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The Origins of Human Love and Violence

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Paper presented at the 7th International Congress of the Association for Pre- and Perinatal Psychology and Health. This essay is a précis of a book in preparation which has the tentative title: Understanding The Moral Imperative For Violence: Consequences of the "Unbonded" Child and Gender Inequality.

James Prescott is a developmental neuropsychologist and cross cultural psychologist who received his doctorate in psychology from McGill University, Montreal, P. Q. Canada. He served as Assistant Head, Psychological Psychology Branch, Office of Naval Research (1963-1966); as Health Scientist Administrator, Developmental Behavioral Biology Program, National Institute of Child Health and Human Development, NIH (1966-1980); and President, Maryland Psychological Association (1970-1971). He was the recipient of the "Outstanding Contributions to Psychology Award," Maryland Psychological Association (1977); and the Cine Golden Eagle Award, for his contributions, as Scientific Director, of the award winning Time-Life film, "Rock A Bye Baby" (1971); and has given expert testimony on the origins of human violence, particularly domestic violence, before the Senate of Canada, the U. S. Congress; and many other legislative and professional organizations. He is currently an Assistant Clinical Professor (External Faculty), Dept. of Pediatrics, University of California School of Medicine, San Diego and Director, Institute of Humanistic Science.

After our industrial civilization has broken and the civilization of touch has begun, war will cease, there will be no more wars.

**- D.H. Lawrence (1885-1930)
*Future War***

INTRODUCTION

The beginning of my quest to understand the origins of human love and violence was partly rooted in my doctoral training in developmental neuropsychology and psychophysiology at McGill University, Montreal, P.Q. Canada where I was made acutely aware of the extraordinary importance that the early sensory-social environment

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has upon brain development and behavior. The pioneering studies at McGill in the 1950s and 1960s documented that social isolation rearing of puppies results in not only aberrant adult emotional-social behaviors but also in abnormal brain development and functioning. These and related behavioral studies involving the effects of sensory deprivation and the social isolation rearing of infrahuman primates by psychologists Austin Riesen at Yerkes Primate Center in Atlanta, Georgia and of the Harlows at the University of Wisconsin provided a theoretical and

experimental frame of reference for the brain studies which I initiated on isolation reared (maternal-socially deprived) monkeys at the National Institute of Child Health and Human Development (NICHD), National Institutes of Health (NIH). (Melzack and Thompson, 1956; Thompson and Scott, 1956; Melzack and Scott, 1957; Hebb, 1958; Harlow, 1958; Riesen, 1961, 1966; Melzack and Burns, 1965; Mitchell, 1968; Mason, 1968; Sackett 1970ab; and Mason and Berkson, 1975).

Other significant scientific work that influenced the theoretical and experimental programs of the Developmental Behavioral Biology Program, NICHD on the effects of "maternal-social deprivation" was that of Cannon (1939); Cannon and Rosenbleuth (1949); Dow and Moruzzi (1958); Essman (1971); Heath (1968); Hebb (1958); Hunt (1961); the Berkeley Group: Krech, Rosenzweig, Bennett (1960) and Rosenzweig, Krech, Bennett and Diamond (1968); Levine (1974); MacLean (1962,1973); Mark and Ervin (1970); Money, Wolff and Annecillo (1972); Selye (1956); Sharpless (1969); Wiesel and Hubel (1963); Ainsworth (1967); Appley and Trumbull (1967); Barry, Bacon and Child (1967); Bowlby (1952,1969 & 1973); Cairns (1966); Casler (1961); Spitz (1965); Textor (1967); Whiting and Child (1953); Yarrow (1961); Zubek (1969) and many others. From a different theoretical perspective, Francoeur (1965,1982, 1992) and Francoeur and Rami (1979) are spiritual co-travelers on this journey of understanding the nature of human love and violence.

In 1966, I joined the newly formed NICHD where I created the Developmental Behavioral Biology Program (NICHD) to establish basic research programs on brain-behavioral development. During my tenure at the NICHD (1966-1980), I formulated a novel developmental brain-behavioral theory of emotional-social regulation to explain the pathological depression and violence that results from maternal-social deprivation or the social isolation rearing of infant animals. This theory involved the cerebellar-limbic-frontal lobe complex where I proposed that the cerebellum has a major role in the regulation of

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sensory-limbic (emotional) brain activity which also integrates (or not) this activity with higher brain processes (frontal-temporal cortex). I established a number of basic research programs to evaluate this theory and with other scientists documented that the failure of "mother love" results in developmental brain dysfunction and damage which underlies the depression, stereotypical movement disorders (e.g. rocking behaviors and self-mutilation), hyperreactivity to sensory stimulation, particularly touch with, paradoxically, impaired pain perception; social alienation, rage and pathological violence against other animals that have been commonly described in isolation reared monkeys and in other isolation reared animals.

It is of historical significance that both Harry Harlow (1964) and Rene Spitz (1965) denied that maternal-social deprivation involved sensory deprivation and prior to my reformulation of this issue no one had suspected that the abnormal emotional-social behaviors observed in the

isolation reared or maternal-socially deprived monkeys was due to abnormal brain development and function.

Specifically, I redefined "maternal-social deprivation" as a special case of Somatosensory Affectional Deprivation (SAD) and identified somesthetic processes (body touch) and vestibular-cerebellar processes (body movement) as the two critical emotional senses that define the sensory neuropsychological foundations for maternal-infant affectional bonding. Sensory deprivation in the other sensory systems (vision, hearing, smell and taste) do not result in the maternal-social deprivation or SAD syndrome). I proposed and established with other scientists brain studies in isolation reared monkeys (maternal-infant separation) which documented structural and functional brain abnormalities in the limbic-frontal-cerebellar brain system of adult maternally deprived monkeys (loss of mother love) which are directly related-as a causative process-to the depression and pathological violence of these mother deprived monkeys (Prescott, 1968, 1971, 1972, 1975, 1976).

My reconceptualization of the maternal-social deprivation syndrome which involved cerebellar-limbic-frontal lobe brain functions was made possible by the pioneering studies of Mason (1968) and Mason and Berkson (1975) who demonstrated that the isolation rearing of infant monkeys on a "swinging mother" surrogate (vestibular-cerebellar stimulation) prevented the development of the classic maternal-social (SAD) syndrome. This behavioral study opened the "vestibular-cerebellar" gate to brain structures and processes not previously implicated in these emotional-social disorders and represents,

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in my view, a scientific study of such importance that is matched only by the original contributions of the Harlows. The implications of the Mason and Berkson "swinging mother surrogate" study for human development is profound but, unfortunately, remains unappreciated despite the fact that its dramatic effects can be seen in the Time Life documentary film "Rock a Bye Baby" (Dokecki 1973) and which has been one of the most successful documentaries of Time Life.

It is important to emphasize that in terms of SAD theory, the different sensory-emotional systems of the body provide the neuropsychological foundations for different psychological states. Specifically, the vestibular-cerebellar sensory system provides the *primary* neuropsychological foundation for "Basic Trust"; the somesthetic (touch) sensory system provides the *primary* neuropsychological foundation for "Affection"; and the olfactory (smell) sensory system provides the *primary* neuropsychological foundation for "Intimacy". In normal development these emotional-sensory systems are combined in rich patterns of complex sensory stimulation which results in the development of a "neurointegrative" brain where "Basic Trust", "Affection" and "Intimacy" are integrated with one another to form an emotional brain gestalt that can be called "Love"-long before the infant can understand the spoken or written word which is mediated by the auditory and visual cognitive senses.

All three emotional sensory systems, of course, are involved in the experiencing of "Pleasure" and "Bonding". It is through the *emotional senses* that the infant knows when it is being loved or rejected and this is particularly true for the congenitally blind or deaf infant/child (Fraiberg and Friedman, 1964; Bowyer and Gillies (1972); Dokecki, 1973; Prescott, 1976); Smell, as the primitive emotional-sexual brain, has been a long neglected sensory system for understanding human sexuality, intimacy and bonding (Kohl and Francoeur, 1995). The failure to encode the infant's developing brain with the smell of its mother's body through breastfeeding can only have long-term adverse consequences for bonding and for the male-female sexual relationship.

The absence of any one of these three emotional senses in the development of the infant, e.g. failure to breast-feed, removes not only the primary neuropsychological foundation for "Intimacy" (smell-the primitive olfactory sexual brain) but also precludes the formation of the brain gestalt that can only be formed when all of the sensory elements are present. By analogy one cannot form a perception of

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"triangle" with only two lines. It takes not only three lines but it also requires their combination in specific relationships to one another to form the perceptual gestalt of "triangle". It is my belief that similar sensory-brain processes are at work developmentally in the formation of affectional bonds; "Basic Trust"; "Affection"; and "Intimacy" which have long term developmental consequences for the development and stability of love relationships. Stated differently, Love is a "Brain Gestalt" where, indeed, the whole is greater than the sum of its parts.

The failure to integrate pleasure into the higher brain centers associated with "Consciousness" (frontal lobes) is the principal neuropsychological condition for the expression of violence, particularly sexual violence. Pleasure that is experienced only at the genital-spinal reflex level or limbic level of brain function does not result in the inhibition of sexually exploitative and violent behaviors. It is at these lower levels of brain processing of sexual pleasure where sado-masochism flourishes (Prescott, 1977; 1990).

A fractured neurobiological/neuropsychological substrate which results from early sensory deprivation results in a "dissociative brain" which translates into dissociative behaviors-depression, alienation, rage, violence and chemical dependencies to self-medicate the effects of SAD.

NEUROBIOLOGICAL/NEUROPSYCHOLOGICAL STUDIES

The validation of my SAD theory which includes cerebellar regulation of limbic system activity that mediates emotional-social behaviors (Prescott, 1968, 1971, 1976, 1983) has been provided by a number of NICHD supported brain studies in isolation reared monkeys (Saltzberg, Lustick and Heath, 1971; Heath, 1972,1975; Floeter and Greenough, 1979; Riesen, Dickerson and Struble, 1977; Struble and Riesen, 1978; Bryan and Riesen, 1989). Abnormal brain electrical activity and abnormal

neuroanatomy of brain cells (abnormal dendrites and dendritic spines) were found in somatosensory and motor cerebral neocortex and in cerebellar cortex.

Additionally, a neurosurgical study involving paleocerebellar decortication (removal of my hypothesized abnormal paleocerebellar cortical cells due to sensory deprivation) in a previously untouchable pathologically adult isolation reared monkey transformed that monkey into a very friendly, inquisitive and touchable monkey. This same

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brain surgery was also found to be effective in reducing approximately 80% of the autistic-like behaviors in isolation reared monkeys (reduction in stereotypical rocking behaviors; depression and tactile avoidance behaviors). (Berman, Berman and Prescott, 1974).

It was discovered that the isolation reared infant monkeys with cerebellar surgery began to socially interact and touch one another-behaviors not seen prior to surgery. These brain surgery studies were conducted to confirm the role of the cerebellum in the regulation of emotional-social and peaceful/violent behaviors-not to provide a remedy for violent, anti-social or autistic-like behaviors. (Berman, Berman and Prescott, 1974; Prescott, 1971, 1976).

In addition to the significant scientific breakthrough that the failure of "mother love" results in developmental brain dysfunction and damage, the specific finding of abnormal electrical storms called "spiking"-high voltage electrical discharges-in deep brain structures (limbic system and cerebellum) which are associated with uncontrolled outbursts of violent behavior was considered to hold particular promise for the development of a neurodiagnostic test of impaired brain function associated with "dangerousness". In pursuing this suggestion (Prescott 1971), Saltzberg, Lustick and Heath (1971) and Saltzberg and Lustick (1975) made additional scientific breakthroughs by developing a computer signal processing algorithm that could detect the presence of these deep brain electrical storms ("spiking") from ordinary scalp recorded brain electrical activity (EEG) which looked clinically normal. These studies and scientific breakthroughs were made possible by an NICHD contract research program which I established with these investigators at Tulane University Medical School, Department of Psychiatry and Neurology in the mid-late 1960s.

Additional brain-behavioral studies involving platelet serotonin in isolation reared violent monkeys was initiated by the Developmental Behavioral Biology Program, NICHD and those findings were reported by Coleman (1971). Violent isolation reared monkeys had significantly lower platelet serotonin levels than normally reared monkeys. Based upon a variety of published studies (mostly in rodents) that early social isolation affects many neurotransmitters of the brain, particularly serotonin (Essman, 1971, Eichelman and Thoa, 1973), the study of platelet serotonin in isolation reared monkeys was initiated. The positive findings from this study antedated by several years the later findings of

significantly reduced levels of 5-HIAA, a metabolite of serotonin, in the spinal fluid of violent

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individuals (Asberg, et al., 1976; Brown, et. al., 1979, 1982; Linnoila, et. al., 1983).

It remains to be seen how well the combined neuropsychological diagnostic criteria of sub-cortical "spiking" and reduced brain serotonin levels can identify the "dangerous" violent offender. These studies could have been completed a quarter of a century ago, if it were not for the lack of interest in violence research by NICDH/NIH officials and their later inexplicable, unconscionable and unlawful termination of NICHD's agency responsibility to conduct further research on the causes and consequences of child abuse and neglect and the developmental origins of violence (See Appendix A).

Although, I was able to enlist the interest and support of the Federal Bureau of Prisons in 1978 to conduct an interfederal agency collaborative research program to test the validity and reliability of detecting sub-cortical spike discharges in known violent criminals compared to non-violent control subjects, these studies were blocked by the NICHD/NIH which ultimately withdrew its agency responsibility to support any further research on the developmental origins of violence and the causes and consequences of child abuse and neglect. (More on this story later). I believe that a safe and non-invasive neuropsychological diagnostic test of impaired brain function could be developed to identify the "dangerous" violent offender which would translate into the savings of human life lost to such violent offenders who are prematurely released from protective custody and back into the community to commit more violent crimes.

Positive findings of impaired brain function in violent offenders would lead to specific therapeutic programs to correct this impaired brain function while serving as a criteria to maintain such individuals in custody for the protection of society. Such data would also support diminished responsibility for such violent behaviors because of impaired brain function that was mostly likely incurred in childhood from abuse and neglect. If these research programs had been permitted to continue and were proven to be successful, we can only speculate on how many lives could have been saved, particularly of children and women, by identifying such dangerous violent offenders and keeping them in custody until treatment was proven to be successful. Again, we can only speculate on how many lives of the "Polly Klauses of America" could have been saved if these research programs and initiatives had not been terminated. For reasons not to be elaborated upon here, I believe that the detection of sub-cortical "spiking" would be particularly effective in identifying violent sex

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offenders who appear to be more intractable to therapy than other sex offenders.

Returning to the effects of isolation rearing upon brain chemistry and behavior, Essman (1971) and later Valzelli and Morgese (1981) provided the linkage of social isolation rearing in rodents to altered brain chemistry, aggression/violence and altered vulnerability to both stimulant and depressant drugs which leads to increased drug dependency and addiction. Of specific interest is the report of Essman (1981) (and others not reviewed herein) that isolation rearing of mice results in the doubling of their violent attacks on other mice under the influence of amphetamine. Normally reared group housed mice do not show this enhanced violence under the influence of amphetamine. Similar results have been shown with alcohol which supports my SAD thesis that SAD interacts with certain drugs to enhance aggressive and violent behaviors; and conversely, individuals reared with a high degree of physical affection are not only not violent but do not become violent under the influence of violent facilitating drugs, e.g. alcohol, amphetamine, cocaine, etc. (Prescott, 1980, 1989, 1990ab).

SAD reared children are those who will most likely become violent under alcohol, amphetamines, cocaine, etc and also most likely to imitate the violence seen in the mass media (Huesmann, L.R., Eron, L.D., Lefkowitz, M.W., & Walder, L.O., 1984; Palmer and Dorr, 1980; Prescott, 1995).

These relationships have significant implications for understanding the complexities and misdirected nature of the "drug war" where it is not understood by the "drug warriors" that rearing our children under conditions of SAD leads to increased vulnerability to alcohol/drug abuse and addiction and to the enhancement of violence under the influence of certain drugs. The NICHD studies of Higley, et al. (1990, 1991) have demonstrated that maternal-socially deprived monkeys (social isolation rearing) have a significant increase in alcohol consumption as adults than control animals confirming earlier findings on other animals of these relationships.

Bacon, et. al. (1965) and Barry (1976, 1982) have shown from their cross-cultural studies how child rearing practices influences alcohol consumption and drunkenness in these cultures. Specifically, Barry (1976) reported a high and significant correlation ($r = .77$) between frequency of drunkenness and "high amount of crying during infancy" in the 13 cultures of his study sample. Infant crying was found to be the most significant predictor of alcohol consumption

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and drunkenness in these cultures. Frequency and duration of infant crying is a direct measure of SAD (failure of nurturance) and provides further support for my SAD hypothesis and its relationship to alcohol and drug abuse and addiction (Prescott, 1975, 1979, 1980).

EFFECTS OF PRENATAL/PERINATAL TRAUMA UPON ADULT BEHAVIORS

It is beyond the scope of this paper to review in any detail the significant findings which link the use of obstetrical medications to later enhanced

adult drug use and abuse (Jacobson, et al., 1988, 1990); and prenatal and perinatal trauma to later adolescent and adult violence (Salk, et al., 1985; Jacobson, et al., 1987; Raine, 1994). Suffice it to say that prenatal and perinatal traumas results in a significant percentage increase of adult substance abuse and violence that ranges from 56% to 500% increase when compared to normal controls.

Table 1 provides a summary of the results of the above cited studies. These findings clearly support the conclusion that adolescent-adult alcohol/drug abuse and addiction has significant roots in prenatal/perinatal traumatic experiences that are obviously beyond the control of such drug abusing/addicted persons. Equally clear is that such individuals cannot be held criminally responsible for their substance abuse behaviors which have their origins in prenatal and perinatal life experiences—a factor that defense attorneys should be addressing in their defense of drug abusers and addicts in the criminal courts of America.

In summary, the above described studies have confirmed that the sensory deprivation of mother love induces developmental brain abnormalities which results in a variety of pathological emotional-social behaviors, as observed and described in the mother deprived monkeys. Unfortunately, future studies planned by the Developmental Behavioral Biology Program, NICHD to identify similarly impaired brain function in abused and neglected children and in violent offenders with a history of child abuse and neglect were prevented by administrative actions of NICHD/NIH/DHHS officials. This tragic situation remains today where NICHD/NIH officials continue to deny their history of having supported research on child abuse and neglect or the developmental origins of violence (See Appendix A).

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Table 1
Perinatal Traumas & Adult Drug/Violence Behaviors

Investigator & Year	Experim of Subj	Ss #	Control Ss # of Subj	Perinatal Trauma	Adult Trauma	E > C % PT
Salk, Lipsitt et al. 1985	52		104	<i>Respiratory distr. > 1 hr. at birth No antenatal care 1st 20 wks. preg. Chronic disease during preg.</i>	<i>Adolescent Suicides (In 81% of sample)</i>	400

Jacobsen/1987	412	2,901	<i>Asphyxia</i>	<i>Suicides by:</i> 500 hanging, strangulation, drowning, gas poisoning
			<i>Mechanical Trauma:</i> breech, forceps, loops	<i>Suicides by:</i> 200 hanging & other mechanical inj.
			<i>Opiate and Barbituates</i>	<i>Drug Addiction</i> 300
Jacobsen/1988	195	200	<i>Nitrous Oxide</i>	<i>Amphetamine</i> 60
	amphebetam. addicts	sibling controls	> 4.5 hours to < 15 minutes	<i>Addiction</i>
Jacobsen/1990	139	230	<i>Opiates, barbit. nitrous oxide</i>	<i>Opiate Addiction</i> 56
	opiate addicts		> 1 hour within 10 hrs. delivery	
Raine/1994*	145 violent criminals (3.4%)	3,584 non-viol. (84.0%)	Birth Complications (N = 2,064)	145 violent criminals
	540 non-viol. criminals (12.6%)		Maternal Rejection (N = 256)	
			Combined Birth Complications & Maternal Rejection	240
			None	
* ... offenders who had both risk factors (birth complications & early child rejection) 47.2% became violent compared with 19.7% of offenders who had neither risk factor or only one. ... only 4.5% of the 4,269 sample had both risk factors but accounted for 18% of all violence.				

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CROSS-CULTURAL STUDIES: CHILD REARING PRACTICES FOR PEACE OR VIOLENCE

My redefinition of loss of mother love as a special case of Somatosensory Affectional Deprivation (SAD) was also confirmed in my cross-cultural studies of child rearing practices that produced either peaceful or violent adult behaviors. One study involved 49 "primitive" cultures distributed throughout the world where 20 of the cultures were violent and 29 were peaceful. This cultural sample resulted from my selection of all the cultures in the 400 culture sample of Textor (1967) which had

information on the extent to which the child was carried on the body of the mother or caretaker (ratings provided by Barry, Bacon and Child, 1967); and the degree of physical violence (torture, mutilation and killing of enemy captured in warfare) that was present in the culture-ratings provided by Philip E. Slater (Textor, 1967).

Table 2 presents the results of this study. I found that it was possible to accurately predict (classify) the peaceful or violent nature of 39/49 (80%) of these "primitive" cultures based upon the single measure of "body bonding" / "affectional bonding" in the maternal-infant relationship. The peaceful or violent nature of the remaining ten cultures (20%) was accurately predicted based upon whether adolescent sexual activity was permitted or punished (ratings provided by Ford and Beach, 1951; and J.T. Westbrook in Textor, 1967). (Prescott, 1975, 1979, 1990). Cultures which permit adolescent sexual expression are predominantly non-violent cultures.

Table 3 lists those social-behavioral characteristics of cultures that provide high infant physical affection. Physically affectional cultures do not inflict pain upon their infants; are highly nurturant to children with prolonged breast-feeding (2.5 years or longer); adult violence is low; and religious activity is low.

There is no other theory or data base that I am aware of that can predict with 100% accuracy the violence and non-violence of 49 primitive cultures distributed throughout the world and by specifying the specific sensory systems and brain mechanisms that mediate such effects. This prediction was made possible by the known effects of sensory deprivation upon brain development and behavior and the role of brain mechanisms that mediate pleasure in controlling and inhibiting depression and violent behaviors (Prescott, 1968, 1972, 1975; Heath, 1968).

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Based upon the above scientific findings, I have concluded that vestibular-cerebellar stimulation is the most important sensory system (followed by touch) for the development of "Basic Trust" in the affectional bonding between mother and infant which establishes the neurobiological and neuropsychological foundations for all other human relationships. My conclusions follow from the experimental brain studies of isolation reared monkeys (supra); the studies of Mason (1968) and Mason and Berkson (1975) which documented the prevention of emotional-social abnormalities including violence in isolation reared monkeys given artificial movement (vestibular-cerebellar) stimulation (swinging mother surrogate); my cross-cultural studies on "primitive" cultures which carry or do not carry infants on the body of the mother/caretaker; the recognition that the vestibular-cerebellar sensory system is the dominant sensory system during fetal brain development since it receives continuous stimulation *in utero*—unlike the other sensory systems; and my hypothesis that the cerebellum has a major role in regulating limbic system activity and, thus, emotional-social behaviors, has been fully supported by a number of studies (supra).

It is for these reasons that "movement therapies" and "movement sports", e.g. gymnastics, skiing, ice-skating, roller skating, roller blading, swimming-diving, snorkeling, water flotation, hang gliding, skydiving, bungee jumping, dancing, etc. produces such dramatic emotional-behavioral therapeutic effects. These "vestibular-cerebellar sports" are the "therapies of choice" for treating depression, impulse control disorders and addictive disorders.

For all of the above reasons, I have concluded that the single most important child rearing practice to be adopted for the development of emotional and social healthy infants and children is to carry the newborn/infant on the body of the mother/caretaker all day long where the continuous "backpacking" of newborns/infants on the body of the mother/caretaker becomes the best "behavioral vaccine" against depression, social alienation, violence and drug/alcohol abuse and addiction later in life. The brain-behavioral consequences of different "child rearing practices" are dramatically portrayed in the Time Life documentary "Rock A Bye Baby" which I premiered at the 1970 White House Conference on Children (Dokecki, 1973).

It should be noted that the above behaviors cannot be accounted for by variations in breast-feeding alone, thus the primacy of vestibular-cerebellar stimulation for the development of emotional-social healthy behaviors in the newborn/infant and child. I have also

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<p>Table 2 Distribution of 49 Cultures Which Relates Deprivation of Infant Physical Affection to Adult Physical Violence (torture, mutilation and killing of enemy captured in warfare) and High Infant Physical Affection to Adult Non-Violence</p>			
High Infant Physical Affection	Low Infant Physical Affection	High Infant Physical Affection	Low Infant Physical Affection
Low Adult Physical Violence N = 23	High Adult Physical Violence N = 16	High Adult Physical Violence N = 4	Low Adult Physical Violence N = 6
Andamanese	Alorese	<u>Cheyenne</u>	<i>Ainu</i>
Arapesh	Aranda	<u>Chir-Apache</u>	<i>Ganda</i>
Balinese	Araucanians	<u>Crow</u>	<i>Kwakiutl</i>
Chagga	Ashanti	<u>Jivaro^a</u>	<i>Lepcha</i>
Chenchu	Aymara	<u>Kurtatchi</u>	<i>Pukapuka</i>
Chuckchee	Azande	<u>Zuni^c</u>	<i>Samoans^b</i>
Cuna	Comanche		<i>Tanala</i>
Hano	Fon		

Lau	Kaska
Lesu	Marquesans
Maori	Masai
Murngin	Navaho
Nuer	Ojibwa
Papago	Thonga
Siriono	Jivaro
Tallensi	Samoans
Tikopia	
Timbira	
Trobriand	
Wogeo	
Woleaians	
Yahgan	
Zuni	

Premarital sex punished: <u>underlined</u>	Premarital sex permitted: <i>italic</i>
Misclassified by Textor (1967): crossed-out	New classification (see footnotes): bold

^a According to Harner (1972) the Jivaro culture is misclassified and belongs in column 2 (personal communication).

^b According to Derek Freeman, Professor of Anthropology, Australian National University, the Samoans belong in column 2 (personal communication).

^c The Zuni have are also been missclassified in Textor (1967) and belong in Column 1.

Infant physical affection predicts violence and non-violence in 80% (38/490) of the cultures that are distributed throughout the world. Conclusion: The presence or absence of physical affection in two stages of development, viz the maternal-infant relationship and the adolescent sexual relationship can predict with 100% accuracy the violence and non-violence of 49 primitive cultures distributed throughout the world.

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Table 3
Social and Behavioral Characteristics of Cultures that Provide High Infant Physical Affection

Per Cent Correct Classification	Sample Size # Cultures	Social-Behavioral Characteristics
66	50	Invidious display of wealth is low
68	22	Superordinate justice is absent

72	36	Incidence of theft is low
80	66	Overall infant indulgence is high
74	65	Degree of reducing infant needs is high
68	59	Immediacy of reducing infant needs is high
65	63	Infant physical pain is low
63	63	Weaning age is 2.5 years or longer
68	65	Child anxiety over performance of responsible behavior is low
65	63	Child anxiety over performance of obedient behavior is low
78	18	Dissociation of sexes at adolescence is high
73	49	Killing, torturing, mutilation of enemy captured in warfare is negligible
81	27	Religious activity is low
76	17	Belief in reincarnation is absent
66	41	Asceticism in mourning is low
71	38	Fear of human beings is high
76	17	Witchcraft is low or absent

1. All of the above relationships are statistically significant.
2. Derived from R. B. Textor (1967): *A Cross-Cultural Summary*. HRAF Press, New Haven.
3. Measures of Infant Physical Affection were provided by Barry, Bacon and Child (1967).
4. Previously published with more complete statistical data (Prescott, 1975, 1979, 1990).

interpreted the reported findings of African infant precocity compared to white infants as due to the increased vestibular-cerebellar stimulation

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associated with carrying the infant on the body of the mother (Prescott, 1976; Warren, 1972; Leiderman, et al., 1972). This African infant precocity is lost when Western child rearing practices are adopted. For the above reasons, I have also concluded that infant/child day care is damaging to the emotional-social health of infants and children-the result is the unbonded child who becomes the future psychopath and sociopath of tomorrow. The review of those studies that document the harm of infant/child day care are beyond the scope of this review (see Appendix B).

It is recognized that even with a well established foundation of emotional-social health during infancy and early childhood that subsequent developmental SAD life experiences and traumas can mitigate and compromise to an unknown degree the benefits of that early foundation of emotional-social health. Similarly, affectional bonding experiences later in life can compensate for earlier trauma (Prescott, 1975, 1979, 1990; Werner, 1992). Within this context, the effects of prenatal and birthing experiences upon later development deserve more attention and

systematic study (Arms, 1975, 1993; Chamberlain, 1988; Verny and Kelly, 1981).

EPIDEMIOLOGICAL SURVEY OF INFANT/CHILD HOMICIDES IN AMERICA

Another set of studies which I undertook, as part of my NICHD program studies on the effects of psychosocial deprivation upon infant/child development (NICHD, 1968), was the evaluation of the increasing homicide rates of infants and children in America; their probable underestimation; and the probable cause of such violence against infants and children.

In these studies, I obtained the following basic data from the National Center for Health Statistics, DHEW (now DHHS) on homicide and suicide rates; accidental death rates; infant and child mortality rates; physical assault rates and burglary rates for the fifty States and the District of Columbia from 1930 to 1976. In addition to reporting on the growth of homicide rates in infants and children I also correlated infant and child mortality rates with homicide rates for the fifty States and District of Columbia for the years 1940 to 1970 to determine, statistically, to what extent overall infant and child mortality rates were related to homicide rates, i.e. the extent to which infant and child mortality rates reflected homicidal variables.

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Most of this data has been previously published (Prescott, 1979) and presented in my testimony before the U.S. House of Representatives, Appropriations Subcommittee on Labor-Health and Human Services and Education, Ninety-Eighth Congress on May 10, 1983 (Wm. Natcher, Chairman) (Prescott, 1983). Some of this data is presented here because of its dramatic documentation of the extraordinary increase of infant and child homicides in this country that was ignored by the National Institutes of Health and the U.S. Congress when it was first presented some sixteen years ago and which is still ignored today by the National Institutes of Health, DHHS and the U.S. Congress (NIH, 1994; ABCAN, 1995).

Figure 1 presents the increase in homicide rates for children under one year of age for the years 1950-1976 for white and nonwhite males and females. The homicide rates for nonwhite children more than doubled during this time period while remaining relatively unchanged for white children.

Figure 2 presents the increase in homicide rates for children 1-4 years of age for the years 1950-1976 where there is an explosive growth in homicide rates for nonwhite children compared to white children from 1960 to 1976. The percent increase in homicide rates are as follows:

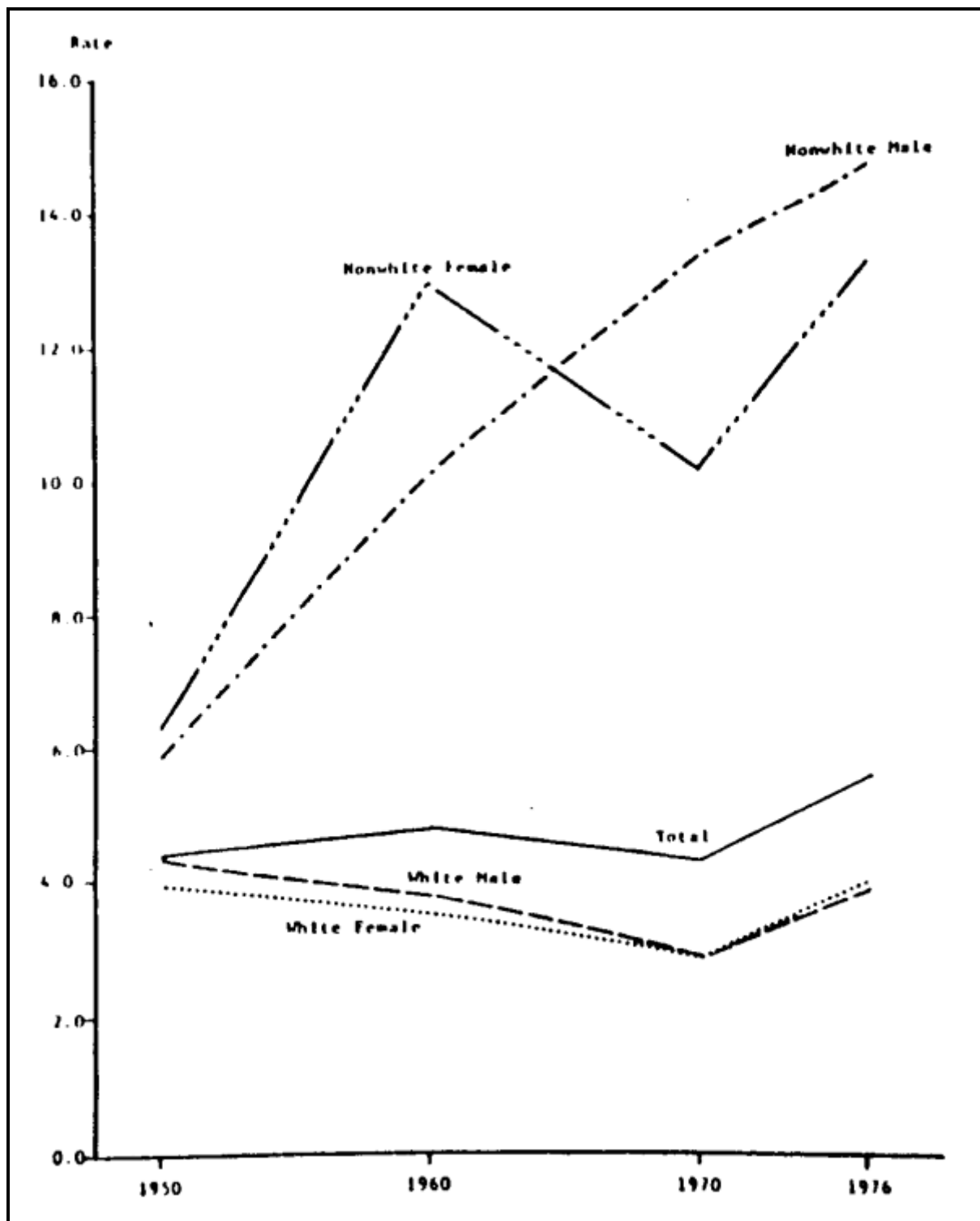
1. 325% for white male children ages 1-4 years
2. 544% for nonwhite male children ages 1-4 years and
3. 70% for the general population (not shown in the graph)

These data document that we are killing our children at an increasing rate that is 6.2 times greater than the increase in homicide rates for the general population. Although, the data are comparable for female children, nonwhite females have a greater increase in homicide rates than for nonwhite males. These data are for the years 1950-1976 where these statistics are undoubtedly more grim for the years 1950 to 1995 but which have not been published by the U.S. Advisory Board On Child Abuse and Neglect (ABCAN) in their recent report "A Nation's Shame: Fatal Child Abuse and Neglect in the United States" (April 1994). Inexplicably, ABCAN was not aware of the above statistical studies and those described below.

Figure 3 presents the correlations between infant mortality rates (under one year of age) and homicide and suicide rates for the 50 States and D.C. for the years 1940-1967. It can be seen that infant mortality rates are highly correlated with homicide rates but not suicide rates and are statistically significant for each year from 1940-1967.

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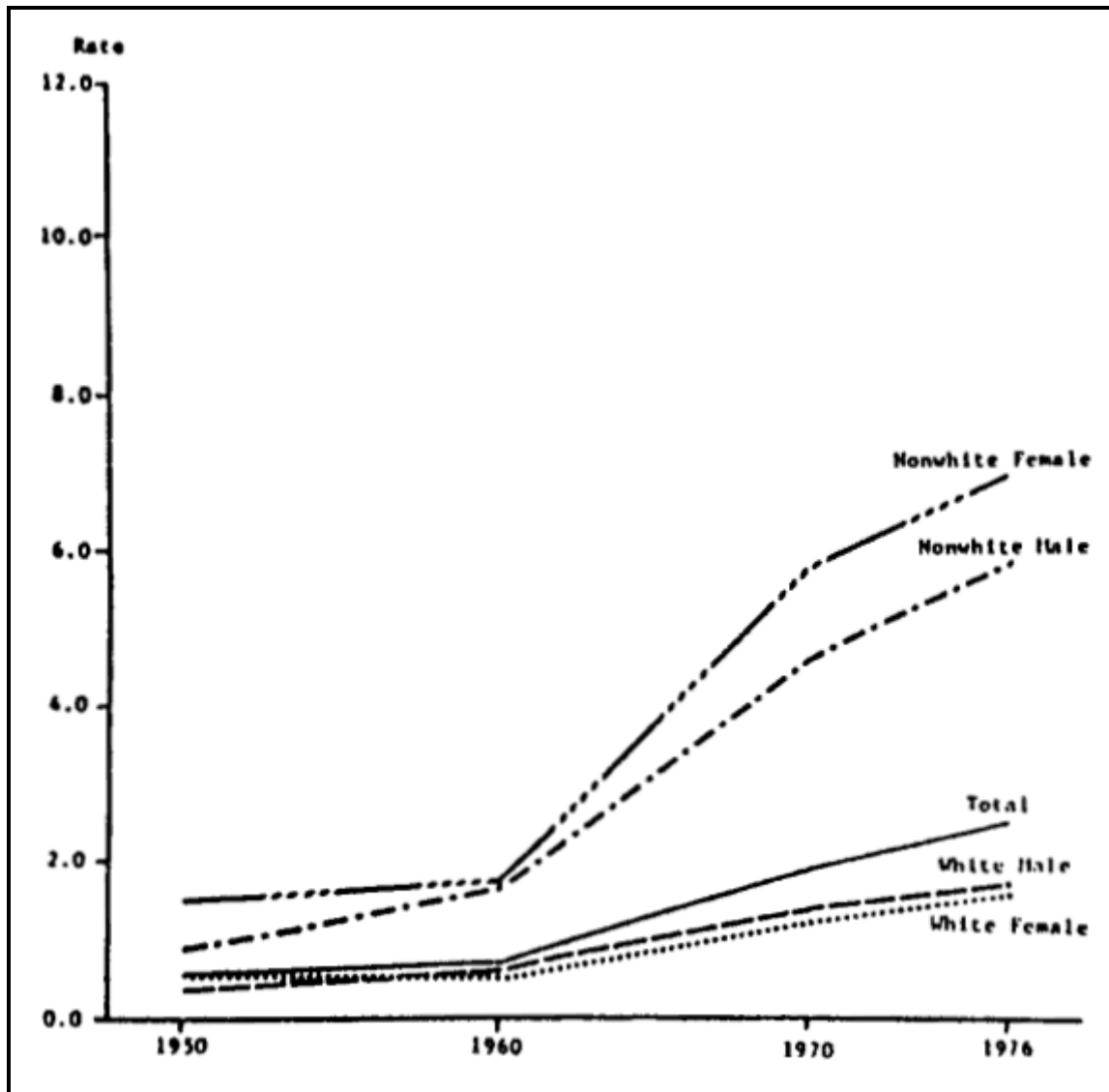
Figure 1
Homicide Rates by Color, Under 1 Year of Age, 1950-1976 (per
100,000 population)



Data obtained from the National Center for Health Statistics, Department of Health and Human Services. Requested by the National Institute of Child Health and Human Development, National Institutes of Health. Submitted as part of the testimony before the U.S. House of Representatives Appropriations Subcommittee on Labor-Health and Human Services and Education, Ninety-Eight Congress on May 10, 1983 (William Natcher, Chairman) by James W. Prescott, Ph.D. Subject: Child Abuse and Neglect Research at the National Institute of Child Health and Human Development, National Institutes of Health.

Figure 2

Homicide Rates by Color, 1-4 Years of Age, 1950-1976 (per 100,000 population)



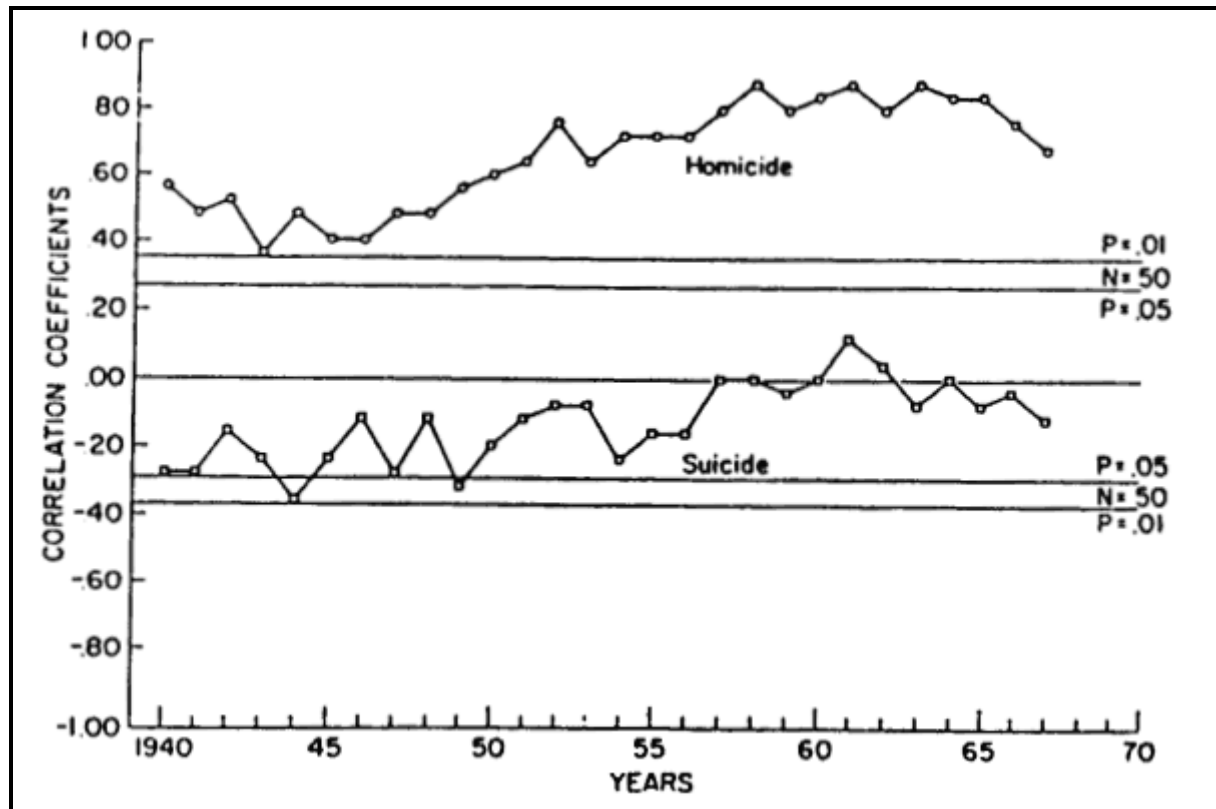
Data obtained from the National Center for Health Statistics, Department of Health and Human Services. Requested by the National Institute of Child Health and Human Development, National Institutes of Health. Submitted as part of the testimony before the U.S. House of Representatives Appropriations Subcommittee on Labor-Health and Human Services and Education, Ninety-Eight Congress on May 10, 1983 (William Natcher, Chairman) by James W. Prescott, Ph.D. Subject: Child Abuse and Neglect Research at the National Institute of Child Health and Human Development, National Institutes of Health.

Equally significant is the extraordinary increase in the correlations for that time period or communality between infant mortality rates and homicide rates. There is an approximate five-fold increase

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Figure 3
Within Year Correlations of Infant Mortality with Homicide and Suicide for the 50 States and D.C. Predicting Concurrent

Homicide and Suicide Rates from Concurrent Infant Mortality Rates



From: Prescott, James W. (1979). Deprivation of Human Affection As A Primary Process In The Development of Physical Violence. In: Child Abuse and Violence (David Gil, Ed.). AMS Press New York. Submitted in testimony before the U.S. House of Representatives on May 10, 1983 (supra).

in the magnitude of these relationships from the the 1940s to the 1960s. Stated differently, from 15-25 percent of the homicides can be predicted from the infant mortality rates of the 1940s, whereas as much as 25-75% of the homicides can be predicted from the infant mortality rates of the late fifties and sixties. This is to say that more and more homicidal factors are involved in our infant mortality rates of the late 1950s and 1960s than in the 1940s. This kind of data analysis is, unfortunately, not available for the years 1970-1995 since the NICHD abandoned its agency responsibility to conduct such studies (Prescott, 1979b, 1983b, 1993).

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Figure 4 presents the same kind of analysis for child mortality rates (children 1-4 years of age) and homicide rates. These data parallel the findings for infant mortality rates only the magnitude of correlations between child mortality rates and homicide rates are even greater than with infant mortality rates. As before, suicide rates are uncorrelated with child mortality rates. These data strongly support the conclusion that there is a greater prevalence of homicidal factors in our infant and child mortality rates than previously suspected which suggests that many infant and child deaths attributed to non-homicidal factors, e.g. accidental deaths, may be in error. In short, there is a high degree of

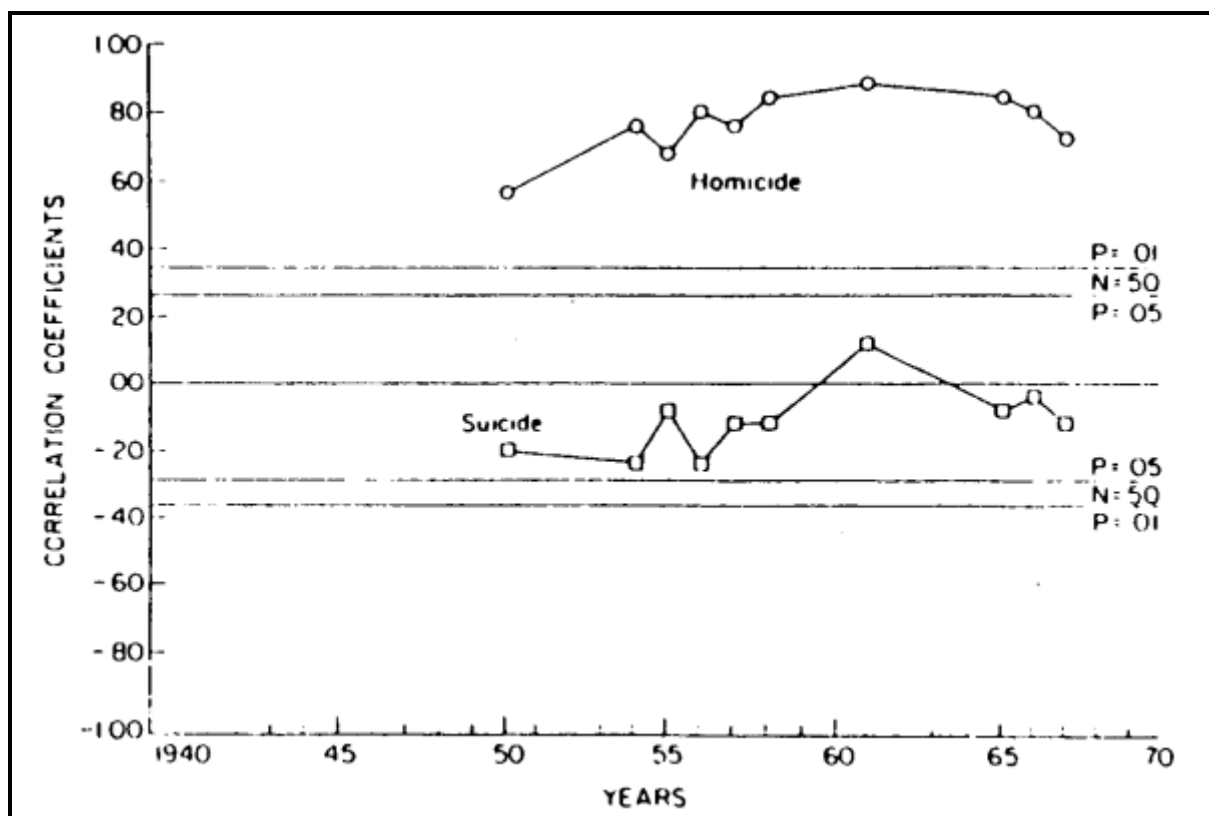
underreporting of infant and child homicides because of mis-classification of these deaths due to other causes, e.g. accidents (Prescott, 1979).

The recent report of ABCAN (April 1994) estimated that there are some 2,000 homicides of children each year in this country and presented that data as startling "new findings" when a more grim picture of infant and child homicides in this country was painted some sixteen years ago (Prescott, 1979b, 1983b). Equally grim is that these earlier statistical data on the increase of infant/child homicides; the experimental animal data which documented that the failure of "mother love" results in developmental brain dysfunction/damage; and the cross-cultural data that links failure of "mother love" and sexual repression to later violence (reported below) have been purposively ignored by the National Institutes of Health, the Department of Health and Human Services which includes ABCAN; the National Academy of Sciences; and the U.S. Congress for the past sixteen years and which continues to be ignored today (Prescott, 1983b, 1994; NIH, 1994; ABCAN, 1995; NRC, 1995ab).

The refusal of the NIH to acknowledge the existence or any results of NICHD supported research on child abuse and neglect and the developmental origins of violence during the 1960s and 1970s in its 1994 report (NIH, 1994) is particularly onerous given the review of that research history for the "NIH Panel On Violence Research" by Prescott (1993) and its direct implications for establishing violence prevention programs. The deliberate refusal by NIH officials to include that scientific history of the NICHD and the several significant scientific breakthroughs on the developmental origins of violence in its final report must represent one of the most fraudulent scientific reports ever published by the NIH. And this nation is now paying the high cost of that history of denial and repression of scientific knowledge which has contributed to the escalation of the failure of

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Figure 4
Within Year Correlations Relating Child Mortality to Homicide
and Suicide for the 50 States and D.C.



From: Prescott, James W. (1979). Deprivation of Human Affection As A Primary Process In The Development of Physical Violence. In: Child Abuse and Violence (David Gil, Ed.). AMS Press New York. Submitted in testimony before the U.S. House of Representatives on May 10, 1983 (supra).

maternal-infant/child bonding in this country with the violence and alcohol/drug abuse and addiction which follows like the night and day.

The above statistical data portrays a continuing disintegration of our culture and its lack of capacity and concern to care for the children of this nation. This lack of caring at all levels of our society is rooted in the failure to recognize the supreme importance of that first affectional bond between mother and infant/child which has continuing ramifications throughout the life of the child, adolescent and adult. It is not surprising that we are now witnessing "children killing parents" and "children killing children" without remorse—the legacy of our child abuse and neglect that produces the "unbonded child"

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and which continues today at epidemic rates. A copy of the "NIH Report On Violence Research" (April 1994) can be obtained by writing the Director, National Institutes of Health - Bethesda, MD 20892.

There are, however, other factors that contribute to our lack of compassion and increasing violence which I will now address from the cross-cultural data base which is discussed below.

CROSS-CULTURAL STUDIES: SEXUAL VALUES AND RELATIONSHIPS

It should not come as a surprise that the developmental neurobiological and neuropsychological processes necessary for the maternal-infant affectional bond are also necessary precursors for the establishment of sexual affectional bonds. How can a damaged emotional-sexual brain which occurs in infancy and childhood be expected to mediate sexual affectional bonding during adolescence and adulthood? It cannot. In the place of sexual affectional bonding is the development of exploitive and violent sexual relationships which are all too characteristic of American and other contemporary cultures.

Further, without the establishment of sexual affectional bonding it is not possible to develop a sexual-spiritual relationship that includes transcendent states of "Consciousness". [See [Appendix C](#).] The development of these latter qualities of "Being" are dependent upon the development of a neurointegrative brain which results from affectional bonding throughout brain development, as opposed to a neurodissociative brain which results from the failure of those affectional bonding processes through the processes of affectional sensory deprivation. The genital mutilation (e.g. circumcision) of children is one of the first traumas against the development of the neurointegrative brain which cannot but help impair the development of maternal-infant affectional bonding and later sexual affectional bonding and, thus, the development of spiritual states of sexuality [see [Appendix C](#)] and of "Transcendent Consciousness" (Prescott, 1989, 1990).

An examination of the social-behavioral characteristics of cultures that permit or punish premarital and extramarital sexuality has provided important insights into how human sexuality is related to either peaceful or violent behaviors. For example: cultures which punish premarital and extramarital sexuality were found to be authoritarian and violent cultures and the opposite behaviors were

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found for those cultures that did not punish premarital or extramarital behavior (Prescott, 1975, 1979, 1990).

Table 4 lists a number of authoritarian and violent behaviors associated with the punishment of premarital sexuality. Table 5 provides a similar listing of authoritarian and violent behaviors associated with the punishment of extramarital sexuality; Table 6 lists the social-behavioral characteristics of the patrilineal cultures; Table 7 lists the social-behavioral characteristics of the matrilineal cultures; and Table 8 lists some of the most salient differences between matrilineal and patrilineal cultures. Some of the most significant findings in Table 8 is that 100% of the 19 exclusively matrilineal cultures permitted adolescent sexuality where 67% of the 84 exclusively patrilineal cultures punished adolescent sexual expression. Further, 59% of the 37 exclusively matrilineal cultures lacked a "High God" in their cultures, whereas 71% of the 99 exclusively patrilineal cultures had a "High God" in their culture.

It is beyond the scope of this review to elaborate upon how the "High God" in the patrilineal cultures becomes an instrument of the patrilineal

culture to control, regulate and deny physical affectional pleasure (bonding) in human relationships where "Divine Love" is offered as a substitute for Human Love and where that "Divine Love" is controlled by the priests, ministers and messengers of "God" which then becomes an instrument for the control of the people and of culture by those messengers and "gatekeepers" of "God".

The pattern of these relationships are self-evident where the patrilineal cultures are characterized by low infant/child affection and indulgence; infliction of pain upon the infant; punitive sexuality; male genital mutilation; abortion is punished; women are purchased (high bride price); caste systems are present which includes slavery; and belief in a High God that is involved in human morality. The absence of a linkage between these patrilineal cultures and female genital mutilation involves a number of complex issues that cannot be addressed herein.

It is emphasized that it is the neuropsychological integration of pleasure in higher brain centers that is essential if pleasure is to be an effective process in the inhibition of depression and violence and for the development of states of "Transcendental Consciousness". It is here where the developmental neuropsychological sciences can contribute to the meaning of certain philosophical constructs on pleasure, as expressed, e.g. by Aristotle: "Therefore the highest good is some sort of pleasure, despite the fact that most pleasures are bad,

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Table 4
Social and Behavioral Characteristics of Cultures that Punish Premarital Sexuality

Per Cent Correct Classification	Sample Size # Cultures	Social-Behavioral Characteristics
73	80	Community size is larger
87	15	Societal complexity is high
60	111	Class stratification is present
59	176	Slavery is present
71	24	Female income is low
71	28	Personal crime is high
68	31	Incidence of theft is high
62	114	Kin group exclusively patrilineal
70	62	Extended family is small
54	114	Wives are purchased
62	50	Postpartum sex taboo is longer
71	58	Extramarital sex is punished
83	23	Sex disability is present
89	25	Intensity of sex anxiety is high

65	37	Castration anxiety is high
68	37	Bellicosity is extreme
69	35	Killing, torturing, mutilation of enemy captured in warfare is high
81	27	High god in human morality
66	38	Narcissism is high
65	66	Exhibitionistic dancing is emphasized

1. All of the above relationships are statistically significant.
2. Derived from R. B. Textor (1967): *A Cross-Cultural Summary*. HRAF Press, New Haven.
3. Measures of Punishment of Premarital Sexuality by John T. Westbrook (1967).
4. Previously published with more complete statistical data (Prescott, 1975, 1979, 1990).

and, if you like, bad in the unqualified sense of the word" (*Nichomachean Ethics*, Book 7). Simply stated, nonintegrated pleasures are bad; integrated pleasures are good.

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Table 5
Social and Behavioral Characteristics of Cultures that Punish Extramarital Sexuality

Per Cent Correct Classification	Sample Size # Cultures	Social-Behavioral Characteristics
67	83	Slavery is present
79	14	Contracted debts are high
63	44	Display of wealth is emphasized
80	20	Personal crime is high
81	21	Incidence of theft is high
63	52	Kin group is patrilineal - not matrilineal
76	17	High avoidance of sons' wife
70	27	Desire for children is high
76	17	Abortion is highly punished
65	43	Postpartum sex taboo is longer
68	37	Reducing infant needs is low
68	37	High child anxiety over responsibility
77	39	High child anxiety over obedience
71	58	Premarital sex is strongly punished
87	30	Castration anxiety is high
62	53	Military glory strongly emphasized
77	43	Bellicosity is extreme
76	42	Killing, torturing, mutilation of enemy captured in warfare is high

1. All of the above relationships are statistically significant.
2. Derived from R. B. Textor (1967): *A Cross-Cultural Summary*. HRAF Press, New Haven.
3. Measures of Punishment of Extramarital Sexuality by Ford and Beach (1967).
4. Previously published with more complete statistical data (Prescott, 1975, 1979, 1990).

In SAD theory, the cerebellum plays a central role in this neurointegrative process and, thus, my proposal of the Quadrune Brain (Prescott, 1983a) which is contrasted with the concept of the Triune Brain of MacLean (1973). Further, SAD theory has proposed that

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Table 6
Social and Behavioral Characteristics of Exclusively Patrilineal Cultures vs. All Other Kin Groups

Per Cent Correct Classification	Sample Size # Cultures	Social-Behavioral Characteristics
69	368	Castes are present
62	381	Slavery is present
79	24	Superordinate justice is present
100	196	Marital residence is patrilocal
66	133	Small extended family
73	244	Polygyny is common
63	395	Bride price is high
63	23	Desire for children is high
86	14	Abortion is highly punished
71	80	Mother-child household is low
61	78	Child indulgence is low
61	75	High child anxiety over responsibility
62	73	High child anxiety
66	73	High child conflict
62	37	Adolescent sex dissociation is low
62	241	Adolescent boys separated from mother-sister
69	325	Male genital mutilation is present
66	65	Female initiation rites are absent
52	107	Premarital coitus is strongly punished
63	52	Extramarital coitus is strongly punished
57	38	Homosexuality is permitted
68	167	High god is present

62	103	High god is active
73	56	High god in human morality
67	36	High other culture contact
69	49	Low insobriety

1. All of the above relationships are statistically significant.
2. Derived from R. B. Textor (1967): *A Cross-Cultural Summary*. HRAF Press, New Haven.
3. Measures of Patrilineal Cultures from the Ethnographic Atlas (1967). There are only 150 exclusively patrilineal cultures in the Ethnographic Atlas.
4. Previously published with more complete statistical data (Prescott, 1990).

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Table 7
Social and Behavioral Characteristics of Exclusively Matrilineal Cultures vs. All Other Kin Groups

Per Cent Correct Classification	Sample Size # Cultures	Social-Behavioral Characteristics
56	382	Class stratification absent
100	200	Marital residence matrilineal
66	212	Large extended family
62	394	Wives easily obtained
66	73	Low child anxiety over responsibility
63	242	Adolescent boys separated from mothers-sisters
63	178	Premarital coitus permitted
84	44	Low castration anxiety
70	60	Anal reasons for illness
63	259	High god is absent
62	156	High god, if present, is inactive
74	87	High god absent in human morality
73	86	High food taboos
77	22	Secret societies are present

1. All of the above relationships are statistically significant.
2. Derived from R. B. Textor (1967): *A Cross-Cultural Summary*. HRAF Press, New Haven.
3. Measures of Exclusively Matrilineal Cultures from the Ethnographic Atlas (1967). There are only 55 Exclusively Matrilineal Cultures in the Ethnographic Atlas.
4. Previously published with more complete statistical data (Prescott, 1990).

the human female brain is wired differently for greater neurointegrative brain processes than the human male brain which is reflected in the gender differences of nurturance, compassion, love and spirituality that

have been so well noted throughout history (Prescott, 1976, 1990a, 1992ab). Preliminary scientific data has been presented to support the SAD theory postulate that there is greater neuronal interconnectivity between the cerebellum, limbic system and frontal lobes in the human female brain than in the human male brain (Prescott, 1992a, 1993). It is beyond the scope of this essay to elaborate upon these findings and their implications for the

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Table 8
Social and Behavioral Characteristics Which Distinguish Exclusively Matrilineal Cultures from Exclusively Patrilineal Cultures

Per Cent Correct Classification		Sample Size # Cultures		Social-Behavioral Characteristics
Matri	Patri	Matri	Patri	
100	100	31	137	Marital Residence: Matrilocal or Patrilocal
58	69	33	97	Extended Family: Large vs. Small
59	80	54	148	Bride Price: Low vs. High
75	79	12	24	Child Anxiety Over Responsibility: Low vs. High
59	51	34	91	Adolescent Boys Separated from Mother-Sisters Present vs. Present
100	67	19	84	Premarital Coitus: Permitted vs. Punished
59	71	37	99	High God: Inactive vs. Active

1. Derived from R. B. Textor (1967): *A Cross-Cultural Summary*. HRAF Press, New Haven.
2. Measures of Exclusively Matrilineal Cultures from the Ethnographic Atlas (1967).
3. There are only 55 Exclusively Matrilineal Cultures and 150 Exclusively Patrilineal Cultures in the Ethnographic Atlas.
4. Previously published with more complete statistical data (Prescott, 1990).
5. Textor, unfortunately, did not statistically compare *exclusively* matrilineal cultures with *exclusively* patrilineal cultures which would have yielded a much larger number of meaningful and statistically significant differences between these two kin groups. His statistical comparisons involved a) exclusively matrilineal cultures vs. all other kin groups; and b) exclusively patrilineal cultures vs. all other kin groups which are somewhat muddled comparisons. The comparisons in Table 8 were those found to be common to both analyses in (a) and (b).
6. The most significant findings in Table 8 are that a) 100% of the exclusively matrilineal cultures permit premarital coitus and 67% of the exclusively patrilineal cultures punish premarital coitus; and b) that a High god is absent in 59% of the exclusively matrilineal cultures but present in 71% of the exclusively patrilineal cultures.

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future of male-female relationships; the rearing of children; and of *homo sapiens*.

PSYCHOMETRIC VALIDATION OF SAD

Table 9 presents the results of the first Factor of a Factor Analysis of a questionnaire which I developed with my colleague Dr. Douglas Wallace which assessed in our culture some of the same values and behaviors evaluated in the primitive cultures concerning pain, pleasure, sexuality, violence, etc. This 46 item questionnaire was completed by 96 college students in 1974 (average age 19 years) where the students rated the statements on a scale of 1 to 6 where 1 indicated strong agreement and 6 strong disagreement. The first Factor extracted 66.6 percent of the information in the questionnaire which represents a "personality profile" of the respondents. The number attached to each statement reflects the strength or weight which that statement or personality "variable" has in defining the Factor or personality profile. If a person agrees with the first statement he/she will very likely agree with the other statements where the coefficient gives the strength or weight associated with each statement. The maximum values of the coefficients range from -1.00 to $=+1.00$.

The questionnaire results parallels the findings from the primitive cultures where high social-moral values are placed on experiencing pain and punishment which are highly linked to rejection of physical pleasure, particularly sexual pleasure. These collective values and behaviors are directly related to an ethic of violent behaviors and to drug/alcohol use that is often preferred to sexual pleasure. Maternal indifference and paternal violence (lack of nurturance) were also found to be linked to these values and behaviors which collectively taken together-as a pattern or profile- defines what is called "Political Conservatism". These data were originally published in Prescott (1975). There is substantially more psychometric data to support the SAD theory but the review and presentation of that data base is beyond the scope of this essay.

Genital Mutilation of Infants and Children

Special attention must be given to the extraordinary trauma that genital mutilation, e.g. circumcision, of children (male and female)

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Table 9
Somatosensory Index of Human Affection (Factor 1: 66.6%:
Violence, Pleasure, Drugs and Sex)

Factor Coefficient	Question
.85	<i>Violence Approved</i> Hard physical punishment is good for children who disobey a lot.

- .81 Physical punishment and pain help build a strong moral character.
- .80 Abortion should be punished by society.
- .76 Capital punishment should be permitted by society.
- .75 Violence is necessary to really solve our problems.
- .74 Physical punishment should be allowed in the schools.
- .69 I enjoy sadistic pornography.
- .54 I often feel like hitting someone.
- .43 I can tolerate pain very well.

Self-Determination of Sexual Expression Rejected

- .84 Prostitution should be punished by society.
- .80 Responsible premarital sex is not agreeable to me.
- .78 Nudity within the family has a harmful influence upon children.
- .73 Sexual pleasures help build a weak moral character.
- .72 Society should interfere with private sexual behavior between adults.
- .69 Responsible extramarital sex is not agreeable to me.
- .61 Natural fresh body odors are often offensive.
- .47 I do not enjoy affectional pornography.
- .42 I often get "uptight" about being touched.

Alcohol and Drugs Rated Higher than Sex

- .70 Alcohol Is more satisfying than sex.
- .65 Drugs are more satisfying than sex.
- .60 I get hostile and aggressive when I drink alcohol.
- .49 I would rather drink alcohol than smoke marijuana.
- .45 I drink alcohol more often than I experience orgasm.

Political Conservatism-Parental Non-Nurturance

- .82 I tend to be conservative in my political points of view.
- .77 Age (Older).
- .51 I often dream of either floating, flying, falling, or climbing.
- .45 My mother is often indifferent toward me.
- .40 I remember when my father physically punished me a lot.

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has upon the developing brain, specifically the emotional-sexual brain. There is every reason to believe that such trauma not only interferes with the affectional bonding process between mother and infant but may well result in brain pathology as well. I have proposed that such brain pathology exists as a consequence of genital mutilation of infants and children where that brain pathology contributes to the impaired ability to experience sexual pleasure and to integrate such sexual pleasure into higher brain processes (Prescott 1989c). I also proposed that genital mutilation of infants and children in combination with other

developmental life experiences provides for the neuropsychological and neurobiological foundations for the development of sadomasochistic behaviors (1989). This suggestion is supported by the findings of Levy (1945). It is long overdue to conduct Magnetic Resonance Imaging (MRI) and Positron Emission Topography (PET) studies of the genital sensory projection fields and associated brain structures in males and females who have been subjected to genital mutilations (Prescott 1992b).

Many individuals have contributed to bringing an end to the genital mutilation of children worldwide and they are too numerous to cite here, however, the life's work of Hosken (1982) and Milos and Macris (1992) are deserving of special mention, as are the contributions

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of DeMeo (1989); Lightfoot-Klein (1989); Montagu (1995) and many others.

SUMMARY AND CONCLUSIONS

In summary, the above patterns of human relationships which have emerged from the various scientific data bases on SAD persons and cultures represent the antithesis for the development of human affectional and spiritual bonds, particularly sexual bonds, since human affectional and spiritual sexual relationships cannot coexist with authoritarian, non-egalitarian, alcohol/drug abusing behaviors and violent relationships where the male controls and assaults the body, specifically, the sexual body of woman and her children. A further tragedy of SAD is that the rightful pursuit of gender equality has been misdirected to follow the male path where the female of the species is becoming more violent toward her children where power has now become more important than love.

Returning to contemporary human societies, an understanding of worldwide gender inequality requires an understanding of how gender inequality has its moral-social roots in the philosophical and religious foundations of both Western and Eastern "Civilizations" and, thus, in their social-political structures.

When Aristotle proclaimed in *Politics* (Book 1, Chapter 4): "Also, as regards male and female, the former is superior, the latter is inferior; the male is ruler, the female is subject"; and St. Paul proclaimed: "For man did not originally spring from woman, but woman was made out of man; and man was not created for woman's sake, but woman for the sake of man" (1 *Corinthians* 11:8-9); and *Ecclesiasticus* (25:24) proclaims: "Woman is the origin of sin, and it is through her that we all die"; and St. Thomas Aquinas proclaims in *Summa Theologica*, Pt.1: "As regards the individual nature, woman is defective and misbegotten";-we clearly have a formidable history of error to overcome if gender equality is to become a world reality.

Given all of the above, is it so surprising that no patriarchal theistic religion of the world (Western or Eastern) acknowledges or affirms the full equality and dignity of woman with man and treats her accordingly.

This is particularly true for her sexual body where only today at the 1995 United Nation's Fourth World Conference on

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Women in Beijing, China is it formally being acknowledged that woman has a fundamental human right to her own body.

That International Resolution states:

"The human rights of women include their right to have control over and decide freely and responsibly on matters related to their sexuality, including sexual and reproductive health, free of coercion, discrimination and violence."

For all of the above reasons, I have concluded that Western Civilization and other similar human civilizations that are characterized by the moral dualisms of "Body (Evil) vs. Soul" (Good); of Pain (Good) vs. Pleasure (Evil) and of Male (Good) vs. Female (Evil) (gender inequality) are also characterized by the neurodissociative brain. It is this form of culturally induced brain dysfunction/damage that accounts for the massive history of violence, human inequality and injustice which has so characterized the ancient and contemporary histories of patriarchal *homo sapiens*.

The body property rights of woman, particularly her sexual body, have been held hostage to the patriarchal theistic religious traditions which must be dismantled if woman is to become fully equal to man and if peace and harmony are to be restored to the male-female relationship; to her children; and, thus, to the world (Prescott, 1972, 1975, 1989, 1990ab, 1995ab).

Without a return to **Human Love** with its **First Foundation** in the maternal-infant/child affectional bond (includes prenatal life); in its **Second Foundation** of the paternal-infant/child affectional bond; in its **Third Foundation** of the sexual affectional bond; and in its **Fourth Foundation** of *Transcendental Consciousness*, there can be no hope for the survival of the species, *homo sapiens*.

Human physical affectional love which is mutually shared neutralizes power in human relationships and provides for the neurobiological and neuropsychological foundations for egalitarian, peaceful and harmonious behavior in human relationships. This is the only true antidote or "behavioral vaccine" to the depression, alienation, anger/rage/violence and alcohol/drug abuse and addiction which afflicts and is destroying *homo sapiens*.

The above findings on the origins of human love and violence resulted in my *Sixteen Principles for Personal, Family and Global Peace* which are listed in Table 10.

In closing, I would be remiss in not acknowledging the extraordinary contributions to this subject matter by Ashley Montagu. The

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following quote from "The Natural Superiority of Women" is not only

most relevant but one of my favorites:

Woman knows what true love is; let her not be tempted from her knowledge by the false idols that man has created for her to worship. Woman must stand firm and be true to her own inner nature; to yield to the prevailing false conception of love, of unloving love, is to abdicate her great evolutionary mission to keep human beings true to themselves, to keep them from doing violence to their inner nature, to help them to realize their potentialities for being loving and cooperative. Were women to fail in this task, all hope for the future of humanity would depart from the world.

-Ashley Montagu

The Natural Superiority of Women 1952; Rev. Ed 1974

PAST AS PROLOGUE

There are many persons and themes from history that merit citation in an essay of this kind but that endeavor would take a book-long project. However, there are certain historical and contemporary themes that merit re-visiting since they represent the crucible for and of human transformation-of how to transform the world from one of violence to one of peace through the transformation of how the world rears its children.

Along with Ashley Montagu who has devoted his life path to this objective there is also the life's work of Joseph Chilton Pearce (1971, 1977, 1985, 1992) which deserves special mention and acknowledgment in this regard. Despite much agreement with Joseph Chilton Pearce on most issues, my basic thesis of *neurointegration* as the key to human transformation, sexual-spirituality and states of Transcendental Consciousness are the antithesis of his reification of that ancient dualism that has proven so destructive to humanity when he states:

My experience symbolized how, for spiritual development, the biological must be surrendered to the non-biological, the flesh must give over to Spirit. For only in spirit do we find our true autonomy. (Pearce, 1985, p.125)

It is precisely this split between "flesh" and "spirit"-the neurodissociative state-that leads to neurodissociative behaviors which in their extreme includes the hallucinations and psychoses-often misinterpreted as "mystical" experiences.

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<p style="text-align: center;">Table 10</p> <p style="text-align: center;">Sixteen Humanist Principles for Personal, Family and Global Peace</p>
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| <ol style="list-style-type: none"> 1. Every pregnancy is a wanted pregnancy. Every child is a wanted child. 2. Every pregnancy should be free from alcohol, drugs, tobacco and other harmful agents of stress. 3. Every pregnancy should have proper nutrition and health. 4. Every normal birth should be without drugs. 5. Every birth should be a loving event with family and friends. 6. Every baby should be breast-fed for two years or longer and be |
|--|

- given a loving massage every day.
7. Every baby should be carried on the body of its mother, father or caretaker as much as possible.
 8. No baby, child or person should be subjected to any form of genital mutilation notwithstanding reasons of religious belief or social custom.
 9. No baby or child should be hit, spanked or humiliated.
 10. No baby or child should be left to cry itself to sleep or left to cry for any reason.
 11. The personal dignity of every baby and child should always be respected and affirmed.
 12. The emerging sexuality of every child and adolescent should always be respected and affirmed.
 13. The right of self-determination in the sexual expression of affection and love is a basic right of all persons.
 14. Every human being should receive a loving massage every day.
 15. Sexual affection and sexual love are essential wellsprings for human peace, harmony and peace.
 16. The home and family is the cradle of alienation and violence or the cradle of love and universal peace.

This ancient dualism that subordinates body to spirit-woman to man-was crystallized by the ancient Greek philosophers who defined the nature of our humanity as "schizoid" and woman was declared forever as unequal to man which was cited earlier but bears repeating:

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There is a good principle which has created order, light and man; and a bad principle which has created chaos, darkness and woman (Pythagoras) (Quoted in Simone de Beauvoir, *The Second Sex* 1953); and

Also, as regards male and female, the former is superior, the latter is inferior; the male is ruler, the female is subject. (Aristotle, *Politics*, Bk. 1, Ch. 4).

In contrast to the above metaphysical monstrosity, this writer is in agreement with Teilhard de Chardin in his commentary on these issues when he stated in what may be his most profound essay: *The Evolution of Chastity* (1934), the following:

At the term of the spiritual power of matter, lies the spiritual power of the flesh and of the feminine... (p.70) ...

The feminine is the most formidable of the forces of matter... (p.74) ...

And so we cannot avoid this conclusion: it is biologically evident that to gain control of passion and so make it serve spirit must be a condition of progress... (p.86).

In the above words, Teilhard de Chardin destroyed the false distinction between matter and spirit; defined spirit as a special condition of matter where *the flesh has spiritual power which is feminine in nature*; and where biology serves spirit, i.e. biology is the substrate for the evolution of spirit-"Transcendental Consciousness".

In my perspective, this evolution of Spirit only becomes possible with the evolution of the neurointegrative brain which makes possible the integration of "Passion" with "Spirit" (limbic-cerebellar-frontal cortex integration) where "Love" is born.

In the words of Teilhard de Chardin (1934):

The truth is, indeed, that love is the threshold of another universe.

The depths we attribute to matter are no more than the reflection of the peaks of spirit.

... The centre of loving attraction and possession shifts progressively towards the spiritual; and if beings are to attain one another, they are obliged to seek one another at a progressively higher level. But, if they are to ensure the fullness of this sublimation—if they are not to cut the channels which convey to them the spiritual powers of matter—from *what initial level* are they to start taking possession of one another? **How much of the body is needed for an optimum of spirit?** (pp.78-79). (bold emphasis added).

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My response would be at least this: the neurointegration of the olfactory-limbic-cerebellar-frontal cortical brain structures (Quadrune Brain) where preliminary scientific data suggest that this neurointegration is more fully developed in the human female brain than in the male human brain (Prescott, 1983a, 1990, 1992; Kohl and Francoeur, 1995) which translates into "...the spiritual power of the flesh and of the feminine..."

Woman loves with her whole soul. To woman love is life, to man it is the joy of life.

*But where the body of the beloved person is made the sole object of love, or if sexual pleasure **only** is sought without regard to the communion of soul and mind, true love does not exist. Neither is it found among the disciples of Plato, who love the soul **only** and despise sexual enjoyment.*

In the one case the body is the fetish, in the other the soul, and love is fetishism.

–Baron Richard Von Kraft-Ebing
Psychopathia Sexualis (1866)

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APPENDIX A

A detailed history of the NICHD/NIH research program on child abuse-neglect and the developmental origins of violence with NICHD's subsequent abandonment of these research programs and obligations can be obtained by writing the Director, National Institutes of Health, 9000 Rockville Pike Bethesda, MD 20892 and requesting a copy of the complete written and oral testimony of James W. Prescott, Ph. D. before the "Panel on NIH Research on Antisocial, Aggressive, and Violence-Related Behaviors and Their Consequences" (1993), specifically, the "*Prescott Report: Parts I & II*".

APPENDIX B

Breast-feeding assumes special significance for maternal-infant affectional bonding because of its effects upon the developing infant brain. Absence of *breast-feeding* contributes to SAD (failure of affectional bonding) which results in abnormal development of the brain serotonergic system (among other brain abnormalities). Similarly, absence of *breast milk* also contributes to the abnormal development of the infant's brain serotonergic system because of the induced nutritional deficiency of tryptophan which is richly present in colostrum and breast milk but absent in formula milk. Tryptophan is the critical precursor amino acid necessary for the development of brain serotonin. Deficits of brain serotonin have been strongly linked to depression, impulse dyscontrol and violence. The dual trauma of failure of breast feeding and affectional bonding that are prevalent in the American culture contributes to developmental brain dysfunction/damage which predisposes such children to depression, impulse dyscontrol and violence. These infant/child rearing practices which includes institutional day care during the breast-feeding years, tragically, contributes to generations of brain dysfunctional children and adults. It should be noted that UNICEF and WHO recommend breast-feeding for "two years and beyond" (Newman, 1995).

Appendix C

APPENDIX C: "Spiritual Sexuality" and "Transcendental Consciousness"

This additional appendix has been written exclusively by Dr. James W. Prescott for the online version of this article.

The terms "spiritual sexuality" and "transcendental consciousness" have been used by persons who claimed extraordinary experiences during orgasm. They claimed they had reached a special state of orgasm only achievable after years of sexual pleasurable experience. From the perspective of psychology these terms can be considered as hypothetical "brain gestalts" where the "whole is greater than the sum of its parts"--a common psychobiological perception in the visual world.

The terms "spiritual sexuality" and "transcendental consciousness" may give difficulties to those who equate these terms with the supernatural, as opposed to natural processes. It is the intent of this article, in the use of these terms, to indicate that there are different psychobiological states that can be understood within the natural processes of the brain and amenable to experimental evaluation.

In S-SAD theory, it is expected to find in those persons who claim to experience states of "spiritual sexuality" and "transcendental consciousness" (Stages 3 & 4), a different form of brain structure and function. These states are "brain gestalts" that, hopefully, can be measured by the MRI and PET scans, as well as with methods of quantitative electrophysiology. In brief, it is expected that states of "spiritual sexuality" and "transcendental consciousness" will be characterized with greater functional activity between limbic system, cerebellum and the frontal lobe, which can be measured by brain MRI and PET scan technologies. Quantitative electrophysiology and neurochemistry can also be of help here where the Coherence Function can be utilized to help quantify differences in brain-states associated with states of "spiritual sexuality" and "transcendental consciousness" which can also be related to their behavioral reports, as outlined in Tables 6.13 and 6.14 (Prescott, J.W. (1990): Affectional bonding for the prevention of violent behaviors: Neurbiological, Psychological and Religious/Spiritual Determinants. In. Violent Behavior Vol. I:Assessment and Intervention. (L.J. Hertzberg, et. al., Eds). PMA Publ. NY pp. 110-142; and in Prescott, J.W. (1992). Sexual Dimorphism in the Developing Human Brain: Evidence from Lateral Skull X-Rays. Presented in Symposium: "Genes, Hormones and Sexual Behavior" (R.T. Francoeur, Chairman). The Society For The Scientific Study of Sex. 1992 Annual Meeting. San Diego, CA November 12-15. Hilton Beach and Tennis Resort.

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