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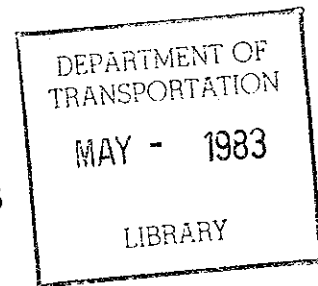


Effects of Automobile Accidents Upon American Families

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16. Abstract <p>Long term effects of traffic accidents upon nine families in which one or more members were badly injured or killed are described in detail. Information was collected through open-ended interviews with the victims, or in the event of death, with the decedents' closest of kin. Also interviewed in some cases were other relatives, friends, neighbors, medical personnel, lawyers, and social workers who helped the victims and their families after the accident.</p> <p>In some families financial costs paled in comparison to the victims' continuing pain, disability, and psychological stress and other family members' emotional strain and added burdens of care. In others, economic hardship blighted the victims' convalescence and rehabilitation and deepened the entire family's misery. In all families, the quality of life deteriorated markedly for at least a year, and in some, accident-related problems have persisted for much longer periods and may affect succeeding generations.</p> <p>Social costs of serious accidents are far-reaching. Healthy, productive individuals are lost or reduced to dependence upon others. Relatives, friends, neighbors, and many professionals divert energy from more constructive tasks to remedial and maintenance efforts. Time-consuming litigation stemming from motor vehicle accidents clogs the courts and often produces unsatisfactory results.</p>					
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EXECUTIVE SUMMARY

This report supplies information about the human and social costs of automobile accidents to families in which one or more members have been severely injured or killed. Past research has emphasized the economic costs of auto accidents in terms of money and time loss for victims, their immediate families, and the national economy. The social, psychological, and emotional effects have rarely been investigated. Traffic accident victims, their families, and others who have helped them through their crises are the only people who have actually experienced or witnessed the consequences of such traumas. Their perceptions and insights are a vital source of information for the formulation of public policy.

Nine separate families involved in different automobile accidents were studied. In-depth ethnographic interviews were conducted with seriously injured victims, or in the event of death, with surviving relatives of the decedent. In some cases other family members, friends, neighbors, medical personnel, lawyers, and social workers also were interviewed.

Each case is summarized briefly below. Each case also is depicted more fully in Part II of the report.

(1) Goodman family: Emma Goodman, a divorced mother of four, was killed when her car was hit head on by a van trying to pass another vehicle on a foggy winter night in 1978. Her two daughters, both in their late teens, lived with their boyfriends in their mother's house for six months until the estate was settled. One, Jan Cornet, married her boyfriend and had a daughter when she was eighteen. The other sister moved to California, and they have lost contact. The victim's two sons, aged twelve and fourteen, went to live with their father. The boys had to transfer to inner city schools and move to a new neighborhood. They went from straight "A" students to juvenile delinquents within two years. Both began to use drugs extensively; both got into trouble with school and police authorities; and both dropped out of high school. The father decided he could not handle them and moved to Florida. One boy found a distant aunt to live with for six months until he could join the army. The other was in the county children's home for over a year. The lives of all four children, and especially the futures of the two boys, were severely disrupted.

(2) Lambert family: Thomas Lambert, a nineteen-year-old youth, was hurled from the back seat of a Volkswagen through its roof when the driver missed a curve on an August night in 1971. In a coma for four months, the young man had total amnesia when he regained consciousness. He had to learn how to speak, attend to his personal hygiene, read, and write all over again. Today, ten years later, he is virtually paralyzed on his right side and ambulates with a pronged cane, walker, or in his wheelchair. Still unable to remember his past, he nevertheless has made a remarkable recovery. He finds meaning in his life by counseling closed-head injury patients and their relatives at the center where he was rehabilitated. After watching over him and succoring him for years, his parents reluctantly moved to another state when his father accepted a job promotion. His oldest sister quit college to help out during the first year after her brother's accident. His parents and some of his brothers have difficulty accepting his changed condition and mourn the disappearance of the healthy, strapping person he was before his accident.

(3) Walters and Stokes family: Three adults sustained broken bones and other severe injuries when a man driving under the influence of intoxicating liquor crashed head on into their stationwagon one bright January afternoon in 1980. Three young children in the vehicle escaped with superficial cuts and bruises. Cheryl Walters, the pregnant woman driving the stationwagon, miscarried her five-month-old fetus as a consequence of the accident. She also endured physical injuries which incapacitated her for several months after her discharge from the hospital. Her brother, Keith Stokes, received multiple glass cuts and mild kidney damage. His wife, Estelle, suffered a traumatic dislocation of the hip and sharp blows to her legs. She now faces removal of her knee bones and thus permanent disability. All victims fortunately were given practical aid and emotional support during their hospitalization and subsequent convalescence at home by a large network of kin who live nearby and were available and willing to help on a rotating basis. While the victims recovered and grieved the stillborn baby, they had to deal with court hearings at which the offending driver plea-bargained, received a suspended sentence, a \$100 fine, and responsibility for \$150 court costs. Moreover, he was driving again soon after the accident. The two civil lawsuits against him will not be settled for years and have caused a slight rift between the brother and sister who were hurt in the accident.

(4) Smith family: Sue Smith, now a young woman of twenty-nine, received injuries to her head, multiple fractures to her pelvis and limbs, and was in a coma for over a month from her accident of 1979. She had many operations before she could attempt to return to work two years later. During her recovery she was extremely sensitive, often depressed, and her self-confidence was undermined by her memory problems and continuing disabilities. Her left leg is one and a half inches shorter than her right leg, and she still faces future surgery. Her husband did most of the housework and cared for her while she recuperated. Though their relationship still is strong, the accident and its aftermath caused them some strain and many adjustments. Her mother, who lives in another city, took five weeks off from work while her daughter was in the hospital and near death. In this case, not only the family but also the neighborhood felt the repercussions of the accident. Neighbors were hurt and experienced conflict when the accident victim accused several of them of rejecting her because of her handicaps, and formerly close friendships were shattered.

(5) Brown family: In 1976 Kay Brown, then a thirty-seven-year-old mother of three, was waiting at a red light when a car struck her from behind. She did not realize she was seriously injured at the time, but in ensuing years has had a number of major operations that have left her in constant pain, unable to do most of her work or engage in many of her former activities. She has become bitter and angry and fears the return of paralysis and more operations. Her children have had to do most of the housework, and increased strain between family members has resulted. The husband avoids the family tension by staying away from home, and his ailing wife fears divorce.

(6) Brody family: Rosa Brody received multiple leg fractures and shoulder injuries when a car in which she was a passenger slid on ice and slammed into a tree on a murky January night in 1959. Her convalescence took several years, during which her mother gave up her job as a cleaning woman to care for her. Rosa immigrated to metropolitan Okera from Panama as a seven-year-old child with her mother and younger sister. Now forty-five, Rosa has been un-

able to walk without prosthetic devices ever since her accident, and she spends most of her waking life in a wheelchair. In 1980 she earned a B.A. at Okera City University. She now must vacate her subsidized university apartment, which is fitted for a person in a wheelchair, because she has graduated. Conscientious, skilled, and willing to work, Ms. Brody has no immediate prospects of employment. She eeks out a frugal existence on social security and welfare payments.

(7) Steckman family: Viv Steckman was a thirty-two-year-old mother of a teenage son when she received a whiplash injury from a rear-end collision in 1979. Several days later she experienced pain and eventually paralysis; she subsequently had two back operations. Her activities are greatly limited, and she feels constant pain and frustration because of her handicaps. Her bitterness and depression led to violence with her live-in boyfriend and the breakup of their nine-year relationship. Her teenage son has followed his stepfather's lead in judging her as lazy, not disabled. Thus Ms. Steckman has experienced not only physical stress and disability, but complete family disruption, rejection, and loneliness as a result of her accident. She has no job, and her financial position is precarious.

(8) Blair family: In a crash caused by a high speed police chase of another car in September 1977, Howard Blair, aged forty, received severe head injuries from which he never will completely recover. His personality and behavior have changed drastically. He is now often verbally abusive, occasionally violent, and cannot function normally in society. His wife, Helen, suffered a crushed pelvis, myriad cuts, and burns to her eyes in this accident. She still has chronic aches and pains and on many days can perform only at a reduced capacity. In addition, she must cope with her husband's changed personality. The Blair children, who were not in their parents' accident, nevertheless have been deeply affected by the ensuing emotional turmoil and gloomy domestic situation at home. The eldest daughter, Arlene, felt rejected by her father, who irrationally feared that she carried germs from her job in a nursing home. Their nineteen-year-old son, Todd, felt he had to continue to live at home to protect his mother during her three-year convalescence. Dawn, their teenage daughter, escapes the depressing atmosphere at home whenever possible, often skips school, and dreams of an early marriage. A large financial settlement this family won in court has brought them new affluence but does not assuage their daily misery.

(9) Kuhn family: On a mild weekday in March 1975, eleven-year-old Harold Kuhn was killed by a hit-and-run driver on a quiet residential street corner just a few blocks from his home. His mother still grieves his death openly, but his father has not been able to share his deeply felt bereavement with surviving members of his family for the past six years. As a result, he has isolated himself from them and is less communicative with his wife about his feelings than before. He spends more evenings drinking at the bar, as he once said, to help him sleep at night. One of the Kuhns' three remaining sons threw a firebomb through the window of the house of the subsequently-identified man who drove the car that killed his brother. The boy committed a string of misdemeanors before he finally settled down. The whole family still cannot come to grips with the sudden and incomprehensible loss of a beloved member.

In each case sketched above, the effects of the automobile accident clearly extended beyond the specific persons killed or injured. Other family members

experienced strain, worry, and changing family dynamics, and they expended a great deal of time and energy coping with their crises. The quality of their lives deteriorated for at least a year or two, and in some cases, the disruptions in people's lives will continue until the day of death. Medical treatment and legal ramifications will take years for completion, while feelings of bitterness, loss, and living with handicapping conditions may remain unresolved for even longer periods.

All aspects of family life were affected by the accidents. Financial problems were caused or exacerbated in some cases. Economic class before the accident, insurance coverage, and lawsuit settlements influenced income levels afterwards. Future employment for seriously disabled victims is doubtful, and many families thereby will suffer added financial hardships. The burdens of caring for a badly injured accident victim fall heavily upon the shoulders of healthy adults within the immediate family, so their employability also is affected. When no other relatives are available to give relief to the primary care-giver, resentment over the loss of precious freedoms intensifies, and emotional tensions within the nuclear family consequently deepen. Isolated nuclear families do not fare as well in such crisis situations as families enmeshed in extended kinship networks. One-parent families are even more fragile than nuclear families unless supported by an extensive network of friends. Personal adjustments within the immediate family to the aftermath of an auto accident can be thwarted or facilitated by the interaction of three major factors: the status of the victim(s) within the family, the types and severity of the injuries, and whether domestic roles are flexible or rigidly set. Physical injuries which obviously are disabling are more readily accepted by family members than those which are not clearly disabling. Spinal injuries often are especially difficult to assess. If physical disabilities of a spouse interfere with the performance of usual domestic responsibilities, the conjugal relationship may be strained, unless someone else is willing to assume them. This is most noticeable when the accident victim is a wife/mother. Some victims interviewed voiced a fear of divorce or separation from their mate, because they felt their uninjured partner resented the extra work and emotional stress. Physical pain and disability frequently generate feelings of powerlessness, depression, and hostility, which may be directed at spouses or other family members. If a victim's injuries result in a profound personality change and impaired mental abilities, family members must cope with a transformed person and restructure their attitudes and behavior accordingly. Children in the victims' families sometimes reacted to their own grief, confusion, and frustration by acting up at school and in the neighborhood.

The social costs of traffic accidents spread outside the family into the wider community. Friends and neighbors of the victims also are affected. If they help extensively, their own family members begin to feel neglected. Yet such help as meal preparation, provision of transportation, and lending a sympathetic ear often are urgently needed. Medical professionals, lawyers, and social and psychological counselors spend varying proportions of their time assisting traffic accident victims and their families. The services rendered are sometimes very beneficial, but often are inadequate in the opinions of both the recipients and the providers.

The findings in this report suggest that the human and social costs of automobile accidents cannot be measured simply in terms of dollars and cents

or time lost. Costs also include psychological and emotional repercussions upon the victims and their kin. In all cases the stress produced by the accident resulted in notable changes in family relationships and a sharp decline in the quality of life for the individuals concerned. Reduced life satisfaction has been temporary for some but will be permanent for others. So often low level, seemingly minor injuries become persistent physical disturbances, which cause a deterioration of overall health and deepening depression. Furthermore, the aftermath of an accident produces a constantly shifting domestic situation which requires ongoing adjustments by all family members.

PART I

INTRODUCTION

The purpose of this research is to gain information about the human and social costs of automobile accidents for families in which one or more members have been seriously injured or killed. Most previous research into the effects of auto accidents has focused on economic costs in terms of money and time loss for the victim, their immediate families, and the national economy.¹ Some studies have even utilized dollars and cents as a convenient measure for expressing the value of human life, pain, suffering, or human impairment. According to Ashford, et al.:

A major reason to question the validity of analytic attempts to value life is that they do not consider human life except in economic terms. That fails to consider the value placed on human life by our religious beliefs and cultural heritage. Valuation attempts that focus on considerations such as loss of earnings due to premature death fail to capture the fundamental sense of life for, say, someone who is receiving welfare assistance and not earning an income. A value must be attached to human life that reflects how a 'good' culture values life in order that it and its people survive.²

Others have also questioned the appropriateness of setting monetary values to obviously nonmarket aspects of life.³ In an article concerning cost-benefit analysis and the cost-effectiveness of safety standards, O'Neill and Kelley state:

because of the major conceptual and methodological difficulties in the valuation of life and limb, cost-benefit studies will be appropriate only in the evaluation of designs not primarily intended to save lives and reduce injuries--that is, vehicle designs to reduce property damage.⁴

¹Barbara Moyer Faigin, "1975 Societal Costs of Motor Vehicle Accidents," U.S. Department of Transportation, 1975; Joseph C. Marsh, Richard J. Kaplan, and Susan M. Kornfield, "Financial Consequences of Injuries in Automotive Accidents," Highway Safety Research Institute Bulletin, 9 (1978), 1-4.

²Nicholas A. Ashford, et al., Benefits of Environmental, Health, and Safety Regulation. Prepared for the Committee on Governmental Affairs, U.S. Senate, by the Center for Policy Alternatives at the Massachusetts Institute of Technology, U.S. Government Printing Office, 1980.

³See Steven Kelman, "Cost Benefit Analysis: An Ethical Critique," Regulation, AEI Journal on Government and Society (January-February 1981), 33-40.

⁴Brian O'Neill and A. B. Kelley, "Costs, Benefits, Effectiveness and Safety: Setting the Record Straight," Society of Automotive Engineers, Inc., 740988, 1974.

Thus, for anyone truly interested in the total societal costs of automobile accidents, qualitative investigation of the social, psychological, and emotional effects of the accident is also necessary.

Many allied health professionals, especially family practitioners, have attempted to analyze the changes and problems generated by various types of family crisis. Family stress studies have tended to concentrate on specific variables such as war, unemployment, or general illness, injury, or death not necessarily associated with automobile accidents.⁵ Although some of the individuals studied may have received their injuries from automobile collisions, the effects of vehicle-caused injuries or death have not been the focus of their studies,⁶ and their research has been little utilized by policymakers in this area. Several researchers have dealt with the stress and family interactions that occur when a child is chronically ill or handicapped.⁷ Their studies reveal that great suffering, guilt, depression, and hostility are often present in parents and siblings as well as the disabled child. Cleveland, in a study of families where a child had suffered a spinal cord injury, found post-injury changes in family task allocation, communication patterns, affection, and power structure.⁸ Other researchers have studied the impact of adult

⁵For examples and discussion, see Martha Cleveland, "Family Adaptation to Traumatic Spinal Cord Injury: Response to Crisis," Family Relations, 29 (1980), 558-566; E. James Anthony, "Impact of Mental and Physical Illness on Family Life," American Journal of Psychiatry, 127 (1970), 138-146; and H. I. McCubbin, "Integrating Coping Behavior in Family Stress Theory," Journal of Marriage and the Family, 41 (1979), 237-244.

⁶Lorrie Rubin, Family Reactions to a Child's Death, Unpublished Master's Thesis, The University of North Carolina-Chapel Hill, 1980.

⁷E. J. Anthony, and C. Koupernick, "Child in His Family--Impact of Disease and Death," in International Association for Child Psychiatry and Allied Professions, Yearbook, Vol. II, John Wiley and Sons, 1973; William R. Dunlap and J. Selwyn Hollinsworth, "How Does a Handicapped Child Affect the Family? Implications for Practitioners," Family Coordinator, 26 (1977), 286-293; William N. Friedrich, "Ameliorating the Psychological Impact of Chronic Physical Disease on the Child and Family," Journal of Pediatric Psychology, 2 (1977), 26-31; Abram Kanof, B. Kutner, and Norman Gordon, "The Impact of Infantile Amaurotic Familial Idiocy (Tay-Sachs Disease) on the Family," Pediatrics, 29 (1962), 37-45; Evan T. Peterson, "The Impact of Adolescent Illness on Parental Relationships," Journal of Health and Social Behavior, 13 (1972), 429-437; and G. Travis, Chronic Illness in Children: Its Impact on Child and Family, Stanford University Press, 1976.

⁸Cleveland, op. cit.

disability on family members.⁹ Substantial increased marital conflict apparently results from a spouse's chronic illness, and children often develop behavioral and adjustment problems at home and at school as a result of a parent's serious disability. None of these studies attempts to measure monetary costs, for the inherent nature of the situation makes such analysis meaningless; the research is valuable in that it demonstrates the nonquantifiable nature of illness and injury and their effects on family members.

Little has been done to investigate the human and social costs of automobile accidents, which cause thousands of deaths and disabilities every year. As mentioned, investigators of societal costs from vehicle accidents have primarily measured wages lost, medical costs, and property damage. Among the few exceptions have been Foekler, et al. in their study of the social and psychological problems of drivers involved in fatal accidents, and Calloway and Drucker, who in a pilot study explored the social effects and psychological stresses caused by auto accident injuries to victims and their families.¹⁰

In the present report, each of the nine cases reveals severe consequences in the emotional, psychological, and social aspects of life for the principal victims and their families. These consequences are largely noneconomic, nonquantifiable, and even intangible--this does not mean they are not real. For many families involved in auto accidents, transformations in the quality of life are long-lasting and often permanent. Only qualitative in-depth analysis can disclose the extent of the stress and anxiety, the alterations in life satisfaction, goal adjustments, and changes in family relationships that affect not only the injured or killed persons, but those close to them as well.

Traffic accident victims, their families, and others who helped them through their crises are the only people who actually have experienced or witnessed the consequences of such traumas. Their perceptions and insights are a vital source of information for the formulation of public policy.

⁹E. James Anthony, "The Mutative Impact on Family Life of Serious Mental and Physical Illness in a Parent," Canadian Psychiatric Association Journal, 14 (1969), 433-453; Geoffrey Gibson and Edward G. Ludwig, "Family Structure in a Disabled Population," Journal of Marriage and the Family, 30 (1968), 55-63; P. Graham and S. George, "Children's Response to Parental Illness: Individual Differences," Journal of Psychosomatic Research, 16 (1972), 251-255; John Hiltbourne, "On Disabling the Normal: The Implications of Physical Disability for Other People," British Journal of Social Work, 3 (1973), 497-507; G. P. Koocher, "Listen to the Children--A Study of the Impact on Mental Health of Children of a Parent's Catastrophic Illness." Book Review in Journal of Child Psychology and Psychiatric and Allied Disciplines, 19 (1978), 407; and Yen Peterson, "The Impact of Physical Disability on Marital Adjustment: A Literature Review," Family Coordinator, 28 (1979), 47-51.

¹⁰Merle Foekler, et al., "Vehicle Drivers and Fatal Accidents," Suicide and Life-Threatening Behavior, 8 (1978), 174-182; Donald Calloway and Charles Drucker, Social Consequences of Accidents, U.S. Department of Transportation, 1979.

Below is an explanation of the methodology used in this study. Summaries of the nine cases follow. Then predominant patterns that emerge from the cases are discussed and the significant conclusions stated. The case studies are developed in depth in Part II, where the effects of accidents are explored in detail. Part III includes the bibliography and appendices.

METHODOLOGY

The authors investigated the social and human costs of automobile accidents upon nine urban families of different ethnicities and income levels in a mid-western city which we will call Okera. In-depth ethnographic interviews were conducted with seriously injured accident victims, or in the event of death, with surviving relatives of the deceased. (See interview schedule in Appendix A.) In many cases, interviews were also conducted with friends, neighbors, other relatives, medical personnel, lawyers, and social workers who had worked with the families interviewed.

Respondents for the study were secured through newspaper ads, personal contacts and through contact with social agencies such as handicapped student organizations. The respondents chosen for the sample were those who best met the criteria for ethnic and income-level diversity.

Immediately prior to the interview, the project was explained to each informant, who was then given an opportunity to ask questions. Interview respondents were also asked to sign a notice of informed consent (see Appendix B). The notice included permission to contact designated close family members and others who had worked with the family after the accident. In some cases, only the principal victim or survivor could be interviewed; in others, as many as seven additional persons provided information. The names and places used in this report are fictional, but all other information is factual.

The ethnographic interview was our primary instrument of inquiry. In this type of interview, the respondent does not fill out a printed questionnaire. Rather, the interviewer, guided by a formal schedule, steers the conversation gently to acquire the necessary information and always allows the respondent to expound on and even introduce topics for discourse. Informants thereby are encouraged to speak of events and feelings which they consider important and relevant. Thus, their perceptions of the world and their circumstances are revealed, rather than the researcher's preconceptions about what is significant in their lives. Data collection by means of the ethnographic interview is more time consuming than by means of the traditional sociological survey with a standardized questionnaire designed for statistical purposes. Interview times for our study ranged from a half hour with neighbors to as much as four or five hours with some of the principal victims. Ethnographic interviews provide a qualitative dimension and immediacy which quantitative data alone lack, while surveys map the distribution of objective features of the social landscape which a small number of case studies cannot by themselves disclose. Both approaches are complementary.¹¹

¹¹James P. Spradley, The Ethnographic Interview, Holt, Rinehart and Winston, 1979; Pertti Pelto and Gretel H. Pelto, Anthropological Research: The Structure of Inquiry, 2nd Edition, Cambridge University Press, 1978.

Information was gathered on the circumstances of the accident, the type and extent of injuries, the victims' ages, status and so on within the family, the stage of the family cycle, religious and ethnic background, family income before and after the accident, available sources of support and the effectiveness of that support, changes in family dynamics, and the perceptions of the family members themselves on their problems, needs, and successes. The interviews were taped and transcribed in their entirety. We are extremely grateful to our respondents who so willingly discussed their problems and feelings. This research would have been completely impossible without their frank and open cooperation.

In addition to the interview itself, observations and field notes were made on the neighborhood setting, the home and its furnishings, and the use of space within the house. Thus, impressions gathered concerning the general atmosphere of the home and the socioeconomic status of the family could be correlated with information garnered from the interview itself.

Because of the small number of cases, no claim is made for representation of any population. However, each case study discloses some of the possible stresses endured by families involved in automobile accidents. The dynamic interplay of accident consequences with family circumstances and structure produce unique outcomes in each situation. Taken together, the nine cases present a range of effects which vividly demonstrate many of the social and psychological costs of automobile accidents to families in the United States.

CASE SUMMARIES

The abstracts of the cases provided below are the same as those which appear in the Executive Summary. The chart which follows the abstracts offers a quick survey of each case for purposes of comparison.

1. GOODMAN FAMILY:

Emma Goodman, a divorced mother of four, was killed when her car was hit head on by a van trying to pass another vehicle on a foggy winter night in 1978. Her two daughters, both in their late teens, lived with their boyfriends in their mother's house for six months until the estate was settled. One, Jan Cornet, married her boyfriend and had a daughter when she was eighteen. The other sister has moved to California, and they have lost contact. The victim's two sons, aged twelve and fourteen, went to live with their father. The boys had to transfer to inner city schools and move to a new neighborhood. They went from straight "A" students to juvenile delinquents within two years. Both began to use drugs extensively; both got into trouble with school and police authorities, and both dropped out of high school by the tenth grade. The father decided he could not handle them and moved to Florida. One boy found a distant aunt to live with for six months until he could join the army. The other was in the county children's home for over a year. The lives of all four children, and especially the futures of the two boys, were severely disrupted.

2. LAMBERT FAMILY:

Thomas Lambert, a nineteen-year-old youth, was hurled from the back seat of a Volkswagen through its roof when the driver missed a curve on an August night in 1971. In a coma for four months, the young man had total amnesia when he regained consciousness. He had to learn how to speak, attend to his personal hygiene, read, and write all over again. Today, ten years later, he is virtually paralyzed on his right side and ambulates with a pronged cane, walker, or in his wheelchair. Still unable to remember his past, he nevertheless has made a remarkable recovery. He finds meaning in his life by counseling closed-head injury patients and their relatives at the center where he was rehabilitated. After watching over him and succoring him for years, his parents reluctantly moved to another state when his father accepted a job promotion. His oldest sister quit college to help out during the first year after her brother's accident. His parents and some of his brothers have difficulty accepting his changed condition and mourn the disappearance of the healthy, strapping person he was before his accident.

3. WALTERS AND STOKES FAMILY:

Three adults sustained broken bones and other severe injuries when a man driving under the influence of intoxicating liquor crashed head-on into their stationwagon one bright January afternoon in 1980. The three young children in the vehicle escaped with superficial cuts and bruises. Cheryl Walters, the pregnant woman driving the stationwagon, miscarried her five-month-old fetus as a consequence of the accident. She also endured physical injuries which incapacitated her for several months after her discharge from the hospital. Her brother, Keith Stokes, received multiple glass cuts and mild kidney damage. His wife, Estelle, suffered a traumatic dislocation of the hip and sharp blows to her legs. She now faces removal of her knee bones and thus permanent disability. All victims fortunately were given practical aid and emotional support during their hospitalization and subsequent convalescence at home by a large network of kin who live nearby and were available and willing to help on a rotating basis. While the victims recovered and grieved the stillborn baby, they had to deal with court hearings at which the offending driver plea-bargained, received a suspended sentence, a \$100 fine, and responsibility for \$150 court costs. Moreover, he was driving again soon after the accident. The two civil lawsuits against him will not be settled for years and have caused a slight rift between the brother and sister who were hurt in the accident.

4. SMITH FAMILY:

Sue Smith, now a young woman of twenty-nine, received injuries to her head, multiple fractures to her pelvis and limbs, and was in a coma for over a month from her accident in 1979. She had many operations before she could attempt to return to work two years later. During her recovery she was extremely sensitive, often depressed, and her self-confidence was undermined by her memory problems and continuing disabilities. Her left leg is one and a half inches shorter than her right leg, and she still faces future surgery. Her husband did most of the housework and cared for her while she recuperated.

Though their relationship still is strong, the accident and its aftermath caused them some strain and many adjustments. Her mother, who lives in another city, took five weeks off from work while her daughter was in the hospital and near death. In this case, not only the family but also the neighborhood felt the repercussions of the accident. Neighbors were hurt and experienced conflict when the accident victim accused several of them of rejecting her because of her handicaps, and formerly close friendships were shattered.

5. BROWN FAMILY:

In 1976 Kay Brown, then a thirty-seven-year-old mother of three, was waiting at a red light when a car struck her from behind. She did not realize she was seriously injured at the time, but in ensuing years has had a number of major operations that have left her in constant pain, unable to do most of her work or engage in many of her former activities. She has become bitter and angry and fears the return of paralysis and more operations. Her children have had to do most of the housework, and increased strain between family members has resulted. The husband avoids the family tension by staying away from home, and his ailing wife fears divorce.

6. BRODY FAMILY:

Rosa Brody received multiple leg fractures and shoulder injuries when a car in which she was a passenger slid on ice and slammed into a tree on a murky January night in 1959. Her convalescence took several years, during which her mother gave up her job as a cleaning woman to care for her. Rosa immigrated to metropolitan Okera from Panama as a seven-year-old child with her mother and younger sister. Now forty-five, Rosa has been unable to walk without prosthetic devices ever since her accident, and she spends most of her waking life in a wheelchair. In 1980 she earned a B.A. at Okera City University. She now must vacate her subsidized university apartment, which is fitted for a person in a wheelchair, because she has graduated. Conscientious, skilled, and willing to work, Ms. Brody has no immediate prospects of employment. She eeks out a frugal existence on social security and welfare payments.

7. STECKMAN FAMILY:

Viv Steckman was a thirty-two-year-old mother of a teenage son when she received a whiplash injury from a rear-end collision in 1979. Several days later she experienced pain and eventually paralysis; she subsequently had two back operations. Her activities are greatly limited, and she feels constant pain and frustration because of her handicaps. Her bitterness and depression led to violence with her live-in boyfriend and the break up of their nine-year relationship. Her teenage son has followed his stepfather's lead in judging her as lazy, not disabled. Thus Ms. Steckman has experienced not only physical stress and disability, but complete family disruption, rejection, and loneliness as a result of her accident. She has no job, and her financial position is precarious.

8. BLAIR FAMILY:

In a crash caused by a high speed police chase of another car in September of 1977, Howard Blair, aged forty, received severe head injuries from which he never will completely recover. His personality and behavior have changed drastically. He is now often verbally abusive, occasionally violent, and cannot function normally in society. His wife, Helen, suffered a crushed pelvis, myriad cuts, and burns to her eyes in this accident. She still has chronic aches and pains and on many days can perform only at a reduced capacity. In addition, she must cope with her husband's changed personality. The Blair children, who were not in their parents' accident, nevertheless have been deeply affected by the ensuing emotional turmoil and gloomy domestic situation at home. The eldest daughter, Arlene, felt rejected by her father, who irrationally feared she carried germs from her job in a nursing home. Their nineteen-year-old son, Todd, felt he had to continue to live at home to protect his mother during her three-year convalescence. Dawn, their teenage daughter, escapes the depressing atmosphere at home whenever possible, often skips school, and dreams of an early marriage. A large financial settlement this family won in court has brought them new affluence but does not assuage their daily misery.

9. KUHN FAMILY:

On a mild weekday in March 1975, eleven-year-old Harold Kuhn was killed by a hit-and-run driver on a quiet residential street corner just a few blocks from his home. His mother still grieves his death openly, but his father has not been able to share his deeply-felt bereavement with the surviving members of his family for the past six years. As a result, he has isolated himself from them and is less communicative with his wife about his feelings than before. He spends more evenings drinking at the bar, as he once said, to help him sleep at night. One of the Kuhn's three remaining sons threw a firebomb through the window of the house of the subsequently-identified man who drove the car that killed his brother. The boy committed a string of misdemeanors before he finally settled down. The whole family still cannot come to grips with the sudden and incomprehensible loss of a beloved member.

DISCUSSION

In each case considered above, the effects of the auto accident clearly extended beyond the actual persons killed or injured. Other family members experienced emotional strain, worry, and a change in family dynamics, and they expended a great deal of time and energy dealing with their crises. The quality of their lives deteriorated for at least a year or two, and in some cases, the disruptions in people's lives will continue until the day of death. Medical treatment and legal ramifications take years for completion, while bitterness, feelings of loss, and living with handicapping conditions remain unresolved for even longer periods.

Family Economics and the Quality of Life:

Financial problems were caused or exacerbated by the accident in some

SUMMARY OF CASES

Family # 1	Family # 2	Family # 3 (3 injured)			Family # 4	Family # 5	Family # 6	Family # 7	Family # 8 (2 injured)		Family # 9
1978	1971	1980			1979	1976	1959	1979	1977		1975
Characteristics of victim-time of accident: Age Sex Marital status Occupation/Income Ethnicity/religion	19 M Single Student Irish-Amer., Catholic	Driver 34 F Married Homemaker Canadian-American, Episcopalian	Her Brother 29 M Married Assembly-line \$15,000 Anglo, Episcopalian	His Wife 33 F Married Secretary \$10-15,000 Mixed European ancestry, Methodist	26 F Married Computer sales rep. \$16-18,000 Irish-Amer. Catholic background	37 F Married Homemaker/part-time child care Mixed European ancestry, Jehovah's Witness family	22 F Single Receptionist \$4-6000 Mixed European ancestry, Catholic	32 F Divorced Homemaker European ancestry, Jewish	40 M Married Salesman Mixed European ancestry, Protestant	41 F Married Bank teller Anglo-Lebanese, Baptist	11 M Mixed European ancestry, Catholic
Family Characteristics at time of accident: Type of family No. of children Sex, age of children	Nuclear 9 Sis-21 Victim-19 Bro-18 Bro-17 Bro-16 Bro-15 Bro-14 Bro-13 Sis-6 Father: corporation management	Nuclear 2 Son-5 Dau-3 Husband: accountant \$18-22,000	Nuclear 1 Son-5	Husband/wife 0 Husband: sales rep. \$35,000 last year	Nuclear 3 Son-20 Dau-18 Dau-12	Matrifocal 2 Sis-20	Matrifocal 1 Son-15	Nuclear 3 Dau-21 Son-19 Dau-13	Nuclear 4 Son Son Son Victim-11 Father: technician \$20,000 Mother: clerk \$5-6000	Death Crushed pelvis, severe cuts, bruises, eyes burned, ribs, humerus, broken nose, facial bones fractured	Death Less than a day
Injuries sustained	Closed head injury, torn shoulder muscles	Miscarried fetus, broken jaw, severe cuts, bruises	Deep gashes, temporary kidney damage	Dislocation of hip, severe cuts, bruises	Closed head injury, radial nerve injury, fractured pelvis, humerus, separation of clavicle	Whiplash/spinal and abdominal injury	Multiple fractures to leg bones, torn shoulder muscles	Whiplash/spinal injury	Closed head injury, torn brachial plexus, broken ribs, humerus, and clavicle fractured	Crushed pelvis, severe cuts, bruises, eyes burned, facial bones fractured	Death
Time in hospital: After accident	One year Rehab. Inst.	Nine days	Four days	Three weeks	Six weeks 4-future arthroplasty	0 6	One month 2	0 2 operations Rehab. Inst.	Four months 2	One month 2	Less than a day
No. of subsequent hospitalizations	1	1	1	1	1	0	2	0	2	2	2
Present physical disabilities	Memory loss, atrophied right side,	Weak, unsteady legs	Few	Knee problem	Cannot abduct legs, left leg is 1 1/2 in. shorter than right, some memory loss	Injury to spine	Legs non-functional, weakness in arms	Injury to spine	Memory loss, atrophied right side, personality change great	Headaches, tiredness, blood clotting	Chronic, sometimes severe
Complaint of pain	Moderate	Occasional	Little	Moderate, knees "burn"	Occasional minor pain	Chronic	Moderate	Chronic	Moderate	Chronic, sometimes severe	Chronic, sometimes severe

	1	2	3	4	5	6	7	8	9
Present curtailment of activities	Must use cane, walker, or wheelchair. Drives with special car.	Curtailment of housework, recreational activities	Minimal	Minimal	Some curtailment of athletic, household activities	Considerable curtailment of household, social activities	Must use walker or wheelchair	Considerable curtailment of household, athletic activities	Severe impairment of ability to keep house
Financial consequences									
Accident-related costs	Insurance covered all but minor bills, which were paid by estate	Parent's insurance adequate	Adequate insurance coverage	Adequate insurance coverage	Adequate insurance coverage	Insurance pays all but about \$500 per year in medical costs	Insurance, welfare fund- ing adequate for medical bills	Insurance covered medical costs	Adequate insurance, large court settlement
Impairment of earning ability	Substantial impairment	Yes	None	None	Has returned to work, but cannot travel as before	Yes	Employment possible, but hard to attack due to handicaps	Yes	Total impairment
Psychological and social consequences.									
To victim	Determined to be as independent as possible, to help others with similar injuries	Grief over loss of fetus + curtailment of activities	Anger toward offending driver	Minimal	Determination some emotional stress over others' perceptions of her disability	Depression, bitterness, loss of self-esteem, anger, fear of future	Reconciliation to ability, determination to achieve independence. Faith deepened	Depression, loneliness, bitterness, loss of self-esteem, fear of future	Depression, anger, hopelessness mixed with determination
To other family members	Daughters lived with boy friends in mother's home until estate settled. Sons went to live with father, began to use drugs, dropped out of school, one in county children's home	Grief, worry, occasional confusion, impatience	Worry, concern	Worry, concern	Fear, worry on part of mother and husband	Worry, concern, some fear of new complications, some being resentment, guilt	Mother worried about daughter's well-being, some being	Frustration, anger, resentment	Children: grief, worry, anger, resentment
Providers of support: Relatives	One relative took in older son until he was old enough to join army	Parents, in-laws, husband, wife helped extensively	Parents, in-laws, other relatives helped out	Parents, in-laws, other relatives helped out	Mother took six weeks off work to be with daughter, husband did much housework	Children took over housework.	Mother gave intensive aid	Step-father helped	Sister helped
Friends/neighbors	Neighbors helped	Some provided meals and emotional support	Some friends, neighbors provided food and emotional support	Some friends, neighbors provided food and emotional support	Several neighbors, friends provided meals & transportation, support	Many	Many	Friends provide much emotional support	Many friends provided intensive support of all kinds
Professional: medical	At hospital	Many	Yes	Yes	Family friend	Many	Many	Many	Many
Legal	Hired lawyer	Family friend	Hired lawyer	Hired lawyer	Family friend	Hired lawyer	Rehab. Inst.	Hired lawyer	Hired lawyer
Other	Therapists, social workers	Minister	Minister	Minister	Social worker	Social workers	Rehab. Inst.	Ministers, psychological counselors	Ministers, psychological counselors
Other changes in family relationships	Family members somewhat isolated from each other	Greater closeness between husband-wife, both sets of parents	Greater closeness between husband-wife, both sets of parents	Greater closeness between husband-wife, both sets of parents	Wife more dependent on husband, feels closer to him	Husband-wife not as close between daughter, mother over dau. conflict	Some strain mother over independence	Son alienated from mother, boy-friend has left	Reduced communication with father-head, daughters alienated, son has had responsibility

cases. Economic class before the accident influenced income levels afterwards. In only two cases (Blair and Lambert) did a legal settlement ensure freedom from financial worries in the future. But money cannot solve all problems. The severity of Mr. Blair's physical injuries, his personality change, and his loss of job, self-confidence, and self-esteem have irrevocably blighted the quality of life in the Blair household. Helen Blair still suffers physical pain from her injuries of three years ago. She has been forced to assume leadership and decision-making roles within the family under the very eyes of her husband; yet she tries to be discreet, because she still cares for him. Thus, the marital relationship is tense, and the old companionship is gone. Both daughters are alienated from their parents' situation. Howard Blair has virtually repudiated his older daughter, who lives with her husband thousands of miles away and was unable to leave her family to be with him during his convalescence. The younger girl earnestly wishes to get away from the stress and sadness of her parents' household. Although she eventually will build an independent life for herself, the family cohesiveness which provided her girlhood security has been destroyed. Todd Blair has grown close to his mother, yet both he and she wonder when he will be able to find a permanent job, marry, and start a family of his own. The beautiful house and latest model cars now available to the Blairs as a result of their financial awards do not eliminate or compensate much for the permanent physical injuries, heightened psychological tensions, and changed family relationships caused by their accident.

For those families (Smith, Walters and Stokes) where the husband's income was at a middle-class level, and the medical and accident insurance policies gave adequate coverage, little financial cost was experienced. In the working-class household of the Browns, Mrs. Brown's complete inability to work has deleted a needed income for the family. For Viv Steckman, the accident and her handicaps caused the break up with her boyfriend, and she is without funds of her own unless her lawsuit is settled. Rosa Brody, an intelligent and conscientious woman, finds job opportunities for someone in a wheelchair almost non-existent and living on public assistance difficult. She may live at a bare subsistence level for the rest of her life.

Family Size and Support Networks:

Isolated nuclear families do not have a sufficient pool of potential helpers when one or more members is seriously incapacitated. The burdens of care fall heavily upon the shoulders of the most qualified adults. No other relatives are available to offer consistent relief for the primary care-giver, who may be torn between uncomplaining performance of extra responsibilities and resentment over the loss of precious freedoms. Emotional tensions within the nuclear family thereby deepen. Mr. and Mrs. Blair were both seriously injured in their accident, but Mrs. Blair recovered sufficiently to look after her more incapacitated husband. Yet, she has little respite from her increased duties, even with the support of her mature son. Young and adolescent children whose father and/or mother are disabled are deprived of their usual parental care and suffer from unmet needs. Older children may be pressured into supportive roles before they have achieved maturity and independence, as exemplified in the Blair and Brown cases. Mrs. Brown's oldest daughter did the housework and tended her mother for several years. She also gave up plans for college and, though now married, still goes to her mother's home once a week to help

out. Her younger sister now is expected to take over household tasks. The Smiths have no children to worry about or to receive assistance from; they just have each other. Their relatives are few and live in distant places. Sue Smith's mother flew in from another city to be with her daughter in the hospital, taking a five-week leave of absence from her job. Bob Smith took several days off from his job to care for his wife when she came home from the hospital, but he could not afford to stay away from work until she became self-sufficient again; they had to rely on neighbors to help out.

One-parent families are even more fragile than nuclear families unless supported by an extensive network of friends and relatives. The matrifocal Goodman family simply dissolved upon the death of the mother. None of the children were helped substantially by their natural father, and the two boys drifted into serious trouble. Mrs. Brody, on the other hand, fortunately had many skillful and helpful friends and knowledge of how to utilize service agencies to provide good care for her invalid daughter for many years. She orchestrated all their activities, could get relief for herself when necessary, and gave her daughter a stimulating array of personalities to react to and enjoy. However, most Americans, and particularly middle-class Americans, prefer to rely on kin rather than on friends for sustained and systematic aid in caring for disabled family members. What friends do to help is always appreciated but cannot be taken for granted. The help of friends usually stirs a greater sense of obligation in the recipient than the help of relatives.

A cooperating, expanded kindred whose component nuclear families live close to one another can form an efficient and effective network of mutual support whenever one or more members are incapacitated. In the Walters-Stokes kindred, three adults--Cheryl Walters, her brother Keith Stokes, and his wife Estelle--were injured badly in their automobile accident. The parents of all the victims, Cheryl's husband, his parents, and his brother's family shared the practical tasks of caring for the victims' young children while their parents were hospitalized and later recovering at home, cooking meals and keeping house for the injured persons, and driving them to different doctors for countless appointments, to lawyers' offices, and to court. The victims' kin also gave plenty of emotional support. Thus, no single relative had to do everything all the time to help out. Indeed, Cheryl's husband missed only a week from work because of the accident, because he knew she was in good hands while he was away from home. All the relatives assisted as they could and relieved one another, so that their everyday lives, though assuredly interrupted temporarily and sometimes hectic, have not been profoundly and permanently disrupted.

Injuries, Family Roles, and Intra-Family Relationships:

Problems of adjustment within the immediate family were aggravated or ameliorated by the interaction of three major factors: the status of the victim(s) within the family, the types and severity of the injuries, and whether domestic roles were flexible or rigidly set. Peterson argues that physical impairments which are fairly obvious or totally disabling often cause less family tensions than those which are not clearly disabling.¹²

¹²Peterson, op. cit.

We also found that uninjured family members were sometimes less tolerant when disabilities were not obvious, as in the two cases where the accident victims sustained back injuries. Ms. Steckman's son doubts her incapacity and considers her lazy because she does not do the housework and cooking. Some of Mrs. Brown's children express puzzlement that just a little bump from another car could cause such pain and inability to carry out normal household duties. If the physical disabilities of a marital partner interfere with the performance of usual domestic responsibilities, the conjugal relationship may be strained unless someone else can assume them. This is most noticeable when the accident victim is the wife/mother. Thus, Mrs. Brown's daughter became the family housekeeper and cook; her husband did little work inside the home before, and he does little now. Keith Stokes hired two girls to do housecleaning and washing while his wife was hospitalized and later convalescing at home. He did help her manage her bath and put on her clothing after she came home. Cheryl Walter's mother, not her husband, temporarily kept house, cooked, and watched the children while Cheryl was recuperating at home, so Hugh could return speedily to his job. On the other hand, Mr. Smith is not dogmatic about sex roles in marriage, and he was willing to assume most of his wife's duties during her recovery period. Ms. Steckman's boyfriend also performed household tasks until their relationship disintegrated. Nevertheless, in both of these cases, the added responsibilities caused some tension. Some victims voiced a fear of divorce or separation because their spouse or mate was probably fed up with their continual complaints of pain and need for reassurance. In the Steckman case, this has already happened. In a few cases, friends thought a split was inevitable, because they felt the uninjured conjugal partner was bound to resent the extra work and emotional stress. The great hostility and depression often generated by physical pain, feelings of powerlessness, and social isolation were sometimes directed at spouses or other family members. Yet shared suffering drew other couples closer together, as in the cases of the Walters and Stokes.

When the victim's injuries resulted in profound personality changes and impaired mental abilities, family members had to cope with a transformed person and restructure their attitudes and behavior accordingly. Patrick Lambert still is in limbo between regarding his brother, Thomas, as he once was and as he is now. The Blair children were faced with a virtual stranger as their father after his accident. Today they comprehend intellectually why he acts as he does, but they still have trouble tolerating some of his behavior emotionally. Mrs. Blair no longer can look up to the man to whom she is married, and she is uncomfortable in her role of actual head of their household, a role her husband so ably played before their accident.

The sudden and accidental death of a healthy child can be more devastating to parents than the expected death of an ailing child after a terminal illness. In the latter event, parents may begin to grieve prior to the child's death and thereby have time to adjust to it beforehand.¹³ Cheryl and Hugh Walters were profoundly saddened by her miscarriage of her five-month fetus. Mr. and Mrs. Kuhn were totally unprepared for their son's calamitous death.

¹³See Rubin, *op. cit.*; Walter Tietz, et al., "Family Sequelae After a Child's Death Due to Cancer," *American Journal of Psychotherapy*, XXXI (1977), 417-425.

Reluctant to share bereavement with his wife, Otto Kuhn has withdrawn from her and others with his unresolved feelings. In consequence, open communication of feelings within the marriage has been eroded. However, the surviving Kuhn children, now young men, have been able to mourn their lost brother together as well as with their mother.

In all of our cases, the victims and uninjured family members still are experiencing slight to major problems adjusting to their altered roles. Attempts to restructure family relationships in order to accommodate either the gap left by a death or the needs of a disabled member often are uncoordinated and conflicting. This impedes individual adjustments to the tribulations the whole family is suffering.

Relationships with Friends and Neighbors:

The social costs of automobile accidents spread outside the family into the wider community. In some of our cases, seemingly trivial daily events disclosed the complex and subtle impact of the accident upon neighbors and friends. Helen Blair's friends rotated tasks such as meal preparation and transportation equitably among themselves, and they rallied behind her unflaggingly. Often, however, offering aid infringed upon the donor's own time and home responsibilities. Ms. Steckman, for example, needed a neighbor's help to find her lost dog. In Mrs. Smith's case, many neighborhood women cooperated in driving her mother to the hospital, taking Mrs. Smith to physical therapy treatments, and making meals. Unfortunately, tension developed as a result of divergent views about the assistance and concern of a former close friend; it culminated in a broken friendship, hard feelings, and general neighborhood uproar.

The quality of life among helping friends sometimes declined briefly. One of Mrs. Smith's neighbors and one of Mrs. Blair's friends reported that members of their own family began to complain that they were being neglected. Friends and neighbors of the Kuhns cooked meals and watched over the family for several weeks after Harold's death. One couple with six young children stayed with the Kuhns every evening for six weeks, often getting home so late that their own children were already in bed. No one remained with these children, who were on their own for the duration. It is not clear whether this experience spurred their self-reliance or deprived them of a fair measure of parental care.

Children of the victims' families sometimes reacted to their own sorrow, confusion, and anger by releasing it outside the family. One of the Kuhn boys caused property damage to the house of the neighbor who drove the car that took his brother's life and later committed a string of misdemeanors before he finally shaped up. The two Goodman boys began to use drugs, skip school, and one eventually ended up at the county children's home after his mother's death. Other children were fearful and anxious about the family situation and vented their turbulent emotions through disruptive behavior or withdrawal in the classroom.

Community Services:

Many specialists spend varying proportions of their work time assisting

traffic accident victims and their families, yet the services rendered are sometimes inadequate, superficial, and ineffective in the opinions of both the recipients and the providers. Some families, however, were greatly helped through their crises by various professionals.

1. Medical: The accident victims and surviving relatives we interviewed occasionally inveighed against, but more often praised, individual doctors and other medical personnel. The Walters were repelled by the perfunctory and insensitive attitude of the male doctor who induced the natural abortion of Cheryl's already-dead fetus. Thomas Lambert felt one nurses' aide was woefully inadequate. Mrs. Brown felt she was not given sufficient information concerning her operations both before and after they were performed. On the whole, however, most people were very satisfied with the quality of their medical care. Common gripes were (1) the delay caused by the necessity of producing health insurance credentials at the hospital admittance desk prior to the commencement of diagnosis and treatment of injured or dying persons, (2) the typically terse and uninformative hospital notification of the admission of injured accident victims to their relatives, and (3) the time and money lost in trips to diverse specialists with offices in scattered locations.

2. Legal: Perhaps the greatest dissatisfactions our respondents expressed were with the legal system and the laws surrounding traffic offenses. Our respondents were not displeased with their own lawyers. However, the length of time required to settle their lawsuits, postponed hearings resulting from defendants' lawyers' legitimate stalling tactics, plea bargaining, the ineffective punishment of traffic safety violators, and the indifference of some judges are deeply frustrating to innocent auto accident victims and their families. Attitudes toward the police vary. The Blairs were astonished and utterly disgusted with the cover up and denial of guilt for their accident by the city police department and by the officer involved in the "hot pursuit" that caused it. Yet the Kuhns, Walters, and Stokes commended the sympathetic officers who arrested the drivers that caused their accidents, appeared as witnesses in court against these drivers, and with them rued the clemency of the courts toward intoxicated drivers who perpetuated motor vehicle accidents.

Except for Rosa Brody and Thomas Lambert, our respondents all expressed anger towards the drivers who caused the deaths and injuries that so profoundly changed their lives. They are outraged that people with a history of drunken driving offenses are not kept off the road until they are rehabilitated. Viv Steckman complained that young drivers receive licenses without sufficient training. Helen Blair and Jan Cornet feel that all drivers' licenses are issued too carelessly. Mrs. Blair can hardly believe that her husband was able to renew his driver's license without special testing, in view of his closed-head injury and general impulsiveness. She worries that he will inadvertently cause an accident if she does not accompany him while he is driving.

3. Social and Psychological Counseling: The accidents evoked complex and often uncontrollable emotions in those who were injured or who lost loved ones--anger, depression, sadness, listlessness, and frustration.

Yet only Thomas Lambert, Rosa Brody, and Sue Smith received expert professional counseling from psychologists or social workers through the hospitals where they were treated. Unfortunately, Howard Blair was granted only the most superficial therapy from social workers, and Helen Blair neither sought nor received therapy for herself until recently. Cheryl Walters went to her minister for counseling. The remaining victims and surviving relatives of those who were killed coped alone or with the help of a few friends. Moreover, members of each victim's immediate family also fended for themselves. It did not occur to them to seek professional counseling; some of them implicitly feel that to do so is an admission of mental instability and of failure to control one's emotions and deal effectively with life's problems. Self-reliance in the face of adversity is what they expect of themselves and others. Yet we have seen that they all suffered along with their stricken relative(s) and were sometimes quite bewildered by the changes the accident wrought in their lives.

Feelings and Emotional Coping:

Many of the auto accident victims we interviewed sensed that other family members and friends were tired of hearing about their accidents and wanted them to return to normal, to get on with the business of living. Indeed, one friend of a disabled person complained that the latter talked of nothing but the accident for a year afterwards. But it is not easy, and often impossible, to resume life as usual. Silver and Wortman found that "for most people, an adverse life event is never really forgotten and the experience is likely to be carried with them for the remainder of their lives."¹⁴ Perhaps this is one reason why the accident victims to whom we spoke responded to our interview questions at length and in great detail, openly expressing their fears, anxieties, and agonies. They also indicated a desire for getting together with other accident victims for psychological support and interchange. Sharing feelings and worries springing from a traffic accident can lead to the discovery of common reaction patterns. This is comforting to people who hitherto had regarded their particular case as unique and were wondering if their emotions and behavior might be bizarre or even pathological. Most of our accident victims were afraid to drive or ride in a car for months after their accident. Some said that they expected to hear the sound of the crash again. For about a year after their accident, the Walters and the Stokes went to a common destination in separate vehicles rather than all together in one, to minimize their chances of all being killed simultaneously in a hypothetical crash. Several of the seriously injured accident victims who survived went into shock at the moment of impact, were comatose for a time afterwards, and suffer from partial to complete amnesia today. Even several of those without impaired brain functioning cannot recall what happened in the time span just preceding their awareness of the impending crash; yet nothing that happened then was directly responsible for their accident.

Some victims and their families evidently regard their accident purely as a private and personal tragedy, while others have become involved in the

¹⁴Roxane L. Silver and Camille B. Wortman, "Coping with Undesirable Life Events," In Human Helplessness, ed. by J. Garber and M. E. P. Seligman, Academic Press, 1980, p. 279.

social issues surrounding their accident. Those among the former who can sustain themselves through religious belief seem more reconciled to their tragedy than those who do not. Mrs. Kuhn's idea that God takes us when our time comes gives her an explanation for her son's chance death and appeases her anger, frustration, and grief. Those whose faith was undermined by their accident flounder unless they take up the social issues related to it. Thomas Lambert, whose Catholic background is no longer important to him, has courageously made himself available to closed-head injury victims and their families to assist them through their crises. He also is getting involved in the policy-making process of state-level programs and apprising himself of the laws pertaining to handicapped persons. In contrast, Rosa Brody's Catholicism remains a vital force in her life. She also writes letters to enhance public awareness of the unnecessary barriers and prejudices physically handicapped persons face. Sue Smith systematically calls her local police department or authorities when she sees the need for stop signs or other safety measures. The Walters campaign against the permissive attitude of the courts toward drunken drivers through letters to the editors of local newspapers, to circuit court judges, and other elected officials. Helen Blair and her son have become experts on the question of the "hot pursuit." They actively, but unsuccessfully, tried to persuade their local police force to sponsor workshops on the proper use of the police car offered by a group of specialists from Texas. Today, Helen Blair is contemplating a career in law. All of our respondents have manifested some interest in the social issues relating to traffic accidents simply by participating in this study.

CONCLUSIONS

Our research has documented the human and social costs of automobile accidents to nine families in which one or more persons were badly injured or killed. It has demonstrated that each victim's entire family experienced serious stresses which cannot be measured solely in terms of dollars and cents or time lost. These stresses include not only the death, permanent disability, or chronic pain of the victims, but also the psychological and emotional repercussions of the accident upon the victims and their kin. In Part II of this report, we quote some of the very words our respondents used to so vividly describe their grief, shame, feelings of inadequacy, depression, anger, hostility, occasional unwarranted aggressive behavior, social isolation, and role disruption and ambiguity. In all cases the tensions generated by the accident produced notable changes in family dynamics and a sharp decline in the quality of life for the individuals concerned. Reduced life satisfaction will be temporary for some, but permanent for others. So often, low-level, seemingly minor injuries became persistent physical disturbances, which cause the deterioration of overall health and deepening depression. Furthermore, the aftermath of the accident produces a constantly changing domestic situation that requires ongoing adjustments by all family members. Each case has an individual message of human cost. In each case, we can see how outcomes have crystallized through the interplay of economic, circumstantial, and cultural factors.

Heretofore only glimpses of the social and emotional costs of auto accidents have been available. For example, a couple relate in a letter to a newspaper that they were forced to sell their home as a result of financial

difficulties after the husband was injured in a motor vehicle collision.¹⁵ Scattered newspaper reports of auto crashes, their aftermath, and the stress and bereavement of all family members offer vivid impressions of the human suffering such traumas create.¹⁶ Such articles are more evocative and complete than the terse, one-paragraph case reports in a recent All-Industry Research Advisory Council (AIRAC) study of 420 insurance claims equalling or exceeding \$100,000 each.¹⁷ The social and psychological costs of motor vehicle accidents are still largely unexplored and unspecified. This study and those cited in the Introduction are a modest beginning. With an expansion of qualitative and quantitative research, the richness and reliability of information available to the general public as well as to government policy-makers, community service personnel, and other professionals who deal with auto accident victims and their families will be vastly improved.

Families grieve, are disrupted, and cope in predictable ways when one or more members are disabled or die, whether the cause is a natural catastrophe such as a flood or tornado, a debilitating or fatal illness, or a serious accident of any kind. Different patterns of adjustment are conditioned partly by the suddenness and severity of the disaster and partly by family strength and structural form. This is confirmed by the family stress literature cited in our Introduction. Yet casualties from motor vehicle collisions constitute a social problem of epidemic proportions. Over 50,000 people are killed and more than 4,000,000 injured each year in traffic accidents. From 1975 to 1979 traffic deaths reached 238,992, more than the entire population of many U.S. cities.¹⁸ The statistics show a steady increase in fatalities among 15-to-24-year-old persons; 38 percent of all deaths in this age group result from auto crashes.¹⁹ Can we allow such human wastage to continue at this level? Our study depicts the tremendous social and psychological costs of automobile accidents to just nine families. These nine cases are multiplied by millions over just one decade. They illustrate the massive negative individual, familial, and societal consequences of traffic collisions in this nation. The Goodman case demonstrates how the ultimate costs of a single auto accident in which a parent is killed not only can derail the lives of surviving children, but also may extend into future generations. The Blair case illuminates the personal agony and social repercussions occasioned by the transformation of a once independent and productive individual into someone utterly dependent upon others in society. Traumas resulting from traffic accidents differ from those resulting from many other types of disaster, for traffic accidents frequently can be

¹⁵Letter appearing in The Washington Post, September 8, 1979, p. E24.

¹⁶See, for instance, articles in The Detroit News, April 20, 1982, p. 3A; The Washington Post, May 12, 1980, p. A1; and The Wall Street Journal, May 24, 1982, p. 1.

¹⁷All-Industry Research Advisory Council, "Automobile Injuries and Their Compensation in the United States," Alliance of American Insurers, 1979.

¹⁸"Automobile Occupant Crash Protection," Progress Report No. 3, U.S. Department of Transportation, 1980.

¹⁹"The Need for a National Trauma Institute," American Trauma Society, 1982.

prevented. Increased public awareness of proven hazards such as speeding and drunk driving and public demand for safer vehicles and highways would greatly decrease the incidence of automobile collisions. The myriad and incalculable human and social costs of traffic accidents uncovered in this study would thereby be considerably reduced.