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Chapter 6
Affectional Bonding for the Prevention of Violent Behaviors: Neurobiological, Psychological and Religious/Spiritual Determinants

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The failure to develop peaceful behaviors represents the single greatest threat to the quality of human life and to the survival of human civilization. The human mammal is unique in its ability to engage in collective action to destroy its own species. Perhaps the evolution of language and complex cognitive functioning are the indispensable factors accounting for the uniqueness of human violence. Alternately, our evolutionary heritage, wherein the most aggressive individuals survived hostile and violent environments, may have led to the development of an aggressive genotype. No such genotype has, of course, been found, and it is highly unlikely that such a genotype exists. The enormous extent and diversity of human violence throughout the world appears to defy any simple genetic explanation. Fortunately, there is another explanation.

It is my belief that the origins of human violence have primarily an ontogenetic basis with unique phylogenetic characteristics. In brief, my SAD (Somatosensory Affectional Deprivation) theory states that the failure to develop affectional bonds in human relationships is the primary cause of human violence. The beginning of this failure is in the parent-offspring relationship where sensory deprivation of the emotional affective senses (tactile, vestibular, olfactory sensory modalities) is permitted to occur. It is these sensory modalities that mediate somatosensory affectional pleasure experiences in the parent-offspring relationship, which are held to be necessary for the development of primary affectional bonds between parent and offspring. Failure to develop this primary affectional bond is proposed to result in an impaired ability to develop secondary affectional

bonds, that is, the expression of physical affection through human sexual relationships. This failure to establish adult affectional bonds prevents adults, as parents, from providing the essential physical affectional experiences to their children, who are then emotionally and affectionately impaired and will with high probability, as adults, pass on their impairments to succeeding generations. Central to this theory is the role of physical pleasure in inhibiting physical violence and the primacy of the cutaneous and vestibular sensory modalities in the development of affectional bonds at the neurobiological level.

The unique evolutionary characteristic of this theory is proposed to reside in the human emotional/affective capacity to experience and integrate pleasure with other human capacities and functions in a manner not possible with infrahuman mammals. This evolutionary advantage to experience and integrate pleasure is considered to be sexually dimorphic; that is, it is uniquely developed in the human female and thus confers upon the human female a psychobiological advantage to experience and integrate pleasure when compared to the human male. The ability to integrate somatosensory pleasure with higher brain functions (frontal-temporal cortex and cerebellum) is considered to be less well-developed in the human male brain than in the human female brain. It is this difference that is proposed to largely underlie sex differences in aggression, although these sex differences can be abolished and reversed by specific ontogenetic experiences. A corollary of this theory is that the human female is also more vulnerable to somatosensory pleasure deprivation experiences, and consequently will manifest more diverse impairments than the human male when subjected to deprivation of somatosensory pleasure. Before proceeding with the identification of this unique evolutionary characteristic that is considered to be sexually dimorphic and the biological and behavioral evidence that supports it, it would first be helpful to review the evidence in support of the ontogenetic theory of human affection and violence that has been summarized elsewhere (Prescott 1971, 1975, 1976a, 1976b, 1979, 1983).

ANIMAL STUDIES

This ontogenetic theory of human affection and violence has its origins in the primate isolation-rearing studies of the Harlows and their many students and colleagues (Harlow 1958, 1964, 1971, Harlow et al. 1963, Harlow and Harlow 1965, Harlow et al. 1966, Harlow and Seay 1966, Mason and Berkson 1975, Mason and Kenney 1974, Mason 1968, 1971, Mitchell 1968, 1970, 1975, Kaufman 1973a, 1973b, Kaufman and Rosenblum 1967, 1969, Lichstein and Sackett 1971, Suomi 1973, Suomi and Harlow 1972, Gluck et al. 1973, Seay et al. 1962, 1964, Berkson and Mason 1964, Jensen et al. 1968, 1973, Hinde 1974, Eastman and Mason 1975, Arling and Harlow 1967, Reite & Field 1985). In these studies it was found that rearing infant monkeys from birth in single cages within a colony room where they could see, hear, and smell other monkeys, although not being able to touch

or be touched by other monkeys, resulted in severe emotional and social pathologies. Symptoms included depressed, withdrawn, and autism-like behaviors; movement stereotypes; and self-stimulation. Juveniles and adults alike manifested self-mutilation, pathological violence, and abnormal behaviors. In addition to these abnormalities it should be noted that these isolation-reared animals develop an aversion to touching as well as impaired pain perception. Lichstein and Sackett (1971) have experimentally documented this paradoxical relationship between aversion to touching (a form of hyperreactivity) and impaired pain perception. It should also be recognized that the chronic self-stimulation of these animals (toe and penis sucking early in life and self-mutilation later in life) reflect a high need for tactile stimulation as does the stereotypical rocking behavior reflect a need for vestibulocerebellar stimulation. There is sufficient experimental data that documents compensatory chronic stimulus-seeking behaviors consequent to sensory deprivation during the formative periods of development. In other words there is a greater need for sensory stimulation in the specific sensory modality that has been deprived (Lindsley et al. 1964, Prescott 1967, 1971, 1975, 1976a, 1976b). These behaviors in isolation-reared monkeys also appear in humans who have been deprived of physical affectional experiences during the formative periods of development; correspondingly, parental-infant/child affectional deprivation is also linked to disturbances in later adult human sexual functioning.

One of the most dramatic findings reported by Mason (1968) and his colleague Berkson (1974) was that artificial movement (vestibular) stimulation provided by a "swinging-mother" surrogate could prevent most of the abnormal emotional-social behaviors from developing in the isolation-reared infant monkey. An infant monkey reared on its swinging-mother surrogate freely interacts with a human attendant, showing no avoidance of touching or social withdrawal. In contrast an infant monkey reared on a "stationary mother" surrogate crouches in fear, avoids touching, and is socially withdrawn.* It is emphasized that vestibular stimulation (movement) is the critical variable in accounting for the differences in these animals. It should be noted that physical touching through grooming and play involving movement are in general two of the more dominant social activities in developing mammals, particularly in primates. The pathological violence of ju-venile and adult rhesus monkeys reared in social isolation (deprivation of touch and body movement) has been extensively documented by Mitchell (1968, 1970, 1975). The pathological attacks of juvenile isolated monkeys against large adult monkeys and against helpless infants were particularly noted. Normally reared rhesus monkeys are rarely, if ever, observed to engage in such pathologically violent behaviors. Harlow and Harlow (1965) provide a vivid description of "motherless" monkey mothering:

* The film Rock-a-Bye Baby, which illustrates many of the abnormal social-emotional behaviors in animals and children subjected to parental-social deprivation, can be obtained from Time-Life, Inc., Time-Life Bldg., New York, NY

> Female monkeys that fail to develop affection for members of their species in their first year of life are ineffective, inadequate, and brutal mothers toward their first-born offspring.... All seven infants would have died had we not intervened and fed them by hand. Five of the mothers were brutal to their babies, violently rejected them when the babies attempted maternal contact, and frequently struck their babies, kicked them, or pushed the babies against the cage floor. The other two "motherless mothers" were primarily indifferent and one of these mothers behaved as if her infant did not exist.

In addition to the above behavioral pathologies of isolation-reared rhesus monkeys, there is also sexual dysfunction in these animals as a consequence of their early affectional deprivation.

ADULT SEXUAL DYSFUNCTIONING AND CHILD ABUSE

A systematic review of cross-cultural studies on aggression is beyond the scope of this chapter; however, it would be remiss not to mention selected studies by cultural anthropologists who have previously linked certain parent-child re-lationships and other cultural factors to the development of social and asocial behaviors (Whiting and Child 1953, Bacon et al. 1963, Whiting et al. 1958, Whiting 1969, 1971, Ainsworth 1967, Barry et al. 1967, Russell 1972, Rohner 1975, Otterbein 1970, Narol 1970, Slater and Slater 1965, Freeman 1971, Alcock 1976).

The longitudinal study of the development of aggression by Lefkowitz et al. (1977) is an additional essential reference, which has contributed significantly to the literature on childhood experience and later violence. Their findings that parental rejection and lack of parental nurturance of the child is significantly linked to the expression of aggression is consistent with the findings of Mantell (1974), Rohner (1975), and the point of view developed herein and elsewhere (Prescott 1975, 1977, 1979, 1984).

The powerful role of physical contact and pleasure in affectional bonding, health and disease have been addressed by many writers, (e.g. Bowlby 1973, Klaus & Kennel 1982, Lynch 1977, Montagu 1971, Reite & Field 1985, Heath 1964, 1975, brown 1984, Colton 1983).

The findings from Harlow's laboratory and his many students and colleagues have direct relevance to human behavior in several respects. The issue of child abuse and human violence in general is one such example. The literature on child abuse has grown extensively and appears to parallel the increase (actual or in reporting patterns) of child abuse. Research has shown that parents who abuse their children invariably were deprived of parental physical affection, that is, they were subjected to somatosensory pleasure deprivation during their infancy and childhood. Steel and Pollack (1968) have reported in their studies of child abuse that abusing parents rarely experience pleasure in day-to-day living and that their sexual lives are especially impoverished. Dr. Steel (personal communication

1975) mentioned that few of the hundreds of women he interviewed ever reported experiencing orgasm. Thus, it appears that the deprivation of physical affection and sexual pleasure in adulthood may be linked with deprivation of parental physical affection where these deprivations of physical pleasure during the prepubertal and post pubertal stages of development have been linked with adult human violence. The issue of child abuse in human violence in general is one such example; impaired adult sexual functioning is another. (Prescott 1975). Milner and Wimberley (1979) have specifically reported in their study of child abusers that: "The best single predictor concerned having a good sex life. Those reporting such were identified less often as abusers. This relationship alone explained 62% of the variance" (p. 97). Adult sexual dysfunctioning in child abuse has also been reported upon by Williams and Money (1980).

CROSS-CULTURAL STUDIES: CHILD REARING PRACTICES

In an attempt to provide more substantive data that would link deprivation of parental physical affection to adult physical violence and impaired sexuality, cross-cultural studies were conducted on preindustrial cultures. I am indebted to Professor John Whiting for bringing my attention to the resources of the *Human Relations Area Files* and to R.B. Textor's (1967) *A Cross-Cultural Summary*, which was the principal source for the cross-cultural studies. From Textor the relationships among the following coded scales were examined: 1. infant physical affection provided by Barry et al. (1967); 2. repressive sexuality provided by John T. Westbrooke (1963) and Ford and Beach (1951); and 3. adult physical violence provided by Philip E. Slater (1964).

For Tables 6.1, 6.2, 6.4, 6.5-6.7 and 6.10, the code column is the Textor code number with the initials of the cultural anthropologist who coded the variables under "Descriptor." This is followed by the value of the chi-square statistic, its level of significance, the number of cultures in the sample, the phi coefficient, and the percentage of "correct" classification of cultures in the comparison.

Table 6.1 presents some of the social and behavioral characteristics of cultures that inflict pain on the infant by the nurturant agent. Such cultures are characterized by the following:

1. Practice of slavery ($p = .03$) (64% communality)
2. Polygyny has high incidence ($p = .001$) (79% communality)
3. Women's status is inferior ($p = .03$) (78% communality)
4. Desire for children is high ($p = .003$) (79% communality)
5. Low infant physical affection ($p = .03$) (65% communality)
6. Low overall infant indulgence ($p = .0000$) (77% communality)
7. Developing nurturant behaviors in children is low ($p = .05$) (67% communality)
8. Supernaturals are aggressive ($p = .10$) (64% communality)

TABLE 6.1. Social and Behavioral Characteristics of Cultures that Inflict Pain on the Infant by Nurturant Agent (324-BB)

Source Textor Code	Descriptor	Chi Square	p	N	Phi	% 'Correct' classif.
110-EA	Slavery is present	4.74	.03	66	.27	64
175-EA	Community not 'kin-heterogeneous'	5.74	.02	66	.29	64
243-WCS	Polygyny has high incidence	9.84	.001	34	.54	78
277-LWS	Women's status is inferior	3.43	.03	14	.50	79
282-BCA	Desire for children is high	7.22	.003	28	.51	79
299-EA	Postpartum sex taboo lasts 1 year or less	6.89	.007	36	.44	78
314-WCS	Incidence of mother-child households is high	3.99	.05	45	.30	64
317-BBC	Low infant physical affection	4.71	.03	63	.27	65
318-BBC	Low overall infant indulgence	18.05	.0000	66	.52	77
321-BBC	Immedicate reduction of infant drive is low	3.48	.06	58	.25	64
322-BBC	Consistency of reducing infant's drive is low	5.08	.02	57	.30	67
340-BBC	Developing nurturant behavior in child is low	3.87	.05	45	.29	67
425-LTW	Supernaturals are aggressive	2.17	.10	36	.25	64
426-GES, EA	High god is present	3.05	.08	57	.23	64
438-WC, JFG	Fears of supernatural greater than fears of natural forces	3.88	.03	28	.37	71

9. High god is present (p = .03) (64% communality)
10. Fears of supernatural forces greater than fear of natural forces (p = .03) (71% communality)

The above cluster of interrelationships illustrates a pattern of exploitation and deprivation of women and children being associated with inflicting pain upon the infant by the nurturant agent. It is emphasized that these data document an inverse relationship between infant physical affection and infant physical pain.

FROM: Prescott, J.W. (1990): Affectional bonding for the prevention of violent behaviors: Neurobiological, Psychological and Religious/Spiritual Determinants. In. *Violent Behavior Vol. I: Assessment and Intervention.* (L.J. Hertzberg, et. al., Eds). PMA Publishing NY pp. 110-142.

TABLE 6.2. Social and Behavioral Characteristics of Cultures that Provide High Infant Physical Affection (317-BBC)

Source Textor Code	Descriptor	Chi Square	p	N	Phi	% 'Correct classif.
137-PES	Invidious display of wealth is low	3.54	.06	50	.27	66
138-BBW	Superordinate justice is absent	2.55	.07	22	.34	68
149-BBC	Incidence of theft is low	5.51	.02	36	.39	72
318-BBC	Overall infant indulgence is high	21.00	.0000	66	.56	80
320-BBC	Degree of reducing infant needs is high	11.95	.0005	65	.43	74
321-BBC	Immediacy of reducing infant needs is high	5.66	.92	59	.31	68
324-BBC	Infant physical pain is low	4.77	.03	63	.27	65
330-BBC	Weaning age is 2.5 years or longer	3.72	.05	63	.24	63
338-BBC	Child's anxiety over performance of responsible behavior is low	8.49	.004	65	.36	68
354-BBC	Child's anxiety over performance of obedient behavior is low	4.61	.03	63	.27	65
368-JKH	Dissociation of sexes at adolescence is high	4.43	.93	18	.50	78
421-PES	Killing, torturing, or mutilation of enemy is negligible	8.38	.004	49	.41	73
424-JMH	Low religious activity	7.73	.003	27	.54	81
433-GES	Belief in reincarnation absent	2.91	.05	17	.41	76
434-JFG	Low asceticism in mourning	3.58	.06	41	.30	66
441-WC	Fear of human beings is high	6.58	.007	38	.42	71
446-GES	Witchcraft low or absent	2.91	.05	17	.41	76

In this context a "high desire for children" reflects a measure of exploitation and deprivation rather than high nurturance. In many primitive cultures large families are desired to demonstrate "potency" in the male and "fertility" in the female, to provide a labor source, and to provide protection and security in old age.

Table 6.2 presents some of the social and behavioral characteristics of cultures that provide "high infant physical affection." Selected characteristics of these cultures are highlighted as follows:

1. Low incidence of theft (p = .02) (72% communality)
2. Low infant physical pain (p = .03) (65% communality)
3. Weaning age is 2.5 years or longer (p = .05) (63% communality)
4. Child's anxiety over performance of responsible behavior is low (p = .004) (68% communality)
5. Killing, torturing, or mutilation of enemy is negligible (p = .004) (73% communality)
6. Low religious activity (p = .003) (81% communality)
7. Belief in reincarnation absent (p = .05) (76% communality)

The variable of particular significance in the above cluster of characteristics is "killing, torturing, or mutilation of the enemy," which provides direct support for the main hypothesis that deprivation of infant physical affection is associated with adult physical violence and thereby supports at a high level of statistical significance the extrapolation of effects of infrahuman primate isolation rearing (somatosensory affectional deprivation) to consequences of human primate child-rearing practices that are also characterized by somatosensory affectional deprivation that results in adult violence.

Table 6.3 presents the distribution of the 49 cultures that relate infant physical affection to adult physical violence. The first two columns include 36 cultures (73%), whose physical violence was correctly classified according to the somatosensory pleasure-deprivation theory. Thirteen cultures were not correctly classified according to this theory. It is recognized that a theoretical system must deal with the exceptions, and how these exceptions can be accounted for within the somatosensory pleasure deprivation theory is given below.

CROSS-CULTURAL STUDIES: HUMAN SEXUAL RELATIONSHIPS

For the six cultures in the third column of Table 6.3, violence should have been low since these cultures had high infant physical affection. Since the original publication of these data, three cultural miscodings have come to the attention of this writer. According to Harner (1972; and personal communication) the Jivaro have low infant physical affection and therefore belong in Column 2. The Zuni were inappropriately listed in Textor (1967) as high in physical violence when they should have been listed in Column 1, as low in physical violence (Slager, personal communication, 1985). This reclassification is also supported

TABLE 6.3. Distribution of 49 Cultures that Relate Infant Physical Affection to Adult Physical Violence (Textor Codes 317:BBC vs. 421:PES).

High infant physical affection and low adult physical violence	Low infant physical affection and high adult physical violence	High infant physical affection and high adult physical violence	Low infant physical affection and low adult physical violence
Andamanese	Alorese	Cheyenne*	Ainu**
Arapesh	Aranda	Chir-Apache*	Ganda**
Balinese	Araucanians	Crow*	Kwakiutl**
Chagga	Ashanti	Jivaro[a]*	Lepcha**
Chenchu	Aymara	Kurtatchi*	Pukapuka**
Chuckchee	Azande	Zuni[c]	Samoans[b]**
Cuna	Comanche		Tanala**
Hano	Fon		
Lau	Kaska		
Lesu	Marquesans		
Maori	Masai		
Murngin	Navaho		
Nuer	Ojibwa		
Papago	Thonga		
Siriono			
Tallensi			
Tikopia			
Timbira			
Trobriand			
Wogeo			
Woleaians			
Yahgan			

* = Premarital sex punished.
** = Premarital sex permitted.
Note: chi square = 8.38; p = 0.004; N = 49; 0 = 0.41; percent = 73.
aAccording to Harner (1972) the Jivaro also belong in column 2. (personal communication, 1976).
bAccording to Derek Freeman (personal communication, 1976), Professor of Anthropology, Australian National University, the Samoan culture is misclassified and belongs to column 2. Also, Freeman (1983).
cAccording to Slater (1985, personal communication) the Zuni belong in column 1.

by the Zuni being rated as low in bellicosity (Textor Code 420) by Slater in Textor (1967). This leaves four misclassified cultures in Column 3. It should be noted that all four of these remaining cultures are punitive toward premarital sex, which accounts for their high violence, since deprivation of sexual affectional pleasure during adolescence can negate the advantages of early infant physical attention.

With respect to Zuni sexuality,. there was an absence of coded information on

TABLE 6.4. Social and Behavioral Characteristics of Cultures that are Punitive Toward Premarital Sexuality (389-392-JTW, EA)

Source Textor Code	Descriptor	Chi Square	p	N	Phi	% 'Correct' classif.
81-EA	Community size is larger	13.11	.0003	80	.41	73
91-FW	Societal complexity is high	5.13	.01	15	.56	87
102-EA	Class stratification present	6.25	.01	111	.24	60
110-EA	Slavery is present	7.87	.005	176	.21	59
127-JKB	Low female income	2.84	.09	24	.34	71
148-BBC	Personal crime is high (392)	3.45	.05	28	.35	71
149-BBC	Incidence of theft is high (392)	2.70	.07	31	.30	68
186-EA	Kin group exclusively patrilineal	4.39	.04	114	.20	62
190-EA	Kin groups patrilineal or double-descent rather than matrilineal	10.10	.002	62	.40	64
240-EA	Small extended family	7.13	.008	62	.34	70
262-EA	Wives are "purchased"	5.58	.02	114	.22	54
278-LWS	Women have property rights	5.41	.008	9	.78	100
301-EA	Longer postpartum sex taboo	4.86	.03	50	.31	62
393-FB	Extramarital sex is punished	7.96	.005	58	.37	71
397-JKH	Sex disability is present	6.94	.004	23	.55	83
398-WNS	Intensity of sex anxiety is high	14.86	.0000	25	.77	89
399-WNS	Castration anxiety is high	5.23	.009	37	.38	65
420-PES	Bellicosity is extreme	3.50	.04	37	.31	68
421-PES	Killing, torturing, mutilating is high	3.26	.07	35	.31	69
428-GES	High god in human morality	5.44	.01	27	.45	81
472-PES	Narcissism is high	3.31	.04	38	.30	66
475-PES	Exhibitionistic dancing emphasized (392)	4.16	.04	66	.25	65

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TABLE 6.5. Social and Behavioral Characteristics of Cultures that are Punitive Toward Extramarital Sexuality (393-FB).

Source Textor Code	Descriptor	Chi Square	p	N	Phi	% 'Correct' classif.
110-EA	Slavery is present	10.12	.002	83	.35	67
133-GES	Contracted debts highly present	3.43	.03	14	.50	79
137-PES	Display of wealth emphasized	3.05	.08	44	.26	63
148-BBC	Personal crime is high	4.38	.02	20	.47	80
149-BBC	Incidence of theft is high	5.86	.008	21	.53	81
175-EA	Community not "kin-heterogeneous"	3.12	.08	84	.19	60
190-EA	Kin group patrilineal or double-descent rather than matrilineal	2.76	.10	52	.23	63
258-WNS	High avoidance of son's wife	4.13	.02	17	.49	76
282-BCA	Desire for children is high	3.41	.05	27	.36	70
295-BCA	Abortion is highly punished	3.14	.05	17	.43	76
301-EA	Greater postpartum sex taboo	3.01	.08	43	.26	65
320-BBC	Low degree of reducing infant's needs	3.34	.05	37	.30	68
337-BBC	Child responsibility: high child anxiety	3.26	.05	37	.30	68
345-BBC	Child autonomy: high child anxiety	9.24	.001	39	.49	77
353-BBC	Child obedience: high child anxiety	5.24	.02	38	.37	71
392-JTW, EA	Premarital sex strongly punished	7.26	.005	58	.37	71
399-WNS	Castration anxiety is high	13.33	.0001	30	.67	87
419-PES	Military glory strongly emphasized	9.52	.002	53	.47	62
420-PES	Bellicosity is extreme	10.10	.002	43	.49	77
421-PES	Killing, torturing, mutilating is high	9.33	.002	42	.47	76
425-LTW	Supernaturals are aggressive	4.54	.02	19	.49	79

their premarital sexuality; however, Ford and Beach (1951) have rated them as accepting extramarital coitus (Textor Code 393). Since it is highly unlikely that a culture would permit extramarital coitus but not premarital coitus (the converse is not necessarily true), it is concluded that the Zuni also permit premarital coitus. These sexual behaviors are consistent with a nonviolent culture.

In contrast, the Jivaro strongly punish extramarital coitus and wife-stealing is punished by death. It is also of interest to note that Jivaro males appear to prefer hunting to engaging in sexual relations and are "reluctant to engage in sexual intercourse more often than about once every six to eight days" (Harner 1972). It is also reasoned "that a second wife permits a man to spend more time hunting and thus reduces the frequency of his acts of sexual intercourse" (Harner 1972). Clearly, the Jivaro are not a highly sexually active and expressive culture, and although premarital sex is permitted, it is frequently exploitative and violent.

For the cultures in the fourth column of Table 6.3, violence should have been high since these cultures had low infant physical affection. According to Derek Freeman, Professor Emeritus of Anthropology, Australian National University, the Samoan culture is highly violent and belongs in Column 2, and not in column 4 (personal communication, 1976, and Freeman 1983). All of the remaining six cultures are characterized by expressive premarital sexuality. The interpretation of this relationship is that the disadvantages of early infant physical affection can be compensated for later in life by enriched physical affection and pleasure experienced through expressive premarital sexuality.

Given the revisions of the Jivaro, Samoan and Zuni cultures from the original classification from the data base in Textor (1967), there are now 39 of the 49 or 80% of the cultures whose adult physical violence (high or low) can be accurately predicted from the single variable of infant physical affection. The adult physical violence (high or low) in the remaining 10 cultures can all be accounted for by whether premarital sexuality (coitus) is permitted or punished.

Table 6.4 provides a summary of social and behavioral characteristics of cultures that are punitive toward premarital coitus. It can be seen that these cultures are characterized as violent, criminal, sexually dysfunctional, dehumanizing, narcissistic, "pornographic" (exhibitionistic dancing) with a religious belief structure that has a High God involved in human morality. Significantly, these cultures are patrilineal and not matrilineal cultures. When premarital coitus is punished, sex disability is present; castration anxiety is high and sex anxiety is high. This sexually dysfunctional profile is linked to high personal crime, where 71% of the cultures are correctly classified (high sexual dysfunction with high personal crime and low sexual dysfunction with low personal crime; high theft: 68% of cultures correctly classified; extreme bellicosity: 68% of cultures correctly classified; killing, torture and mutilation: 69% of cultures correctly classified).

In brief, the single variable of physical affectional pleasure experienced in two stages of development (infancy and adolescence) can correctly classify the adult physical violence (high or low) in 100% of the 49 preindustrial cultures that are

TABLE 6.6. 186/190*: Patrilineal Cultures (N = 150/186)

Source Textor Code	Descriptor	Chi Square	p	N	Phi	% 'Correct" classif.
109-EA	Castes are present	20.90	.0000	368	.24	69
110-EA	Slavery is present	16.12	.0001	381	.21	62
138* BBW	Superordinate justice present	4.04	.03	24	.41	79
210* EA	Marital residence patrilocal	189.00	.0000	196	.08	100
240* EA	Small extended family	7.22	.007	133	.23	66
242* EA	Polygyny is common	8.22	.004	244	.18	73
263-EA	High bride price	40.73	.0000	395	.27	63
282* BCA	High desire for children	1.99	.09	23	.29	63
295* BCA	Abortion highly punished	4.98	.02	14	.60	86
314-WD	Low mother-child households	7.14	.008	80	.30	71
334-BBC	Low child indulgence	5.39	.02	78	.26	61
336-BBC	High child responsibility	5.63	.02	75	.27	61
337-BBC	High child anxiety	3.99	.05	73	.23	62
339-BBC	High child conflict	4.72	.03	73	.25	66
368-JKH	Low adolescent sex dissoc.	3.42	.05	37	.30	62
370-EA	Adolescent boys sep. mother-sister	7.27	.007	241	.17	62
377-EA	Male genital mutilation present	29.38	.0000	325	.30	69
382-JKB	Female initiation rites absent	4.31	.04	65	.26	66
390* JTW	Premarital coitus strongly punished	8.73	.003	107	.29	52
393* FB	Extramarital coitus strongly punished	2.76	.10	52	.23	63
400 FB	Homosexuality permitted	3.89	.05	38	.26	57
426* GES	High god is present	11.90	.0006	167	.27	68
427* GES	High god is active	5.26	.02	103	.23	62
428* GES	High god in human morality	5.51	.02	56	.31	73
468* JMH	High other culture contact	5.27	.01	36	.38	67
476 CH	Low insobriety	3.70	.05	49	.28	69

TABLE 6.7. Exclusively Matrilineal Cultures (N = 55)

Source Textor Code	Descriptor	Chi Square	p	N	Phi	% 'Correct classif.
102-EA	Class stratification absent	3.33	.07	382	.09	56
210-EA	Matrilocal residence	192.44	.0000	200	.98	100
240-EA	Large extended family	6.24	.01	212	.17	66
263-EA	Wives easily obtained	7.90	.005	394	.14	62
336-BBC	Low child responsibility	4.44	.04	73	.25	66
370-EA	Adolescent boys sep. mother-sister	5.43	.02	242	.15	63
390-FTW	Premarital coitus permitted	6.19	.01	178	.19	63
399-WNS	Low castration anxiety	2.72	.10	44	.25	84
403-WL	Anal reasons for illness	4.09	.04	60	.26	70
426-GES	High god is absent	6.06	.01	259	.15	63
427-GES	High god, if present, is inactive	7.08	.008	156	.21	62
428-GES	High god absent in human morality	4.24	.04	87	.22	74
449-JRL	High food taboos	3.69	.05	86	.21	73
471-LWS	Secret societies are present	3.97	.05	22	.43	77

distributed throughout the world. This writer knows of no other theoretical system or data base that can yield such predictions of violent and peaceful cultures distributed throughout the world.

Table 6.5 provides a summary of social and behavioral characteristics of cultures that are punitive toward extramarital sexuality. The statistical relationships are much stronger than for repression of premarital sexuality and reflect stronger associations of violence, criminality, sexuality, militarism, exploitation of women and children and dehumanization with strong punishment of premarital sexuality. It should also be noted that in these violent, sexually repressive cultures that their supernatural deities are aggressive rather than benevolent and tend to be patrilineal rather than matrilineal. Given the linkage of patrilineal cultures with strong punishment of premarital and extramarital sexuality, a summary of the social-behavioral characteristics of patrilineal and matrilineal cultures seemed indicated. These follow below:

TABLE 6.8. Social-Behavioral Characteristics of Exclusively Matrilineal and Patrilineal Cultures

Textor Code	Descriptor	Textor 187 Matrilineal %	Textor 187 Matrilineal N = 55	Textor 186 Patrilineal %	Textor 186 Patrilineal N = 150
210	Residence: matrilocal vs. patrilocal	100	31	100	137
240	Extended family: large vs. small	58	33	69	97
263	Wife price: low vs. high	59	54	80	148
336	Child responsibility: low vs. high	75	12	79	24
370	Adolescent boys segregated: same	59	34	51	91
390	Premarital coitus: permitted vs. punished	100	19	67	84
426	High god: absent vs. present	59	37	71	99
427	High god: inactive vs. active	80	15	64	70

CROSS-CULTURAL STUDIES: PATRILINEAL VS. MATRILINEAL CULTURES

Table 6.6 presents selected statistically significant social-behavioral characteristics of *exclusive patrilineal* cultures (Textor Code 186, N = 150); and patrilineal cultures whose kin group is exclusively patrilineal or double-descent rather than matrilineal (Textor Code 190, N = 186), vs. all other kin group cultures.

The primary social-behavioral characteristics of these patrilineal cultures are human inequality (caste system and slavery present; high bride price; polygyny common); affectional deprivation and exploitation of children (low child indulgence and high childhood responsibility; high desire for children with abortion punished are linked because children serve utilitarian purposes, e.g. proof of virility in the male; fertility in the female; and economic security in old age); sexual violence and repression (male genital mutilation rituals, premarital and extramarital coitus strongly punished but homosexuality permitted); belief in a High God that is active and involved in human morality; and drunkenness.

Table 6.7 presents selected statistically significant social-behavioral characteristics of *exclusive matrilineal* cultures (Textor Code 187, N = 55) compared to all other kin group cultures. There are fewer significant social-behavioral correlates with the matrilineal than with the patrilineal cultures. Significant correlates include family and child-centered values (large extended family; wives easily obtained; low childhood responsibility); sexual expressiveness (premarital coitus permitted and low castration anxiety—masturbation not punished); and the general absence of a High God in their cultures or when present the High God is not involved in affairs of human morality.

Table 6.8 compares selected differences between *exclusive matrilineal* (T187) and *exclusive patrilineal* (T186) cultures. It should be noted that 100% of the

TABLE 6.9. Roles Of A High God In Matrilocal Cultures That Permit Premarital and Extramarital Coitus

Matrilocal Cultures with Premarital Coitus	High god absent	High god inactive	High god morally indifferent	Extramarital coitus permitted
Bororo	(Yes)			
Delaware	(No)	No	Yes	
Dobuans*				No
Garo -	Yes			
Goajiro	No	No	Yes	
Haida	Yes			
Hano*				Yes
Kaska	Yes			
Navaho*				
Ponapeans	Yes			Yes
Siriono	No	Yes		Yes
Siuni	Yes			
Talamanca	No	No	Yes	
Tenda	No	Yes		Yes
Timbira	Yes			Yes
Trobriand	Yes			Yes
Trukese	Yes			Yes
Vedda	Yes			No
Yao	Yes			
Total (N = 19)				
Cum. Per Cent (N = 16)	63	81	100	
Percent (N = 9)				78%

nineteen exclusive matrilineal cultures where information was available on pre-marital sex *permitted* premarital coitus; whereas 67% of the 84 exclusively patrilineal cultures punished pre-marital coitus. Further, 59% of 37 exclusively matrilineal cultures had *no High God* in their cultures; whereas, 71% of 99 exclusively patrilineal cultures had a *High God* in their cultures. Similarly, 80% of 15 exclusive matrilineal cultures who had a High God was coded as "inactive," whereas, 64% of 70 exclusive patrilineal cultures had a High God who was coded as "active."

Table 6.9 lists the nineteen exclusive matrilineal cultures that permit premarital coitus with their religious belief structure and extramarital behaviors. Sixteen of the nineteen cultures had coded information available on their High God. Ten of the sixteen cultures or 63% had no High God present in their culture. Three of the remaining six cultures had a High God that was "inactive"; and the three remaining cultures with "active" High Gods which were not involved in affairs of human morality. Nine of the nineteen exclusive matrilineal cultures had coded information available on extramarital sexuality where 7 of the 9 or 78% of these cultures permitted extramarital coitus.

TABLE 6.10. Cultures Where A High God Is Present Textor code(426)

Textor Code #	Descriptor	X^2	P	N	Phi	%
109	Caste System Present	12.44	.0004	244	.23	52
110	Slavery is Present	14.03	.0002	251	.24	60
190	Patrilineal Rather Than Matrilineal	11.90	.0006	167	.27	68
262	Wives Purchased	10.10	.0015	258	.20	65
313	High Aggression Socialization Anxiety	6.28	.01	45	.37	71
324	High Infant Pain By Caretaker	3.05	.08	57	.23	63
331	Early Independence Training	2.99	.06	29	.32	69
377	Male Genital Mutilation Present	11.03	.0009	2.57	.21	54
391	Premarital Sex Strongly Punished	3.91	.05	149	.16	59

TABLE 6.11. High God Supports Human Morality Textor Code(428)

Textor Code #	Descriptor	X^2	P	N	Phi	%
109	Caste System Present	5.20	.02	76	.26	54
190	Patrilineal Rather Than Matrilineal	5.51	.02	56	.31	73
242	Monogamous Rather than Polygymous	5.61	.02	87	.25	51
339	Low Child Conflict over Responsible Behavior	2.34	.09	14	.41	79
343	High Child Conflict over Nurturant Behavior	3.51	.03	7	.71	100
377	Male Genital Mutilation Present	11.45	.0007	86	.37	64
391	Premarital Sex Strongly Punished	6.75	.009	50	.37	74

CROSS-CULTURAL STUDIES: THE ROLES OF THE HIGH GOD IN PRIMITIVE CULTURES

An examination of the roles of the HIGH GOD in primitive cultures and their relationship to human violent and peaceful behaviors proved to be unusually illuminating. The ethnographic codings of a HIGH GOD were developed by Guy E. Swanson (1960) and modified by the Ethnographic Atlas where the HIGH GOD was defined as follows:

> By a high god is meant a spiritual being who is believed to have created all reality and/or to be its ultimate governor, even if his sole act was to create other spirits who, in turn, created or control the natural world.

(Textor 1967, p. 163).

The specific codes are as follows:

A. A high god present but otiose or not concerned with human affairs (69 cultures).
B. A high god present and active in human affairs but not offering positive support to human morality (26 cultures).
C. A high god present, active, and specifically supportive of human morality (61 cultures).
D. A high god absent or not reported in substantial descriptions of religious beliefs (104 cultures).

Table 6.10 lists those statistically significant social-behavioral characteristics of cultures which have a high god present in their cultures (T426: A, B & C) vs. no high god present (D). The profile of high god cultures is one of dehumanization and inequality. Specifically, such cultures have a caste system; practice slavery; are patrilineal; wives are purchased; have high aggression socialization anxiety; high infant pain by the caretaker; early independence training; male genital mutilation; and premarital sex is strongly punished.

Table 6.11 lists those statistically significant social-behavioral characteristics of cultures whose high god supports human morality (T428: C vs B). The profile of such cultures is similar to that reported for cultures coded as having a high god present, i.e. a caste system is present; patrilineal rather than matrilineal; monogamous rather than polygamous; low child conflict over responsible behavior; high child conflict over nurturant behavior; male genital mutilation present; and pre-marital sex is strongly punished.

Table 6.12 presents the social and behavioral characteristics of cultures where supernaturals are mainly aggressive rather than benevolent. This code was developed by Lambert, Triands and Wolf (1959). The most striking characteristic of this data is the consistent pattern of low infant and child nurturance and caring with exploitation of children and infliction of pain upon the infant by the nurturant agent. Although several of the associations are of marginal statistical significance (.05.p), the cluster of associations are highly consistent, including the punishment of extramarital sexuality.

This data with the other data reported herein suggest that if the human culture is an affectionate and caring culture, then the supernaturals that exist in the culture, as part of their religious belief system, are also affectionate and caring, i.e. benevolent. However, if the human culture is exploitative and violent, then the supernaturals of that culture are also very likely to be exploitative and violent. The strong linkage of patrilineal cultures with exploitation and violence and belief in a High God, and of matrilineal cultures with affectional caring and nonviolence with a general lack of belief in a High God that is involved in human morality, suggests the cultural paths of peace and violence in these latter cultures. It is recognized that not all patrilineal cultures are exploitative and violent nor

TABLE 6.12. Social and Behavioral Characteristics of Cultures Where Supernaturals Are Mainly Aggressive Rather Than Benevolent (Textor Code 425)

Source Textor Code	Descriptor	Chi Square	p	N	Phi	% 'Correct' classif.
127-JKB	Female contribution tosubsistence is high	2.42	.06	16	.39	81
259-WNS	High avoidance of mother-in-law	3.71	.03	20	.43	73
301	Post partum sex taboo lasts longer than one month	2.24	.07	19	.34	79
318-BBC	Overall indulgence of infant is low	2.17	.10	36	.25	64
324-BBC	Pain inflicted upon infant by Nurturant Agent is high	2.17	.10	36	.25	64
334-BBC	Indulgence of the child is low	2.81	.09	36	.28	67
340-BBC	Developing nurturant behavior in child is low	3.05	.06	29	.33	69
344-BBC	Developing self-reliant behavior in child is high	4.03	.04	35	.34	69
345-BBC	High child anxiety over low performance	4.96	.02	35	.38	71
393-FB	Extramarital coitus punished	4.54	.02	19	.49	79
402-WC	Explanation of illness of an oral nature are present	9.76	.0007	29	.58	83
424-JMH	Religious specialists are part-time not full time	5.19	.01	12	.66	92
452-WNS	Totemism with food taboos is absent	5.58	.009	17	.57	82

are all matrilineal cultures affectionately caring and nonviolent. The core of the two paths is to be found in whether physical affectional pleasure mutually shared is a dominant or negligible characteristic of the culture. God may well be made unto the image and likeness of man rather than man being made unto the image and likeness of God.

It would appear reasonable to conclude that religious bonding between human and God does not lead to human nonviolence and peace; but rather it is affectional bonding among humans that leads to nonviolence and peace among humans, where affectional bonding includes its biological, psychological and spiritual components, which must ultimately become totally interdependent

TABLE 6.13. A Four Stage Process Theory of Orgasmic State: Neurobiological, Psychobiological, Cultural and Spiritual Characteristics: A Bio-Psycho-social Field Theory of Male-Female Sexual and Love Relationships.

	Orgasmic State	Body Experience	CNS-Brain Mechanisms	Perceptual Experiences	Psychological State	Cultural* Form	Religious* System	Spiritual State	Gender
1.	Reflexive/ Dissociative (Physiological)	Genital Specific	Spinal/Limbic	Tension Reduction Apparent Pleasure	Exploitive Violent Authoritarian Addictions	Patristic-Monogamy Polygamy	MONOTHEISM	Aspiritual Male Animus	Male
2.	Associative (Psycho-physiological)	Somatic General	Limbic/ Paleocerebellar	Well-being floating/ Drifting Pleasure	Manipulative Controlling Utilitarian Dependencies	Polyandry	POLYTHEISM	Aspiritual Female Animus	M/F
3.	Intergrative (Psychosocial)	Somatic/ Cognitive	Limbic/ Paleocerebellar Neocortical	"Oceanic" Dyadic Unity Happiness Joy/Bliss	Mutuality Interdependencies Equality of LOVE	Polygamy	DEISM-TAOISM TANTRIC BUDDHISM	Spiritual Anima Amystical	F/M
4.	Transcendental (Spiritual)	Cognitive/ Somatic Parapsychic	Limbic/Paleo-neocerebellar Neocortical	Cosmic Unity "Out of Body" Sensations Ecstacy	Exclusivity "Surrender" of LOVE	Polyfidelity Pluralistic Monogamy	NATURALISTIC RELIGIONS DIONYSIAN	Spiritual Anima Mystical	Female

*Cultural Form and Religious System are approximations in this theoretical model

universal human peace is to be realized.

In summary, exclusive matrilineal cultures that are highly physically affectionate and nurturant and that permit premarital and extramarital coitus have either no High God present in their culture or the High God is either "inactive" or, if "active," is not involved in affairs of human morality.

These data and others not reported herein support the conclusion that supernatural belief systems with High Gods involved in human morality are created in human cultures that are primarily characterized by deprivation of physical affection and nurturance in human relationships, specifically sexual affectionate relationships, and these are generally patrilineal cultures. Conversely, human cultures that are high in physical affection and nurturance, specifically sexual affection, as expressed in permitted premarital and extramarital coitus in matrilineal cultures have apparently no need to construct a supernatural belief system with a High God present that is presumably the source of "love" which attempts to compensate for the loss of human love and affection. This interpretation and data on "primitive" cultures may illuminate similar relationships found in the fundamentalist/orthodox monotheistic cultures of Judaism, Christianity, and Islam, which are highly violent cultures and extremely punitive toward premarital and extramarital sexuality, particularly the punishment of the free and autonomous sexual expression of women.

In these violent, patristic, monotheistic cultures, the supernatural serves as an instrument of power to deny physical affection and pleasure to children and in our sexual relationships; inflicts pain and suffering on the human body; and thereby, maintains power and authoritarian control over women, children and society. It is for these reasons that the cultures of Western civilization have a history of pandemic human violence, which is made possible by a brain structure and function that has been shaped for violence through chronic sensory deprivation of physical affectional relationships.

THE FOUR STAGES OF ORGASMIC STATE

An alternative to the human history of affectional deprivation and violence is the integration of central neural pleasure into higher brain centers and, thus, higher levels of consciousness. To this end a four-stage process/state of pleasure, particularly orgasmic pleasure, was developed to account for the neurobiological, psychological and spiritual dimensions of affectional bonding (Prescott 1983). These relationships are summarized in Table 6.13.

In brief, the four stages of orgasmic process are: (1) reflexive/dissociative; (2) associative; (3) integrative; (4) transcendental. The lower two stages are primarily somatic experiences and male in character. Sexual exploitation and violence are Stage 1 phenomena. With respect to neural mechanisms, the lower two stages involve primarily spinal/limbic and paleocerebellar processes. The higher two stages involve cognitive and parapsychological experiences that are

TABLE 6.14. Descriptive Narrative of the Four Orgasmic States

Stage 1. Reduction of physiological tension (apparent pleasure) that is short-lived and has a genital focus is the primary somatic experience. There is little or no generalization of the somatic experience throughout the body. Fatigue and tiredness with desire to sleep are common post-orgasmic symptoms. Genital stimulation is necessary for orgasm.
Stage 2. Transition from mere reduction of physiological tension to positive states of relaxation and well-being. The somatic pleasure experience is generalized throughout the body and is longer-lived. Transitional state could involve transient sensations of floating, drifting, floating; feeling very light rather than heavy. Genital stimulation is necessary for orgasm. Little or no cognitive components.
Stage 3. Somatic and cognitive effects are experienced in either or both parallel and integrative forms with varying levels of integration of somatic and cognitive experiences. Multiple orgasms appear. Higher levels of integration involve altered states of consciousness which include loss of perception of body boundaries; perceived unity with partner's body and the cosmos; vestibular-cerebellar sensation of floating, drifting, flowing i.e. "oceanic" or "intrauterine" sensations are more intense and vivid. Orgasm can be elicited through nongenital touching, i.e. through other tactile surfaces of the body. Enhanced states of joy, peace, tranquility and well-being which may last for days.
Stage 4. Profound sense of unity with cosmos or universe. Dramatic sensations of blinding light and body movement in three-dimensional space; out-of-body experiences. Ability to experience orgasmic state without tactile stimulation. Profound states of joy, peace, tranquility as "state-of-being" ecstasy.

primarily but not exclusively female in character. These higher two stages involve progressively higher neuro-integration of limbic process with neocortical (fronto-temporal structures) and neocerebellar functions. With respect to spiritual states the lower two stages are aspiritual. Stage 3 is spiritual but amystical and Stage 4 involves mystical states of union. The transcendental stage necessarily involves a higher level of neuro-integration of limbic, cerebellar and fronto-temporal cortex structures and function, which are proposed to be more well developed in the human female brain than in the male brain. Unfortunately, the transcendental stage is rarely experienced in human cultures, given the massive deprivation of physical affection and repression of female sexuality that is characteristic of most human cultures.

It is proposed that this increased neuro-integration of limbic-cerebellar and frontal-temporal lobe activity (which is made possible by intense pleasure states) permits increased communication of the conscious (neocortex) with the subconscious (limbic) self. The cerebellum is the "gatekeeper" to this neurointegrative communicative process between the neocortical and limbic system structures that permits the psychological experiences of transcendental and mystical states of union. This state reunifies, in part, the oceanic intra-uterine state of psychobiological unity between mother and fetus. (In contrast, sensory deprivation of pleasure leads to disassociative and parapsychotic states that have been

frequently described by the mystic hermits of the patristic body-denying "spiritualists," e.g. St. John of the Cross. The creative insights of Gooch (1980, 1981) on the role of the cerebellum in psychic and paranormal phenomena merits examination within this context.

Table 6.14 provides a descriptive narrative of the four orgasmic states that is offered as a heuristic model to facilitate dialogue on a different perspective on the ultimate purpose of human sexual functioning and relationships and why repression of sexual affectional relationships is so destructive to the development of human peace and spirituality. It is the neuro-integration of body and mind in dyadic relationships and their accompanying psychobiological synchronicity and harmonic coupling or union that manifests itself in a state of spiritual union – with lover, the universe, the cosmos-God (spirit). This perspective has much in common with Tantric Buddhism and Taoism (Francoeur 1982, Parrinder 1980, Tannakill 1979, Bullough 1976, Chia and Winn 1984).

TOWARD THE FUTURE

These concepts are not entirely new and have been previously expressed in different form by Wilhelm Reich, a German psychoanalyst, who in 1933 wrote the following in *The Mass Psychology of Fascism* (Reich 1973):

> More than the economic dependency of the wife and children on the husband and father is needed to preserve the institution of the au-thoritarian family. For the suppressed classes, this dependency is endurable only on condition that the consciousness of being a sexual being is suspended as completely as possible in women and children. The wife must not figure as a sexual being, but solely as a child-bearer. Sexually awakened women, affirmed and recognized as such, would mean the complete collapse of the authoritarian ideology. (p. 105)

And by Teilhard de Chardin, a Jesuit paleontologist, who in the Peking of 1934 wrote the following about sexuality, women in society and knowledge in his essay on *The Evolution of Chastity* (Chardin 1975):

> Woman is, for man, the symbol and personification of all the fulfillments we look for from the universe. The theoretical and practical problem of the attainment of knowledge has found its natural "climate170 in the problem of the sublimation of love. At the term of the spiritual power of matter, lies the spiritual power of the flesh and of the feminine.
>
> It is here, if I am not mistaken, that we reach the source of the divergence which seems to detach our modern sympathies from the traditional cult of chastity. The Christian code of virtue seems to be based on the presupposition that woman is for man essentially an instrument of gen-eration. Either woman exists for the propagation of the race – or woman has no place at all: such is the dilemma put forward by the

moralists. All that is most dear to us in our experiences, and most certain, revolts against this simplification. However fundamental woman's maternity may be, it is almost nothing in comparison with her spiritual fertility. Woman brings fullness of being, sensibility, and self-revelation to the man who has loved her. (p. 70)

...The feminine is the most formidable of the forces of matter (p. 74)....The truth is, indeed, that love is the threshold of another universe. (p. 78)

...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)

...The day will come when, after harnessing the ether, the winds, the tides, gravitation, we shall harness for God the energies of love. And, on that day, for the second time in the history of the world, man will have discovered fire. (pp. 86-87)

In summary, we are confronted with the realization that there are two spiritual paths: the first is the traditional patristic authoritarian monotheistic spirituality that is based upon carnal violence, pain, suffering and deprivation of physical affection and sexual pleasure; the second is the biocultural evolutionary and egalitarian matristic, nontheistic spirituality that is based upon carnal love and the integration of carnal love with higher brain centers to achieve "altered states of consciousness" and "transcendental states of being" where profound states of joy, peace, tranquility and communion are experienced. This spiritual path is consonant with that of Tantric Buddhism and Taoism, but with significant differences.

The pursuit of the patristic spiritual path will continue the human species along the path of alienation, inequality, violence and ultimately its own self-destruction.

The pursuit of the matristic spiritual path will redirect the human species along the path of peace, harmony, compassion, equality and love with an expansion of human spiritual consciousness that, theretofore, has been beyond our realization.

In closing, it is perhaps fitting to end with a commentary of that ancient Chinese philosopher Lao Tzu from the *Tao Te Ching*, Book One, XIII:31 (Lao Tzu, 1963):

Hence he who values his body more than dominion over the empire can be trusted with the empire.

He who loves his body more than dominion over the empire can be given custody of the empire. (551-479 B.C.)

And that of Aristotle from *Nichomachean Ethics*, Book 7:

Therefore, the highest good is some sort of pleasure, despite the fact that most pleasures are bad, and, if you like, bad in the unqualified sense of the word.

EPILOGUE

In conclusion, the deprivation of physical affection in human relationships – beginning in the parent-infant relationship and extending through the repression of female sexuality – constitutes the single greatest source of physical violence in human societies. The sensory neurobiological mechanisms of physical pleasure are mediated by the somesthetic (touch) and vestibular (movement) sensory systems where the cerebellum has been proposed as a master integrating and regulating system for sensory-emotional, psychological and spiritual experiences.

The role of olfaction is of particular significance in affectional bonding where extended breast-feeding (2-3 yrs) results in the encoding of woman's natural body odors in the developing brain which becomes intimately associated with pleasure bonding with mother (woman). The failure to develop olfactory pleasure encoding in the brain results in olfactory aversion of woman's natural body odors in the same manner that early touch deprivation results in touch aversion behaviors. These developmental olfactory events have greater significance for adult male/female sexual relationships and bonding than has been previously recognized.

It is the neural circuits of the brain which mediate pleasure that controls and regulates the neural circuits of the brain that mediate violence. When the pleasure circuits of the brain are damaged through incomplete development due to Somatosensory Affectional Deprivation (SAD) then uncontrolled violence is the consequence. (Prescott 1971, Riesen 1975, Struble & Riesen 1978, Heath 1975).

The human female is psychobiologically unique among her mammalian predecessors in that her sexual receptivity is not under regulatory control of ovarian cyclic processes, as it is for virtually all other mammals. This profound evolutionary change for continual potential sexual receptivity clearly establishes another purpose of human female sexuality other than reproduction. This other function is sexual pleasure that serves the purpose of affectional bonding between male and female which promotes family and community harmony, if not repressed. The human female capacity for multiple orgasms is another indicator of this special function and role of her sexuality.

Multiple male mating by the female is observed in certain infrahuman primates, e.g. the chimpanzee, where the female freely copulates with all unrelated males in the troop who, in turn, do not fight among themselves over the female and who also provide protection and nurturant caring of the female and her offspring. In contrast, it is the Alpha Male of harem troops who maintain sole and exclusive sexual control and access to the females and, upon displacement of a former Alpha Male, will kill the nursing offspring sired by the previous Alpha Male, presumably – according to sociobiological theory – to optimize gene transmission to the new Alpha Male (Hrdy 1977, Hausfater and Hardy, 1982).

This writer has offered a different explanation based upon power, domination

and control of the female that is accomplished through the sexual mounting of the female which is not possible with a nursing female. It is particularly emphasized that the peaceful and nurturant behaviors in multiple male mating female infrahuman primate troops (several examples) are surprisingly similar to those observed in multiple male mating female matrilineal cultures; and that the converse relationship is equally illuminating, namely, the violence of Alpha Males of harem troops that denies sexual access to females by other males is comparable to the violence of patristic males who also control sexual access to "his" females by other males (Prescott 1984).

It is concluded that somatosensory affectional pleasure mutually shared in the male-female relationship inhibits physical violence and neutralizes power and authoritarianism in that relationship. Thus, physical pleasure mutually shared constitutes a psychobiological substrate for egalitarian democratic relationships which is antithetical to authoritarian, fascist relationships. Consequently, religious systems that place a high moral value on pain, suffering and deprivation while placing immoral values on physical pleasure where the virtues of virginity, celibacy and chastity are highly valued contribute substantially to authoritarian and fascist societies which are characterized by high physical violence, particularly torture and mutilation, e.g. the Spanish Inquisition.

The implications of this SAD theory of alienation and violence for human survival is self-evident. Nations at war have their genesis for war within their own cultures. The path toward world peace must begin at home—our children, families and communities. As the child is the father of the man, so too is the child the mother of culture and the future of humanity.

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Chapter 7
The Social and Economic Context of Violent Behavior*

John Monahan

CLINICAL AND ACTUARIAL PREDICTION

The Nature of the Distinction

Much has been made in the area of prediction of the distinction between "clinical" and "actuarial" (or "statistical") methods. In what is still the leading work on the subject, Meehl (1954) distinguished the two approaches as follows:

> The mechanical combining of information for classification purposes, and the resultant probability figure which is an empirically determined relative frequency, are the characteristics that define the actuarial or statistical type of prediction. Alternatively, we may proceed on what seems, at least, to be a very different path. On the basis of interview impressions, other data from the history and possibly psychometric information of the same type as in the first sort of prediction, we formulate, as in psychiatric staff conference, some psychological hypotheses regarding the structure and dynamics of this particular individual. This type of procedure has been loosely called the clinical or case study method of prediction (pp. 3-4).

Clinical and actuarial prediction may be thought of as differing along at least two dimensions: the data employed and methods used to turn the data into a prediction.

Actuarial tables spell out precisely what kinds of data are to be considered in the prediction, while the clinical approach appears to let the choice of data vary somewhat with the individual case. Thus, in an actuarial table one would either

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