

PHYLOGENETIC AND ONTOGENETIC ASPECTS OF HUMAN AFFECTIONAL
DEVELOPMENT

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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. It is unnecessary to catalogue the history of human violence nor to note that the human mammal is unique in its ability to engage in collective action to destroy its own species. Some would point to the evolution of language and complex cognitive functioning as indispensable in accounting for the uniqueness of human violence. Others would argue that it is our evolutionary heritage where the most aggressive individuals survived hostile and violent environments which thereby perpetrated their own 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 defies any simple genetic explanation.

It is the purpose of this paper to outline a different theory of the origins of human violence which is primarily an ontogenetic theory but which has unique phylogenetic characteristics. In brief, the 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 and vestibular sensory modalities) are permitted to occur. It is these sensory modalities that mediate somatosensory 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, i.e., the expression

of physical affection through human sexual relationships. This failure to establish adult affectional bonds prevents adults, as parents, to provide 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 ontogenetic development.

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 that is not possible with infra-human mammals. This evolutionary advantage to experience and integrate pleasure is considered to be sexually dimorphic, i.e., it is uniquely developed in the human female and thus confers upon the human female a biological advantage to experience and integrate pleasure when compared to the human male. The ability to integrate somatosensory pleasure with higher cortical functions is considered to be less well developed in the human male than in the human female. It is this difference which is proposed to 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 greater impairments than the human male when subjected to somatosensory pleasure deprivation. 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 which has been summarized elsewhere (Prescott, 1971, 1975, 1976a, 1976b).

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; Mitchell and Clark, 1968; Kaufman, 1973a, 1973b; Kaufman and Rosenblum, 1967, 1969; Lichstein and Sackett, 1971; Sackett, 1970a, 1970b; 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).

In these studies it was found that rearing infant monkeys from birth in single cages but in a colony room where they could see, hear, and smell other monkeys but could not touch or be touched by other monkeys resulted in severe emotional and social pathologies. Symptoms included depressed, withdrawn and autistic-like behaviors; movement stereotypies; self-stimulation; and as juveniles and adults: self-mutilation, pathological violence and abnormal sexual behaviors. Mitchell (1968, 1970, 1975) has, in particular, documented their pathological violence. 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 behaviors reflect a need for vestibular-cerebellar 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, 1968, 1971, 1975, 1976). These behaviors in isolation reared monkeys also appear in humans who have been deprived of physical affectional experiences during the formative periods of development and it will be illustrated how parental affectional deprivation is also linked to disturbances in 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. Figure 1 illustrates how the infant monkey reared on its "swinging-mother" surrogate freely interacts with a human attendant showing no fear, no avoidance of touching and no social withdrawal. In contrast, Figure 2 illustrates how the infant monkey reared on the "stationary-mother" surrogate crouches in fear, avoids touching and is socially withdrawn. These behaviors are more dramatically illustrated in the film "Rock-a-Bye Baby" (Dokecki, 1973).¹ It is emphasized

¹The 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, N.Y.

that vestibular stimulation (movement) is the critical variable in accounting for the differences in these animals. Figure 3 illustrates two 8 month isolate reared monkeys that were paired together by the author for a film study of social behaviors and movement stereotypies. Note the catatonic posturing of the hind limb of one animal while the other looks on and that they have physically separated themselves from each other to avoid physical touching which is highly traumatic to these animals. These behaviors are also vividly portrayed in the film "Rock-a-Bye Baby." Figure 4 illustrates how two infant monkeys touch and cuddle one another when they have not been reared in social isolation (deprivation of touch and body movement). It should be noted that physical touching - grooming and play-movement - are two of the most dominant social activities in developing mammals and in primates, in particular. Figure 5 illustrates the self-biting and self-mutilation of the adult isolation reared rhesus. The pathologic violence of the juvenile and adult rhesus monkey in their attacks against other monkeys has been extensively documented by Mitchell (1968, 1970, 1975). The pathological attacks of young juvenile isolate monkeys against large adult monkeys and against helpless infants were particularly noted by Mitchell. Normally reared rhesus are rarely, if ever, observed to engage in such pathologic violent behaviors. Figure 6 illustrates a "motherless" mother monkey attacking its infant and crushing its head to the cage floor. Seay, et al. (1962, 1964) have documented extensively this "infant abuse" in "motherless" reared mother monkeys. Harlow and Harlow provide a vivid description of "motherless" monkey mothering:

"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 crushed 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." (Harlow and Harlow, 1965: 309.)

In addition to the above behavioral pathologies of isolation reared rhesus monkeys, there is also sexual dysfunctioning in these animals (Figure 7). As can be seen neither the male nor the female engage in correct sexual posturing. This issue will be returned to later.

HUMAN STUDIES

The findings from Harlow's laboratory and his many students



Fig. 1. "Swinging" surrogate reared monkey freely interacts with human attendant.



Fig. 2. "Stationary" surrogate reared monkey avoids interacting with human attendant.

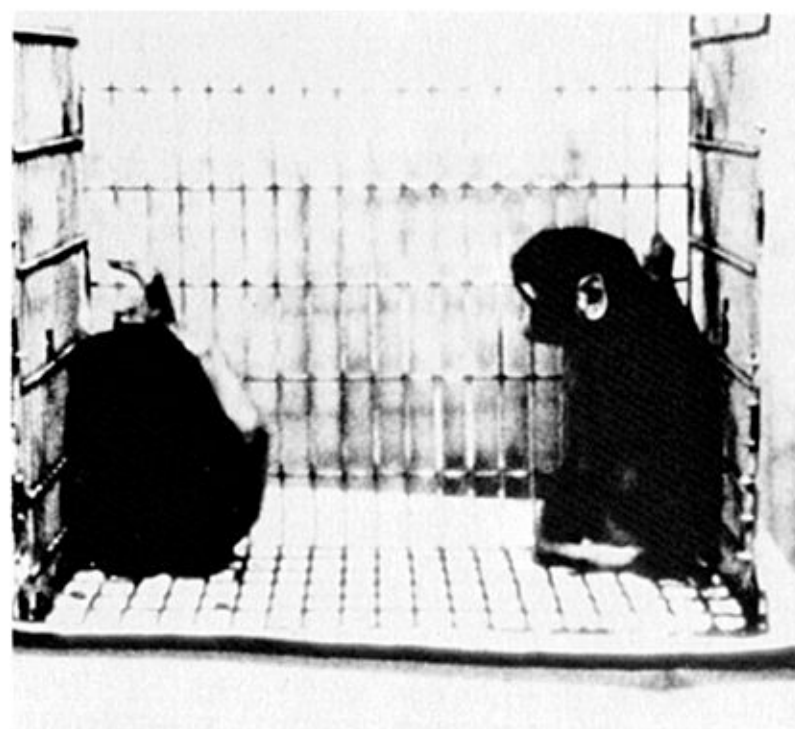


Fig. 3. Two 8 month old isolate reared monkeys who avoid touching and social interaction.



Fig. 4. Two normally reared monkeys touch and cuddle one another.

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; impaired sexual functioning is another. There are intrinsically interrelated and the nature of their interrelationship will be illustrated later.

Child Abuse Studies

The literature on child abuse has grown extensively and appears to parallel the increase (actual or reporting patterns) of child abuse. Lash and Sigal (1976), for example, have reported a 1,026% increase in child abuse between 1964 and 1974 for New York City. Needless to say, it is not possible to ascertain what portion of this increase is real and what portion reflects better reporting. The observation that for the United States (1970-1971) accidents ranked fifth and homicide ranked thirteenth for infant deaths; and accidents ranked first and homicide ranked fifth for child deaths (Simopoulos, 1976) suggests the degree of societal neglect and abuse of children that exists in the United States. It is not possible to even begin to review the child abuse literature for this paper; rather the intent is to illustrate the relevance of primate isolation rearing studies to human child abuse.

Figure 8 illustrates a case of child abuse where this 3 month old infant had scalded milk thrown on its face. There are worse examples of child abuse than what is illustrated here. The relevance of child abuse to this paper are the findings that parents who abuse their children were invariably deprived of parental physical affection, i.e., 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. In personal discussions between Dr. Steele and the senior author he mentioned that of the hundreds of women he interviewed only a few had ever reported experiencing orgasm. Thus, the deprivation of physical affection and sexual pleasure in adulthood has been linked with deprivation of parental physical affection and these deprivations of physical pleasure during two stages of development (pre-pubertal and post-pubertal) have been linked with adult human violence. Unfortunately, Dr. Steel did not assess the degree of sexual pleasure experienced by fathers who abuse their children and it should be noted that ejaculation should not be equated with orgasm. Ejaculation is a basic reflex which may be associated with very high or very low degrees of pleasure. We will return to these issues later.



Fig. 5. Self-biting and self-mutilation of an adult isolation reared rhesus.



Fig. 6. Motherless mother crushing 20 day old infant to the floor.

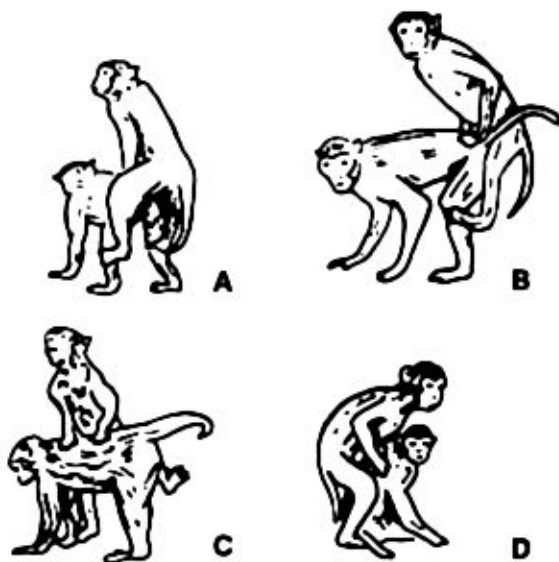


Fig. 7. Normal sexual posturing in the normal male & female rhesus (A, B). Abnormal sexual posturing in the isolation reared male & female rhesus (C, D).



Fig. 8. Physical pain in child abuse: 3 month old child with scaled milk thrown on its face.

Cross-Cultural Studies

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 pre-industrial cultures.² The author is indebted to Professor John Whiting for bringing his 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: a) infant physical affection provided by Barry et al. (1967); b) repressive sexuality provided by John T. Wesbrooke (1963) and Ford and Beach (1951) and c) adult physical violence provided by Philip E. Slater (1967).

For the following Tables the code column is the Textor code number with the initials of the cultural anthropologist who coded the variables (s) 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 percent "correct" classification of cultures in the comparison.

Table 1 presents some of the social and behavioral characteristics of cultures which inflict pain on the infant by the nurturant agent. Such cultures are characterized by:

- a) practice of slavery ($P = .03$);
- b) polygyny has high incidence ($P = .001$);
- c) women status is inferior ($P = .03$);
- d) desire for children is high ($P = .003$);
- e) low infant physical affection ($P = .03$);
- f) low overall infant indulgence ($P = .0000$);
- g) developing nurturant behaviors in children is low ($P = .05$);
- h) supernaturals are aggressive ($P = .10$);
- i) high god is present ($P = .08$);
- j) fears of supernatural forces greater than fears of natural forces ($P = .03$).

²Some of these findings have been previously reported (Prescott, 1975).

TABLE 1

SOCIAL AND BEHAVIORAL CHARACTERISTICS OF CULTURES
WHICH INFLICT PAIN ON THE INFANT BY NURTURANT AGENT (324-BBC)

CODE	DESCRIPTOR	CHI	SQ	P	N	PHI	%
110-EA	Slavery is Present	4.74		.03	66	.27	64
175-EA	Community Not "Kin-Heterogeneous"	5.47		.02	66	.29	64
243-WCS	Polygyny has High Incidence	9.84		.001	34	.54	79
277-LWS	Women Status is Inferior	3.43		.03	14	.50	78
282-BCA	Desire for Children is High	7.22		.003	28	.51	79
299-EA	Post-Partum Sex Taboo Lasts One 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	Immediate Reduction of Infant Drives is Low	3.48		.06	58	.25	64
322-BBC	Consistency of Reducing Infant's Drives 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

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. 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 2 presents some of the social and behavioral characteristics of cultures which provide "high infant physical affection." Selected characteristics of these cultures are highlighted below:

- a) low incidence of theft ($P = .02$);
- b) low infant physical pain ($P = .03$);
- c) weaning age is 2.5 years or longer ($P = .05$);
- d) low demands for child responsibility ($P = .004$);
- e) killing, torturing or mutilation of enemy is negligible ($P = .004$);
- f) low religious activity ($P = .003$).

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 infra-human primate isolation rearing (somatosensory deprivation) to consequences of human primate child rearing practices which are also characterized by somatosensory deprivation.

Table 3 presents the distribution of the 49 cultures which relate infant physical affection to adult physical violence. The first two columns include 36 cultures whose physical violence was correctly classified according to the somatosensory pleasure deprivation theory. 13 cultures in the last two columns were not correctly classified according to this theory. It is recognized that a theoretical system must deal with the exceptions and it will be illustrated how these exceptions can be accounted for within the somatosensory pleasure deprivation theory.

TABLE 2

SOCIAL AND BEHAVIORAL CHARACTERISTICS OF CULTURES
WHICH PROVIDE HIGH INFANT PHYSICAL AFFECTION (317-BBC)

CODE	DESCRIPTOR	CHI SQ	P	N	PHI	%
137-PES	Invidious Display of Wealth is Low	3.54	.06	50	.27	66
138-BBW	Super Ordinate 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	.02	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 Performances of Obedient Behavior is Low	4.61	.03	63	.27	65
368-JKH	Dissociation of Sexes at Adolescence is High	4.43	.03	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

TABLE 3

DISTRIBUTION OF 49 CULTURES WHICH RELATE INFANT PHYSICAL AFFECTION TO ADULT PHYSICAL VIOLENCE

High Infant Physical Affection - Low Adult Physical Violence	Low Infant Physical Affection - High Adult Physical Violence	High Infant Physical Affection - High Adult Physical Violence	Low Infant Physical Affection - High Adult Physical Violence
ANDAMANESE ARAPESH BALINESE CHAGGA CHENCHU CHUCKCHEE CUNA HANO LAU LESU MAORI MURNGIN NUER PAPAGO	SIRIONO TALLENSI TIKOPIA TIMBIRA THROBRIAND WOGEO WOLEAIANS YAHGAN	ALORESE ARANDA ARAUCANIANS ASHANTI AYMARA AZANDE COMANCHE FON KASKA MARQUESANS MASAI NAVAHO OJIBWA THONGA	CHEYENNE CHIR-APACHE CROW JIVARO** KURTATCHI ZUNI ----- Premarital sex punished ----- Premarital sex permitted N = 49 XSQ = 8.38 P = .004 PHI = .41 % = 73

* According to Derek Freeman, Professor of Anthropology, Australian National University the Samoan culture is misclassified and belongs to column 2. (Personal communication).

** According to Harner (1972) the Jivaro also belongs in column 2 (Personal communication).

For the cultures in the third column, their violence should have been low since they had high infant physical affection. It should be noted that four of the six cultures are punitive toward premarital sex and from other sources the Zuni are also considered to be punitive toward premarital sex (Raoul Naroll, personal communication). Consequently, five of the six cultures are characterized by punitive premarital sexuality. The interpretation of this relationship is that the advantages of early infant physical affection can be negated later in life through repressive sexual pleasure and it is this which accounts for their adult physical violence. The Jivaro is the only exception and this may be due to their religious belief that "killing leads to acquisition of souls which provide a supernatural power conferring immunity from death" (Harner, 1972). A more parsimonious explanation would involve the extension of the somatosensory pleasure deprivation (SPD) theory to the next developmental stage - marital sexuality. The Jivaro strongly punish extramarital sex and wife stealing is punished by death. Given this additional criteria this theory accurately classifies the physical violence in the cultures. 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." 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 do not appear to be a highly sexual active and expressive culture even though premarital sex is accepted. Additionally, Harner (1972) considers the Jivaro as providing low infant affection which places the Jivaro in Column 2.

Needless to say it is a subject of future research that should attempt to relate frequency of sexual relations to incidence of physical violence. A necessary consideration for such an inquiry is whether the sexual relation reflects an act of dominance/exploitation or a mutual sharing of physical pleasure. The central issue is the degree of sexual pleasure experienced and not just the frequency of sexual activity, although the two are often assumed to co-vary.

For the cultures in the fourth column their violence should have been high since they had low infant physical affection. All seven of these cultures were 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.

Derek Freeman, professor of Anthropology, Australian National University in a personal communication indicated that the Samoan

culture belongs in column 2 not column 4. Given these revisions by anthropologists Harner and Freeman there are now 38/49 cultures whose physical violence is accurately classified from the infant physical affectional variable with $X^2 = 14.69$; $P = .0002$; $\text{PHI} = .55$; 78% correct classification.

In brief, the single variable of physical affection or physical pleasure experienced in two stages of development (infancy and adolescence) can correctly classify the physical violence in 48 of 49 pre-industrial cultures which are distributed throughout the world. An extension of this theory to three stages of development to include issues of marital sexuality results in a 100% correct classification of physical violence in these 49 cultures. A re-classification of the Jivaro in column 2 also results in a 100% correct classification. Needless to say these data offer no support for a genetic-evolutionary theory of human violence but does provide substantial support for an ontogenetic-developmental theory of human violence.

Table 4 provides a summary of social and behavioral characteristics of cultures which are punitive toward premarital sexuality. It can be seen that these cultures can be characterized as violent, criminal, sexually dysfunctional and dehumanizing.

Table 5 provides a summary of social and behavioral characteristics of cultures which are punitive toward extramarital sexuality. The statistical relationships are much stronger than for repression of premarital sexuality and reflect even stronger associations of violence, criminality, militarism, exploitation of women and children and dehumanization with repressive extramarital sexuality. It should also be noted that belief in a "high god in human morality who is punitive and aggressive" is also a characteristic of these cultures.

Cross-Cultural Studies in Perspective

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

TABLE 4
SOCIAL AND BEHAVIORAL CHARACTERISTICS OF CULTURES
WHICH ARE PUNITIVE TOWARD PREMARITAL SEXUALITY (389-392-JTW,EA)

CODE	DESCRIPTOR	XSQ	P	N	PHI	%
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	63	.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 Post-Partum Sex Taboo	4.86	.03	50	.31	62
393-FB	Extramartial Sex is Punished	7.96	.005	58	.37	71
397-JKH	Sex Disability is Present	6.94	.004	23	.55	83
399-WNS	Castration Anxiety is High	5.23	.009	37	.38	65
420-PES	Belligerency 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

TABLE 5

SOCIAL AND BEHAVIORAL CHARACTERISTICS OF CULTURES
WHICH ARE PUNITIVE TOWARD EXTRAMARITAL SEXUALITY (393--FB)

CODE	DESCRIPTOR	XSQ	P	N	PHI	%
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					
	Decent 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 Post-Partum Sex Taboo	3.01	.08	43	.26	65
320-BBC	Low Degree of Reducing Infant's Needs	3.34	.05	37	.30	68
321-BBC	Infant Needs Not Immediately Met	3.01	.07	31	.31	68
337-BBC	Child Responsibility: High Child Anxiety					
	Child Autonomy: High Child Anxiety	3.26	.05	37	.30	68
345-BBC	Child Obedience: High Child Anxiety	9.24	.001	39	.49	77
353-BBC	Premarital Sex Strongly Punished	5.24	.02	38	.37	71
392-JTW,EA	Castration Anxiety is High	7.26	.005	58	.37	71
399-WNS	Military Glory Strongly Emphasized	13.33	.0001	30	.67	87
419-PES	Belllicosity is Extreme	9.52	.002	53	.47	62
420-PES	Killing, Torturing, Mutilaring is High	10.10	.002	43	.49	77
421-PES	Supernaturals are Aggressive	9.33	.002	42	.47	76
425-LTW		4.54	.02	19	.49	79

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).

Limitations of space, unfortunately, preclude the reporting of extensive psychometric studies on the consequences of parental affectional deprivation upon sexual functioning, social/moral values and alcohol/drug usage. These studies fully support the conclusion that females are more vulnerable to deprivation of parental affection than are males. These findings will be reported in full elsewhere which are related to the conceptualization of physical pleasure as a sexually-dimorphic characteristic.

EVOLUTION OF PHYSICAL PLEASURE: A SEXUALLY DIMORPHIC CHARACTERISTIC?

It has been previously argued that the sensory neurobiological mechanisms of physical pleasure are the somesthetic (touch) and vestibular (movement) sensory systems. These emotional senses and associated brain mechanisms should be expected to show sexually dimorphic characteristics associated with pleasure and pain experiences. Thus, these primary sensory processes and the central neural integrative mechanisms of these afferent processes become subjects for systematic study with respect to the hypothesis being proposed.

The specific evolutionary process that is being proposed which confers upon the human female an evolutionary biological advantage of experiencing and integrating physical pleasure to an extent that is not shared by the human male involves the relationship between ovarian cyclic processes and sexual behavior. A major evolutionary change in mammalian sexual behavior is the emergence of human female sexuality that is relatively autonomous from ovarian cyclic processes and reproductive intent. This dramatic evolutionary change of sexual function observed in the human female is not shared by the human male since mammalian males, except for seasonal breeders, have always had the potential for sexual activity when presented with an estrous female. What then is the primary function intended by this evolutionary change in sexual receptivity and activity of the human female? Clearly, it is no longer primarily "reproductive intent" which is characteristic of infra-human mammals except for certain primates under conditions of captivity, e.g., stumptail macaques (*M. arctoides*) (Slob et al., 1975; Bielert, 1976; Goy, 1977).

There can be only one alternative: physical pleasure. It is clear that the primary function of human sexuality is for the experiencing of physical pleasure; and "reproductive intent" is clearly secondary. This is so obvious that it hardly needs stating except that there are strong religious viewpoints to the contrary. It is only necessary to compare the number of children in a family to the total incidence of intercourse in a lifetime of a couple to be convinced that the primary function of human sexuality is physical pleasure.

With respect to the unique role of physical pleasure in human female sexuality other phenomena can be cited, e.g., multiple orgasms which are common experiences for many women but are rare, if non-existent, in men. The distinction between multiple (absence of refractory phases) and sequential (presence of refractory phases) orgasm becomes an important consideration in this context and it is recognized that these differences are a subject of considerable discussion and research. It is not necessary to take an extreme sexually dimorphic view of multiple orgasms to support the hypothesis, i.e., to posit non-overlapping distributions between the sexes with respect to the phenomena of multiple orgasms. It is probable that an extremely small percentage of men may experience multiple orgasms which would not invalidate the criteria of multiple orgasms as being primarily a human female sexual characteristic that denotes an unusual capacity to experience and integrate physical pleasure (Masters and Johnson, 1966). It is recognized that there is a difference of opinion on the interpretation of multiple orgasms in women, particularly those that are induced by clitoral stimulation with vibrators. Frankl (1974) has argued that such phenomena represent orgasmic spasms and not orgasmic discharge and that women who terminate many such orgasms from physical exhaustion are not necessarily gratified in the Reichian orgasmic sense. The commentary on these issues by Frankl is worth reading in full. (Frankl, 1974: 153-154.)

This does not, however, exclude the existence of genuine (Reichian) multiple orgasms in women which are not characteristic of the male sexual response, although it may be experienced in some males (Robbins, 1976). Needless to say, these issues require systematic research to clarify more specifically the pleasure dimensions of the male and female orgasm. Consistent with the theoretical point-of-view being developed herein it is suggested that the male human orgasm is more "reflexive" and less "integrative" which reduces states of physiological tension rather than producing positive states of "integrative-pleasure." The increased capacity of the human female to experience and integrate sexual pleasure with her somatic and psychological life is proposed to account for sex differences in aggression. Such integrative capacity appears to be more developed in women than men. The descriptive reports of physical pleasure and orgasm by women presented in The Hite Report

are supportive of this interpretation. A common report is that the whole body is involved in the orgasmic pleasure experience - from head to toe; suspension of time - no past and no future; emergence and integration of one's body with her partner - "as we two become one." In addition, it is of interest to note that descriptions involving vestibular-cerebellar mediated sensations are reported, e.g., "floating," "drifting," "flowing" and identification with the universe or cosmos, etc. Similar reports were given by Seymour Fisher in The Female Orgasm (1973). Unfortunately, no comparable data appears to exist for men. Space does not permit even a brief outline of how these differences in experiencing and integrating physical pleasure between men and women may be represented in brain mechanisms. Consistent with previous theoretical speculations it would seem that cerebellar-frontal/cortical-limbic system interrelationships are to be emphasized.

It is heuristic to relate the issue of integrating physical pleasure with higher levels of consciousness to Bakan's (1966) concept of agency (male) and communion (female) in human sexuality where "agency" manifests itself in the formation of separation, isolation, alienation and aloneness; and "communion" manifests itself in contact, openness and union. Similarly, within this context, Koestenbaum's (1974) concept of existential sexuality as pre-sexual, pre-erotic, pre-biological and pre-somatic, as a manifestation of "pure consciousness," deserves systematic attention that is not possible to develop herein. Bakan (1966), Koestenbaum (1974), Marcuse (1962, 1964, 1969), and Frankl (1974) provide rare resources to explore more fully the philosophical, social and psychological dimensions of human sexuality that have been illuminated by the pioneering studies of Reich (1942, 1945, 1971).

EPILOGUE

It is the conclusion of this writer that deprivation of physical affection in human relationships, particularly, the repression of female sexuality constitutes the single greatest source of physical violence in human societies. It is also held that as somatosensory pleasure inhibits physical violence, its coexistent of mutual sharing in the male/female relationship also neutralizes power and authority in that relationship. Thus, physical pleasure mutually shared constitutes a psychobiological substrate for egalitarian democratic relationships which is antithetical to authoritarian, fascist relationships. It is for these reasons that religious systems that place a high moral value on pain, suffering and deprivation and place immoral values on physical pleasure, which emphasize the virtues of virginity and celibacy contribute substantially to authoritarian, fascist societies and the prevalence of physical violence (Prescott, 1975, 1976).

A moral revolution is necessary if human societies are to become humanized. The morality of physical pleasure mutually shared must be affirmed and the immorality of pain, suffering and deprivation must be acknowledged.

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