of cases. Fines paid "at the counter" remained low, averaging $1.78 in 1931. Fines were pegged higher for those found guilty in contested cases, and they averaged four times those imposed in contested cases in the old traffic court. Each year a smaller proportion of traffic cases were contested, and fewer of those contested were dismissed in favor of the defendant. While in 1926-1927 about 75 percent of the contested cases were dismissed, in 1935 only 17 percent were similarly disposed of, leading to the sharp increase in the fine rate illustrated in Figure 7. Welcomed in 1931 by headlines like "Judge Handles 400 Auto Cases in Five Hours," the unified traffic court efficiently handled the mounting traffic caseload, and increasingly dispensed justice in streamlined, assembly-line fashion.[44] The imposition of small, standardized fines replaced the wholesale dismissal of many offenses, but whether the larger purposes of the criminal law were better served is problematic. .

THE ENVIRONMENT, THE LEGAL SYSTEM, AND MODELS OF HUMAN BEHAVIOR

The ever-mounting number of traffic cases which entered the Municipal Court of Chicago raises larger questions about the relationship between law enforcement activity and citizen behavior. Do the apparently endless apprehension and dispositional activities of the police and courts have any impact upon the incidence of traffic law violations? Did increasing police allocations of scarce resources to the traffic patrol, and the time and energy expended upon the processing of traffic cases in court have any consequences, or did this flurry of activity proceed without deterrent effect? In systems terms, is there any

evidence of "negative feedback" processes for Figure 4, some indication that activity by the police and the court limits future enforcement opportunities and reduces the volume of cases entering the legal system, or at least inhibits the growth of those inputs?

This essay has documented the efficacy of *organizational* feedback processes, or the ability of the municipal court to adapt to stresses generated by the volume of cases entering the system. Figure 8 illustrates this, and the systemic consequences of deterrent feedback loops. Negative feedback processes are necessary for the continued existence of any system. Positive growth processes (arrow with positive signs) predict only endless, and eventually wildly impossible, growth, and such "positive growth systems" are inherently unstable. Stable systems develop mechanisms to suppress, or control, or cope with such expansion.[45]

As we have seen, organizations in the Chicago legal system responded to environmental change only slowly. These adaptations tended to be organizationally efficient, rather than legally appropriate, in the absence of external influence. Given society's ambivalence over the total enforcement of traffic regulations, there were few incentives for the courts to invest heavily in their processing. Only severe organizational stresses and periodic demands that they "do something" about the traffic problem stimulated the courts to reform their structures and increase their conviction rate. But these changes do not appear to have had much systemic, deterrent impact.

One explanation for the absence of negative deterrent feedback may be that the certainty and severity of punishment for traffic offenses in Chicago is low. It

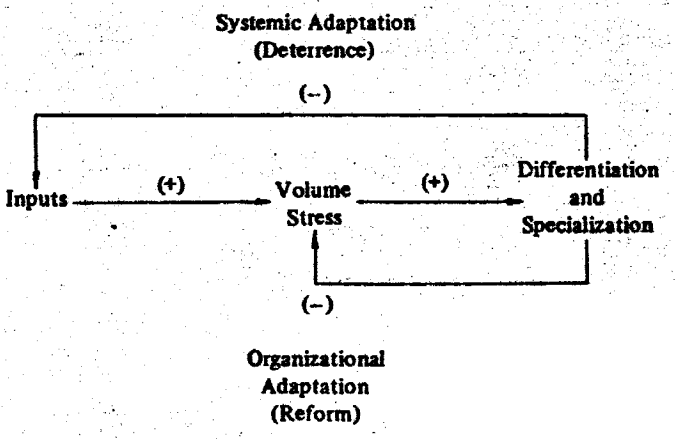

Figure 8: FEEDBACK PROCESSES

is the combination of the formal law and its vigorous enforcement which is presumed to maximize driver compliance with established norms. While the apprehension of numerous individual offenders by the police generates more business for the legal system, the general deterrence this produces–increased compliance with the law by those who would otherwise fail to do so–is assumed to reduce the overall incidence of illegal behavior in the community as a whole. The certainty with which offenders will be detected and the severity of their punishment are two general characteristics of a legal system which affect this process (Middendorff, 1968).

The best evidence available (which is not very good) indicates that more severe penalties, when combined with relatively high detection rates, will reduce the overall incidence of illegal behavior.[46] The nature of traffic offenses presents some limitations upon the severity of punishments available to sanction violations, however, and this may limit the deterrent effects of vigorous enforcement. First, apprehension and conviction for minor traffic offenses have very limited consequences. Not only are most penalties extremely low, but there are few of the collateral stigmas attached to traffic violations which come with the identification of many other forms of deviance. People rarely feel that pain of conscience when violating many of the provisions of the traffic code, and bringing them into court and labeling them as offenders does not bring the wrath of the community upon them. Typically, there is no victim pressing a claim and reminding others of the human costs of illegal behavior.[47]

Second, attempts to impose more severe penalties for traffic violations have been fraught with difficulty. Investigations indicate that such attempts are thwarted in practice by the informal reduction of charges and the unwillingness of judges and juries to convict their fellows of newly serious offenses.[48] This may be because traffic cases are more likely than others to involve middle-class and white defendants, or because most traffic laws are abstract and rational, and do not reflect ethical or religious tradition.[49] Given the widespread distribution of traffic law violations ("we all do it") and their normless character ("it's not so bad"), there appears to be considerable informal resistance to the imposition of severe penalties in traffic cases.

The problem is intensified by the low certainty of detection of traffic violations. Experts are in agreement that the severity of a penalty affects the regulated behavior only when the certainty of being apprehended is high (Goen, 1965: 21).

> The prevalence of traffic violations is usually attributed to lack of public support for severe enough penalties. Certainly, more severe penalties for violators, and removal of licenses of violators would increase compliance with traffic regulations, but the low probability of detection of traffic

violations must be an important factor in the lack of compliance. It is axiomatic in law enforcement that surety of punishment is a more important deterrent to crime than the severity of punishment. Thus an increase in the capabilities of detection of traffic violations is essential for adequate enforcement.

There is considerable experimental evidence that the physical presence of law enforcement personnel can reduce the incidence of traffic violations (and other public crimes as well); the difficulty is that the levels of enforcement required are simply too high for society to support on a general basis.[50] Increasing the resources allocated to traffic control activities three- or four-fold may reduce violations, but the social overhead cost (the amount of society's resources poured into administrative or control activities) of such policies would be tremendous. One consequence is that "realistic" levels of enforcement may well be below the level required to produce any general deterrence of traffic violations.

This may be the case in Chicago. While a specialized traffic division continually generates a large number of traffic cases, the ratio of motor vehicles to officers on the traffic detail is quite large. In 1946, the year before the traffic division was created, the ratio of motor vehicles to traffic officers was 1:1113. In 1970, the figure stood at 1:1433.

At the same time, severity levels remain low, and some have even dropped in response to the organizational needs of local courts. The cafeteria court and its variants have proven an effective bureaucratic device for coping with volume problems: they are an adaptive organizational response. But the need to make the agency work efficiently has affected the nature of the traffic law and the repertory of sanctions available to the court. The effectiveness of the traffic bureau and its successors depends upon the cooperation of the violators being processed. The court can be effective only to the extent to which it encourages guilty pleas. In order to maintain the guilty-plea rate, fines for traffic code violations have been kept low. If citizens appeared in court rather than mailing in most of their fines, the system would be clogged. If they contested moving violations, it would grind to a halt. Advocates of deterrence who would attempt to deal with traffic cases by escalating penalties are in a practical dilemma, for increased penalties have the effect of increasing trial demands. For example, when the legislature empowered the Illinois secretary of state to revoke or suspend the licenses of drivers convicted of multiple moving violations (a stiff penalty indeed), the number of cases transferred to the trial branch of the traffic court in Chicago rose 10 percent.[51] The minor traffic case thus raises the conflict between deterrence theories of crime control and organizational pressures to maximize the efficiency of the courts as organizations. Given our

ambivalence about the imposition of severe penalties in traffic cases, organizational norms predominate. Before the organizational reforms of the 1920s and 1930s, the municipal court solved these problems by tolerating the nonappearance of large numbers of defendants and dismissing cases wholesale. After the reforms, the outcomes appear more legalistic—most are judged and sentenced—but the systemic impact of the process may be unchanged. Without a radical change in the way in which they are processed, the resource limitations and legal constraints which shape the disposition of minor traffic cases may preclude their deterrence.

We see currently in traffic code enforcement a halting, and at times controversial, attempt to find ways out of the bind we appear to be in. The first, and most limited, has been the introduction of new dispositional alternatives for traffic judges which enable them to escape the narrow and punitive range of sanctions to which they seemed in the past limited. The most important has been the traffic school. A number of states require attendance of a driver improvement program in place of, or in addition to, ordinary penalties for moving violations; in several states the program are directed at participants in accidents as well. There, individual counseling, group therapy sessions, and frightening movies are employed to reeducate and resocialize traffic offenders. Given the absence of good theory about the cases of such infractions, it is no surprise that systematic evaluations of the impact of such programs have not been hopeful.[52]

More radical have been programs designed to remove traffic problems from the courts entirely. For criminal offenses, the State of New York has led the way with the creation of administrative bodies to process traffic cases. Since 1970, moving violations in New York have been processed by hearing officers appointed by the New York Department of Motor Vehicles. They are the "court" in all cases which do not involve jail sentences. In New York City, attorneys appointed by the city's transportation administration hear all cases involving parking, stopping, standing, and jaywalking, and they too are the court, even in contested cases. The program has removed approximately 1,000,000 cases from the dockets of New York City courts yearly, freeing 18 judges for misdemeanor and felony hearings.[53]

This two-fold attack upon the traffic problem—expanding the organizational flexibility of the sanctioning system and expanding the range and severity of available sanctions—may prove to have deterrent effects. The best evidence suggests that court reforms will have such consequences only if the certainty with which violations are detected is increased as well. This is in part a technical problem (Goen, 1965). In principle, traffic law violations should be readily deterrable. The behavior is public and observable by routine police patrols,

disobedience of the law can be objectively described and determined, and traffic offenses are utilitarian and minor. Their violation is not deeply seated in personality flaws or social roles: they are not career crimes, addictive, or particularly profitable.[54] But in the past, organizational processes have conspired to blunt whatever impact existing enforcement patterns may have had. The seemingly endless rise in the rate of detected violations may be one of the hidden costs we pay for our urban court system.

APPENDIX

DATE SOURCES

Variables and Indicators	*Years Available*	*Sources*
*Index of Social Scale**		
Size		
population of Chicago	1840-1970	U.S. Census of Population
Density		
population over area	1840-1970	Area figures cited in B. Pierce, *A History of Chicago* (1940)
Heterogeneity		
number non-white	1840-1970	U.S. Census of Population
number foreign born	1850-1970	
number foreign stock	1890-1970	
Affluence		
number manufacturing establishments	1890-1967	U.S. Census of Manufacturing and Statistical Abstract of the United States
number wage workers	1890-1967	
value added by manufacturing	1899-1967	
Interdependence		
population suburban Cook County	1840-1970	U.S. Census
Size of police department		
total sworn and civilian personnel	1842, 1847, 1857-1970	Annual Reports and A. T. Andreas, *History of Chicago* (1885)
Motor vehicle registration	1912, 1921, 1926, 1933-1970	Annual Reports, Illinois Division of Highways and Chicago Police Department
Accidents	1905-1970	Annual Reports, Chicago Police Department
Laws regulating traffic	1900-1931	Traffic ordinance arrest categories, Annual Reports of the Chicago Police Department
Traffic arrests and citations	1900-1970	Annual Reports, Chicago Police Department
Tort cases filed	1907-1938	Annual Reports, Municipal Court of Chicago

*Nine components equally weighted, added, and averaged each year.

NOTES

1. This brief historical sketch relies upon Karlen (1958); Goodspeed (1896); Pierce (1937-1953); Lepawski (1932); Gilbert (1928).

2. Continuances during the 1920s are discussed in chapters 1, 3, and 6 of the Illinois Association for Criminal Justice (1968, reprint). For a discussion of the functions of continuances see Jacob (1973b).

3. Illinois Association for Criminal Justice (1968: 204).

4. *Chicago Daily News*, January 21, 1925.

5. That is, the regression equation which best describes the data is: y = 43 + (.00026 X CASES).

6. The social costs of the automobile are detailed in Buel (1972: chapter 3).

7. The three-year figure is that given by Cook County Circuit Court officials. A recent study by New York University's Institute for Judicial Administration sets the figure at 58 months for major civil cases and 43 months for minor cases (*Chicago Daily News*, August 26, 1972). The administrative office of the Illinois Courts charged in 1973 that Cook County delays statistics "amount to little more than an educated guess." See the *Chicago Tribune*, June 2, 1973.

8. Motor vehicle registration figures reported have been corrected to reflect the influx of automobiles from the suburban fringe into the central city. Census figures estimating the number of automobiles entering the city each day for employment purposes have been added to official city registration totals.

9. All arrest statistics are taken from the annual reports of the Chicago Police Department.

10. Accident and injury statistics are those reported in the annual reports of the Chicago Police Department. Police reports of fatalities have been supplemented with traffic fatality totals from *Accident Facts*, a yearly publication of the National Safety Council, when official figures are unavailable. The two sources report identical figures for years when both are available.

11. Accident and injury statistics for Chicago and Cook County are available from two independent sources: the Police Department, and the State Division of Highways. The latter records only more serious accidents. Across time, the correlation between accident totals from the two sources is .95, and the correlation for injuries is .88. The Chicago Police Department figures are considerably higher each year, but these independently measured figures co-vary quite closely. This suggests that accident and injury statistics reflect more than the organizational processes involved in their collection, and may serve as useful indicators of the "actual" distribution of these events over time.

12. *Annual Report of the Chicago Police Department* (1949: 17-18).

13. *Annual Report, Illinois Division of Highways* (1950).

14. *Annual Report of the Municipal Court of Chicago* (1921: 133).

15. This is also suggested by comparative statistics on the distribution of traffic fatalities in Illinois. Chicago, which in 1957 registered 30 percent of the state's motor vehicles, and recorded 40 percent of the state's traffic injuries, suffered only 17 percent of the state's traffic fatalities. While a number of factors may have contributed to this dramatic difference, the ready access of the city's citizens to modern medical facilities may have been a major one. See Illinois Traffic Study Commission of the American Bar Foundation (1958).

16. This terminology is used in Ross (1960-61).

17. Chicago Police Department (1966). A discussion of the problems in regulating horse-drawn vehicles in the city of London will be found in Reith (1952).

18. Chicago Police Department (1966).

19. *Annual Report of the Municipal Court of Chicago* (1921: 132).

20. Ross (1960-61: 231).

21. New York State Department of Public Works, Bureau of Highway Planning (1955).

22. This analysis is quite tentative, and should be taken only as simple description of the data. Time series data presents some complex statistical problems (such as autocorrelation of error terms) which have been glossed over in this presentation. Problems of trend, on the other hand, have been greatly alleviated by the per capita transformation of the variables. For a discussion see Quenouille (1952: chapter 11).

23. All dispositional figures were calculated from data presented in the yearly annual reports of the municipal court.

24. *Annual Report of the Municipal Court of Chicago* (1913: 86).

25. These data are from a special study of the operation of the Traffic Bureau conducted by the Street Traffic Committee of the Chicago Association of Commerce. They cover the first 14 months of the court's operation. They are reported in Table 2 of the *Annual Report of the Municipal Court of Chicago* (1928: 122). The figures here exclude three judges who sat in traffic court for only one day.

26. The equation generating this line is: $y = .36 + (.009 \times CASES) - (.00004 \times CASES)^2$. The $R^2 = .41$ and $N = 22$.

27. *Annual Report of the Municipal Court of Chicago* (1924: 12).

28. The equation generating this line is $y = 605 - (.88 \times INPUTS)$. The $R^2 = .88$ and $N = 31$. The data are from various annual reports of the municipal court.

29. *Chicago Tribune*, June 15, 1972.

30. In a study by the Institute for Judicial Administration of New York University, cited in the *Chicago Daily News*, August 26, 1972.

31. P. J. Johnen (1970: 291-295). There is evidence that not all of these tactics are successful. A recent investigation of the impact of pretrial discovery rules in the federal courts discovered that they served to (a) increase the proportion of cases coming to trial, (b) increase the length of trials and trial records, and (c) "unsettle" cases that might otherwise be settled out of court. See W. A. Glaser (1968).

32. *Annual Report of the Municipal Court of Chicago* (1913: 85).

33. Ibid., 100.

34. Ibid., 101.

35. *Annual Report of the Municipal Court of Chicago* (1921: 131-133). A. Wells and J. E. Parlee (1962: 116).

36. The operation of the cafeteria court is described in Traffic Court Committee of the American Bar Association (1959). See also the statewide report cited in note 8, supra.

37. *Chicago Daily News*, March 17, 1926.

38. All fines are calculated from figures released in various annual reports of the municipal court.

39. *Chicago Tribune*, March 18, 1926.

40. *Chicago Tribune*, September 5, 1931.

41. Ibid.

42. Ibid.

43. Calculated from breakdowns occasionally released in the annual reports of the municipal court.

44. *Chicago Tribune*, September 9, 1931.

45. See note 7, supra.

46. Barmack and Payne (1964). This and other evidence is reviewed by R. C. Cramton (1968). See also H. L. Ross, D. T. Campbell, and G. V. Glass (1970); J. Andenaes (1966).

47. The role of the victim is pointed out in J. A. Gardiner (1969), and Cramton (1968: 192).

48. W. Middendorff (1968: 73); D. T. Campbell and H. L. Ross (1968). The latter report that two consequences of Governor Ribicoff's crackdown on speeding in Connecticut during the mid-1950s were: (a) many fewer drivers were arrested for speeding, and (b) the conviction rate for those who were dropped considerably.

49. Ross (1960-61).

50. F. M. Council (1970); R. P. Shumate (1958); R. Michaels (1960). Enforcement studies are reviewed by Cramton (1968: 190-196).

51. Traffic Court Committee of the American Bar Association (1959: 30).

52. Middendorf (1968: 15-16). Studies are reviewed by Cramton (1968: 206-207).

53. Department of Motor Vehicles of the State of New York (1970).

54. These distinctions are elaborated by W. Chambliss (1969: 368-372).

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