

The Presence of Fathers in Attenuating Young Male Violence: Dad as a Social Palliative

Wade C. Mackey
Bonnie Mackey

ABSTRACT. Although violent crime is typically viewed as a public safety problem, the *sequelae* of violent crime can also be viewed as a public health problem, with at least part of its roots aligned with the family. Murder, rape, and assault result in substantial societal costs as well as individual costs. It is suggested here that the prior presence of a residential and biological father inhibits violent behavior in their sons who have grown to adulthood. Data analyzed across the U.S. indicate that father absence, rather than poverty, was a strong predictor of young men's violent behavior. Predictions of violent crime rates based on the level of out-of-wedlock births from the *prior* generation were superior to predictions that were based on adult violent crime rates and levels of out-of-wedlock births from the *same* time frame. A consonant pattern was found in cross-national surveys. Accordingly, public health policies which are designed to prevent or to reduce the numbers of violent sons and the incidence of violent crimes and their *sequelae* should take into account (1) how the presence of social fathers inhibits violent behavior by their sons and (2) how

Wade C. Mackey is affiliated with the Department of Social & Behavioral Sciences, University of Arkansas at Monticello, Monticello, AR (E-mail: Waddmac@aol.com).

Bonnie Mackey is affiliated with the Department of Early Childhood Education, University of Houston-Clear Lake, Box 279, 2700 Bay Area Blvd., Houston, TX 77058 (E-mail: mackey@cl.uh.edu).

Marriage & Family Review, Vol. 35(1/2) 2003
<http://www.haworthpress.com/store/product.asp?sku=J002>
© 2003 by The Haworth Press, Inc. All rights reserved.
10.1300/J002v35n01_05

to maximize the opportunities for children to have an ongoing social father. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2003 by The Haworth Press, Inc. All rights reserved.]

KEYWORDS. Father-child relations, violent behavior, violent crime, illegitimacy, father absence, unemployment

Although violent behavior is nominally viewed as a social problem or a law enforcement problem, it can also be viewed as a public health problem which is not independent from the institution of the family. An example of the magnitude of the problem is evidence indicating that homicide in the U.S. was the tenth leading cause of death for all ages in 1996 (21,300 deaths). For the ages of 15 to 24 years, homicide was the second leading cause of death (6,500 deaths), with young males being about six times more likely than young females to be victims (U.S. Bureau of the Census, 1999). If the medical *sequelae* from two other violent crimes, forcible rape (96,000 cases in 1997) and aggravated assault (102,200 cases in 1997), are also considered, then the public health costs of violent behavior become considerable. Thus, to the extent that (1) knowledge of the bases of violent behavior is available and (2) such knowledge can be translated into prophylactics, then the incidence and costs of injuries/deaths and trauma due to violent behavior can be similarly prevented or reduced.

It is argued below that one component in the complex calculus, which leads to violent behavior, is the absence of an ongoing, social father.

FATHERLESSNESS AND VIOLENT BEHAVIOR

It is suggested that, if a responsible and continuous adult male role model (i.e., a father or father-figure) is unavailable to young boys, then youngsters in this circumstance would be more at-risk for deviant or antisocial behavior. That is, there is a tendency for children from fatherless homes to be overrepresented in categories of unwanted behavior. This tendency has been evident for decades (Adams, Milner, & Schrepf, 1984; Anderson, 1968; Bereczkei & Csanaky, 1996; Blau & Blau, 1982; Chilton & Merkle, 1972; Monahan, 1972; Mosher, 1969; Robins & Hill, 1966; Stevenson & Black, 1988), with several theoretical orientations and reviews specifying the suggested linkages (Blankenhorn, 1995; Draper & Harpending, 1982; Mischel, 1961a, 1961b; Mackey, 1985, 1996; Popenoe, 1996).

The loss of a father, however, would also mean the loss of father's income and the consequent potential for the child's lack of a father to be confounded with the child's environment of poverty (Adams, Milner, & Schrepf, 1984; Freeman, 1975; Gillespie, 1975; Smith & Krohn, 1995). Thus, two hypotheses, *inter alia*, are generally offered as routes to understand the basis of violent behavior. First, violent behavior is seen as a consequence of fatherlessness, and, second, violent behavior is viewed as a consequence of poverty. Again, although these two hypotheses certainly differ in emphasis, they are not mutually exclusive.

Four sets of data will be analyzed to test the two separate, if overlapping, hypotheses. The first set analyzes data from across the U.S. by state (plus D.C.) for the year 1993. The second set analyzes data from across the U.S. by state (plus D.C.) from a constricted time frame: 1987-1993. The third set analyzes aggregate data from the U.S. across a more extended time frame: 1975-1993. The fourth set correlates data across states from an earlier time frame (1970-1974) with data across states from a more recent time frame (1989-1993). The results from the U.S. will then be compared to data from other countries to determine (1) if the U.S. pattern represents only its own unique social structure and history or (2) if it represents a variation upon a cross-cultural theme.

Definitions and Method: U.S. Patterns

Out-of-wedlock births were used to index fatherlessness. It is important to note that divorce, as a variable, is not to be equated with out-of-wedlock births, as a variable. The two dynamics are diagnostically separable. (See Mackey & Coney [2000] for a discussion on such a separation.) Violent crime was used to index violent behavior. Male unemployment was used to index poverty. Data from the *Statistical Abstract of the United States* (U.S. Bureau of the Census, 1970-1999) were compiled for the tested years for (1) out-of-wedlock births, (2) rates of violent crime, known to police per 100,000 population, and (3) rates of male unemployment were used in computations. Note that rates of male unemployment were used rather than overall employment rates, which would include females, because males are so heavily over-represented in crimes of violence (U.S. Department of Justice, 1993; Bartol, 1995). For analyses within the U.S., the units of analysis were either by states plus D.C. within a specified year or by the aggregate U.S. across years. As will be presented in a later section, "nation" was the unit of analysis for cross-cultural analysis.

Ecological Inference. A methodological problem which this type of analysis faces is that of the relationship between aggregate data and individual data. Framed differently, aggregate data are not equipped to isolate behaviors of an

individual. Thus, inferences from an aggregate, an ecological unit, are generally inappropriate when directed at any individual. See Robinson (1950) for an early discussion of the problem, and see Borgatta and Jackson (1980), Goodman (1959), Hanushek, Jackson, and Kain (1974), King (1997), Langbein and Lichtman (1978) and Pedhazur (1982) for subsequent discussions plus partial solutions to the problem of relating aggregate data to individual behavior. Suffice it to say that the analysis below is not construed to specify how any one individual would or would not behave. The analysis below is content to attempt to discover what behavior patterns, if any, are aligned with other behavior patterns.

***Out-of-Wedlock Births vs. Male Unemployment:
A Test Across States (1993)***

Out-of-Wedlock Births and Violent Crime. In 1993, the correlation across states plus the District of Columbia between percentage of all births which were out-of-wedlock births and violent crime rates was significant ($r = .796$; $p < .001$; $n = 51$). Nearly two-thirds of the differences in violent crime rates can be attributed to differences in percentages of out-of-wedlock births ($.796^2 = .634 = 63.4\%$).

Male Unemployment and Violent Crime. In 1993, the correlation between rates of male unemployment and violent crime rates was also significant ($r = .298$; $p < .05$; 2-tailed; $n = 51$). Approximately 9% ($.298^2 = .088 = 8.8\%$) of the variance in violent crime rates can be attributed to the variance in the rates of male unemployment.

Out-of-Wedlock Births vs. Male Unemployment: Partialled Variables. Because the dependent variable (i.e., rates of violent crime) is the same for both independent variables (i.e., percentage of out-of-wedlock births and rates of male unemployment), the correlations can be partialled. Hence, rates of male unemployment were partialled from the correlation between percentage of out-of-wedlock births and rates of violent crime. The resulting correlation was significant ($r_p = .778$; $p < .001$; $n = 51$). That is, after any explanatory power of male unemployment was removed from the correlation between percentage of out-of-wedlock births and violent crime rates, the relationship between out-of-wedlock births and violent crime rates was still significant. The explained variance in violent crime rates attributed to out-of-wedlock births remained a robust 60.5% ($.778^2 = .605 = 60.5\%$).

When the percentage of out-of-wedlock births was partialled from the correlation between rates of male unemployment and rates of violent crime, the resulting correlation was not significant ($r_p = .139$ [n.s.]). Framed differently, when the explanatory power of out-of-wedlock births was removed from the correlation between male unemployment rates and rates of violent crime, there

was no longer a significant relation between rates of male unemployment and rates of violent crime. The figure of .139 would be able to explain only 2% ($.139^2 = .019 = 1.9\%$) of the differences in rates of violent crime.

Consequently, the argument that unemployment of males generates a social milieu which, in turn, generates violent behavior is difficult to sustain. The argument that varying rates of violent crime is a consequence of varying levels of out-of-wedlock births seems much more consonant with the data.

Nonetheless, it is arguable that 1993 was an unusual year and generalizations from that year to any other time frame are problematic. To address this possibility, the years 1987 to 1993 were analyzed as a single block of time.

Out-of-Wedlock Births and Violent Crime (1987-1993)

For the time interval 1987-1993, the average correlation between violent crime and out-of-wedlock births was significant ($r = .790$ [sd = .021]; $p < .001$; $n = 51$). The mean percentage of explained variance was 62.4% ($.790^2 = .624 = 62.4\%$) (see Table 1).

With rates of male unemployment partialled, the mean correlation between rates of violent crime and percentage of out-of-wedlock births was still signifi-

TABLE 1. The relationship between level of out-of-wedlock births and rates of violent crime 1987-1993.^a

Year	Correlations (r , $df = 49$)	Percentage of explained variance: (r) ²
1993	.796*	63.4%
1992	.773*	59.8%
1991	.796*	63.4%
1990	.815*	66.4%
1989	.813*	66.1%
1988	.780*	60.8%
1987	.757*	57.3%
Mean	.790*	62.4%
(sd)	.021	3.3%

* $p < .001$

^aThe level of out-of-wedlock births is defined by the percentage of all live births which are children born out of wedlock. The rates of violent crime are determined by the number of offenses known by the police per 100,000 population. The "n" is the number of states plus the District of Columbia.

cant ($r = .776, p < .001; n = 51$) with 60% ($.776^2 = .602 = 60.2\%$) of the variance being explained (see Table 2).

Male Unemployment and Violent Crime (1987-1993). For the same time interval, the average correlation between rates of violent crime and rates of male unemployment was not significant ($r = .185; [sd = .105]; n.s.; n = 51$) (see Table 2).

Synopsis. It is clear, therefore, that 1993 was not an aberrant time period. Levels of out-of-wedlock births were consistently and strongly related to rates of violent crime, whereas, rates of male unemployment were not consistently related to rates of violent crime. In fact, rates of violent crime were significantly related to rates of male unemployment during only two years of the six-year interval. In neither of these two cases did the percentage of explained variance accounted for equal more than 10% ($.305^2 = .093 = 9.3\%$).

Correlates to Violent Crime in the U.S. Across Time (1975-1993)

Taking the U.S. as a unit, from 1975 to 1993 (or 19 years or $n = 19$), the correlation between percentages of out-of-wedlock births and rates of violent crime was significant ($r_p = .949; p < .001; n = 19$). Over 90% ($.949^2 = .901 = 90.1\%$) of the variability in rates of violent crime can be explained by differential rates of out-of-wedlock births. For the same time period, the correlation between rates of male unemployment and rates of violent crime was not signif-

TABLE 2. The relationship (r_p) between level of out-of-wedlock births and rates of violent crime.

Correlated variables	Year							Mean	(sd)
	1993	1992	1991	1990	1989	1988	1987		
Correlation between out-of-wedlock births and rates of violent crime	.796**	.773***	.796***	.815***	.813**	.780**	.757**	.790	(.021)
(Correlations with rates of male unemployment partialled)	.778***	.750***	.786**	-	.809**	.778***	.756***	.776	(.021)
Correlation between rates of male unemployment and rates of violent crime	.298**	.305**	.209	-	.147	.103	.048	.185	(.100)
(Correlations with out-of-wedlock births partialled)	.139	.119	n.a.	-	n.a.	n.a.	n.a.	n.a.	

* $p < .05$; 2-tailed; ** $p < .01$; two-tailed; *** $p < .001$

icant ($r_p = .208$; n.s.). It seems clear, therefore, that the level of out-of-wedlock births is a superior predictor, over time, of rates of violent crime than is the rate of male unemployment. And, in point of fact, rates of male unemployment, over time, are not a successful predictor at all.

A Lag Between Level of Out-of-Wedlock Births and Violent Crime Rates

Approximately 30% of the individuals arrested for violent crimes are 19 years old or younger (U.S. Department of Justice, 1995). Thus, if we add 19 years to 1970, the data year for out-of-wedlock births across (available) states and D.C. ($n = 39$), we arrive at the year 1989. That is, males who were born out-of-wedlock in 1970 would be 19 years of age in 1989. If we correlate the percentage of out-of-wedlock births per state plus D.C. in 1970 to the rate of violent crime per state in 1989, the results are significant ($r = .874$; $p < .001$; $n = 39$).

In order to avoid isolating an aberrant year, the same procedure is conducted for four additional and consecutive years to have a five-year interval (1970-1974) for out-of-wedlock births and a five-year interval (1989-1993) for rates of violent crime. The average correlation for the five-year comparison was significant ($r = .882$ [s.d. = .014]; $p < .001$; $n = 39$) (see Table 3). In addition, this figure ($r = .882$) is higher ($t = 3.20$; $p < .01$; 2-tailed; $df = 36$) than the mean correlation between the percentages of out-of-wedlock births and rates of violent crime (i.e., $r = .790$) from the interval of years (1987-1993).

TABLE 3. Correlations (r_p) across states (38) and District of Columbia between percent of live births that were out-of-wedlock and rates of violent crime. Each year that depicts the percent of out-of-wedlock births (1970-1974) is nineteen years *prior* to the compared year of violent crime rates (1989-1993) (U.S. Bureau of the Census, 1972-1996).

Year of out-of-wedlock births	Year of violent crime rates	Correlation (r_p , $df = 37$)	Percentage of explained variance (r_p) ²
1974	1993	.901*	81.2%
1973	1992	.894*	79.9%
1972	1991	.871*	75.9%
1971	1990	.870*	75.7%
1970	1989	.874*	76.4%
Mean		.882*	77.8%
(sd)		.014	2.5%

* $p < .001$

In other words, it appears that rates of violent crime can be predicted by the percentage of (out-of-wedlock) infants who were born nineteen years earlier. After nineteen years, of course, these infants are no longer young children, but are perfectly capable of energetic, adult physical behaviors.

A CROSS-CULTURAL PERSPECTIVE

Arguably, this connection between unwed mothers and violent crime may be an (epi)phenomenon or quirk that is highly specific to the U.S. mega-tribe. Because of the possible idiosyncratic character of such a linkage, any assertion of unqualified generalizability from the U.S. to other communities would be an exercise in presumption. The U.S. may simply be an example, on the other hand, of a more general trend. Consequently, three analyses, similar to those used earlier, were conducted across cultures to determine whether the linkage between violent crime and births to unwed mothers was either particularistic to U.S. culture or a more general cross-cultural theme. The first such survey is restricted to Nordic countries, whereas the two additional surveys are more universal and span the globe.

Nordic Out-of-Wedlock Births and Levels of Assault

Percentages of out-of-wedlock births and rates of assault per 100,000 population for individuals 15 years or older (14 years for Norway) were available from Denmark, Finland, Norway and Sweden for the interval 1959-1990 (Nordic Statistical Secretariat, 1960-1992). [Note that all of the nations did not have figures for all of the indices. Hence, the "n"s vary slightly.] The correlations between percentage of births which were out-of-wedlock and assaults were significant for all four nations (Denmark ($r = .970$; $p < .001$; $n = 23$), Finland ($r = .851$; $p < .001$; $n = 20$), Norway ($r = .973$; $p < .001$; $n = 23$) and Sweden ($r = .945$; $p < .001$; $n = 22$). If an interval of 19 years is used to separate the level of out-of-wedlock births (a prior event) and rates of assault (a subsequent event), the correlations are still significant (the correlations range from .889 to .949; $p < .001$; $n = 13$).

Global Sample #1: Murder and Illegitimacy Across Cultures

Cross-cultural analyses are hampered by the problems of meaningful and comparable units of analysis. (See Ford [1961] and Levinson & Malone [1980] for a discussion on cultural units.) Analyses of rates of crime are often problematic because of the lack of consonance among countries in the definitions

and reporting of various crimes. However, one crime, murder, does seem to be universally accepted as a crime with reasonably concordant definitions (Archer & Gartner, 1988; Daly & Wilson, 1988), unless one muses on the high validity of the level of death as a dependent variable. Accordingly, rates of murder in the U.S. (U.S. Bureau of the Census, 1994) were correlated with illegitimacy rates in the U.S.—across the 50 states plus D.C.—and then were compared to similar figures generated by cross-cultural data (Smith-Morris, 1990; United Nations, 1992). Note that the United Nations defines illegitimacy in the following manner:

Legitimate refers to persons born of parents who were married at the time of birth in accordance with the laws of the country or area. Illegitimate refers to children of parents, who, according to national law, were not married at the time of birth, regardless of whether these children have been recognized or legitimized after birth. (United Nations, 1992)

The U.S. In 1992, the relationship across the 50 states plus D.C. between murder rates and illegitimacy rates was significant ($r = .745$; $p < .001$). As illegitimacy rates increased, so did murder rates. Over half of the variance in murder rates, 55.5%, can be attributed to differences in illegitimacy rates. Of interest is the relationship between percentage of out-of-wedlock births in 1973 to the murder rate in 1992, a correlation of .900 ($p < .001$; $n = 39$). Over 80% ($.900^2 = .810 = 81.0\%$) of the variance in the murder rates can be attributed to the variance in the percentage of out-of-wedlock births. Again, the knowledge of out-of-wedlock births (i.e., fatherlessness in 1973) ($r = .900$) was a superior marker ($t = 5.00$; $p < .001$; $df = 36$) for 1992 levels of violent crime, in this instance murder, than that of the 1992 level of fatherlessness: ($r = .745$).

Cross-Cultural Data. Usable data from U.N. sources also exists for 44 countries in which both murder rates and illegitimacy rates were reported to the satisfaction of the United Nations. The relationship was positive and significant ($r = .443$; $p < .01$; 2-tailed; $df = 42$).¹ Across cultures, as murder rates went up, so did the proportion of single-parent births. Nearly 20% ($.443^2 = .196 = 19.6\%$) of the differences in murder rates could be attributed to differences in rates of illegitimacy.

Global Sample #2. In a wider sample (which surveyed 60 nations) (INTERPOL, 1990), rates of serious assault and out-of-wedlock births were found to be related. As the percentage of all live births which were out-of-wedlock increased, so did the rates of serious assault ($r = .436$; $p < .05$; 2-tailed; $n = 38$).

Synopsis

Violent Crime and Illegitimacy Across Nations. Two *caveats* and qualifications should be noted in regards to cross-cultural comparisons.

1. Problems in the reporting of (violent) crime are legion, and
2. If the focus is cross-cultural, then the multitude of (violent) crime reporting problems become intensified.

Despite the two previous *caveats*, on the other hand, the above sources of error variance would tend to lessen or to lower, if not submerge, any index of association that was being computed. But, in spite of large amounts of noise in the system, significance was still reached and, thereby, suggests that the relationship between violent crime and rates of illegitimacy is real. That is, independent of locale, where fathers are systematically precluded or abraded from the mother-child dyad, then violent crime within these communities, as indexed by murder rates and rates of aggravated assault, is expected to be under pressures to increase.

An Argument for Causality

Although causation is primarily a philosophical concept and quite immune from proof, the argument can certainly be made that father presence inhibits—causally—violent behavioral tendencies in their sons who have grown to adulthood. Certainly, correlations from the same time frame between violent crime and fatherlessness may leave room for legitimate debate on the grounds of correlation versus causality. However, the successful prediction of violent crime rates with indices of fatherlessness nineteen years earlier presents evidence of a different order of rigor. This successful prediction, across a generation, occurred both in the U.S. as well as in all four Nordic countries which were surveyed.

Any assemblage of evidence that intends to establish causation, must, of necessity, include time separation, albeit a factor that is not sufficient. If “A” causes “B,” then “A” must occur before “B.” (See Russell [1945] and Kant [1963] for classic discussions.) And such is the case being presented here. Thus, the incidence of fatherlessness occurred nineteen years before the incidence of violent crime, and it is noted that part of the argument being made here is that father absence is neither a necessary nor a sufficient pre-condition for the violent behavior of sons. Father absence is best conceptualized as being a contributory causal variable (see Susser [1973] and Kenny [1979] for discussion), whereas male unemployment is only erratically related to violent crime.

Specifically, if the impact of fatherlessness is removed, the relationship between male unemployment and violent crime dissipates rather completely. Consequently, if poverty is adequately represented by male unemployment, poverty is not a thematic variable that generates both fatherlessness and violent crime.

SUMMARY

The goals of precisely isolating the mechanisms and what levels of potency per mechanism are beyond the reach of this study. Nonetheless, it is argued here that the ongoing presence of fathers with their sons will reduce the level or incidence of violent behavior by the younger generation when they are grown. The association is argued to be causal in character, not merely correlative. Hence, social dynamics and attitudes which maximize father presence with their (especially young) sons should result in long-term prevention of or reductions in violent behaviors by those sons who have grown to adulthood. It should be noted that the mechanisms by which the presence of a father influences the psychological and motivational hierarchy or conscience of the developing son are currently unknown. However, these mechanisms that inhibit violent behavior are important subjects of inquiry for family researchers and public health professionals.

NOTE

1. Note that the two rates—for illegitimacy [6.7 per 100 live births] and for murder [38.7 per 100,000 population]—were also available for the Philippines. However, the Philippines' murder rate of 38.7 was over 8.5 standard deviations [$sd = 4.09$] over the sample mean of 3.62. Accordingly, the Philippines were judged to be enough of an *outlier* to be excluded from the sample. If rankings were used to generate the correlation coefficient [r_s] and if the Philippines are included in the sample, then the relationship between illegitimacy and murder rates is significant ($r = .889$; $p < .01$; 2-tailed; $n = 45$). If the Philippines are not included in the sample, then the correlation, based on ranks, is still significant ($r = .896$; $p < .01$; 2-tailed; $n = 44$).

REFERENCES

- Adams, P. L., Milner, J. R. & Schrepf, N. A. (1984). *Fatherless children*. NY: Wiley.
- Anderson, R. E. (1968). Paternal deprivation and delinquency. *Archives of General Psychiatry*, 89, 641-649.
- Archer, D. & Gartner, R. (1988). Homicide in 110 nations. In L. I. Shelly (ed.), *Readings in comparative criminology* (pp. 78-100). Carbondale, IL: Southern Illinois University Press.

- Bartol, C. R. (1995). *Criminal behavior: A psychosocial approach* (4th ed.). Englewood Cliffs, NJ: Prentice Hall.
- Berezkei, T. & Csanaky, A. (1996). Evolutionary pathway of child development: Lifestyles of adolescents and adults from father-absent families. *Human Nature*, 7, 257-280.
- Blankenhorn, D. (1995). *Fatherless America: Confronting our most urgent social problem*. NY: Basic Books.
- Blau, J. R. & Blau, P. M. (1982). The cost of inequality: Metropolitan structure and violent crime. *American Sociological Review*, 47, 114-129.
- Borgatta, E. F. & Jackson, D. J. (Eds.) (1980). *Aggregate data: Analysis and interpretation*. Beverly Hills, CA: Sage.
- Chilton, R. J. & Merkle, G. E. (1972). Family disruption, delinquent conduct, and the effects of sub-classification. *American Sociological Review*, 37, 93-99.
- Daly, M. & Wilson, M. I. (1988). *Homicide*. NY: Aldine de Gruyter.
- Draper, P. & Harpending, H. (1982). Father absence and reproductive strategy: An evolutionary perspective. *Journal of Anthropological Research*, 38, 255-272.
- Ford, C. S. (1961). *Readings in cross-cultural methodology* (pp. 130-165). New Haven, CT: HRAF Press.
- Freeman, R. B. (1975). Crime and unemployment. In J. Q. Wilson (Ed.), *Crime and public policy* (pp. 89-106). San Francisco: Institute for Contemporary Studies.
- Gillespie, R. W. (1975). *Economic factors in crime and delinquency: A critical review of the empirical evidence*. Washington, D.C.: National Institute of Law Enforcement and Criminal Justice.
- Goodman, L. (1959). Some alternatives to ecological correlation. *American Journal of Sociology*, 64, 610-625.
- Hanushek, E. A., Jackson, J. E., & Kain, J. F. (1974). Model specification, use of aggregate data, and the ecological correlation fallacy. *Political Methodology*, 1, 87-106.
- INTERPOL (1990). *International crime statistics, 1989-1990*. Lyons, France: Interpol General Secretariat.
- Kant, I. (1963). *Critique of pure reason* (translated by N. Kemp Smith). London: Macmillan.
- Kenny, D. A. (1979). *Correlation and causality*. NY: John Wiley.
- King, G. A. (1997). *A solution to the ecological inference problem: Reconstructing individual behavior from aggregate data*. Princeton, NJ: Princeton University Press.
- Langbein, L. I. & Lichtman, A. J. (1978). *Ecological inference*. Beverly Hills, CA: Sage.
- Levinson, D. & Malone, M. J. (1980). *Toward explaining human culture: A critical review of the findings of worldwide cross-cultural research*. New Haven, CT: HRAF Press.
- Mackey, W. C. (1985). *Fathering behaviors: The dynamics of the man-child bond*. NY: Plenum.
- Mackey, W. C. (1996). *The American father: Biocultural and developmental aspects*. NY: Plenum.
- Mackey, W. C. & Coney, N. S. (2000). The enigma of father presence in relationship to son's violence and daughter's mating strategies: Empiricism in search of a theory. *The Journal of Men's Studies*, 8, 349-373.

- Mischel, W. (1961a). Father-absence and delay of gratification: Cross-cultural comparisons. *Journal of Abnormal and Social Psychology*, 62, 116-124.
- Mischel, W. (1961b). Preference for delayed reinforcement and social responsibility. *Journal of Abnormal and Social Psychology*, 62, 1-7.
- Monahan, T. P. (1972). Family status and the delinquent child: A reappraisal and some new findings. *Social Forces*, 35, 250-258.
- Mosher, L. R. (1969). Father absence and antisocial behavior in Negro and White males. *Acta Paedopsychiatrica*, 36, 186-202.
- Nordic Statistical Secretariat (Ed.). (1960-1992). *Yearbook of Nordic Statistics* (vol. 1-31). Copenhagen: Nordic Council.
- Pedhazur, E. J. (1982). *Multiple regression in behavioral research* (2nd ed.). NY: Holt, Rinehart & Winston.
- Popenoe, D. (1996). *Life without father: Compelling new evidence that fatherhood and marriage are indispensable for the good of children and society*. NY: The Free Press.
- Robins, L. N. & Hill, S. Y. (1966). Assessing the contributions of family structure, class, and peer groups to juvenile delinquency. *Journal of Criminal Law, Criminology and Police Science*, 57, 325-334.
- Robinson, W. W. (1950). Ecological correlations and the behavior of individuals. *American Sociological Review*, 60, 640-654.
- Russell, B. (1945). *A history of Western philosophy*. NY: Simon & Schuster.
- Smith, C. & Krohn, M. D. (1995). Delinquency and family life among male adolescents: The role of ethnicity. *Journal of Youth and Adolescence*, 24, 69-93.
- Smith-Morris, M. (Ed.) (1990). *The economist book of vital world statistics*. NY: Times Books.
- Stevenson, M. R. & Black, K. N. (1988). Paternal absence and sex-role development: A meta-analysis. *Child Development*, 59, 793-814.
- Susser, M. (1973). *Causal thinking in the health sciences: Concepts and strategies of epidemiology*. NY: Oxford University Press.
- United Nations. (1992). *Demographic yearbook*. NY: United Nations.
- U.S. Bureau of the Census. (1970-1999). *Statistical Abstract of the United States: 1970-1999* (98th-127th eds.). Washington, D.C.: U.S. Government Printing Office.
- U.S. Department of Justice. (1993). *Uniform Crime Reports*. Washington, D.C.: U.S. Government Printing Office.
- U.S. Department of Justice. (1995). *Uniform Crime Reports*. Washington, D.C.: U.S. Government Printing Office.
- Wilson, J. Q. & Herrnstein, R. (1985). *Crime and human nature*. New York: Simon & Schuster.

Copyright of *Marriage & Family Review* is the property of Haworth Press and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.