PART ONE: TIME-SERIES ANALYSIS (1900-1970)

EFFECTS OF THE ECONOMY ON CRIMINAL BEHAVIOUR
AND THE ADMINISTRATION OF CRIMINAL JUSTICE
IN THE UNITED STATES, CANADA, ENGLAND AND WALES
AND SCOTLAND

by M. HARVEY BRENNER

I. THE EFFECTS OF CHANGES IN THE ECONOMY ON THE INCIDENCE OF CRIMINAL BEHAVIOUR

THEORETICAL APPROACHES

1. We have identified seven different theoretical viewpoints on the causation of crime that have a direct bearing on the question of the influence of changes in the economy on criminal behaviour. These theories concern (1) economic loss, (2) comparative decline in socio-economic status as a result of greater gain in such status by the majority of the population, (3) the development of delinquent careers as a result of reduced opportunity in legitimate sectors of the economy, (4) frustration-aggression theory, (5) development of sub-cultural deviance in both values and normative patterns as a reaction or " reaction-formation " to lack of social-economic integration, (6) differential association theory, and (7) urbanization and economic growth, potentially leading to poorer community integration.

2. The connection between economic change and criminal behaviour, as indicated by these theories, is as follows:

a) *Economic loss*

This is essentially the situation of decline in national income and employment levels. The model of " economic rationality " would argue that illegal activities represent a series of industries which come into play when other societal industries decline. This series of illegal industries then is thought to expand and contract in inverse relationship to the expansion and contraction of the general economy.

b) *Comparative decline in socio-economic status as a result of greater gain in such status by the majority of the population*

The argument here is developed from Merton's theory of anomie. This theory specifies that deviance, including " innovative " (in large

measure illegal) behaviour emerges as a result of disjuncture between social values, or goals, and the social-structural means of attaining them.

During periods of economic decline, many individuals have less opportunity to meet social goals; they thus become potential " innovators " under these conditions. At the same time, the rate of innovation should increase as a result of large-scale and comparatively rapid economic growth. This victimizes a substantial proportion of the population unable to participate in that growth, due to lack of the necessary education or acquisition of employment skills appropriate to integration into the economic system, at least at a moderate wage level. Both of these theoretical derivatives from Merton's theory apply to the economic change situation, but in somewhat contradictory ways. The first derivative would specify increases in crime during economic downturns, while the second would specify increases during intermediate-range periods of general economic growth. However, in this theoretical conception, it is the second derivative that is held to be the more significant for crime because the most numerous criminal subpopulation is theoretically imagined to be of low socio-economic origin (due to less effective socialization efforts).

c) *The development of delinquent careers as a result of reduced opportunity in legitimate sectors of the economy*

The classic piece of writing on this subject is Cloward and Ohlin's *Delinquency and Opportunity*, which specifies that delinquency occurs as a result of lack of economic opportunity within legitimate industry, as well as the lack thereof among organized illegitimate industries. The connection with economic conditions is straightforward. During periods of economic contraction, jobs and legitimate income will be less plentiful which will result in the tendency toward criminal behaviour. The well-organized criminal activities (typically prostitution, gambling, drug traffic, and black market activity in general) are not open to the potential newcomer — both because entry into them is highly controlled (they have been established prior to the onset of the economic contraction), and because of increased competition for entry into that illegal labour market.

d) *Frustration-aggression theory*

This traditional hypothesis relates to essentially non-utilitarian violence (though there is little reason why it could not be extended

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aggression. The basic idea is that frustration represents a blockage,
or thwarting, of aspirations and expectations in general. Such
frustration then results in a psycho-physiological response of the
aggressive (or " fight ") variety. This aggressive response is thought
to be common to many animal species, yet is influenced by genetic
and socialization factors particularly as to the direction and subject of
the aggressive attack. The theoretical structure of this hypothesis
has not been completely developed (especially the psycho-chemical
mechanism), and alternative psycho-physiological theories of aggression
have been proposed (e.g., based on loss or attack); yet this
theory continues to command substantial scholarly respect among the
disciplines of psychology, psychiatry and ethnology. This hypothesis
can be applied to either of the two derivatives of Merton's theory
of anomie discussed above, as in Henry and Short, *Suicide and
Homicide.*

e) *Development of subcultural deviance in both values and normative
patterns as a reaction or " reaction-formation " to lack of social-
economic integration*

This theory was developed by Albert Cohen as an expansion
of Merton's theory of anomie where the reference is to " rebellion ",
or an attempt to overturn social values which cannot be fulfilled in
the current social-structural setting. Cohen offers the psychoanalytic
view that, in order to safeguard the mental integrity of an individual
or group, a substitute and often contradictory conception of reality
is developed. In the case of the juvenile subculture in particular,
there is thus a substitution of values with a rejection of adult, middle-
class emphases on legitimate means of achievement for an advancement
of youthful achievement and masculinity via criminal gain at high risk.
Once the delinquent subcultural value system comes to be established,
norms for the regulation of social life thereafter tend to denigrate
the economic achievement values of the larger culture.

This theoretical perspective, while specific to delinquents of a
juvenile subculture, is applicable to the establishment or maintenance

of a great variety of illegal subcultures, especially those with a set of ethnic and lower-class subcultural distinctions.

The influence of economic change on the development of such deviant subcultures could occur either as the result of (1) comparative economic loss among specific subgroups in relation to the general population, or (2) comparative lack of economic gain in comparison to that in the general population.

f) Differential association theory

This is a theoretical position initially advanced by Sutherland in order to explain the method by which criminal subcultural norms come to be diffused, especially among youth. The argument is almost atheoretical in the sense that it is descriptive of the mechanism by which individuals become familiar with criminal subcultures. This must certainly occur through extraordinary contact with those sub-cultures.

This type of theoretical orientation becomes particularly useful on consideration of the effects of unemployment. Where an increased number of individuals lose employment and income, they will tend to join the ranks of those who are more chronically unemployed or of low income, for whom the tendency toward illegal activity is already established. The linkage of the association of these newcomers with an already developed illegal subculture will tend to bring about an increased diffusion of skills, contacts, motivations, and technologies linked to criminal activity.

g) Urbanization and economic growth

The area of urbanization and economic development has probably been the largest single source of theoretical development in the social sciences. From the works of Toennies, Durkheim, Weber, Simmel, Worth and others, there has developed a long-held assumption that the urbanization processes inherently contain elements of social disintegration and pathology. The basic notion appears to be that the bonds which traditionally united elements of the society, namely those relating to family, kin, and ethnic group, gradually lose their importance as society becomes industrialized and the power base shifts from kinship sources to those connected with the national political economy.

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In the course of this political transformation, the fundamental indicators of social position change from those ascribed, on the basis of kin relations to the social structure, to those based on economic achievement in the industrial sector. Thus, increasingly, economic achievement alone comes to represent the definition of social value in the society. An additional result is that those sources of community integration, which were based on kinship and ethnic ties, come to be replaced by those based on economic inter-relationships. Therefore, with the long-term development of economic growth, there is a gradual increase in the degree to which social integration is dependent on the economic function of society.

The obvious implication of this conception is that with continued economic growth the entire fabric of social integration becomes more vulnerable to even minor disturbances in the national economy. Thus, social pathology in general and criminal behaviour in particular would increasingly come to be explained by instrumentalities of the political economy.

Another important component of urbanization and economic development, which is also instrumental in diminishing the influence of ethnic ties, is that of population heterogeneity. Under conditions of urban economic development, the industrial locations draw ethnically mixed populations from many areas into categories of employment defined only by industry and occupation. Thus, in the same economic region, there will be found groups of very different backgrounds engaged in similar occupations and utilizing the same goods and service made available through the urban network. With this heterogeneity of populations, there occurs subcultural pluralism with a multitude of often conflicting value and normative systems. The subcultural pluralism logically leads to moral relativism on the part of increasingly large proportions of the urban population. The resulting vagueness in moral values concerning appropriate conduct and goals, theoretically would, in turn, lead to increasing acceptance and practice of behaviour previously considered unequivocally immoral.

3. Issue of " rational " versus " irrational " models of criminal behaviour as related to economic changes.

The principal sources of hypotheses on which the present work is based derived from the medical and psychological disciplines (psychobiological) on the one hand, and the economic, sociological and political

(socio-cultural) on the other. The psycho-biological formulations centre around the impact of psychological stress on aggression, especially violence. In this mechanism, stresses which overwhelm the individual tend to bring about behaviour which is eruptive and irrational in the sense that it is not under the control of the individual.

The socio-cultural view, by contrast, is that economic and political conditions change in such a way as to make it more probable that the individual will resort to illegal methods in order to gain income or social position. These processes are at least assumed to be " rational ", or under individual control. The conception of illegal injury, whether it involves violence or deprivation of property, is that it represents a form of aggression. The mode of aggression used may itself be comparatively " irrational " or " rational " but it is rarely either purely one or the other. Probably both psycho-physiological and instrumental gain is influencing the criminal behavioural process. Moreover, it is not easy (nor perhaps even correct) to discriminate between psycho-physiological and material gain.

The position taken in this research is that the criminal behaviour attributable to economic change contains elements of both psychological stress and the means of coping with it through either violence or comparatively utilitarian crime. In this sense, both the psycho-physiological and socio-cultural models are operative. In this conception a property crime could well be considered an act of violence, or injury against another person, though not involving immediate physical harm. The loss in property, however, could ultimately result in substantial psychological harm.

Nevertheless, different forms of criminal responses to economic stress could be categorized by the degree to which conscious or unconscious factors dominate the response pattern. In this case, the degree of " rationality " does not logically depend on the extent of violence in the criminal act. By this we do not intend to argue that such stress-responses represent forms of mental illness, but rather that they are coping mechanisms to overwhelming stress situations of which the criminal subject may be more or less aware. Yet it is probable that a " solely " violent act without additional criminal implications, such as assault, can be construed largely within the " more nearly irrational category ". Also, it is probable that a solely utilitarian act of larceny may be largely " rational " under this definition.

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OPERATIONAL MEASURES OF THEORETICAL CONSTRUCTS

In translating the theoretical views listed above into operational measures which reflect on the state of the economy, we are considering six types of measurement. These are:

1. General cycles of economic upswing and recession;

2. Economic instability, or departures from smooth economic growth in general;

3. Change in the structure of economic inequality;

4. The extent to which specific (socio-economic or demographic) population subgroups tend to gain or lose employment and income during economic upturns and recessions, again as compared with the general population;

5. Secular changes in income distribution among population subgroups;

6. Secular changes in income levels according to population subgroups.

The basic mechanisms alluded to by these sets of measures concern:

a) Changes in the level of economic well-being;

b) Changes in comparative socio-economic position (or status) on the part of any specific subpopulation to the population as a whole (overall median) or to any other specific subpopulation (reference group, as in Merton);

c) The general extent of economic inequality in a population, where the measure would approximate the standard deviation (among subgroups) of overall population income;

d) The exact profile (pyramidal structure) of income distribution. This issue concerns the relative proportions of income distributed among the various subpopulations which may be inherently pathological or salutary;

e) Economic instability, or the degree to which levels of income and employment, in the general population or in any sub-

population, is subject to fluctuation. From a psychological standpoint, this is a problem of coping with, or adjusting to, situations of change per se. These economic instabilities are measured by the absolute difference between smooth economic trends and the raw economic data that they are taken to represent;

f) Urbanization, as measured by population size, density and heterogeneity;

g) Increasing dominance of the economy as a mode of societal integration, as measured by the extent to which national or international economic phenomena are causes of the socio-economic situation of subpopulations;

MEASUREMENT OF THE EFFECTS OF ECONOMIC CHANGE ON CRIME AND CRIMINAL JUSTICE SYSTEM (CJS) ACTIVITY

1. Measurement of adverse effects of economic change:

a) Fluctuations in the rate of employment and unemployment (in combination with measures related to personal income, we can estimate the impact of " underemployment " or " misemployment ");

b) Effects of inflation: annual percentage changes in the Consumer Price Index;

c) Intermediate range (1-5 years to long-term) patterns of national economic growth. This measure may be inversely related to the crime rate where:

> *i*) income distribution is not widened among specific subpopulations;
>
> *ii*) there are no substantial concomitant economic instabilities.

d) Differential trends in income and employment among the various subgroups;

e) Differences between income and employment levels of selected minority groups, on the one hand, and the median of per capita income unemployment for the population aggregate on the other;

f) Combinations of several of the above stated measures in order to derive a comprehensive econometric model of adverse effects of economic change;

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2. Measures of the incidence of criminal behaviour and effects on the CJS:

a) The problem: that at any single point in time criminal justice statistics do not accurately reflect the incidence or prevalence of crime in society, and that there is a substantial " dark figure " of unmeasured crime; and furthermore that the size of this " dark figure " varies greatly depending on which criminal justice indicator is used. In sum, the CJS statistics represent the " tip of the iceberg " of existing criminal activity, even if we consider crimes known to the police.   This problem has traditionally been so overwhelmingly difficult that in comparing nations, provinces, cities, or even sub-units of cities, the issues of comparable reporting have prevented accurate assessment of relative crime rates.

b) In the present study, this problem of statistical validity and reliability is handled in several different ways:

1) While it is true that cross-population comparisons, at a single point in time, are extremely treacherous, there is considerably less danger in assessing trends over time for a specific locality since the same reporting system (with the same biases of reporting) can usually be assumed to prevail during the period of the trend analysis under consideration.   Thus, various nations or other regional units may be compared with respect to variations in their trend levels if one does not assume the accuracy of the absolute levels (or rates) represented in the trends, but rather focusses simply on proportionate increases and decreases over time.   In addition, multivariate time-series analytic methods have been established to separate the effects of different influences on the criminal statistical trends, and even the problem of trend changes in reporting can to some degree be estimated or at least statistically controlled.

2) A major safeguard in the assurance of both the validity and reliability of time trends in criminal statistics as they reflect *fluctuations* in criminal behaviour, is the use of multiple statistical indicators of crime drawn from CJS sources.   These sources include police, criminal court, and prison.   Thus, the range of data include the following indicators: crimes known to the police, arrests, crimes brought to trial, conviction and other dispositions, and imprisonment. All of these data are cross-classified by major crime.   A major effort,

then, is to observe the degree to which there is correspondence among the various administrative categories of criminal justice statistics in their specific relationships to economic indicators. To the extent that there is good correspondence, we can be relatively certain that the relationships are not based on any one type of measure, but rather that all available sources of criminal justice data point to the same conclusions. This enhances the likelihood that specific problems in the validity or reliability of any single category of criminal justice data will be compensated for by the use of other indicators which do not present the identical problems.

For example, one of the most crucial issues in the validity of criminal justice statistics trends in representing trends in crime is that they may be influenced by long-term changes in the propensity of the general public to report crime. In particular, it has been suggested that over time the public might have shown a lowered tolerance of (what had earlier been thought of as) comparatively minor crimes, and thus might be more willing to report such crimes to the police. While such a suggestion, if factually accurate, would influence the rate of incidence of certain (comparatively minor) crimes known to the police, it would probably not influence the rate of imprisonment which we would assume to deal almost entirely with relatively serious crimes.

In any case, we would at least assume that as one moved from crimes known to the police to arrest, to prosecution, to conviction, and finally to imprisonment, if the relationships to economic indicators became *successively* weaker, then the reporting issue may well be the source of the problem. If, on the other hand, there were little differences among these criminal statistical indicators in their relation to the economy, then we would assume comparatively minor impact due to reporting. Finally, if we found that the criminal statistical indicators occurring later in time — the very latest representing imprisonment — showed the strongest relations to the economy, then we would assume that the reporting factor probably does not influence the later indicators (especially imprisonment), yet they may influence the earlier indicators (especially crimes known to the police) to some extent.

3) A third safeguard in assuring the validity and reliability of the estimated relationships between criminal statistical *trends* and

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of violent crimes, and the group of property crimes, we can infer
generalizability of the relationships. We therefore counteract the
possibility that the relationships are a result of any one type of crime
or, as is often the case in this type of research, that a gross figure
for crime is used which may indicate the predominant influence of
one offence or category of offences.

4) A fourth method of assuring validity and reliability in
the relationships found is that they will be matched for consistency
across four major geographical and political units, namely the United
States, Canada, England and Wales, and Scotland. This comparison
is particularly pertinent because the Anglo-American legal tradition is
common to all, yet the definitions of crime, public tolerance of
crime, reporting systems, and criminal justice administrative procedures
may vary considerably. We thus control, in part, for the effects
of these differences through a determination of the consistency of
the results (while exposing the most important differences in these
systems).

5) One of the most important sources of obtaining validity
and reliability of research results using criminal statistical data is to
offer comparisons which are derived from outside of the CJS, and
are otherwise not subject to the types of criticism that have been
directed toward CJS statistics. The data we use in this respect
derive from vital statistics of each of our four areas and pertain
to homicide. Homicide is a diagnosis, within the specifications of
the ICDA (WHO), by which the attending physician or officially
designated coroner ascertains that mortality has occurred as a result
of violence done to the deceased by another person. These data
have been subject to the least amount of negative scholarly critique
and, at worst, probably under-represent the true incidence of homicide
by a small fraction.

In addition, as in the case of the other CJS-derived statistics,
the four major political regions are compared. Also, additional
multiple checks on consistency of results for homicide are obtained
since the data are examined for each of several (i.e., ten) different

age-groups, cross-classified by sex and, for the United States, further cross-classified by race.

Finally, the homicide data offer a comparison (for consistency in terms of validity and reliability) with CJS statistics on murder in the sense that the homicide data pertain to victims who died, while the CJS data pertain largely to alleged criminals (apart from crimes known to police).

6) Another means of checking the reliability and validity of findings is to make comparisons among techniques used to establish the findings in the first place. There are four sources of comparison among techniques: differential trend examination, bivariate versus multivariate analyses, varying methods of establishing significant associations, and observations of the relationships over different spans of time. Altogether, to the extent that consistent findings are obtained among the different procedures, we increase confidence in the findings obtained.

The issue of differential trend analysis involves, first, the difference between removing, versus not removing, secular trends (since there are important schools of thought which suggest one or the other procedure). Also, there is the question of examining different levels (or intervals) of temporal change (1-11 or more year changes) in order to observe at which trend and interval levels the relationships can be found. Can we predict even on an annual basis, and can we predict for very large proportionate changes as well as medium-size changes ? Also, can we predict to moderate-size changes rather than only to dramatic changes ?

The second question concerns the distinction between observing the impact of different economic (and other social) indicators on crime versus observing their combined multivariate effect, where internal statistical controls have been employed. Does the explanation of the interactive multivariate model show consistency with the relationships indicated by simple correlation techniques ?

Thirdly, do the two major techniques of over-time analysis, namely regression and spectral, lead to similar conclusions ?

Fourthly, do analyses performed over different spans of time, namely 1920-1940 versus post World War II, lead to similar conclusions ?

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7) The next source of ascertaining validity and reliability of the findings pertains to explanation and interpretation of the findings themselves. Ideally, it is hoped that the findings are consistent with other established research findings in the area, and with theoretical positions that are most sophisticated given the state of the discipline at that time. In line with these considerations, in following standard scientific procedure one constructs hypotheses derived from previously constructed empirical generalizations and theory and either supports or falsifies them as a result of the research effort.

8) Again, some of the answers to questions about the reliability and validity of the trend data in CJS statistics are ascertained in connection with the findings of consistency of relationships vis-à-vis measures that are derived independently from the CJS statistics (the exogenous economic and social indicators). Given consistency of findings among all of the many types of cross-classifications of the CJS data *in relation to the economic and other indicators*, we can assume in large measure, general reliability at least of the trend components of the CJS data.

9) Finally, the existence of the consistent relationships themselves, despite the significant reporting problems inherent in the CJS data, would argue that the relationships found are *underestimates* of the true relationships, and thus the findings could be assumed to be stronger were the data to have carried greater validity and reliability. Yet the findings themselves are very strong in terms of statistical significance and variance explained. It is therefore not difficult to accept the conclusion that these are underestimates, and are thus the most conservative estimates, of the true relationships.

RESEARCH METHODS

1. Data

The data gathered range over the twentieth century and as far into the present as feasible. They generally begin with the year 1900. These data include mortality, crimes known to the police, arrests, trials, and imprisonments for all major crimes including: (*a*) murder, (*b*) manslaughter, (*c*) wounding, (*d*) assault, (*e*) rape and other sexual offences, (*f*) offences related to possession and abuse of dangerous drugs, (*g*) robbery, (*h*) embezzlement, (*i*) forgery, (*j*) fraud, (*k*) burglary

(housebreaking, shopbreaking and entering), and (*l*) larceny and other theft. Where possible, the data are cross-classified by age, sex, and race. In addition, data on prison release by crime are obtained in order to analyse the impact of economic change on the discharge and parole processes.

The national-level economic indicators include employment, unemployment, and per capita personal income and inflation. These data have proven most representative of fluctuations in national economic-industrial indicators, and on the individual level bear a close relationship to per capita economic loss and gain.

2. Analysis

a) *Data transformations*

Three forms of the economic and criminal justice data are used in these analyses. We generally begin with the data transformed so as to eliminate the long-term trends. This process is accomplished after the data have been converted to rates, having first been divided by the appropriate population denominator. The long-term trends are estimated by fitting the best of five models of long-term changes (one linear type, two logarithmic types, a positive and negative reciprocal model, and a logistic type). The most appropriately fitting model is determined by the magnitude of the simple correlation coefficient representing the relationship between each hypothetical trend and the raw economic and criminal justice data. Once the proper trends have been fitted, they are algebrically subtracted from the respective economic and criminal justice series and the cyclic fluctuations remain. This data transformation is used only to investigate the cyclic effect of fluctuations in employment, income and inflation.

The second mode of " transformation " involves no alteration at all in the raw economic and criminal statistics. The use of the criminal statistics in their raw form enables determination of the total amount of variation in the criminal statistical trends that are due to trends in the economic indicators.

Finally, the third type of data transformation involves conversion of the economic and criminal statistics, arrayed over time, into percentage changes. Typically, four levels of percentage change were utilized: annual, 3-year, 5-year, and 10-year changes. These data

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b) *Measure of association*

Standard methods of time-series are used, including:

    1) Simple correlation (controlling for autocorrelated residuals);

    2) Distributed lag analysis, through multiple regression, in order to determine the proportion of variance in the criminal justice indicators which are related to economic changes at lags of specific years (behind economic changes, from one to three years);

    3) Fourier analysis, to determine whether the relationships are active over short (1-3 years), middle-range (3-5 years), and long periods (7-11 years) of recession or economic decline.

These relationships are being separately examined for the following groupings of years in order to determine whether the correlations obtained will show equal strength and predictability over time:

    (*a*)   1900-1910

    (*b*)   1900-1920

    (*c*)   1922-1941

    (*d*)   1936-1970

    (*e*)   1941-1970

    (*f*)   1948-1970

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Graphic analysis of the relationships will also be an important component of the final presentation of data *. Such analyses enable the viewer to observe the magnitude of change in the economic and criminal justice indicators in relation to each other. They have traditionally had greater face validity among persons not fully acquainted with the more complicated mathematical aspects of time-series analysis.

SUMMARY OF FINDINGS

1. Relationships between cyclic fluctuations in employment (and personal income) and criminal statistics

a) *Distinction between pre- and post-World War II relationships*

In the four major political units (United States, Canada, England and Wales, and Scotland), the overall relationships between instabilities in the economy and the major sources of criminal statistics show remarkable correspondence. In general, the rate of unemployment (or declines in employment and in personal income) show significant and strong relationships to increases in trends of criminal statistical data, for all major categories of crime and sources of criminal statistics.

In each country, however, it is also observed that the apparent significance of these adverse short-term economic fluctuations show a substantially heightened influence on the criminal statistics after the Second World War or, more generally, with the passage of time. This is indicated especially by the simple (or zero-order) inverse relationships between these economic fluctuations and the criminal statistics within one year of a decline in employment and income. In other words, without considering lags of criminal statistical data to economic fluctuations, the later decades of the twentieth century show substantially higher inverse correlation coefficients. The difference, in fact, between the strength of these correlations since World War II, as compared with the previous period, might lead one at first blush to imagine that the significant relations exist only since appproximately 1946.

Since a conclusion would be extremely misleading, however, a more sophisticated analysis, which takes into consideration the dispersion

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of the lagged effects of economic stress over a period which includes 0-3 years (distributed-lag analysis), shows that the *overall* impact of the effects of these sources of economic stress on criminal statistics has probably not changed significantly from the pre- to post-World War periods.   Rather, what appears to have happened is that particularly for Canada, England and Wales, and Scotland, the lagged effects are quite pronounced during the pre-war period while minimal since then.   There has been, then, a speeding up of the reaction time to short-term economic adversity coincident with accelerated rates of inflation and economic growth during the last thirty years.

b)   *Distinction between violent crimes against property and property crimes without violence*

The difference in reaction time (or distributed-lag effects) between the pre- and post-war eras is most pronounced when one considers the extent of physical violence involved in the criminal behaviour.   Since the Second World War the relationships appear to be quite similar regardless of the extent of violence associated with crime.   Perhaps the only remaining point of discrimination is that with increasing violence associated with crime there is somewhat more of a tendency toward a distributed-lag relationship with a lower inverse correlation for any single year.

Prior to the Second World War, however, there tends to be a substantially weaker simple correlation relationship for crimes of violence only, as compared with those involving violence with economic gain, or property crime alone.   It therefore appears that the single most important source of the acceleration of reaction time to economic adversity has occurred with crimes of violence, even those involving violence with property crime.

c)   *Distinction in these relationships among the four national regions*

There is a difference between the change in the relationship between adverse economic fluctuations and criminal statistics over time when one compares the United States particularly with England and Wales, and Scotland.   It is especially for England and Wales, and for Scotland that the acceleration of the inverse relationship with economic fluctuations is observed.   By contrast, the United States, while indeed showing some heightened sensitivity during the later years, also showed very substantial and rapid reactions of

criminal statistics particularly during the period 1921-1940, which included the Great Depression. In the United States incarceration in state and federal institutions, for example, for all major crimes show relationships so strong that virtually no other factors other than adverse national economic changes explain the trends. Canada appears to lie somewhere between the extraordinary sensitivity of pre-World War II United States and the more delayed and dispersed reactions of the English and Scottish criminal statistics. In the Canadian case, it is found that the majority of separate crime categories do show increased statistical sensitivity since the Second World War, yet there is a large minority of important categories of crime that do not show such an increased sensitivity.

2. The relationship between economic growth, as measured by changes in Gross National Product, and criminal statistics.

The long-term effects of economic growth during the twentieth century on criminal statistics generally show strongly positive relationships. This finding appears to coincide with the general effects of urbanization, but, perhaps more importantly, with the effects of structural (or technological) unemployment, underemployment (or misemployment) and *comparative* decline in income. This latter problem of technologically-based comparative decline in socio-economic status is more generally referred to as the problem of inequality in income distribution and job allocation. It appears to be engendered by two types of economic trends. The first of these pertains to economic swings of comparatively lengthy and deep variation, in which a substantial aggregate of the population is experiencing change in employment and income. Under these conditions of intermediate-range economic changes (a standard component of the economic growth process), that element of the population which ordinarily shows the highest rates of unemployment and the lowest income experiences only a minor decline in absolute income and employment levels. That lowest socio-economic group, however, simultaneously experiences a *comparative substantial increase* in socio-economic status in relation to the considerably larger declines in employment and income levels experienced by other population groups, (a situation which pushes the other groups into an economic situation which is similar to that of the more chronically unemployed and impoverished).

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By contrast, in the case of intermediate-range economic upswings or long-term economic growth, while these lowest socio-economic groups do show increases in employment and income levels, those increases do not begin to compare with those for the general population. In other words, there is substantial *comparative* decline in socio-economic status among the lowest income and occupational skill groups during these periods of substantial economic acceleration or long-term economic growth.

In industrial societies, especially since the Second World War, the premium qualifications for middle to high income employment have been based on education and technologically sophisticated skills. The lack of acquisition of such skills by the lowest socio-economic groups, frequently in conjunction with the movement of such groups from rural to urban areas, has helped to create great disparities in income and subcultural living styles.

In all political regions examined, therefore, the secular effects of economic growth have served to increase the trends in criminal statistics. These pathological effects of rapid economic development have been far more pronounced since the Second World War, but were in evidence to some degree even prior to 1941. These trends, prior to 1941, were probably most important for Canada, less important for England and Wales, and Scotland, and least in evidence for the United States.

The pathological effects of economic growth are most apparent for crimes of violence unrelated to economic gain, moderately related to violent property crimes and least strongly related to crimes related to property alone. In many instances, in the four major political regions, certain exclusively property crimes do not show trend increases related to economic growth (e.g. occasionally burglary and grand larceny).

a) *Economic growth, trends in income inequality, and crime rates*

A number of different explanations can be proposed as to the causal factors behind the positive correlation between long-term trends in economic growth and crime rates, especially since the Second World War. The issue of changes in income inequality (or relative income change) are among the more prominently cited sources of feelings of deprivation. The finding that relative income deprivation explains the positive relationship between crime and long-term economic

growth, due to increasing economic inequality among specific population subgroups would be in line with the general thesis that it is the *sense* of economic deprivation which leads to crime. This finding would be coincident with those of this study which indicate that with *downturns* in the economic cycle, and with inflation, there are substantial increases in rates of criminal behaviour. Furthermore, it is illogical to make the direct interpretation that it is precisely the increase in income which is the antecedent of crime rate increases for the long-term trend, since exactly the opposite is indicated for small-to-moderate economic fluctuations of the " cyclical " variety.

In this study we have experimented with one major variable by which we hoped to operationalize an important component of the potential impact of changes in income inequality. This variable is the degree of income change of the population at different age-groups in relation to the general growth of population income over time since 1948. The reason that age was specified relates specifically to the variable it was intended to explain, namely homicide. It had been found previously in this study that the size of the population under age 30 was an important factor in the homicide rate since World War II. The further question was raised as to whether the youthful population was put at risk for homicide especially under conditions where their relative income had decreased in relation to that of a population as a whole.

The experiment indicated that since World War II there has indeed developed a very substantial relationship between the income gap of persons between ages 14 and 25 who are not living in families and the rate of homicide. This relationship appears to be so significant that it diminished the statistical importance of unemployment changes as well as the long-term trend in economic growth. Most important, however, is that focussing on age provides only a single indication of the possible impact of changes in income inequality over time on criminal behaviour. A similar type of quantitative operationalization of income inequality through time should be performed at least for specific income groupings (e.g., the lowest tenth of the population in income distribution), occupational, industrial, and ethnic groups. Such operationalizations of multiple indicators of income inequality should extend greatly the potential for explaining the effects of long-term economic growth on the sense of deprivation felt by specific subpopulations.

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b) *General explanation of positive relationship between economic growth and crime rates*

Long-term economic growth appears to produce pathological effects which may involve (a) increased social inequality, or *relative* inequality, (b) urbanization, with its problems of decreased significant interpersonal relationships as related to population size, crowding, and reduced family structure. There may be a minor positive impact of general economic growth, in terms of urbanization, on pathology due to the " civilizing " effects of urban life, and a probable decrease in tolerance for personal violence. The following is an outline of some of the more important factors which may impinge on the crime rate:

— Changes in relative income distribution: or the issue of inequality or relative inequality.

— True differentials in *relative income* change coincident with economic growth (the problem of relative social mobility), according to income or unemployment level by;

- Occupation, industry

- Income group

- Age

- Educational level (i.e., differentials in social mobility as measured by education level alone).

— Increased perception of relative deprivation by comparatively low-income groups due to the (apparent) increasing dependence of economic growth on heightened consumer demand. This heightened consumer demand is, in turn, brought about by the communications industry in general, and advertising in particular. The following variables may be used to measure the growth and potency of these industries:

- Expenditures, or extent, of GNP related to communications in general

- Expenditures for advertising (also manpower involved in advertising)

- Expenditures and manpower in television

- Growth of market research and related industries.

— Increasing minority status of lowest income groups, according to:

- Income rank
- Occupation
- Ethnicity.

— Greater *sensitivity* to loss due to the national median level of greatly increased economic affluence:

- The higher the income level over time, the greater is the absolute income loss due to unemployment (or underemployment).
- The higher the national median level of income, the greater the relative personal loss due to unemployment, underemployment, or inflation. The isolating effects of economic loss during periods of economic affluence, probably imply, in addition, that short-term and sharper economic downturns have a harsher proportional effect than larger sources of economic downturn in which a greater proportion of the population is involved.

— The problem of urbanization

— Physical dimensions of urbanization

- Size and heterogeneity
  - Comparative insignificance of the individual in terms of personal status.
  - A larger number, but less individually significant and close, personal relationships — leading to a decrease in the social control exerted by individuals upon one another;
  - Decreased community integration leading to decreased effectiveness of police and decreased community relations engendering lowered inhibition to injure one's neighbours (1) Less accurate perception of who actually " belongs " or resides in the community; (2) The issue is raised as to who will become involved in helping others; (3) Decreased relationships with local police; (4) Lowered inhibition to harm others due to lessened protection normally afforded by close interpersonal relations.

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- Population density: the issue of crowding and stress levels;
  - The issue of privacy
  - The relative importance of the individual person and his influence on his life situation
  - Competition for resources, or pressure on the distribution of resources.

- Environment
  - Noise levels
  - Pollution and odour intensity.

- Decline in family structure (and structure of other primary groups)
  - Indicators of family structure (1) Family size; (2) Divorce rate; (3) Separation rate; (4) Illegitimate birth rate; (5) Number of persons residing together; (6) Marital status including singles and widowed, by age; (7) Growth of school education
  - Causal indicators (1) Growth of the female labour force; (2) Migration patterns, international, rural-urban, and inter-city; (3) Social mobility.

3. The relationship between inflation, as measured by annual percentage changes in the Consumer Price Index (CPI), and criminal statistics.

There is little statistical doubt that the annual rate of inflation bears a significant positive relationship to the criminal justice statistical indicators. These relationships appear to behave very much like those observed for economic growth as measured by the Gross National Product (which has been deflated). Ordinarily, in fact, the rate of inflation, measured by CPI, and the GNP would be very highly correlated (at a level of correlation greater than 95). Since we wished to sharply distinguish the effects of general economic growth from those relating to inflation per se, annual percentage changes in the CPI were used to represent inflation, while the GNP (deflated) did not undergo transformation. Nevertheless, the greatly attenuated measure of inflation which (according to correlation coefficient

measures) bears little relationship to GNP, does show relations to the criminal statistics which are similar to those found for GNP.

In general, for all four major political regions there is a positive relationship of inflation to the criminal statistics during the full period covered by the twentieth century data. These relationships do not become very important, however, until after the Second World War for most of these regions and for the majority of crimes. As in the case of economic growth, they are most important for the violent crimes without reference to economic gain, least important for the purely property-labelled crimes, and moderately important for those crimes in which violence is associated with economic gain. For the United States, and England and Wales, the relationships between inflation and the criminal statistics are not important until the late 1940's and for the United States, in particular, they seem to be absent until that time.

4. Interaction among the three major national economic indicators (unemployment, GNP, and CPI), and criminal statistics.

Summarizing the combined effects of the three national economic indicators on the criminal statistics, it is found that when used together in the same predictive equation, they explain considerably more variation in the criminal statistics than any one does alone. The three economic indicators seem to have both independent effects and interactive effects. Each one of the three by itself exerts a measurable and statistically significant impact on the criminal data. The combined effect of these three indicators is such that for a great many categories of crime more than 90 per cent of the variation in trends in criminal statistics can be accounted for. This is often true for the entire period from the early 1900's through the late 1960's, but is especially noteworthy since the Second World War.

For the most part, cyclic fluctuations in employment and income appear to be the dominant factors affecting the crime rates prior to the Second World War; but even where they are dominant they may not explain more than 40-60 per cent of the variance in the majority of crime categories. Since the Second World War, however, the effects of economic growth and inflation have been especially pronounced so that in combination with the cyclic economic instabilities, the complete set of three economic indicators frequently accounts for over 90 per cent of the variances in the criminal statistics.

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The cyclic economic fluctuations, particularly relating to employment patterns, have been traditionally the most important sources of influence on the crime rate. They continue to retain their significance during the last three decades, but become equal in importance to the economic disequilibria and inequalities subsumed in the economic growth indicator and including the features of long-term structural unemployment, underemployment, and chronically low and unstable income. Of the three economic indicators, inflation has exerted the least important influence, although that influence has been statistically significant. It has been especially significant in combination with declining, or comparatively low levels of employment and income, since it further acts to reduce real income levels. Inflation is also a variable which during the last few years, has shown very great potential for economic disruption at a level at least potentially equal to that of unemployment or economic inequality.

5. Combined effects of economic and non-economic factors on estimates of crime.

Apart from those factors which are inherently related to absolute or relative change in socio-economic position, it is also necessary to consider factors which influence the crime rate in conjunction with national economic changes. These additional factors could influence the crime rate either by directly interacting with the economic change factors or having an additional independent effect which either moderates or exacerbates the effects of economic change. Two factors which interact directly with the effects of economic change refer to the demography and community structure of a nation. Two major examples of such factors are 1) the expansion and contraction of the size of the comparatively youthful population involved in serious criminal behaviour, and especially violent behaviour, and 2) the extent of urbanization. The size of the youthful population at risk for crime, i.e., 20-30, depends on fluctuations in the birth rate — which are in turn generally positively related to long-term economic changes. Similarly, the extent of urbanization, as measured by the number of persons living in cities greater than village size (i.e., more than 10,000 persons), is a function of long-term economic development, which has been especially pronounced since the second World War even in industrialized countries.

A set of factors which would theoretically have an effect either moderating or making more acute the effects of economic change would be the efficiency and effectiveness of the CJS. While the operations the CJS are not necessarily dependent on the economy, outlays of national revenue for CJS expenditures, in the area of manpower and facilities for example, certainly are.

The impact of changes in the size of the population under age 30, the extent of urbanization, and the ratio of arrests, prosecutions, and convictions to crimes known by the police were investigated in terms of their independent and combined effects on the crime estimates. In addition, these effects were measured in combination with those due strictly to economic changes.

We have been able to experiment with these three groups of variables on the United States data on homicide and England and Wales data on major crimes in each segment of the CJS process (from crimes known to the police through imprisonment). It is quite clear that the size of the youthful population is a significant predictive factor in our measures of the crime rate. This is particularly true for homicide but somewhat less important for our measures of crime funds derived from CJS data.

The extent of urbanization also turns out to be a potent variable in the statistical explanation of crime indicators. It appears to have a positive relationship to property crime in general, at least as indicated by the British data, since 1948 pertaining to robbery, burglary, and larceny. In the case of homicide, on the other hand, it appears to have a comparatively mild effect and even an inverse relationship at times. It is possible, then, that urbanization has the effect of diminishing the extent of violence over the long-term trend while increasing the rate of property crime somewhat. It should be kept in mind that these relationships for urbanization pertain to the period following World War II. Prior to the war, there seem to be few significant observable relationships for urbanization during the twentieth century.

The impact of measures of effectiveness of the CJS does appear to be significant and consistent among the crime indicators with which experimentation has taken place (i.e., the data for England and Wales). While the results are significant, the measures do not explain a substantial proportion of the variation in crime rates as compared with the major economic indicators; the proportion of

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variance explained by the CJS measures range from approximately 3-12 per cent. Nevertheless, these results are theoretically and practically significant, particularly considering that the relationship is always in the hypothesized direction — namely that the higher the ratio of arrests, prosecutions and convictions is to crimes known to the police, the lower is the crime incidence. This apparent effect on crime incidence of the CJS measures would lead to a deterrence explanation, and the greatest effect is observed on crimes known to the police. There is little or no negative effect, however, of the CJS measures on crimes which result in imprisonment — that is, the more serious offences. Indeed for crimes resulting in imprisonment, there is a significant positive correlation with the CJS measures, probably indicating the importance of police and prosecution functions in obtaining conviction even for major crimes.

In general, the demographic, urbanization and CJS data, while showing statistically significant results, do not appear to alter substantially the observed impact of national economic indicators on the measures of crime incidence. These additional factors do, however, serve to round out the explanatory model by which the trends in crime statistics can be understood.

6. The relationship between homicide mortality and national economic indicators.

There are two outstanding distinctions between the homicide data and the data representing changes in crime incidence derived from CJS sources. In cases of both types of data, the attempt is to ascertain relationships between national economic changes and criminal behaviour. In the case of the homicide data, however, the primary source derives from vital statistics reports of actual deaths. In addition, the homicide data are perhaps closest to representing "irrational" aggression, in the sense that most homicide occurs among individuals who are closely acquainted and especially among family members. Therefore, the homicide data are possibly the "purest" representatives of criminal activity without obvious utilitarian motive.

For each of the four major areas under investigation, the homicide findings are somewhat different from those pertaining to other crimes (as derived from CJS data sources). The primary difference relates

to the period between the first and second World Wars, whereas after the second World War the findings for homicide and the CJS-based data are virtually identical. For the period 1920-1940, data on homicide for the four major areas are consistent in showing the following relationships to national economic indicators: (1) a positive correlation with the inverted unemployment index, and (2) an inverse relationship to changes in the Gross National Product (GNP). By contrast, for the CJS-derived data (ie., robbery, larceny) these criminal indicators are inversely related to both the inverted unemployment index and GNP. It therefore appears that while criminal activity was in general strongly inversely related to all the major economic indicators during 1920-1940, homicide is inversely related to the major national economic indicator (GNP) but is positively related to changes in the employment rate (as measured by 100 minus the proportion of persons unemployed per civilian population).

Before attempting to interpret this apparent contradiction in findings, it is important to make reference to the only other study in recent times which dealt with the effects of national economic changes on homicide rates, namely that of A. F. Henry and J. F. Short, *Suicide and Homicide*. Using an index of industrial production for the United States, Henry and Short found a positive correlation with the homicide rate during the twentieth century through 1950. The explanation given by these authors focussed on the issue of relative, as distinguished from absolute, deprivation. They argued that since persons committing homicide are typically of considerably low socio-economic status, and during economic downturns such individuals lose less proportionately than the majority of the population, it is important to focus on the possible adverse effects of economic upturns for these individuals. Thus, while during economic downturns a sizable proportion of the population is actually reduced to a very low level of socio-economic status, during economic upturns the relative gaps between the lowest and higher income groups increases, and even in the best of times the lowest group shows high rates of unemployment.

The difficulty with Henry and Short's explanation is that they generalized to all economic downturns regardless of magnitude. However, while their interpretation might well be correct for an extraordinarily deep and lengthy economic depression, it probably

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would not hold for the more usual short-term economic recession which involves a minority of the population. It is only in the case of a long and deep economic depression that economic change is so intense as to propel a significant number of the population to a status nearly equivalent to that of the lowest socio-economic stratum — in such a way, furthermore, that it is plainly visible to individuals of the lowest socio-economic positions. In the ordinary economic recession, however, probably the typical individual who experiences major income or employment loss is largely unaware of the effects on others, and in fact is likely to blame himself for the loss rather than attribute it to a national phenomenon.

The finding in this study of a positive relationship to homicide rates for the inverted unemployment index during 1920-1940 is coincident with this thesis. Observation of the unemployment rate during this period shows extremely dramatic changes during the period 1929-1936, essentially covering the Great Depression, but minor fluctuations during the other years of 1920-1940. Therefore, the entire relationship between homicide and the inverted unemployment index is dominated by the deep and lengthy economic adversity of 1929-1936. By contrast, the relationship between GNP and the homicide rate is in the proper direction for the hypothesis that absolute economic deprivation produces an increase in the homicide rate; i.e., the correlation is inverse. The validity of the absolute income loss hypothesis is supported by observation that while GNP fell substantially during the Great Depression, other fluctuations in GNP during 1920-1940 were far more important than were those in unemployment (comparing 1929-1936 with the remainder of the period 1920-1940).

It is therefore reasonable to conclude that during the period 1920-1940 the economic stress which precipitated very large increases in the homicide rate in all four major regions was due to both (1) absolute adverse changes in socio-economic status for substantial proportions of the general population, and (2) relative adverse changes in socio-economic status for the very lowest socio-economic groups normally having very high unemployment rates. In addition to the typically adverse effects of economic loss during periods of economic downturn (represented by changes in GNP during 1920-1940), we must also consider the positive effects of major increases in unemployment, during an extraordinarily deep economic depression, on those

who were already in an unstable economic situation (as represented by changes in the employment rate, especially during 1929-1936). In the case of the latter group of individuals of very low socio-economic status, their homicide rate apparently diminished during the early part of the depression (1929-1932), only to increase greatly during the second period (1932-1936) which was an upturn (after the low point of 1932) for most of the population.

There is, then, a real difference between the effects of the economy on homicide as distinguished from other crimes during the 1920-1940 period dominated by the Great Depression. The homicide rates apparently responded to both absolute and relative economic deprivation, while other major crimes (all involving property) responded to absolute deprivation alone. The distinction between homicide and property crime in their relation to national economic indicators during the period of the international depression may lie in significant differences between the populations who committed these crimes. It appears in general to be the case that more of the population who committed property crimes during this period were affected by absolute income loss than is true of the population committing homicide. While both populations did respond in the *same* way to absolute income loss, there was apparently an *additional* population of persons who committed homicide who were responding to the relative economic loss of other persons, and who were probably themselves of very low socio-economic status.

It is important to keep in mind, however, that while relative economic loss did have a significant effect on the homicide rate during the Great Depression, the *overwhelming* effect on the homicide rate resulted from absolute economic loss as it did in the case of major property crimes. In both instances, the international depression is associated with extremely large increases in the rate of criminal behaviour. Indeed, even for homicide in particular, the rates during the Great Depression were the highest recorded during the twentieth century. During the period since the second World War, however, the patterns for both the homicidal and property crimes are identical; they increase sharply during periods of short-term reductions in employment and income. In summary, then, recession and depression both overwhelmingly have the effect of increasing crimes against property and persons.

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7. Effects of economic indicators on components of the criminal justice system.

Perhaps the single most consistent set of findings in this multi-national study is that the relations between economic indicators and criminal statistics are very similar for data derived from each component of the criminal justice system. The CJS-component data include: crimes known to the police, crimes cleared, pre-trial police and judicial activity, trial proceedings, sentencing, and incarceration. All of these show the similar and substantial effects of adverse economic conditions.

In addition, individuals acquitted, both prior to trial and as a result of trial, also reflect adverse national economic conditions. These acquittals may be a result of overload on the CJS which may produce less effective police and prosecution functioning, or possibly a greater rate of arrest of innocent citizens in response to public demand for resolution of a considerably higher rate of crime victimization.

Finally, we observe that the rate of discharge from prison is also considerably greater during periods of economic adversity. This is no doubt partly a result of new waves of inmates " pushing out " an older population of inmates under the management aegis of the prison administration. It is entirely probable that this released population, newly vulnerable to the same types of situations which brought them to the CJS in the first place, will return to prison under similar conditions within a short period.

8. Interpretation of the general relationship.

Interpretation of the relationships between measures of national economic changes and criminal statistics is based on the link between those empirical relationships and theories as to crime causation. The two outstanding findings of the present study are that both absolute economic loss and comparative decline in socio-economic status (as a result of greater gain in such status by the majority of the population) are the pre-eminent causes of variations in criminal statistical trends.

Absolute economic loss is indicated by real " cyclic " declines in employment and income, as measured chiefly by fluctuations in the unemployment rate. Economic loss is additionally measured by annual percentage changes in the rate of inflation.

. Comparative decline in socio-economic status of the lowest socio-economic groups is indicated by accelerated levels of economic growth involving high rates of structural (or technological) unemployment and low (and unstable) income levels. This situation of accelerated economic growth levels, in which significant minorities participate minimally, is also heightened during periods of intermediate-range economic upswings.

Overall, then, to use traditional economic phraseology, the major causes of variation in criminal statistics lie in economic instability and economic inequality. In both of these cases, however, the common basis of causation lies in comparatively low socio-economic status, whether that situation has occurred unexpectedly or represents a chronic pattern. It is clearly no accident, therefore, that the principal theories of crime causation relate to the same condition of comparatively low socio-economic status.

Frustration-aggression theory, which relates most closely to violent crime but is easily applicable to " expressive " forms of property crime which have instrumental overtones, is basically linked to conditions of thwarted socio-economic aspirations. Similarly, the development of subcultural deviance as a " reaction-formation " to social-economic integration would stem from comparatively low socio-economic status. Differential-association theory would be especially relevant to the formation of subcultures of potential delinquents based on enlargement of the poor socio-economically malintegrated individuals, principally brought about by cyclic or structural unemployment patterns.

The issue of urbanization as a factor linked to economic growth, and potentially to criminal behaviour, bears additional discussion. From a general theoretical standpoint, it can be argued that long-term urban development is instrumental in replacing ethnic and socio-cultural modes of societal integration with those based on economic integration alone. Thus, with long-term economic growth the society's means of integration depends increasingly heavily on the stability of the economy and the " justice " or equity of its distributive mechanism.

From a purely empirical standpoint, in addition, the typical pattern of urbanization involves a population dynamic in which the occupational structure and industrial development are the bases for urban residential patterns. In the industrialized societies investigated in the present study, a typical pattern is for lower socio-economic groups, as defined by occupation and industry, to congregate in

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During the last two to three decades, it has been frequently observed that urban rates of criminal activity have increased to extraordinarily high levels. In line with the previous discussion of the frequent pathological effect of economic growth on subpopulations of comparatively low socio-economic status, it appears likely that the growth in urban crime since the Second World War is related to (1) the migration of population of low socio-economic status and low technological skill and education into urban industrial and service occupations, and (2) the simultaneous out-migration of higher socio-economic groups somewhat beyond the political boundaries of these cities.

II. ADDITIONAL NOTES

THE EFFECTS OF FLUCTUATIONS IN THE INCIDENCE OF CRIME, VIEWED AS A DEMOGRAPHIC FLOW PROCESS, ON CRIMINAL JUSTICE PROCESSES: ARRESTS, TRIAL (PROSECUTION, DEFENCE, JURY), INCARCERATION, PAROLE, RELEASE

A. Each component of the criminal justice system is activated under conditions of economic change. Thus, it appears that CJS primarily acts as a repair mechanism for disturbances in the national economy and economically-based social structure.

B. It would be very important to analyse the structural changes that must continually disrupt CJS processes because of the " distributed lag " waves of economic instability. It is possible that the well-known congestion and unpredictability of " stochastic " sources of population impact on the subsystems of the CJS are largely due to national economic instability.

C. It appears that release from prison is also related to economic instability, particularly to recession. Since the recidivism rate is between 60 and 80 per cent or higher (within 2 years), it is possible that a major reason is that ex-prisoners encounter a hostile economic environment similar to the one which initially brought them to prison.

D.   It is likely that larger numbers of individuals are released from prison during economic recession because of the congestion freshly caused by a new wave of admissions during the economically unstable period.   There are important implications here for the legally proper administration of justice and for the danger to the society engendered by this process.

E.   The question of the appropriateness of incarceration based on economic frustrations or economic crimes related to national economic instability.   An important distinction must be made between the following two groups:

i) Comparatively " new " criminals motivated largely by impulse or expressiveness (whether or not the crime was " instrumental ").

ii) " Hardened " criminals with established records of recidivism.

IMPACT OF FLUCTUATIONS IN THE INCIDENCE OF CRIME ON THE POPULATION VICTIMIZED, OR MADE FEARFUL AS A RESULT OF INFORMATION ABOUT THE CRIME RATE

A.   The pattern of urbanization in industrialized societies and underdeveloped countries is heavily influenced by economic changes on the national level.   In industrialized societies, we observe the acceleration of outward migration of middle-income groups, with their investments, real estate, and tax base, from the central cities. Conversely, in non-industrialized settings, there is often a development of shanty-towns surrounding central cities, based on large income gaps and residential segregation.

B.   There is a consequent decline in investment in central cities, leading to long-term economic deterioration and a further acceleration of social pathologies including crime.

IMPACT OF THE CRIME RATE ON POLITICAL-LEGISLATIVE PROCESSES WITH REGARD TO CRIMINAL LEGISLATION

As a result of the economic and population flow processes impinging on the crime rate, from time to time there appear to be " crime waves ".   Under such conditions, the public in general may

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IMPLICATIONS ON THE FINDINGS FOR EVALUATION OF THE CJS

There is a very substantial literature in the general area of evaluation of specific CJS efforts. Typically, the research attempts to link a particular CJS process with specific outcomes usually bearing on the incidence of recidivism. Just as typically, however, one finds a neglect of the types of factors which in the criminological literature have been linked, or been hypothesized to link, to the incidence of crime. It is rare, therefore, for criminology and CJS evaluation to meet in the same research project.

The findings of this study clearly show the impact of economic and socio-demographic factors on trends of criminal activity, regardless of which particular data are used to measure crime trends. Therefore it now appears to be not only theoretically important but realistic to consider the factors which normally affect trends in crime rates. It is only after explaining variation in the base rate of crime, at least as a function of national economic indicators, that we may properly determine the impact of additional factors such as those which stem from CJS activities.

It has been shown, for example. that taking into consideration only the three national economic indicators (unemployment, inflation, and per capita personal income), the size of the population under age 30, and the extent of urbanization, that the trends in crime can be " forecasted " to greater than ninety per cent accuracy for several major populations. Thus, future trends in crime rates could be reasonably accurately projected in any case by the use of these variables alone. Regardless of the activity of the CJS, then, the trends in crime appear to proceed under known and even measurable conditions. The implication is that far more precise methods than have been used in the past are available for the control of factors external to the CJS which impinge on the crime rate.

An example is provided in this study of the means of ascertaining an effect of a given CJS process, while holding constant the economic and socio-demographic factors which ordinarily influence that rate. An attempt was made to examine the impact of the effectiveness of three CJS processes on the crime rate in England and Wales. These processes were (1) police capacity to apprehend the perpetrators of crime, as measured by the rate of arrest per crimes known to the police, (2) the combined effectiveness of police and prosecution, as measured by the rate of prosecution per crime known to the police, and (3) the combined effectiveness of police, prosecution, and criminal court, as measured by the rate of conviction per crime known to the police.

It was in fact found that these measures of CJS effectiveness do have a statistically significant effect on lowering the crime rate (based on crimes known to the police). More important, however, is that these significant effects remain valid even when the impact of the other economic and socio-demographic variables have been statistically controlled. In addition, it is only possible to estimate the *proportionate* impact of CJS factors under conditions of control for the proportionate impact of other relevant factors. Thus, in the case of this study, it was found that the CJS indicators appear to account for between 3 and 12 per cent, depending on the specific crimes, of the trends in crime indicators in England and Wales.

IMPACT OF THE RELATIONSHIP BETWEEN ECONOMIC CHANGE AND CRIME, AND THE QUESTION OF CRIMINAL RESPONSABILITY FOR CRIME

A. Criminological theories appear to include three basic phenomena:

1. Individual background factors

2. Environmental influences

3. CJS processes.

B. To the extent that these theories are accurate, little room is left for deliberate choice. There is an empirical question however: we may in fact find that a certain proportion of crime is a

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in the philosophical-scientific sense, but under criminal liability in the
legal sense.

C. To the newer view among some economists, it is therefore
possible to think of criminal behaviour as rational from the standpoint
of economic modelling. In other words, crime may be undertaken
through deliberate efforts to recoup economic loss. There are at least
two major problems with this viewpoint, however:

1. There is no consideration of who, among those who lose
income, will engage in illegal activity. Clearly, not everyone who
suffers economic loss engages in criminal acts. Therefore, to the
extent that factors other than simply the economic gain related to
crime are motivating those individuals who do engage in illegal
activity under conditions of economic stress, the " rational " model is
inapplicable.

2. Another important point is that the rational-man economic
model of crime assumes that crime, at least under economic stress,
is rational. If we understand the term " rational " to mean normal,
this model is clearly inaccurate because the majority of the population
(average or normal) does not engage in economic crime even under
conditions of loss. There is clearly a discrepancy between the economic
model of rationality, and the sociocultural-psychological model which
focusses on normality (in terms of society and culture) and irrationality
(relating to deviation from adaptive modes).

One question, of course, is whether criminal behaviour is in fact
adaptive. This depends on (1) whether the individual will escape
punishment, which is in turn related to professional criminal skill,
and (2) whether there is much guilt as a result of the criminal
undertaking. In dealing with these questions, we must consider (a)
whether the crime is new or represents hard core recidivism; in the
latter case, the purely rational economic motive might well be
paramount, because of the difficult economic situation of ex-convicts
in the first place and because of their heightened professional skill,
and (b) the nature of the crime committed — whether more nearly
" expressive " or " instrumental ".

3. Perhaps most important, the " rational " model is incompatible with the fact that secular growth is as important in criminal trends. Thus, comparative rather than absolute economic loss is the key variable. It is not " rational " economic motivation but rather social-psychological stress which is the relevant factor.

IMPACT OF THE ECONOMIC CHANGE-CRIME RELATIONSHIP ON THE UNDERSTANDING OF GOVERNMENT RESPONSIBILITY FOR PROTECTION OF THE PUBLIC FROM CRIMINAL HARM

A. Beyond the usual conception of state responsibility for societal protection through police actions, it is clear from this research that the government has a preventive rôle in protection of the population through proper management of the national economy.

B. Whether or not individuals are philosophically liable for criminal acts, or legally liable, the government is morally and practically liable because of the actual control it exerts on the economy on a routine basis. This control is not confined to major economic disturbances, but involves as well economic growth processes, inflation, urban development, migration, and education including the aquisition of technical skills.

COST BENEFIT ANALYSIS OF THE EFFECTS OF NATIONAL ECONOMIC MANAGEMENT ON CRIME; INCLUDING COSTS AND BENEFITS DERIVED FROM THE ENTIRE CRIMINAL JUSTICE PROCESS

A. It is necessary to compare costs and benefits related to management of the national economy with those of criminal justice processes, as they relate to crime.

B. We do not as yet know what effect criminal justice processes usually have on crime; it appears to be modest, yet statistically significant. With extremely severe punitive measures, these processes may have a more substantial impact. On the other hand, it is necessary to gauge the social costs and benefits of increasing or decreasing criminal sanctions.

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C.   While we do not know the effects on crime of CJS processes, we can measure the potential effects of national economic management on the crime rate. Thus, at the very least, we can infer that the crime rate might be reduced by a given proportion as a result of government expenditures of a certain amount, or the use of monetary or other economic-political policies.

END