REFLECTIONS ON CRIMINALITY AND DEMOGRAPHIC STRUCTURE: A MULTI-NATIONAL EXAMINATION OF THE LINKS BETWEEN YOUTH AND NATIONAL CRIME STATISTICS

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I. AFRICA, CRIME STATISTICS AND THE CONTRIBUTIONS OF YOUTH

This Article reflects on the socio-economic factors behind crime data from twenty-two countries. Though its focus is primarily Africa, some countries outside of Africa are also considered. An informal observation of various African countries indicates that crime has increased dramatically. The common presence of fortified housing in urban areas and television advertisements for paratrooper-like private security firms changes the ambiance of many African cities. These cities now exhibit the insecurity commonly found in urban Europe and the United States. While only South Africa rivals, or in some measures surpasses, Europe and the United States in crime, many countries are now moving down the same road, and trends in globalization suggest that other countries may follow.[1]

While African nations are culturally distinct from nations in Europe and from the United States, national crime statistics, as available today, tend to ignore those differences. African statutes typically follow the criminal categories of Africa's former colonial rulers. Interpol provides the most readily accessible information in the form of standard annual tables. However, these figures are generally available only for the

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1. Some useful readings with extensive bibliographies include: CRUCIBLES OF HAZARD: MEGA-CITIES AND DISASTERS IN TRANSITION (James K. Mitchell ed., 1999) and TERESA P.R. CALDEIRA, CITY OF WALLS: CRIME, SEGREGATION, AND CITIZENSHIP IN SAO PAULO (2000).

past six years for most African countries.[2] For African and other poor nations, national statistics undoubtedly cover urban crime better than rural crime. In rural areas, traditional forms of justice may supplant government procedures, and crime is comparatively infrequent. These statistics also tend to conceal the existence of different cultural attitudes toward criminality. This Article compares criminal statistics with various national socio-economic indicators that similarly conceal social and economic differences of some significance. As it turns out, this uniform cultural obtuseness is not an insuperable problem for comparative research.

Though legal scholars often argue from principle and precedent, neither provides sure answers to questions about the effectiveness of sanctions and the causes of criminal behavior. It may be clear that people ought not to steal, but effective deterrence of theft requires creative and empirically supportable methods. There are no simple alternatives to the use of statistics in a discovery or research phase, and while the use of statistics is open to the standard critiques, the statistics on national crime rates are far from useless and are likely to be reasonably accurate. Still, there is a need to use statistics carefully and comparative statistics even more carefully.

While there may be some underreporting of rural crime in less developed countries, this is unlikely to significantly change the overall national crime rates. Cultural differences about what constitutes a crime are more revealing. This issue determines the selection of crimes on which this article is focused. This said, it should also be noted that reasonably accurate statistics can both suggest real relationships and disabuse one of countless "common sense" arguments about the causes of criminality. This Article does not discuss the socio-historical specificity of each country or the full role of geopolitics, dependency, colonialism and globalization. It is clear that full explanations of national crime rates would make meaningful comparisons difficult.[3] Therefore, this Article will focus only on elucidating some commonalities in an attempt to explain part of current national crime rates.

To this end, the Article undertakes a comparison of socio-economic and crime statistics for twenty-two countries split between Europe (France, Germany, Norway, Sweden, Switzerland, United Kingdom), the Middle East (Algeria, Mauritania, Syria, Yemen, Pakistan), Africa (Senegal, Mali, Niger, Tanzania, Botswana, Zimbabwe, South Africa), the Americas (the United States and El Salvador) plus Singapore and the Russian Federation.[4] This subset of the world's nations is representative of the world as a whole in many respects. The included

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2.   The Interpol data is available online for each country at http://www.interpol. int/Public/Statistics/ICS/Default.asp (last visited July 26, 2003).

3.   MARA SLABBERT, REPETITIVE CYCLES: ANALYSES OF SOCIALISATION AND INSTITUTIONALISATION PATTERNS AND DISCUSSION OF CRIME PREVENTION, INTERVENTION AND DIVERSION STRATEGIES (1980), discusses the general issue of social and institutional contexts of crime. LINDA GREEN, FEAR AS A WAY OF LIFE: MAYAN WIDOWS IN RURAL GUATEMALA (1999) provides a clear example of the political, cultural and historical causes of violence in Guatemala.

4.   See following figures and tables. Socio-economic statistics used in this Paper have been drawn from tables available online from United Nations or World Bank websites *at* http://unstats.un.org/unsd/default.htm   and   http://www.worldbank.org/data/countrydata/ countrydata.html.

countries were also selected because they have available crime statistics and stable and reasonably well-organized governments.[5] A case can be made therefore that the analytic results may have broader relevance. However, it is not at all clear that crime statistics in a wealthy country like the United States (where police corruption has frequently led to misrepresentation of crimes) are significantly better than in a poor country like Niger where there simply is not a large amount of crime, and there is a greater likelihood of accurate reporting.[6]

My desire to highlight the role of youth in the crime statistics makes one proviso particularly important—it is a virtual certainty that juvenile crime is underreported in the poorer nations of the globe. Official figures for juvenile crime thus simply cannot be relied upon for global comparative purposes. This might seem a drastic limitation, but it turns out not to be critical. The reasons for this underreporting are not mysterious; they consist, in brief, of a disjuncture in many parts of the world between the modern (European, United States) desire to label as criminals even young children and a traditional preference to leave the discipline of youth to families and the community rather than making it a matter for the formal justice system.[7] The European tradition has gone further in the direction of social and psychological dissection and analysis. This leads to a deeply felt need to label and classify everything from psychological states to types of behavior.[8] The potential danger, of course, is that the labels become self-perpetuating and causal factors in and of themselves. Once labelled "criminal," an individual cannot find employment and soon can only associate with other "criminals," with statistically predictable results. Much has been written about labeling in the criminology literature, with its critics suggesting that this reduction of a human to a reified type is a factor, or even the most important factor, in explaining criminality itself.[9] Other common explanations for crime include genetic or gender predispositions to crime,[10] the individual responsibility[11] and failure

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5.   While I am aware of no comparable comparative studies, at least one attempt has been made to address the relationship between economic variables and crime within a single African country, South Africa. J. M. LUIZ & S. AFR. NETWORK FOR ECON. RESEARCH, TEMPORAL ASSOCIATION, THE DYNAMICS OF CRIME, AND THEIR ECONOMIC DETERMINANTS: A TIME SERIES ECONOMETRIC MODEL OF SOUTH AFRICA (2000).

6.   Recent comparative research on urbanization in Niger and five other African countries (1999–2002) supports impressionistically the official low crime rates and comparatively low levels of urban violence in Niger. The official figures do not seem at all out of touch with reality. Thomas K. Park et al., Creation of a GIS for Six African Cities in Arid Environments (unpublished data from a study funded by the National Science Foundation from 1998–2003, on file with Author).

7.   *See* YVES BRILLON, CAHIER NO. 3: CRIME, JUSTICE AND CULTURE IN BLACK AFRICA: AN ETHNO-CRIMINOLOGICAL STUDY 63 (Dorothy Crelinsten trans., 1985).

8.   While the literature on this is immense, a starting point might be a book on factor analysis devoted to psychological testing, such as PAUL KLINE, AN EASY GUIDE TO FACTOR ANALYSIS (1994).

9.   Apollo Rwomire, *The Contribution of the Labeling Theory to the Understanding of Oppression, Conflict and Violence in South Africa, in* CRIMINOLOGY IN AFRICA 153–64 (Tibamanya mwene Mushanga ed., 1992).

10.   The disproportionately larger numbers of men than women in prisons around the world attract more current interest than the idea of genetic bases for criminality, though this ancient view no doubt has its adherents.

of moral instruction theories,[12] as well as socio-economic explanations for statistical trends in crime rates.[13] This Paper will focus on the latter socioeconomic approach.

II. REVIEW OF LITERATURE ON CRIME IN AFRICA AND ON CRIMINOLOGY MORE GENERALLY

The United Nations Interregional Crime and Justice Institute (UNICRI) publishes edited volumes dealing with the comparative criminology of various regions. The edited volume on Africa sets out a number of interesting perspectives that may serve as a point of departure.[14] Hard core drugs[15] are a major concern in both the areas of production and consumption (Asia and Latin America on the one hand and Europe and North America on the other). However, within Africa the main drug of concern is marijuana,[16] except for a few countries that have a significant role as transit centers (e.g. South Africa[17]). Thus, drug crime is not a good focus for comparison in the twenty-two nation sample. The key socio-economic factors impacting crime that are discussed in the UNICRI volume include rural-urban migration,[18] social change and modernization,[19] poverty,[20] and social inequality.[21] Rural immigration will be

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11.   The most recent advocates follow the U.S. government's "Just Say No to Drugs" campaign, but similar positions have been the basis of classic moral theories in most civilizations. Countless discussions of the "Just Say No" campaigns can be found. *E.g.* John Stossel, *Just Say No: Government's War on Drugs Fails,* ABCNews, *at* http://www.abcnews. go.com/onair/2020/stossel_drugs_020730.html (July 30, 2002).

12.   Advocates of sex education and religion in schools come to this same position from different points of view. E.g. JACK KATZ, SEDUCTIONS OF CRIME: MORAL AND SENSUAL ATTRACTIONS IN DOING EVIL (1988); PAUL R. WILSON, ISSUES IN CRIME, MORALITY AND JUSTICE (1992); REMIGIUS O. NWABICHIE, RELIGION FOR MORALITY IN EDUCATION: A HANDBOOK FOR RELIGION AND MORAL INSTRUCTION IN SECONDARY SCHOOLS (2000); JAMES HOTTOIS & NEAL A. MILNER, THE SEX EDUCATION CONTROVERSY: A STUDY OF POLITICS, EDUCATION AND MORALITY (1975).

13.   A relevant example among many possible might be RALPH E.S. TANNER, CRIME IN EAST AFRICA: THREE STUDIES IN EAST AFRICAN CRIMINOLOGY (1970).

14.   CRIMINOLOGY IN AFRICA, *supra* note 9.

15.   Here we refer primarily to opium and cocaine and their derivatives, which due to their high demand and high price per pound, traditionally form the basis of long-distance trade in drugs between the poor and rich countries of the globe.

16.   Tolani Asuni, *Drug Trafficking and Drug Abuse in Africa, in* CRIMINOLOGY IN AFRICA, *supra* note 9, at 117–27.

17.   *See* TED LEGGETT ET AL., DRUGS AND CRIME IN SOUTH AFRICA: A STUDY IN THREE CITIES (Inst. for Sec. Studies Monograph Series No. 69, Ted Leggett ed., 2002). MARTIN SCHÖNTEICH & ANTOINETTE LOUW, CRIME IN SOUTH AFRICA: A COUNTRY AND CITIES PROFILE (Inst. for Sec. Studies Occasional Paper No. 49, 2001).

18.   Andargatchew Tesfaye, *Rural Urban Migration and the Problems of Crime and Delinquency, in* CRIMINOLOGY IN AFRICA, *supra* note 9, at 179–90.

19.   Manga Bekombo, *Changements Socioculturels et Marginalisation des Enfants et des Jeunes en Afrique Subsaharienne, in* CRIMINOLOGY IN AFRICA, *supra* note 9, at 165–78.

20.   Elisabeth Michelet, *Les Déviances de Subsistence, in* CRIMINOLOGY IN AFRICA, *supra* note 9, at 191–210.

21.   Ben F. Smit, *Violence as a Weapon of the Dispossessed, in,* CRIMINOLOGY IN AFRICA, *supra* note 9, at 211–33.

discussed later in this article because it has a particular significance in Africa. The other factors are more cross-culturally similar and will therefore be discussed in this section.

Poverty at the extreme end of the spectrum, where subsistence itself is difficult, has often given rise to petty theft.[22] This level of poverty no longer prevails in Europe or North America, but famine, war and drought have regularly taken a toll in Africa throughout the twentieth century.[23] Nevertheless, none of the countries selected for examination in this article have had such pressing issues of poverty in the period considered.

Massive inequality is a significant issue in all countries in this study. Even in the United States, social inequality rose dramatically in the last decades of the twentieth century, and the gap between the income of the elite and the common citizen has widened substantially with no sign of abatement.[24] Many elites in poor countries live on parity with their peers in developed countries and yet are surrounded by fellow nationals who have access to less than a fraction of a percent of their level of income. Despite the massive and growing disparities in developed countries, statistics of poor countries are even more glaring—to the point that many elites in poor countries have serious psychological difficulties acknowledging, let alone believing, that the poor of their country should be given equal consideration. This becomes quite apparent when one sees drivers of fancy vehicles accelerate on a road towards a crowd who are expected to disperse like chickens. Similar scenes were common in Europe between

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22. Indeed the European population of Australia is largely the result of abjectly poor people taking resources needed for survival and coming into conflict with new laws directed at preserving virtually all property in the hands of a small elite. DOUGLAS HAY ET AL., ALBION'S FATAL TREE: CRIME AND SOCIETY IN EIGHTEENTH-CENTURY ENGLAND (Douglas Hay et al. eds., 1975).

23. For a general overview of such events the reader should consult INSTITUTO DEL TERCO MUNDO, THE WORLD GUIDE: 1999/2000 A VIEW FROM THE SOUTH (1999).

24. The standard measure of inequality, the GINI coefficient, rose for the U.S. from roughly thirty-four in 1975 to forty-three in 2001. The GINI coefficient measures the area between a line representing equality in income to that representing the current distribution of income (the Lorenze curve) when cumulative percentage of households (ordered from poorest to richest) are plotted against percentage of income. Complete equality is zero while complete inequality would be one—though the coefficient is generally represented as a percent. The transition from thirty-four to forty-three represents a major increase in inequality perhaps more easily understood when we note that in the same time frame the top five percent of households had their share of total income rise from under 16% to over 22%. The World Bank generally calculates the GINI coefficient for each country. *E.g.* http://www.worldbank.org/research/growth/dddeisqu.htm. By the same measures, inequality fluctuated but generally decreased in the U.S. between 1950 and 1975 but has increased steadily with only tiny inconsequential dips since that time. While inequality in this period has lessened in Asia, it has significantly worsened in Africa with most African countries having a GINI coefficient in the 50s and 60s. Peter Coy, *Economic Trends*, Business Week Online *at* http://www.busnessweek.com/magazine/content/02_24/ c3787032.htm (June 17, 2002); Int'l Labor Org., *Poverty and Income Distribution, at* www.ilo.org/public/english/ employment/strat/kilm/kilm20.htm.

aristocrats' carriages and peasants when democracy was little more than a quaint notion from ancient Greece.[25]

The introduction to the UNICRI volume lists twelve ways to reduce crime rates:
1. Universal and compulsory education;
2. Reduction of unemployment among the youth;
3. Creation of new employment opportunities;
4. The eradication of poverty;
5. Decentralization of government;
6. Reduction of the rate of urbanization;
7. Reduction of corruption;
8. Prompt justice;
9. Short, sharp and shock prison sentences;
10. Greater use of non-custodial sentences such as fines and community labor;
11. Abolition of capital punishment; and
12. Strengthening of family values.[26]

This mixed bag of prescriptions lends itself to statistical investigation. Does poverty breed crime and education reduce it? Does unemployment cause crime? Is there a link between urbanization and crime rates? While reducing rates of corruption (defined as a crime in itself) will reduce crime, it is unclear whether corruption will induce other types of crime. In either case, there is insufficient evidence to study this issue from a broad comparative perspective at this time because few governments report levels of corruption to Interpol or anyone else.[27] The whole question of which punishments, if any, reduce crime and by how much will also have to be neglected in this article, although current opinion seems to be that harsh punishments, including the death penalty, do not serve as inhibitors to first time offenders.[28]

While it may seem fairly straightforward to test the relationship between poverty and crime rates it is not as simple as it seems. Key indicators of wealth such as GNP (gross national product) are not likely to be very useful because they reflect

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25.   In France, distrust of justice was so high in the nineteenth century that farmers' evening prayers often included the phrase, "My God, deliver us of all ill and from justice!" EUGEN WEBER, PEASANTS INTO FRENCHMEN: THE MODERNIZATION OF RURAL FRANCE 1870–1914 50 (1976). Also of note is an epigraph in the same book, "Justice my friend, is like spiderwebs, it only catches little flies, the oxfly breaks the web." *Id.* at 512.

26.   Tibamanya mwene Mushanga, *Introduction, in* CRIMINOLOGY IN AFRICA *supra* note 9 at x–xi.

27.   CATHERINE ADE, CRIME IN THE PUBLIC SECTOR: TRENDS AND IMPLICATIONS FOR THE PERFORMANCE OF THE SECTOR (1996); JEAN FRANCOIS BAYART ET AL., THE CRIMINALIZATION OF THE STATE IN AFRICA (Stephen Ellis trans., Int'l Afr. Inst. & James Currey eds., 1999).

28.   The classic support for this position is eighteenth and nineteenth century Great Britain, which instituted the death penalty for almost every offense conceivable against private property. This had so little effect that judges, who could not bring themselves to apply the recommended legal sanctions, populated Australia by commuting sentences from death to deportation for countless poor who had been driven by poverty and social inequality to break the law. *See* Douglas Hay, *Property, Authority and the Criminal Law, in* HAY ET AL., *supra* note 22, at 22–23; CRIME IN ENGLAND, 1550–1800 (J. S. Cockburn ed., 1977).

average wealth and thus only vaguely capture the number and living standard of the poor. International statistics traditionally calculate in dollars using official exchange rates—a practice that is debilitating for comparative purposes. More recently, however, new income statistics reflect the local purchasing power of local money. These adjusted rates overcome the problems associated with tying wealth indicators to official exchange rates.[29]

Education is easier to study since fairly universal standards are officially followed in all twenty-two countries. Nevertheless, there is reason for caution here as well. For example, in Senegal, the traditional French education system is generally felt to be too literary. Consequently, primary and secondary schools are seen as providing little value for immediate application. Students graduate with few business skills, though most will earn their living by commerce. Thus many parents in Senegal opt to pull their children out of the government education system and place them in Koranic schools that teach the basics of commercial accounting and Islamic legal principles of commerce. Whether official education facilitates employment or whether it instills morality is an open question. Some clear attempts to fight crime through education[30] do not readily pertain to education in general. The impact of education on crime might vary empirically from country to country, suggesting a more fruitful examination would look to the causes of this variability. Statistical tools may of course be helpful in this evaluation, but simple national figures on years of schooling may be problematic.

III. OVERVIEW COMPARISON OF THE TWENTY-TWO COUNTRIES USING VARIOUS PARAMETERS

Prior to any consideration of crime statistics, it is important to clarify some of the basic dimensions along which the twenty-two countries in the study vary. The primary reason for a varied sample is that relationships emerging from such a sample are more likely to be of broad relevance than those that emerge from very homogeneous samples. This advantage, while important, would be negated if the researcher relied on completely erroneous assumptions at the hypothesis-formation stage, or even later at the interpretation stage due to unfamiliarity with basic national differences. Thus, this Article will not consider drug statistics from these nations to be comparable for the reasons outlined above in Section II. Nor will it assume the data on juvenile crime is comparable due to underreporting in more traditional societies.

These nations fall into three fairly distinct groups when GDP (gross domestic product) is adjusted for local purchasing power. These three groups (a high income group of eight countries, a middle income group of four countries, and a low income group of ten countries) emerge from the simple cluster analysis provided below.

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29. Official exchange rates are either set in the market or adjusted by government action to facilitate financial policies with little regard to the value of normal income except to the extent this is affected by prices of imports or exports.

30. EARLY LEARNING RES. UNIT, BASELINE STUDY OF RESEARCH DONE ON ANTI-CRIME INITIATIVES AT SCHOOL LEVEL (2000).

TABLE 1. RANKING OF COUNTRIES BY PURCHASING POWER ADJUSTED PER CAPITA GDP

	Country	Ranking	Growth Rate	Percentage of Urban Population	Adjusted Per Capita GDP
1	Sweden (SWE)	1	0.02	83	22200
2	England (UKE)	1	0.23	89	22800
3	Germany (GER)	1	0.27	87	23400
4	France (FRA)	1	0.37	75	24400
5	Singapore (SIN)	1	3.5	100	26500
6	Norway (NOR)	1	0.49	75	27700
7	Switzerland (SWI)	1	0.27	68	28600
8	United States (USA)	1	0.9	77	36200
9	Algeria (ALG)	2	1.71	60	5500
10	Botswana (BOT)	2	0.47	50	6600
11	Russia (RUS)	2	-.35	70	7700
12	South Africa (SAF)	2	0.26	55	8500
13	Tanzania (TAN)	3	2.61	27	710
14	Yemen (YEM)	3	3.38	24	820
15	Mali (MAL)	3	2.97	29	850
16	Niger (NIG)	3	2.72	20	1000
17	Senegal (SEN)	3	2.93	47	1600
18	Mauritania (MAU)	3	2.93	56	2000
19	Pakistan (PAK)	3	2.11	36	2000
20	Zimbabwe (ZIM)	3	0.15	35	2500
21	Syria (SYR)	3	2.54	54	3100
22	El Salvador (ELS)	3	1.85	46	4000

This tripartite ranking based on GDP also shows population growth rate, percentage of the population that was urban in 1999, and the adjusted per capita GDP as of 2000.[31] Even a cursory glance reveals that the higher income countries tend to have lower population growth rates and to be more urban than the lower income countries. In Figure 1, a comparison of GDP versus population growth rate illustrates this first point well and clearly indicates Singapore is anomalous:

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31.   Note that the three groups are listed by increasing per capita GDP within each of the groups, while the order of the groups is from wealthy to middle income to poor.

FIGURE 1. PER CAPITA GDP VERSUS POPULATION GROWTH RATE IN 2000
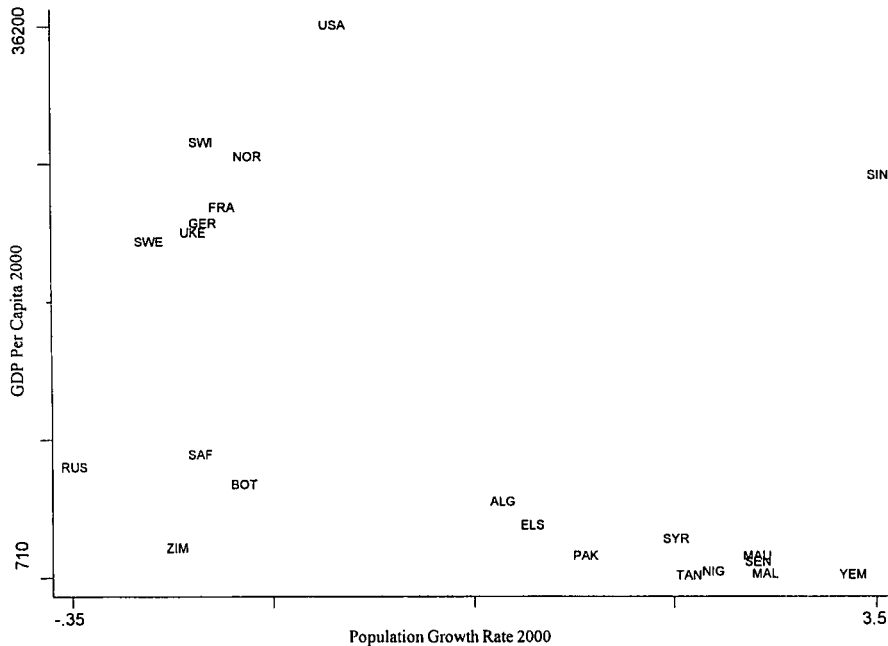
        The three groups are located in the upper left, lower left and lower right in this Figure, with Singapore floating alone in the high income and high population growth rate quadrant. In addition, Algeria appears more closely allied with the poor countries when it comes to population growth rate, while Zimbabwe fits more into the middle income group along this dimension. The general cohesion, however, supports the existence of a complex of socio-economic factors linking the countries together.

        We might expect gross national savings rates to correlate with GDP. As the figure below indicates, they do correlate reasonably well, but the graph makes it clear that the three clusters are less distinct, with Russia and Algeria showing far higher savings rates than most of the countries in the high income group. Nonetheless, this comparison shows a considerable clustering of countries. While GDP and savings rates bear some relation to each other, the relationship cannot be explained by the simple proposition that wealthy countries save more.

## FIGURE 2. PER CAPITA GDP VERSUS GROSS DOMESTIC SAVINGS IN 1999
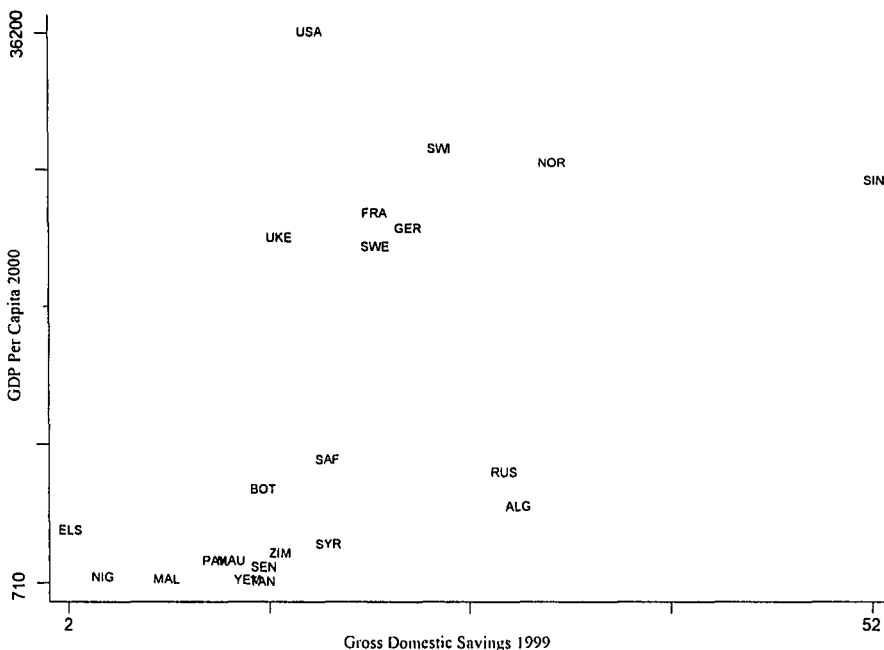
A comparison of domestic savings rates with population growth rates yields a rather different set of similarities. In this graphic there are two key groups—those with moderate domestic savings rates but low population growth rates and those countries with low domestic savings but high population growth rates—with Algeria being somewhat anomalous and Singapore, as usual, being entirely anomalous. High population growth rates thus seem to correlate inversely with savings, but wealth, as evidenced by the locations of the wealthy countries in the graphic, shows only a moderately positive correlation with savings rate.

FIGURE 3. POPULATION GROWTH RATE IN 2000 VERSUS GROSS DOMESTIC SAVINGS IN 1999
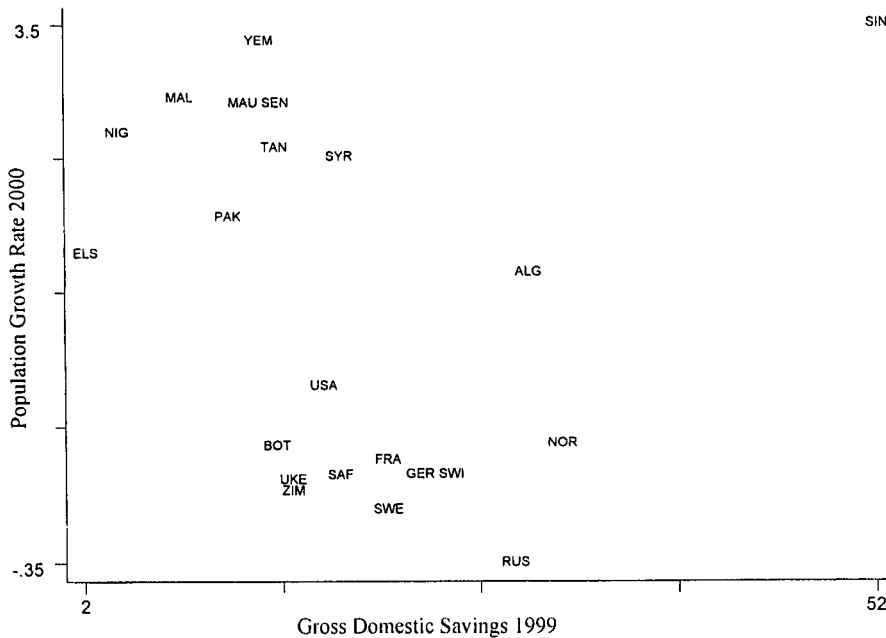

One of the clearest findings in the entire data set is the inverse relationship between rate of urbanization and rate of population growth. The following Figure illustrates this again, with entirely urban Singapore being a glaring exception. This relationship suggests that, ignoring immigration, urban populations grow less rapidly than rural ones. This, of course, has only the slightest direct connection to urban growth rates because they are largely due to migration from the rural areas to the urban areas. Consequently, it is no contradiction that the poor countries, though currently less urbanized, are now typically urbanizing and growing more rapidly than the wealthy countries.

FIGURE 4. PERCENTAGE URBAN VERSUS POPULATION GROWTH RATE IN 2000
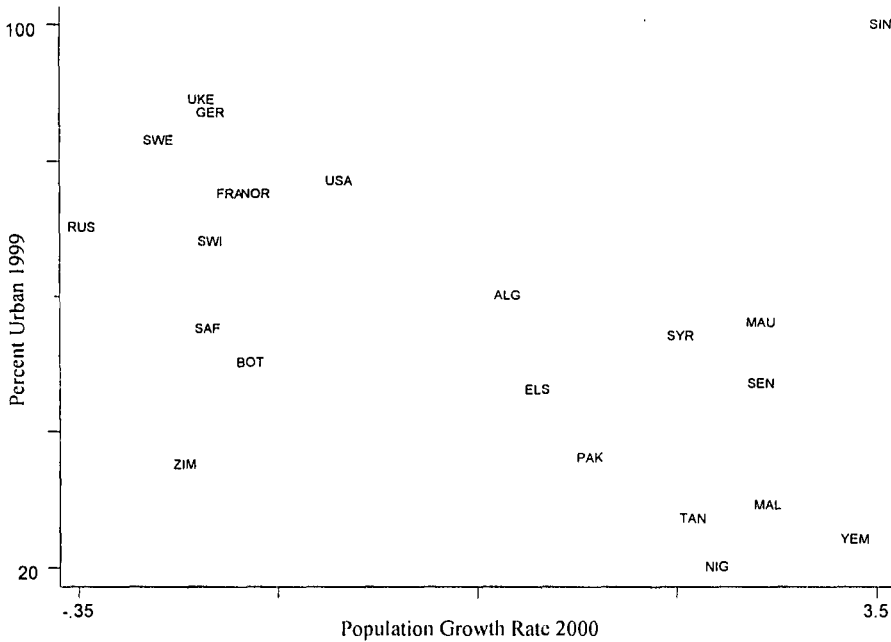
Exposure to external debt, and the ratio of that debt to other indicators, separates the nations dramatically. With regards to the ratio of the present value of external debt to adjusted GDP, the three original groups appear again with some different outliers. The wealthy countries, with the exception of Sweden, cluster along the low end of the debt ratio, the middle income countries come next with El Salvador joining the group, while the poor countries gather around the 40–60% mark, with Syria and Mauritania approaching 160%. Of course, different economies can sustain different levels of debt. Mauritania, which has vast fishing reserves, low population, and recently discovered oil wealth, is pushing for rapid modernization and views high levels of debt as a reasonable strategy. Similarly, the rebuilding of Lebanon and the overall Middle East situation have made loans available and credit needs paramount to Syria. Many other heavily indebted countries are in more difficult circumstances despite lower absolute debt levels.

FIGURE 5. GDP PER CAPITA VERSUS RATIO OF THE PRESENT VALUE OF EXTERNAL DEBT TO GNP 1999

Ratio External Debt - Expended Goods & Services
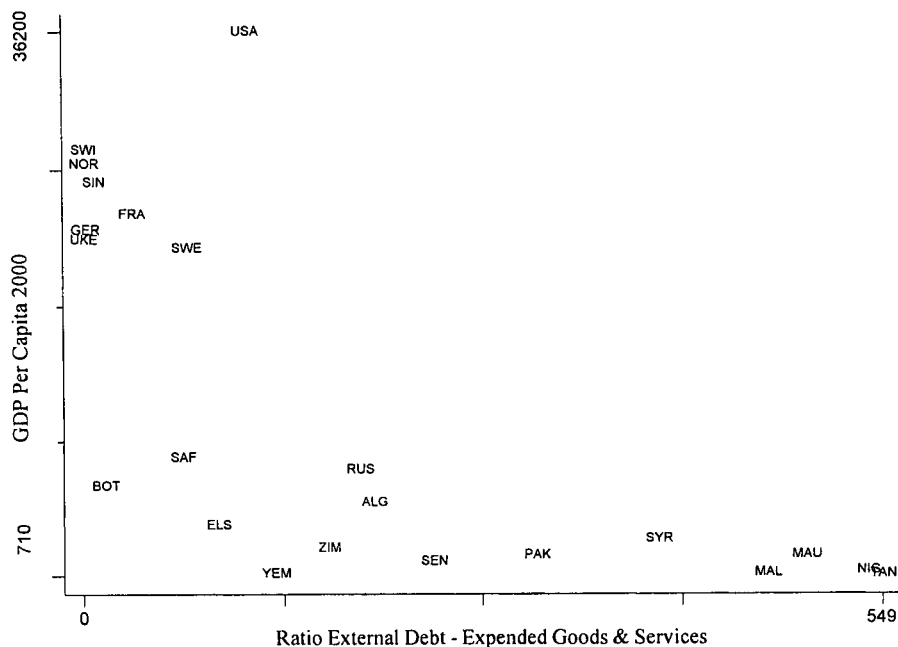
The age profile of a country is a reliable demographic indicator. If we compare along the two dimensions of age profile and HIV (Human Immunodeficiency Virus) rates, it is fairly clear that the first separates the nations into two distinct groups, while the second places the vast majority of both groups into a single low HIV rate cluster. A few of the nations with mid-high level proportions of youth are separated into a disparate third group. On some reflection we find that there are countries with aging populations that are generally rich and countries with young populations, that are typically poor, as well as a small group of countries that used to have young populations but have now lost so many young people to AIDS (Acquired Immune Deficiency Syndrome) that their populations, while still young, now on average are considerably older than they otherwise might be.[32]

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32. Since a far higher percentage of those with HIV/AIDS in Africa are under 50 than are older, and some countries have had infection rates among the young as high as 40–60% for a number of years, the demographic impact is striking. A typical calculation of the expected HIV profile showing the rapid increases before age 35 and similar declines after can be plotted online. POPULATIONS AFRICAINES ET SIDA (Jacques Vallin ed., 1994), *available at* http://sauvy.ined.fr/ popafsi/english/. A recent survey at the University of Botswana, though not to my knowledge yet published, found an HIV rate of 60% among the university community.

FIGURE 6. PERCENT UNDER FIFTEEN YEARS OF AGE VERSUS HIV RATE
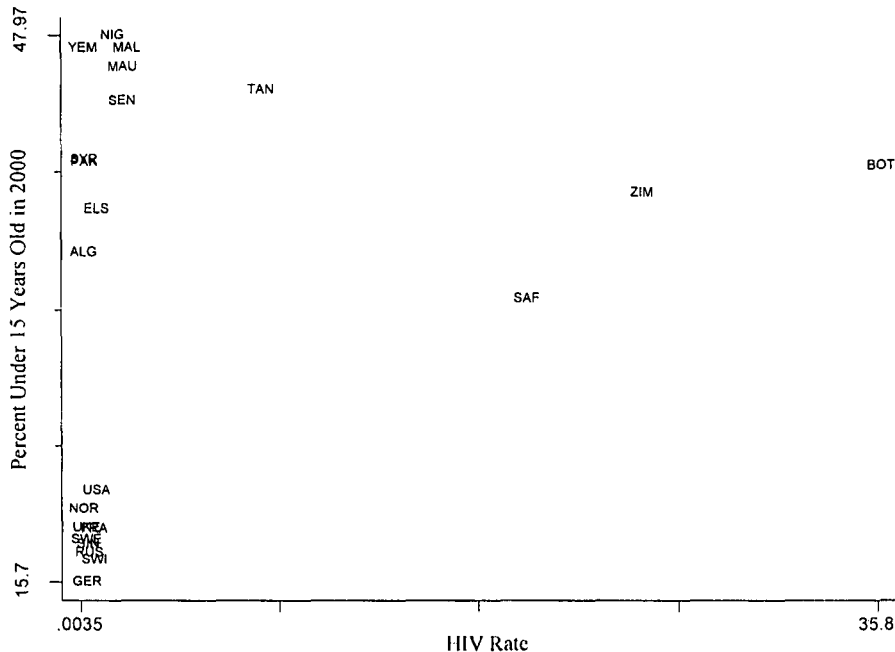
While these glimpses of the dataset offer disparate insights, they do collectively suggest an internal logic. They also do not support any claim that national level statistics are so fraught with error as to be meaningless. As the Article will demonstrate, the crime data merits a similar conclusion.

IV. COMPARISON OF THE NATIONAL CRIME STATISTICS

This section focuses on crime figures for homicide, assault and theft. Data on crimes linked to drugs are not useful because of the major differences in the social significance of drugs between rich and poor countries and the overall low significance of drugs in Africa. Sexual crimes are also not usefully compared because in many African and Middle Eastern countries they are either not common, not well reported, or not defined as crimes. The definition of a sexual crime differs too dramatically for a valid cross-cultural comparison.[33] Thus the three most useful statistics available are

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Interview with Dr. Onalenna Doo Selowane, Sociology Dept., Univ. of Botswana (January 7, 2003). Even the official rates cited in WHO statistics are more than enough to have major demographic consequences. *See* World Health Org., *HIV/AIDS, at* http://www.who.int/health-topics/hiv.htm.

33.   Rape is often not recorded in some countries to a degree that makes its underreporting in Europe or the United States seem inconsequential. Since it impacts both a

figures for homicide, assault, and theft—all of which are condemned and sanctioned in each of the countries in the data set.

The following bar chart plots the annual numbers for per capita theft and per capita total reported crime for each of the twenty-two countries. As can be gleaned from the graphic, if we set aside Zimbabwe, South Africa, and Botswana, all three with very high rates of HIV and AIDS, the most criminally inclined populations are the high income countries, with Sweden leading the pack. In the three poor African countries, HIV diagnosis is typically a death sentence and often results in desperate behavior including drunkenness, robbery and assault.

FIGURE 7. PER CAPITA THEFT AND TOTAL PER CAPITA CRIME BY COUNTRY
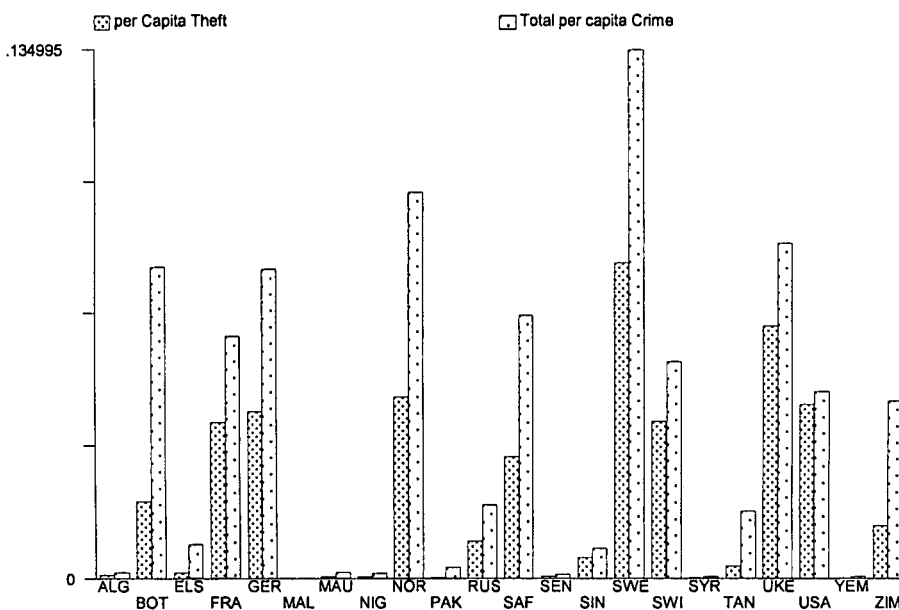

Although the numbers involved are admittedly much smaller, the figures for homicides and assaults tell a related story. The most violent nations are a mixed bag of rich countries, such as the United States and the United Kingdom, followed by France, Germany, and countries in the throws of HIV and AIDS, such as Botswana, South Africa, and Zimbabwe. South Africa, the leader in assaults, also has the legacy of Apartheid to overcome.[34] The most violent of the remainder are only half as violent as the above described group.

women's honor and that of her family, many societies will not condone official reporting of rape in most circumstances. An eloquent discussion for the case in Pakistan is Asifa Quraishi, *Her Honor: An Islamic Critique of the Rape Laws of Pakistan from a Woman-Sensitive Perspective*, 18 MICH. J. OF INT'L L. 287 (1997).

34.   Diana R. Gordon, *Crime in the New South Africa—One of Apartheid's Legacies Is a National Habit of Violence* 267 NATION 4 (Nov. 9, 1998).

FIGURE 8. PER CAPITA HOMICIDES VERSUS PER CAPITA ASSAULTS
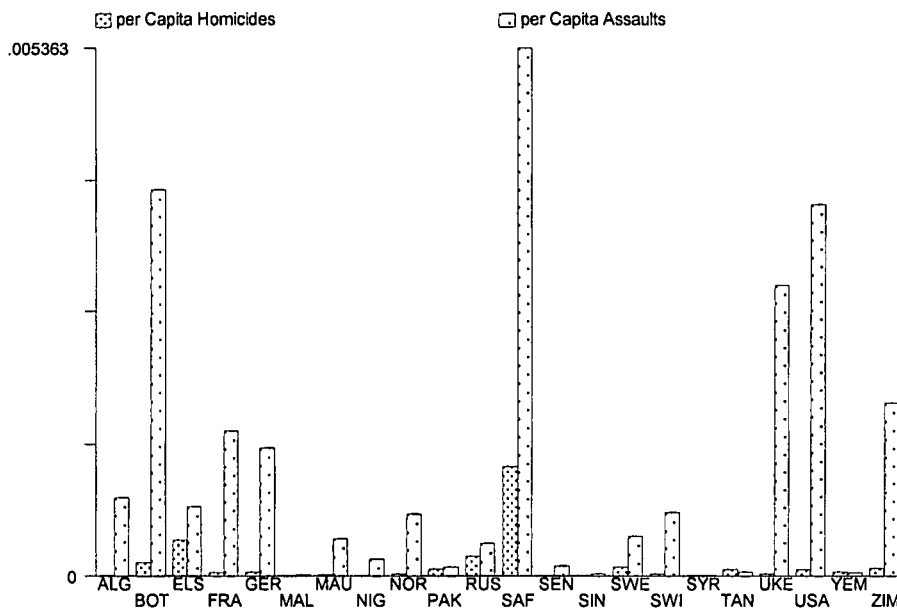
We can be more precise by ranking the nations according to wealth, rate of population growth, age of the population (using the proxy of percentage of youth), per capita homicides, assault, theft, and total crime, as in the following table. In each case, the rates go from low to high. It is worth noting the extreme similarity between the rankings of homicides and assaults, which are both violent crimes. The numeric predominance of thefts in the total of all crimes accounts for the similarity in the ranking between theft and total crime. The following table provides the actual rates and the corresponding countries ranked for each variable.

TABLE 2. RATES AND RANKINGS OF THE SEVEN VARIABLES BY
COUNTRY: RATES FOR GDP, POPULATION RATE, YOUTH,
HOMICIDE, ASSAULT, THEFT AND TOTAL CRIME IN 2000

	GDP Per Capita	Population Rate	Youth	Homicide	Assault	Theft	Total Crime
1	TAN 710	RUS -.35	GER 15.7	MAL 7.09E-06	MAL 0.0000213	MAL 0.0000213	MAL 0.0001003
2	YEM 820	SWE .02	SWI 16.97	SEN 7.38E-06	YEM 0.0002	YEM 0.0002	SYR 0.0004414
3	MAL 850	ZIM .15	RUS 17.41	SYR 9.36E-06	SYR 0.0002502	SYR 0.0002502	YEM 0.0005097

	GDP Per Capita	Population Rate	Youth	Homicide	Assault	Theft	Total Crime
4	NIG 1000	UKE .23	SIN 17.89	SIN 9.61E-06	PAK 0.0003703	PAK 0.0003703	SEN 0.0011272
5	SEN 1600	SAF .26	SWE 18.19	ALG 0.00001	MAU 0.000512	MAU 0.000512	NIG 0.0012681
6	MAU 2000	GER .27	FRA 18.8	NIG 0.000011	NIG 0.0005308	NIG 0.0005308	MAU 0.0016317
7	PAK 2000	SWI .27	UKE 18.89	MAU 0.0000122	SEN 0.0005877	SEN 0.0005877	ALG 0.001742
8	ZIM 2500	FRA .37	NOR 20	NOR 0.000023	ALG 0.000947	ALG 0.000947	PAK 0.0029324
9	SYR 3100	BOT .47	USA 21.12	SWI 0.0015797	ELS 0.0015797	ELS 0.0015797	SIN 0.0077356
10	ELS 4000	NOR .49	SAF 32.5	UKE 0.0031985	TAN 0.0031985	TAN 0.0031985	ELS 0.0087899
11	ALG 5500	USA .9	ALG 35.2	FRA 0.0053778	SIN 0.0053778	SIN 0.0053778	TAN 0.0170766
12	BOT 6600	ALG 1.71	ELS 37.68	GER 0.0094665	RUS 0.0094665	RUS 0.0094665	RUS 0.0186543
13	RUS 7700	ELS 1.85	ZIM 38.68	YEM 0.0133694	ZIM 0.0133694	ZIM 0.0133694	ZIM 0.0449123
14	SAF 8500	PAK 2.11	BOT 40.3	USA 0.0195017	BOT 0.0195017	BOT 0.0195017	USA 0.0473549
15	SWE 22200	SYR 2.54	PAK 40.47	PAK 0.030661	SAF 0.030661	SAF 0.030661	SWI 0.0549751
16	UKE 22800	TAN 2.61	SYR 40.6	TAN 0.0395761	FRA 0.0395761	FRA 0.0395761	FRA 0.0615582
17	GER 23400	NIG 2.72	SEN 44.07	ZIM 0.039773	SWI 0.039773	SWI 0.039773	SAF 0.0668597
18	FRA 24400	SEN 2.93	TAN 44.76	SWE 0.0424817	GER 0.0424817	GER 0.0424817	GER 0.0787374
19	SIN 26500	MAU 2.93	MAU 46.1	BOT 0.0441973	USA 0.0441973	USA 0.0441973	BOT 0.0794287
20	NOR 27700	MAL 2.97	MAL 47.2	RUS 0.0459671	NOR 0.0459671	NOR 0.0459671	UKE 0.0853517
21	SWI 28600	YEM 3.38	YEM 47.21	ELS 0.0641064	UKE 0.0641064	UKE 0.0641064	NOR 0.0984036
22	USA 36200	SIN 3.5	NIG 47.97	SAF 0.0803236	SWE 0.0803236	SWE 0.0803236	SWE 0.1349947

Note that the per capita GDP ranges from a low of $710 for Tanzania to a high of $36,200 for the United States, but the latter figure incorporates the high figures the United States reached during the height of the Clinton era and would be

substantially lower if figures for 2002 were available. The rate of population growth spans a low negative rate of -.35% for Russia through the generally low rates typical of the industrialized countries to the high rates of the poorer countries and the top rate of Singapore of 3.5%. In consulting this table, remember that countries occupy different ranks in different columns. For example the GDP column represents a spectrum from poor countries like Tanzania to rich countries like the United States going from one to twenty-two, while the Youth column begins with aging rich countries like Germany and proceeds on to the younger poor countries like Niger.

These seven different rankings make it clear that the ranking for theft is similar to that for adjusted per capita GDP. The higher the per capita GDP, the higher the per capita theft. This close relationship holds for total crime as well. Conversely, the lower the population growth rate, the higher each of these two crime rates are. The violent crimes, homicide and assault, do not show the same simple patterns. Though the figures are not shown in the table, assaults seem to increase in tandem with the percentage of the population that is urban, but homicide rates show no such simple relationship. The percentage of the population fourteen years of age or under is inversely related to the nonviolent crime rates, but its relationship to the violent crime rates is not clear from the tables.

V. FAILURE OF COMMON SENSE EXPLANATIONS OF CRIME RATES

Crime is so disruptive and shocking that all societies have common sense theories to explain criminality. Some have minor statistical significance (few crimes are really committed by madmen or madwomen), while others, such as failures in upbringing or acculturation, seem to explain little because they neglect to ask why such failures occur more and less frequently in different times and places. Leaving behind the small portion of the crimes committed by seriously psychologically disturbed people, the remaining bulk of crime merits specific attention not just because it is the bulk of crime, but also because it may plausibly be linked, in well-run and generally peaceful societies, with socio-economic conditions.

At first reflection, it may seem that poverty causes crime or that disparities in wealth give rise to jealousy, which in turn gives rise to crime. The data just examined certainly does not support the notion that poverty as measured by adjusted per capita GDP leads to crime, but neither does it fully support the contention that disparities in wealth are the root of crime, since such disparities are extremely high in the poorer countries in the sample.[35]

Another common sense approach focuses on the role of education—many believe that education will eradicate crime because people will know better or will be more employable and thus not need to commit crime.[36] There are those, however, who argue that modern education promotes crime in Africa because it cuts children off

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35.   Although ideal statistics are lacking, the high standard of living of elites and the abysmally low standard of living of the poor in the world's poorer nations is made clear to all on the roads and in the cities of these nations.

36.   Disrespect by the young of their elders may be part of the modern condition due to education, rapid technological change, high valuation of new technology and the rapid obsolescence of old technological knowledge.

from their traditions and devalues their elders with consequent moral deterioration among the young.[37] While this study has found fully comparable data on years of education for only fourteen of the twenty-two nations in the set, these data suggest that years of schooling are linked positively to nonviolent crime rates. Note that the wealthy countries also tend to have high levels of both education and crime. Yet major differences exist in violent crime rates in countries that do not differ substantially along this dimension. Education, like child-rearing or other forms of cultural instruction, obviously has the potential to produce law-abiding citizens, but there is a difference between theory and an empirical reality.

Human beings tend to extrapolate from a few examples to produce stereotypes. Researchers may initially hold these common sense propositions, but they can also benefit from careful testing of hypotheses.

The common belief that inordinate numbers of non-statistically based generalizations are valid is most likely rooted in a failure to distinguish logical from statistical claims. Thus, if we say that one of the defining characteristics of all mammals is that they breathe air, and someone claims that a creature that breathes water (say a fish) is a mammal, we feel confident in rejecting the claim simply because it does not have one of the key characteristics of a mammal. Logic seems to provide the answer to this apparently empirical question quite easily.[38] The situation is quite different for statistical propositions that require processing large amounts of data with complex algorithms. While quite easy on a computer, these functions are well beyond the unassisted capacity of most human brains. It is quite possible for intelligent people to maintain dogmatically that education lowers crime on the basis of a few examples assumed to be widely representative, but it is quite impossible for an unaided human to crunch a significant data set and tell how significant a multivariant statistical model will be.

Postmodern desires to empower all perspectives have their place, but dogmatic versions of post-modernism have obvious drawbacks (flat earth claims may be sociologically interesting, but airlines that wish to conserve fuel will do well to reject them). Similarly, criminologists and social scientists, who may influence government policy and the welfare of human beings, would do well to examine their hypotheses, where possible, using statistical methodologies even when relying on other principles of decision-making.

VI. THE IMPORTANCE OF FAMILY STRUCTURE AND THE COMPLEXITY OF AFRICAN FAMILY STRUCTURE

It seems plausible that family structure and functioning may have something to do with crime rates. We easily imagine idyllic families where all members have

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37.   Andargatchew Tesfaye, *Rural Urban Migration and the Problems of Crime and Delinquency, in* CRIMINOLOGY IN AFRICA, *supra* note 9, at 179–90.

38.   If the question were rephrased to suit modern biology in terms of the genetic relatedness of two species it would itself become a complex, perhaps statistical, problem no longer suitable for simple binary logic appraisal. Major revisions of the Linnaean classification system based on such analyses are ongoing in the biological sciences.

responsibilities and live well and take care of each other. Our minds easily contrast this with a dysfunctional family in which no one has time for anyone else, no one eats meals together, and children are left without guidance and exposed to the dangers of a violent and drug ridden neighborhood. Few people would deny the causal linkage between family structure and crime rates, but it is problematic to propose specific linkages on a global scale due to the major differences between family and community structures in different countries.[39]

Most obviously, families in Africa are frequently polygynous, and children of co-wives view themselves as siblings.[40] Usually a quite broad subset of relatives Americans would refer to as cousins consider themselves in Africa to be "brothers" or "sisters" with all the claims on kinship that nuclear family siblings might have in Europe or the United States. In general, families in Africa are effectively larger even when the number of children per mother is not. This makes it inappropriate to expect simple cross-cultural demographic relationships to hold. Thus, if one imagined that small family size provided children with greater attention, and conversely that large family size went with neglect and led to increased crime rates, this would not be cross-culturally testable. Working parents with only a few children in the United States might still be forced to neglect their offspring, while in Africa a single mother with many children might be highly likely to have multiple relatives to assist in child-rearing, and furthermore, the children might never feel neglected.[41]

Unemployment raises a similar issue. In Europe and the United States, unemployment rates are defined rather counter-intuitively as the number of people actively seeking employment through a variety of official channels. Thus, the statistics bear a dubious relation to the actual proportion of people who are not actively employed. In Africa, unemployment figures are even less meaningful because the norm is underemployment via a multitude of part-time livelihood strategies. Seasonality of work and extended family member livelihood strategies make simple distinctions between employed and unemployed of questionable value, as well. Furthermore, adult dependants may not be properly classified in official unemployment figures.

VII. RURAL-URBAN MIGRATION AND URBAN HOUSEHOLD STRUCTURE

A major social phenomenon in Africa has been the rapid urban growth in recent years. Many African countries have among the highest urbanization rates in the

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39.   Clearly community structure has the potential to influence crime rates as well and some work has been done in this area. *E.g.*, Marc Shaw & Antoinette Louw, *Preventing Crime in South Africa's Cities and Towns*, 24 ENV. DESIGN FOR SAFER CMTYS. (May 1998).

40.   HOUSEHOLDS: COMPARATIVE AND HISTORICAL STUDIES OF THE DOMESTIC GROUP (Robert McC. Netting et al. eds., 1984).

41.   A survey that was part of the Six Cities Project funded by the National Science Foundation (1999–2003), for which I was the principle investigator, found households ranging in size from one to forty-four and a household composition ranging from exclusively nuclear family members to large proportions of more distant relatives and smaller numbers of non-relatives (on file with Author).

world, though these rates are recent. The very high rural population fifty years ago means that African countries are either majority rural or barely majority urban—unlike Europe and the United States, which long ago became heavily urbanized. A key factor in this trend in Africa has been rural-urban migration centered around African extended family structures.[42]

The urban employed, particularly in subsaharan Africa, face a heavy burden as rural relatives come to stay with them—often indefinitely.[43] Until they begin earning income, these relatives function within the family primarily as dependents—though young female relatives may quickly make some labor contributions to the household.[44] The net result is a significant increase in the consumer to worker balance within the household. The scarcity of employment and the low returns to underemployment strategies mean that many immigrants retain dependent status for long periods. Economist Michael P. Todaro based an influential model of rural-urban migration on the notion that migrants find migration advantageous if the expected income in the urban area is greater than in the rural area.[45] The insight of this model was that "expected income" was defined as the average income if employed times the probability of employment, thus making it advantageous for many to migrate even if only a few ended up employed—given that they can survive by living with relatives and that the average urban earnings of those with income is significantly higher than the average rural income. We might modify this model slightly to include the value of urban amenities.

Many countries now track the age dependent ratio, which measures the ratio of working age dependents to the working age population. This age-dependent statistic probably measures the male employed population more accurately because a chauvinistic legacy still exists whereby housework and community work often are not seen as real work.[46] In consequence, it is hard to know whether young women doing significant amounts of household or community labor, but not yet married and without the status of housewife, will be classified as not working or working. Nevertheless, this recently available statistic is likely to be a major improvement over traditional "unemployment" statistics.

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42.   Richard U. Agesa & Sungwoong Kim, *Rural to Urban Migration as a Household Decision: Evidence from Kenya*, 5 REV. DEV. ECON. 16 (2001).

43.   Olga F. Linares, *Households Among the Diola of Senegal: Should Norms Enter by the Front or the Back Door?*, *in* HOUSEHOLDS: COMPARATIVE AND HISTORICAL STUDIES OF THE DOMESTIC GROUP, *supra* note 39, at 407, 407–55.

44.   Recent surveys in six cities document extensive contributions to household labor by young relatives but it is unclear how many would show up as employed or unemployed in national statistics of the age dependent ratio. *See supra* note 40.

45.   Michael P. Todaro, *A Model of Labor Migration and Urban Unemployment in Less Developed countries*, 59 AM. ECON. REV. 138–48 (1969).

46.   Claude Meillassoux, MAIDENS, MEAL AND MONEY: CAPITALISM AND THE DOMESTIC ECONOMY (Cambridge Univ. Press, trans., 1st ed., 1981) (1975).

VIII. SOME TENTATIVE HYPOTHESES ABOUT THE MOST CRITICAL CAUSES OF NATIONAL CRIME RATES

This Article suggests an apparent disjunction between the potential causes of violent and nonviolent crime through the graphics and tables already examined. At this point, statistical regression analysis can describe the relationship between crime rates and socio-economic indicators more rigorously. Given the obvious discrepancy between causes of violent and nonviolent crime, we look at each separately.

Beginning with assault, we might hypothesize that the per capita assault rate will rise along with the HIV rate, and will also rise as per capita GDP rises. This model would thus address both the relatively high rates of violent crime in wealthy countries and low rates in poor countries, plus the predicament of those countries battling HIV and AIDS. The results of a regression model using HIV rate and adjusted per capita GDP to explain per capita assault rate for the twenty-two countries confirms the accuracy of these hypotheses. The statistical model confirms that increases in per capita GDP and HIV rate contribute positively to the per capita assault rate. The model results[47] suggest that more than half the variation in per capita assault rates is captured by per capita GDP and the HIV rate. The model's overall significance[48] suggests a mere 3/100 of a percent probability that this relationship could occur purely by chance. The model also indicates that both variables seem to be independently significant,[49] because the results seem to have extremely small probabilities of occurring purely by chance. A similar model does not yield significant results for homicide rates, perhaps because other, yet to be identified, factors determine these rates.

For nonviolent crimes it seems appropriate to examine per capita theft rates. In this case, we might hypothesize that the proportion of dependents to workers among the adult population (the "age dependent ratio") may be relevant. More particularly, because we view this as a better measure of unemployment, we expect an increase in this ratio will increase the per capita rate of theft. By contrast and despite common sense notions that youth is associated with crime, it looks at least superficially as if those countries with high proportions of youth in the total population have low rates of theft. Thus, we might hypothesize that as the proportion of youth increases, the per capita theft rate will decrease. In contrast to the last regression model, this hypothesis assumes the per capita theft rate to be positively related to the age dependent ratio and negatively related to the proportion of youth in the population. The results of the statistical regression model confirm these hypotheses.[50] These factors account for 64% of the variability in the per capita theft rate.[51]

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47. Adjusted R-squared of 53.5%.
48. F-statistic of 13.07.
49. With t-statistics of 4.73 for per capita GDP and 3.1 for HIV rate, the model has less than 1% percent likelihood of occurring by chance.
50. F-statistic of 19.72, probability of less than 0.0001; t-statistics of 2.54 for age dependent ratio and -4.15 for proportion of youth in the population are clearly significant (0.02 or less) and of the expected sign.
51. Adjusted R-squared of 64%, compared with the 53.5% R-squared in the assault model.

Clearly, if we wish to tackle the more complex issue of the total per capita crime rate in the sample set, we might begin by combining variables from the last two models. It is unproductive to include two highly correlated variables in a regression model, because they will, mathematically speaking, split the variation each "explains" and together look insignificant.[52] Thus, because per capita GDP is high and the proportion of youth in the population is low in wealthy countries, we use only one of these variables. Youth of the population seems the more reasonable choice. Because the model for theft seems stronger than that for assault, we incorporate the age dependent ratio and youth proportion into the new model and add HIV rate from the assault model. Thus, we hypothesize a positive relationship between total crime rate and both the HIV rate and the age dependent ratio, and a negative relationship between total crime rate and the youth proportion. The appropriate regression model results confirm these hypotheses. Despite the greater complexity of the total per capita crime rate model, the three factors included account for more of the variation in the total crime rate,[53] suggesting that more than two-thirds of the variation in crime in these countries can be tied to variation in only three socio-economic variables.

It may, however, be methodologically revealing to approach the explanation of per capita crime rate in another way. We could begin by putting the adjusted per capita GDP back into the model, assuming again that relative wealth might impact dependency and correlate inversely with youth in the population. We noted earlier that high rural-urban migration may be linked to high population growth rates and increases of the proportions of adult dependents within urban areas. The causality presumably starts with the population growth rate, which itself distinguishes the countries more than per capita GDP.[54] A model using both per capita GDP and population growth rate might capture much of the same variations "explained" in the first general model. We would then expect per capita crime rates to increase with GDP and to decrease with an increase in the population growth rate, if the latter's influence is primarily to lower the age of the population and only secondarily to increase urban adult dependency rates. The results of such a regression model confirm these hypotheses.[55] It appears that this is another viable way to explain overall crime rates, but it is preferable to view the two models as simply different sets of variables serving as proxies for an underlying real relationship between crime rates and socio-economic conditions. Intuitively, the first model linking crime rates to youth, HIV rates and age dependent ratios makes clear sense. The second model, however, relying on adjusted GDP and population growth rate, seems to use proxies for the more direct causes

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52.   Or at least not significant enough at the standard 5% level (95% probability that an apparent relationship is not the result of purely random coincidence).

53.   Adjusted R-squared of 69%; F-statistic of 16.63, probability less than 0.0001; t-statistics of -4.78 for youth proportion, 4.11 for the HIV rate, and 3.15 for the age dependent ratio, all less than 0.01 probability of random chance.

54.   *See* Figure 4.

55.   The F-statistic of 21.55 (probability less than 0.0001) and t-statistics of 2.23 and -4.26 (probability 0.038 and less than 0.001) are highly significant, although the adjusted R-squared is slightly lower (66%) compared to the first general model (69%).

exposed in the first model—adult unemployment, age of the population, and the trauma of AIDS.[56]

IX. REFLECTIONS ON WHAT SUCH MODELS REALLY MEAN

Regression models are often interpreted as delineating causal relationships. However, it is often preferable in the social sciences to view them initially as diagnostic tools. Suppose there were a tendency for people who read a lot to be less easily duped. This might be because, among all those who read, a significant proportion read widely and come across swindlers in novels far more often than people typically do in real life. It would not follow then that reading a lot of chemistry will help or that reading per se makes you less gullible. The discovered statistical relationship would thus be best viewed as an aid to uncovering the underlying causality, familiarity with swindlers, rather than as a description of any causal relationship itself.

This analysis, therefore, suggests primarily that there is a high probability that some socio-economic factors impact national crime rates fairly consistently. Second, it seems highly likely that nations with high proportions of youth in their populations are not, thereby, at greater risk for crime—the opposite seems likely.[57] Third, a key factor in nonviolent crime may be the number of people of working age without gainful employment (interpreted either financially or symbolically to recognize the contribution of those who do housework). Fourth, traumatic issues like an extreme HIV and AIDS epidemic may be causally linked to increased violent crime. Obviously, socially destructive wars, dictatorship, harsh social environments, and other social catastrophes might have similar effects.

Legal scholars can benefit from a close understanding of both national and international empirical research into the causes of crime. If the United States has high juvenile crime rates linked to the drug trade, the comparative research can suggest that it is not youth per se that is to blame but perhaps instead the constellation of great economic opportunities for youth in the drug trade combined with limited alternatives and low upward mobility via traditional routes, along with massive exposure to a culture of materialism (to merely hazard a guess). Adult unemployment (disguised by standard statistics) and resultant single parent households and other factors might presumably contribute. Empirical research should be relied on to clarify the actual causes rather than allowing cultural suspicions of youth or individual morals to justify avoiding careful research or ameliorative policy.

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56.   It is worth noting that the t-statistic in the second model for per capita GDP is significant at the 0.05 level but not at the 0.01 level—a level all three variables easily attain in the first model. This would tend to support the claim that per capita GDP is a moderately successful proxy for other variables, and support the conclusion that the first model brings us closer to the underlying causes of crime rates.

57.   It may never be possible to know what proportion of this decreased risk is attributable to a lower level of criminal behavior by youth and what is due to lower criminalization of youthful infractions in some countries, but the consistency of the relationship suggests the majority of the decrease is due to lower levels of criminal behavior.

Yet this comparison suggests as well that considerable thought ought to be given to the historically disproportional criminalization of behavior in the United States (where drug laws are only a part of this trend) and the long term impacts this may have both nationally and within ethnic communities. It is by no means obvious that criminalizing increasingly larger proportions of undesirable behavior has benefits that offset its financial, psychological, and social costs. It is quite possible that this is behind the shameful position the United States holds in the forefront of the world's nations in terms of the percent of its population behind bars or with a criminal record.[58] This rush to criminalize behavior may well have less than salutary effects down the road. This is not to argue that undesirable behavior should be condoned, rather it is to suggest that there may be other ways to deal with more of it outside the justice system in the manner more typical in human societies. Again, empirical questions ought to have a significant place in the deliberations of legal scholars about what ought and should be done with the legal system. There is a place both for logical discourse, with an eye to past debate within a specific tradition of legal thought, and for discussion that avails itself of modern tools to study crime in a comparative perspective. It is, more generally, time to broadly incorporate social science findings into considerations of justice itself.

The empirical evidence that poor countries have, other things being equal, less crime per capita than rich ones and that youthful populations commit less crime per capita than older populations ought to refocus attention on socioeconomic causes and away from criminal propensities or adult prejudices. Moving toward a concern with statistical causality and tendencies is wise because these are more amenable to policy instruments. Just as public health measures are more cost effective than individual care for the ill, so policies that head off incentives for crime are more cost-effective than relying on the deterrent effect of individual sanctions. The much criticized notion that a released felon will do just fine with a long rap sheet and a few dollars in his pocket is merely one example of a "just say no" methodological individualism that is in ideological denial of the statistical character of socio-economic causality—including the influence of lengthy time in prison. We need not only individual responsibility, but also intelligent social policies benefiting from broad comparative research. This clearly mandates placing more confidence and discretion in the hands of judges and less power in the hands of prosecutors who are chained to a win-loss record and too often experience an unreasonable need to both criminalize everything and convict every suspect of something. Such pressures not only lead to innocents on death row, but also serve to mitigate against paying adequate attention to the consequences of over-criminalizing youthful infractions and inhibit the ability of families or communities to handle infractions by youth or adults in less traumatizing, and perhaps more socially beneficial, ways. The anti-intellectual "lets just hit them harder" approach is no more efficient at defeating crime than it is in defeating football teams, yet it wreaks a lot more damage in the former case than in the latter.

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58.   The International Centre for Prison Studies, in January 2003, listed the United States as having the highest rate in the world followed closely by the Russian Federation. The United States' rate of 690 per 100,000 is half again as high as that of South Africa (406). *World Prison Brief*, at http://www.kcl.ac.uk/depsta/rel/icps/worldbrief/highest_rates.html (last modified Nov. 29, 2002).

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