# Wealth Concentration Associated with Frequent Violent Crime in Diverse Communities*

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## ABSTRACT

*Frequency of violent crimes by individuals was measured in a world sample of 102 diverse communities. Violent crimes combine measures of assault and homicide. Frequent violent crimes are associated with high concentration of wealth among a minority of individuals or families. High wealth concentration combines four measures: general polygyny, use of money, gifts or exchanges accompanying marriage, and domestication of pigs or larger animals. Frequent violent crimes are correlated with high wealth concentration. Three of the four components of high wealth concentration are prevalent in modern industrialized nations. The exception is general polygyny. In cities, wealth concentration instead of large, dense, and heterogeneous population is probably the cause of frequent violent crimes. A remedy is to shift government revenue from productive activities, such as wages, sales, and the value of buildings, to owners of land and other natural resources.*

## INTRODUCTION

Violent crimes are frequent in contemporary cities. The large, dense, and heterogeneous urban population has been regarded as the cause (Wirth 1938). Many people, most of whom are strangers to each other, are crowded into a small area. Alshuwaikhat and Garba (1997) found little support for this explanation in the study of homicide rates in several cities in Saudi Arabia, the United States, and Japan.

An alternative possible explanation is that concentration of wealth among a minority of individuals or families is the urban

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condition that breeds violent crimes. Cities contain rich and poor people who live in close proximity to each other. Violent crimes are committed by poor people who resent their rich neighbors and by rich people who fear their poor neighbors. A book by Henry George (1879, 2003, 2006) predicted that 'the new barbarians' will originate in the squalid ghettos of great cities (George 2003: 538; 2006: 291).

The relationship of violent crime with wealth concentration can be tested by information on a sample of diverse communities. Ember and Ember (1992) measured frequency of warfare and related behaviors. The related behaviors include frequency of assault by individuals and frequency of homicide by individuals. The measures were applied to a world sample of 186 societies (Murdock and White 1969). The societies were selected to represent all known cultural types that have been adequately described. Each society is geographically and linguistically separated from all the others.

Several customs that indicate wealth concentration have been measured independently in the same world sample of societies. The information on each society was printed in articles in the journal *Ethnology* and reproduced in a book (Barry and Schlegel 1980). Quantitative ratings on frequency of violent behavior have been associated with a combination of four codes that indicate wealth concentration.

## METHODS

In accordance with Barry (2003, 2005), each society is described as a community because Murdock and White (1969) identified a focal community for each society. The measures of assault and homicide (Ember, C. and Ember, M. 1992) also pertain to the community. Frequency of assault and of homicide by individuals was rated on an ordinal scale of eight categories. Their article contains the scores in each community.

The measure of frequency of violence by individuals adds the two scores, resulting in an ordinal scale with 17 levels. The lowest score is 0, no homicide or assault by individuals. The highest score is 16, very high frequency of both types of violent behavior by individuals.

The correlation between the two measures is .80 for the 102 communities with sufficient information for a score on both measures. Separate variables are frequency of organized assault and organized homicide by groups. Organized violence by groups is not included in the present report because the information is available on fewer communities.

Some cultural customs associated with high frequency of violent behavior have high positive correlations with each other. It is desirable to select a group of customs that are highly correlated with frequent violent behavior but not with the other members of the group of customs. The statistical technique of partial correlation enables a quantitative measure of the association of each custom with violent behavior, independent of the association of each custom with the others that are included in the statistical analysis.

Frequent violent behavior by individuals is associated with measures of four customs, obtained from other sources and applied to the same world sample of communities. Each custom is divided into two categories, one of which is associated with violent behavior.

(1) Frequent violence is associated with general polygyny in 29 communities, defined as multiple wives for 20 % or more of husbands and measured by Murdock and Wilson (1972). The alternative category combines limited polygyny in 52 communities, defined as multiple wives for less than 20 % of husbands, monogamy in 18 communities, and polyandry in three communities.

(2) Frequent violence is associated with indigenous money, one of ten measures of cultural complexity measured by Murdock and Provost (1973). Indigenous money in 29 communities combines currency, including coins or paper, and articles of token or conventional value, including cowrie shells, wampum, and imitation tools. The alternative category in 73 communities combines barter, defined as exchange of goods, a medium of exchange in the form of domestically usable articles, such as salt, grain, livestock, and ornaments, and long use of currency of an alien people, such as colonial rulers.

(3) Frequent violence is associated with gifts or exchanges associated with marriage in 77 communities. The variable was defined by Murdock (1967) and modified by Schlegel and Eloul (1987, 1988), who added a category of indirect dowry. The types of gifts or exchanges are bride-price, token bride-price, bride ser-

vice, dowry, indirect dowry, exchange of gifts, and exchange of women. The alternative category in 25 communities is no gift associated with marriage.

(4) Frequent violence is associated with domesticated large animals in 68 communities. The variable was defined by Murdock and Morrow (1970). Large animals are pigs, sheep, goats, cattle, and other large species. The alternative category in 34 communities includes no animals or smaller species, including bees, cats, dogs, fowl, and guinea pigs.

The relationship of each of the four customs with frequency of violence was tested by Pearson correlation. An additional test of the relationship was partial correlation, controlling for the correlation of each custom with all of the three other customs. Another statistical procedure was multiple regression. The independent association of each custom with frequent violence is the T value. A T score of 1.96 or higher is required for a probability less than 5 % that the association is due to random chance. The data analyses were programmed by SPSS statistical programs (SPSS 1994).

For each of the four customs, the category associated with violence is regarded as encouraging concentration of wealth among a minority of individuals or families. Wealth is concentrated in four forms: wives, money, wedding gifts, and large domesticated animals. A measure of wealth concentration therefore is obtained by adding for the four customs a score of 1 for the category associated with frequent violence and 0 for the alternative category. Wealth concentration therefore ranges from 0 to 4.

## RESULTS

Frequency of violent behavior by individuals has a statistically significant correlation with each of the four customs listed in Table 1. The correlations are shown in the first column of numbers. Much lower correlations of the four customs with each other are demonstrated in Table 2. Two of the six correlations in Table 2 are negative although all four customs have a high positive correlation with frequent violence.

The second column of numbers in Table 1 shows the partial correlation of each custom with frequency of violence. For each custom, its correlation with frequency of violence is adjusted by the correlations of the custom with the other three customs. For

general polygyny, the partial correlation is higher than the original correlation because of a negative correlation with two of the three other customs, shown in Table 2. For gifts or exchanges accompanying marriage, the partial correlation is lower than the original correlation because of a positive correlation with each of the other three customs. For the other two customs, indigenous money and large domestic animals, the partial correlations are the same as the original correlations because of a negative correlation with one of the other three customs.

The third column of numbers in Table 1 shows the T values. They are obtained from the multiple regression that uses the partial correlations shown in the second column of numbers. The partial correlations can range from zero to one. The T values can range from zero to much higher upper limits. For general polygyny, with the highest partial correlation, the T value is 10.5 times the partial correlation. For large domestic animals, with the lowest partial correlation, the T value is 10.1 times the partial correlation.

The new measure of wealth concentration has a correlation of .54 with frequent violence. This correlation is 74 % above the highest correlation of .31 between a single custom and frequency of violence. A more accurate measure of differences among correlation coefficients is the proportion of the total variance that is attributable to the correlation, computed by the square of the correlation. The square of .54 for the correlation with the combination of four customs is .292. The square of .31 for the highest correlation with an individual custom is .096. The proportion of total variance attributable to the combination of four customs, .292, is 304 % above the highest proportion attributable to a single custom, .096.

The partial correlations shown in Table 1 are components for computing the multiple regression of the four customs as independent variables. The dependent variable is frequent violent behavior by individuals. The multiple regression is .55, slightly higher than the correlation of .54 for the single variable that combines the four independent variables. The adjusted proportion of variance explained by the multiple regression is .270. This value is lower than the square of .55, which is .303, because it is adjusted for the use of multiple independent variables in the regression.

The findings combine all six regions of the world defined by Murdock (1967). Differences among the regions are indicated by comparing the numbers of communities with the lowest score of 0

and the highest score of 16 on frequency of violent behavior, separately in each region. The names of the communities are identified by the most frequently used name of the society of which the community is a component.

The Circum-Mediterranean and Insular Pacific are the only regions containing as many communities with the highest as with the lowest frequency of violent behavior. In the Circum-Mediterranean, the score is 0 for three societies (Amhara, Ahaggaren, Lapps) and 16 for three societies (Somali, Gheg Albanians, Russians). In the Insular Pacific, the score is 0 for two societies (Orokaiva, Pentecost) and 16 for three societies (Fijians, Ifugao, Atayal).

North America and East Eurasia have the greatest preponderance of lowest over highest frequencies of violent behavior. In North America, the score is 0 for four societies (Aleut, Montagnais, Yokuts, Papago) and 16 for none of the North American societies. In East Eurasia, the score is 0 for eight societies (Toda, Burusho, Lepcha, Lakher, Semang, Nicabarese, Vedda, Japanese) and 16 for two societies (Punjabi, Burmese).

Sub-Sahara Africa and South America have less preponderance of lowest over highest frequencies of violent behavior. In Sub-Sahara Africa, the score is 0 for three societies (Kung Bushmen, Tallensi, Otoro) and 16 for no society. In South America, the score is 0 for five societies (Cuna, Haitians, Carib, Cayapa, Trumai) and 16 for two societies (Yanomamo, Yahgan).

## DISCUSSION

Four customs, general polygyny, indigenous money, gifts or exchange at marriage, and large domestic animals, each account for a very small proportion of the total variance in frequency of violent behavior by individuals. Frequent violence is correlated much more highly with the single measure of wealth concentration that combines the four customs than with any one of them.

Wealth concentration is not the only cultural condition associated with frequent violent behavior by individuals. Barry (2007) reported that the same measure of frequent violent crimes is associated with frequent corporal punishment of boys during late childhood, mother is not the principal caretaker during infancy, mother is the principal caretaker during early childhood, obedience is weakly required during middle childhood, and premarital sexual

intercourse by females is prohibited. These findings were obtained from a smaller sample of 48 communities with adequate information on all the variables.

Large industrialized nations, including Russia and the United States of America, have accumulated great wealth with the help of their large populations and many technological developments. Most of the wealth is concentrated in a small proportion of individuals and families. Violent behavior by individuals is frequent in these nations. The angry reactions by individuals are insufficiently controlled by local and national governments. Barry (2003) described various undesirable customs that are associated with multiple levels of government beyond the local community. Barry (2005) suggested that the disadvantage of homoarchical subordination of the community to higher government levels may be counteracted by the heterarchic customs of choice of kinship affiliation and selection of community leadership.

Very few of the 102 communities in the world sample are components of modern industrial nations. Most of the communities contain villages or rural peasants. Some of the communities are politically independent tribes. Nevertheless, the four customs associated with high frequency of violence may indicate general cultural conditions that are compatible with and perhaps induce this undesirable behavior. Modern industrialized nations have indigenous money, gifts associated with marriage, and large domestic animals. These three customs contribute to the concentration of wealth in a small proportion of individuals and families.

In agreement with one of the present findings, an early cross-cultural study on a sample of 42 societies (Bacon, Child, and Barry 1963) found that polygynous marriage was associated with frequent personal crime and frequent theft. Personal crime, defined as intent to injure or kill a person, includes assault and murder. Most modern industrialized nations have the custom of monogamy, which does not contribute to wealth concentration because each husband's marital wealth is limited to a single wife. Monogamy is associated with infrequent violence by individuals. Another desirable behavior associated with monogamy is democratic election of the community leader (Korotayev and Bondarenko 2000).

In modern industrialized nations, effective control of violent behavior by individuals requires undesirable suppression of individual liberty by an authoritarian government. A preferable policy

is to counteract wealth concentration. A major form of wealth concentration is ownership of the most valuable and extensive land by individuals, families, and corporations. The owners become wealthy by obtaining high rents or by selling the properties at high prices. A remedy is to increase taxes on owners of the natural resource of land. Taxes thereby can be decreased on productive activities, including wages, sales, and the value of buildings. This remedy was described in detail by Henry George (1879, 2003, 2006). It was also advocated by eminent contemporaries of Henry George, including Leo Tolstoy and Mark Twain. Barry (1999) described psychological aspects of the remedy.

## NOTE

* A prior version of this research was presented at the fourth international conference 'Hierarchy and Power in the History of Civilizations' in Moscow, Russia, on 16 June 2006.

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**Table 1**

Correlations (r), partial correlations (Pr), and T values are shown for four customs with frequent violence by individuals in a sample of 102 diverse communities

| | r | Pr | T |
|---|---|---|---|
| General Polygyny | .31** | .36*** | 3.71*** |
| Indigenous Money | .31** | .31** | 3.16** |
| Gifts at Marriage | .31** | .24* | 2.39* |
| Large Domestic Animals | .23* | .23* | 2.34* |

* $p < .05$ ** $p < .01$ *** $p < .001$

**Table 2**

Six correlations are shown between pairs of customs associated with high frequency of violence by individuals. Four customs were measured in a sample of 102 diverse communities

| | Polygyny | Money | Gifts | Animals |
|---|---|---|---|---|
| General Polygyny | – | –.06 | .11 | –.06 |
| Indigenous Money | – | – | .16 | .12 |
| Gifts at Marriage | – | – | – | .13 |
| Large Domestic Animals | – | – | – | – |