BREASTFEEDING BONDING FOR 2.5 YEARS OR LONGER: PREVENTING DEPRESSION, SUICIDE AND VIOLENCE

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Abstract.

Breastfeeding-Bonding for 2.5 years or longer has been documented to prevent depression and suicide in tribal cultures. 77% (20/26) of cultures with weaning age of 2.5 years or greater were rated low or absent in depression and suicide. This value was increased to 82% (14/17) where the cultures also supported youth sexual expression. In a larger sample of 65 cultures that included the combination of data from Textor (1967) and Barry and Paxon (1971), 86% (31/36) of cultures that were rated low or absent in suicide had weaning age of 2.5 years or greater. These data combined with the data in the Merck Manual on the infant/child requirements of the essential amino acids which are deficient in infant formula milk; and that pain imposed upon infants and children lead to increased violence and crime has led to recommendations on how to build peaceful or violent cultures. Five social paradigms to change the world are recommended as essential for the cultural transformations needed for a change from violent to peaceful cultures. .

Key Words; Breastfeeding Bonding, Depression, Suicide, Merck Manual, Rape, Violent States.

Introduction

Previous studies on tribal cultures have shown the power of body movement (vestibular-cerebellar) stimulation (Baby-carrying throughout the first year of life by the mother) in preventing adult homicidal violence ("torturing, mutilation and killing of enemy captured in warfare") in 80% of 49 (39/49) cultures studied. Prediction of the remaining ten cultures, as peaceful (four) or violent (six), was made possible by incorporating youth sexuality as being permitted or punished. Thus, 100% prediction of peaceful or violent adult behaviors was obtained from two developmental measures of physical affectional bonding: 1) maternal-infant/child relationship; and 2) premarital sexual affectional relationships. There is a 65% communality of cultures between baby carrying during the first year of life and weaning age of 2.5 years or greater (Prescott, 1975, 1979, 1980, 1996, 2005)

Cross-Cultural Studies

The following data were derived from Textor (1967), which presented the intercorrelations of 536 geographic-social-behavioral variables on a 400- culture sample that controlled for cultural diffusion. These bi-variate correlations became the data source for all my data analyses. Unfortunately, all cultures were not rated on all variables, which remains an unfinished task by the *Human Relations Area Files* (HRAF), which I attempted to correct while at the NICHD, without success.

In addition to body movement (baby-carrying bonding), weaning age of 2.5 years or greater (breast feeding bonding) for 34 cultures was listed in Textor (1967) and the statistically significant social behavioral characteristics of these cultures were compared to 36 cultures whose weaning age was less than 2.5 years are presented in **Table 1.** In the bi-variate comparisons: percent communality of cultures, sample size, level of significance and social-behavioral characteristics of the cultures are listed.

An examination of **Table 1** indicates the high degree that infant and child nurturance, class systems, narcissism, personal wealth and violence differentiate between these two cultural groups. Unfortunately, a comparison group of non-breastfed cultures does not exist in tribal cultures and no other comparison group existed in Textor (1967). It would be expected to find much greater differences if the comparison cultures were "never-breastfed" cultures, which does not exist in tribal cultures. Validation of these findings in modern human cultures is desperately needed and the NICHD has shown no interest in determining the health consequences of breastfeeding for "two years of age and beyond", as recommended by WHO and UNICEF (WHO/UNICEF, 1990).

Since it was desired to evaluate the incidence of suicide in cultures with weaning age of 2.5 years of age or longer the following studies were conducted. Textor Code 473 was used for this analyses and is described as follows:

> "Sensitivity to Insults" is rated "High" if: "Public humiliation frequently leads to suicide or some other violent response; Interpersonal insults frequently leads to suicide, homicide, vendetta and demands heavy remuneration; Ethnographer says explicitly they are acutely sensitive to narcissistic wounds, easily take offense, pride is wounded, not merely feeling rejected, unloved or deprived.
>
> "Low", if none of the above are present and "Ridicule and shame are specifically excluded as important public sanctions, Or "Incidents are specifically mentioned (as typical) by ethnographer in which insults, scorn, etc., are received without marked reaction. Offenses can be erased with small gifts, etc." Or, Ethnographer specifically

describes them as phlegmatic, serene, easygoing, not easily offended, quick to forgive slights, etc." (Textor, 1967, p.173).

Table 2 lists the social-behavioral characteristics that statistically discriminate between high and low suicide cultures. As can be seen, narcissism, personal crime and various measures of violence with low indulgence of children, polygynous marriage and a patrilocal culture are the salient discriminating characteristics. There are 32 high suicide cultures and 56 low suicide cultures in this study. Not all cultures were rated on all variables (TC 473).

Table 3 presents cultures with a weaning age of 2.5 years or greater with high and low suicides, as a function of infant pain and adolescent sexuality. 77% (20/26) cultures with weaning age of 2.5 years or greater are low suicide cultures. 82% (14/17) of these cultures support youth sexuality and are rated low in suicides. *Irrelevant* is when marriage occurs shortly after puberty, which translates into low sexual repression and greater sexual pleasure.

The six high breastfeeding cultures that were rated as high suicide cultures all inflicted pain upon the infant (TC 324). When pain and pleasure are combined in child rearing practices, the infant mind is confused as to what constitutes love, as the mother is agent of both experiences of pain and pleasure. This blending of pain and pleasure establishes a biological brain condition of unresolved conflict of what constitutes love, which prepares the infant for later depression and suicidal experiences.

Table 4 presents the role of pain (state sponsored spanking in schools) in shaping the sexual violence of the state (rape rates-*Uniform Crime Reports*, 1997); and in producing the most dangerous states (composite index for six crime categories--murder, rape, robbery, aggravated assault, burglary and motor vehicle theft (Morgan Quinto Press, 2005). The 15 most and 15 least violent states, as measured by the highest and lowest rape rates were compared to whether these states legalized or did not legalize "Paddling" of children in the public school system. It was found that **82%** of Paddle States had the highest rape rates (42-65 rapes per 1000,000population); and **68%** of non-Paddle States had the lowest rape rates (20-28 rapes per 100,000 population). This relationship was highly statistically significant (Chi Square = 10.47; $p < .005$, N = 30).

A similar analysis was conducted with the 15 most dangerous states compared to the 15 least dangerous states, as measured by the composite crime index cited above. It was found that **73%** of

Paddle States were ranked as most dangerous; and **74%** of non-Paddle States were ranked as least dangerous. This relationship was significant: Chi Square = 8.68; p< .01; N = 30).

These data confirm the expected relationship between pain inflicted--"paddling"-- upon the child and the later sexual violence of adults in these cultures of violence (States); and, conversely, that elimination of "paddling violence" against children is reflected in lowered rape rates of these non-violent cultures (States). Physical assaults against school children (paddling) has specific sexual connotations, namely the physical striking of the buttocks (anal-genital area), where protective clothing is often removed to enhance the physical and emotional pain of spanking, which should make obvious this relationship. Legalized paddling of children in the public schools is a useful measure for defining "cultures of violence". The blending of pain and pleasure in early developmental life experiences contributes to the formation of the sado-masochistic personality, sexual exploitation and degradation in the human sexual relationship.

Only 18% (3/17) of these highly nurturing breastfeeding cultures that are rated low in suicide punish youth sexual expression. . The neurochemistry of brain function, particularly the role of tryptophan in breastmilk (an essential amino acid that is deficient in infant formula milk), is essential for brain serotonin development and is known to mediate depression, impulse dyscontrol and suicide. It must be recognized that the rich sensory stimulation of the infant/child brain from the mother's body (touch, taste and smell) has a major role in this relationship, which also influences later sexual behavior. The pleasure and intimacy experienced in the breastfeeding relationship results in a happy baby, which inhibits depression and later suicidal behaviors later in life and contributes to a healthy sexual life. How pain and pleasure are encoded in the developing brain must be known for predicting peaceful or violent behaviors.

The weaning age codes developed by Barry and Paxon (1971) were utilized to compare cultures with weaning age of 24 months or less with those cultures with weaning age of 36 months or more with respect to suicidal behaviors. These data were combined with the data from Textor to maximize sample size for analysis, which involved a total of 65 cultures. It was found that a statistically significant difference existed between cultures with weaning age of 24 months or less v 36 months or more in distinguishing high from low suicidal behaviors, as defined by Textor Code 473. The average weaning age of the cultures were calculated from the range scores of weaning age for each culture for the statistical studies reported.

Table 5 summarizes this data on 65 cultures where 62% of high suicide cultures have a weaning age of 24 months or less and 64% of low suicide cultures have a weaning age of 36 months or greater. The average weaning age of low suicide cultures is 34 months and for the high suicide cultures is 28 months. It is striking that a 6- month difference in breastfeeding at this age could significantly discriminate high from low suicide cultures ($p < .05$). It appears that a formative period of brain development exists at 2.5-3.0 years that would explain the differences in suicide that this study reveals.

Table 6 lists the *low suicide cultures* with range of weaning age and average of weaning age in months from Barry and Paxon (1971); and Textor (1967). **Table 7** lists the *high suicide cultures* with range of weaning age and average of weaning age in months from Barry and Paxon (1971); and Textor (1996).

These combined data from Textor (1967) on weaning age of 2.5 years (30 months) or greater and from Barry and Paxon (1971) are strongly supportive of the thesis that it will take breastfeeding for 30 months or longer to optimize brain-behavioral development for the prevention of depression and violence. The complexity of modern human societies compared to tribal cultures will certainly modify these relationships and systematic studies are needed to evaluate the minimal duration of breastfeeding that is necessary for the optimal development of the emotional health of the child. Some tribal cultures breastfeed for as long as five or six years or longer (Barry and Paxon, 1971; Stuart-Macadam and Dettwyler, 1995).

Breastfeeding for 2.5 years or longer to confer optimal health benefits is supported by the finding of Zheng, et al, 2000 who reported a significantly reduced risk of breast cancer in women who breastfed for more than 24 months and for those women whose lifetime duration of lactation totaled 73-108 months (Zheng, et al, 2000). Similar benefits of reduced breast cancer for Icelandic lactating mothers was reported by Tryggvadotir, et. al (2001) with decreased cancer associated with greater duration of breastfeeding for women with first diagnosis at 40 years age or earlier. The inverse dose-response relation between breastfeeding duration and breast cancer observed for younger women at first diagnosis (40 years or earlier) was not found for the older age group, perimenopausal ages 40-55 years for first diagnosis.

Dye, et al (1997) has shed light on life factors that discourage women from breastfeeding. They report that unintended (mistimed and unwanted pregnancies, as opposed to planned pregnancies), resulted in a significant reduction of breastfeeding by these women. "Overall, 29.2% of the births in the central New York region were to women who did not intend to become pregnant (22.5% were mistimed, 6.6% were not wanted)". Planned pregnancies were associated with a63.2% intent to breastfeed; 50.2% for unplanned pregnancies; and 44.2% for unwanted pregnancies. It is alarming that 36.8% of planned pregnancies did not plan to breastfeed.

Brain Neurotransmitter Systems

The WHO/UNICEF recommend breastfeeding for "two years of age or beyond" and exclusive breastfeeding for the first six months of life--no water, juice or any other food (WHO/UNICEF, 1990).

Human breastmilk contains a rich complex of nutrients-- not found in infant formula milk-- that are essential for normal brain and immunological development. One of these vital brain nutrients is the essential amino acid tryptophan that is richly present in colostrum and breastmilk but deficient or absent in infant formula milk and is necessary for the development of the brain serotonin neurotransmitter system. The normal maturation of the brain neurotransmitter systems are unknown despite repeated pleas to the NIH to conduct such studies.

The nutritional deficiencies of infant formula milk has been recognized by the Food and Drug Administration (FDA) with its authorization for adding two fatty acids, DHA (docosahexaenoic acid) and AA (arachidonic acid) to infant formula milk, which are richly present in breastmilk (Cunnane, et.al, 2000;Brody, 2001). Other nutritional deficiencies are clearly involved.

Studies are needed to document the extent to which the epidemics of depression, impulse dyscontrol, substance abuse and suicidal/homicidal violence in the American culture can be attributed to impaired bonding and insufficient breastfeeding that produce impaired brain neurotransmitter development and function. The NIH has yet to conduct studies on these complex relationships.

Crenshaw (1996) and Pert (1997) have provided excellent reviews of the relationship of brain neurotransmitters with emotional behaviors but, unfortunately, have not related them to breastfeeding and other early life experiences. It should be noted that all of these brain neurochemical transmitters have

their amino acid precursors (Daly and Salloway, 1994) and have their origins in human breast milk. Specifically:

a) L-phenylalanine is a precursor for PEA (phenylethylamine).
b) L-Tyrosine is a precursor for dopamine, norepinephrine and epinephrine. (The conversion of tyrosine to any of these amines is determined by the amount of magnesium and vitamin B6 in the body).
c) L-Tryptophan is a precursor for Serotonin.

Table 8 lists the essential amino acids and their requirements for normal infant and child development (*Merck Manual Fifteenth Edition*, 1987). It is unknown to what extent these values are met by infant formula milk given the findings that tryptophan and DHA and AA fatty acid deficits are found in infant formula milk (Merck, 1987; Cunnane, et al, 2000). Infant percent value of adult requirements were calculated and added to the Table. An urgent systematic evaluation is needed to assess what other brain neurotransmitters are impaired in their development due to infant formula milk.

Table 9 lists the essential amino acids and their requirement for normal infant and child development (*Merck Manual Seventeenth Edition*. Centennial Edition 1999-2005). Infant and child values of adult requirements were calculated and added to the Table. It should be noted that the requirements for Phenylalanine and Tyrosine have more than doubled, as has Tryptophan, yet there is no call for the increase of these essential amino acids in infant formula milk.

Given the limited breastfeeding in the American culture with its reliance on infant formula milk, it can be concluded that infant formula milk constitutes malnutrition for normal brain development, specifically the normal development of the brain serotonin system, deficits of which are known to mediate depression, impulse dyscontrol, substance abuse and the violence of suicide and homicide.

The massive psychiatric medication of children and youth in America is undoubtedly masking the larger suicide rates that could be expected and that the failure of human love is the culprit (Prescott, 1975;Breggin, 1994). Zito, et al (2000) have observed:

> The prevalence of psychotropic medication treatment for children and adolescents with emotional and behavioral disorders has significantly increased in the United States during the last few decades, particularly in the last 15 years. Specifically the 5 through 14-year-old age group has experienced a great increase in stimulant treatment for attention-deficit/hyperactivity disorder (ADHS), and the 15 through 19 -year- old age group has had sizable increases in the use of antidepressant medications (pp.1-2)…

SUICIDE RISK FACTORS

Tables 10 and 11 present the suicide risk factors by DHHS Surgeon General Satcher and James W. Prescott, Ph.D., respectively. Surgeon General Satcher's risk factors depend upon "after the fact" measures, are primarily social in nature and are not truly prevention (Satcher, 1999). The suicide risk factors presented by Dr. Prescott are primarily based in psychobiology and developmental life experiences that lead to depression and suicide.

The Third National Health and Nutrition Examination Survey, 1988-94

For the 2,685 sample of 3-5 yr olds from NHANES III, (variable HYB5) - the following information is provided (Hedger, 2001).

For all children:

9.6% were breastfeeding at 11 months
6.8% were breastfeeding at 12 months

2.7% were breastfed for 24 months or more,
1.0% was breastfed for 30 months or more.

For the children who were ever breastfed:

17.9% were breastfeeding at 11 months
12.7% were breastfeeding at 12 months

5.1% were breastfed 24 months or more
1.8% for 30 months or more.

The findings for all children where only 6.8% were breastfeeding at 12 months; 2.7% were breastfeeding at 24 months and 1% for 30 months or more indicates the crises that exists in America for compromised brain development of our infants and children and for the realization of peace, harmony and happiness.

The NHANES III is an invaluable data base where the duration of breastfeeding can be examined with respect to the other health measures collected in that survey, particularly, the extent to which these children of different durations of breastfeeding are diagnosed with depression, attention deficit hyperactivity disorders (ADHD) and prescribed psychiatric medications. Inexplicably, the NICHD/NIH has

yet to analyze this database that would provide preliminary invaluable information on the duration of breastfeeding and a variety of health measures contained in NHANES III.

The 5.1% of the sample size of 2,685 subjects in the NHANES III, who have been breastfed for 24 months or longer, equals 137 children. The 1.8% of the study sample yields 48 subjects who have been breastfed for 30 months or more that could be subject to special evaluations. Such studies would provide invaluable data on a wide-range of health benefits from breastfeeding for these time durations that are recommended by WHO/UNICEF (1990), yet has not been pursued by the NICHD/NIH.

It is transparent that society must seek the ideal where all pregnancies are wanted pregnancies and all children are wanted and loved, if health and happiness are to be realized.

The continuation of physical affectional bonding that begins with the mother-infant/child relationship and continues throughout the adolescent sexual relationship assures low suicidal and homicidal behaviors in these adult tribal cultures that are distributed throughout the world. This developmental continuum of pleasure bonding creates the neurointegrative brain that makes peace, tranquility, joy, harmony and love possible. The sensory deprivation of physical affectional pleasure during this developmental continuum produces the neurodissociative brain and the neurodissociative behaviors of depression, social alienation, impulse dyscontrol, drug addictions, anger/hate and violence (homicidal and suicidal).

It should be noted that the criteria for healthy development consequent to infant formula feeding are measures of somatic growth. There are no measures, directly or indirectly, of brain development or function. See http://www.violence.de, Politics Section for correspondence with NIH officials, American Academy of Pediatrics, DHHS Secretary Leavitt and the *American Journal of Clinical Nutrition* concerning the failure of establishment medicine to assure the nutritional integrity of breast-feeding bonding and to call for studies that would document the harmful effects of insufficient breastfeeding bonding upon brain-behavioral development.

Table 12 prevents the summary of our two cultural brains: 1) subcortical limbic emotional-social-sexual brain; and 2) the neocortical rational, cognitive, thinking brain. The encoding of these two brains with pain or pleasure determines whether the neurodissociative or neurointegrative brain will be

developed. Modern humanity, over the past several millennia, has been encoding and programming the developing brain with pain and not pleasure, thus our cultures of depression and violence http://www.violence.de/prescott/women/article.html

Prospects are dim for the future of *homo sapiens*, where millennia theistic religions have declared 50% of the human species unequal, morally defective, subordinate to and the property of the male of the species by just being born female, which translates into universal gender inequality (Prescott, 1991,1995,1996). http://www.violence.de/politics.shtml

Five Social Paradigms to Change the Word

Based upon the above scientific data and data reviewed elsewhere, five social paradigms to change the world from violent cultures to peaceful cultures are recommended as essential, if peace and harmony are to be restored to modern human cultures shaped by *homo sapiens*.

1. Gender Equality of Representation In The World's Legislative Bodies.

Woman's Inequality With Man, supported by the patristic, theistic cultures of the world, is the great moral crises of humanity. This great inequality propels violence against woman and her children, which prevents the establishment of human affectional bonds that can prevent depression and violence--the two great scourges of humankind. Gender Equality of Representation throughout the world would transform the political power structure of the world.

2. Society Supporting Mothers Being Nurturing Mothers.

It has been often said that the "Child Is The Father of the Man"; the "Child Is The Mother of Culture"; and the "Child Is The Future of Humanity". Human societies must support mothers being nurturing mothers for without nurturance impaired brain development that drives depression and violence are the consequences. Breastfeeding bonding for 2.5 years or greater and Baby-Carrying bonding during the first year of life create the First Foundation of Love that makes human love possible. Pleasure is a moral good that must be affirmed and is the glue of affectional bonding.

3. Pain Is A Moral Evil That Destroys the Child and Humanity.

The World must abolish the genital mutilation of children, which is the first act of violence and sexual assault against the infant/child. This act of violence against the infant/child is a crime against humanity. The corporal punishment of children is an extension of pain as a moral instrument that helps shape the developing brain for crime and violence.

4. Sexual Puritanism Is A Moral Evil That Destroys Human Embodied Love.

Sexual Puritanism compels sexual violence against women and her children. From circumcision to cure masturbation to national and international sexual trafficking of women and children, human love and egalitarianism cannot exist. WHO has identified the sexual trafficking of women and children as the

second most lucrative crime to drug trafficking--a consequence of the loss of human love, where there can be no alternative for loss of human love.

5. Religious Warfare is Warfare Against Science and Humanity.

Since the trial of Galileo, the sources of absolute truth of theological dogma--biblical scripture and divine revelation--have been proven false. The final battleground between religion and science--the nature of human nature and the role of women in society rests upon the same sources of theological error that drove the belief that the earth was the center of the universe. As "Intelligent Design" is being defeated on this battlefield so too must woman's inequality with man, as dictated by theological fiat, be defeated. God and Caesar cannot coexist in this cauldron of conflict, as the history of religious warfare attests.

"

After Our Industrial Civilization Has Broken And
The Civilization Of Touch Has Begun, War Will Cease,
There Will Be No More Wars

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

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TABLE 1 Social-Behavioral Characteristics of Cultures Where Weaning Age Is 2.5 Years Or Greater Textor Code 330 (% Communality of Cultures)

Percent Communality	Sample Size # Cultures	Textor Code	Social-Behavioral Characteristics
94	34	242	Marriage Polygynous Rather Than Monogamous
93	15	424	Religious Specialists Are Part-Time Not Full Time
81*	16	302	Early Satisfaction Potential Is High
79	14	286	High Number of Food Taboos During Pregnancy
75	24	327	High Mother/Infant Contact Is Beyond Two Years
71	31	317	Infant Physical Affection Is High
70	20	303	Early Oral Satisfaction Potential Is High
70*	10	329	Age Of Toilet Training Is Two Years or Greater
68*	19	358	Low Presence Of Adolescent Groups In Public Gatherings
67	30	326	Transition Anxiety Between Infancy-Childhood Is Low
65	34	334	Indulgence of Child Is High
64	11	272	Divorce Rate Is Low
57	23	343	Child Conflict Over Nurturing Behavior Is Low

1 All of the above relationships are statistically significant with $p < .05$ except for starred items where: $.10 < p < .05$; Percent communality represents the percentage of cultures with weaning age 2.5 years or greater that have in common the joint variables of behaviors listed. High breastfeeding cultures are highly child nurturing cultures that are sexually polygynous, low in religious activity and divorce. Although, paired-comparisons are statistically significant based upon the total sample size that involve cultures with weaning age less than 2.5 years, certain paired comparisons have small sample sizes. A more complete and systematic behavioral ratings of the 400 culture sample of Textor (1967) is needed.

2. Derived from R. B. Textor (1967): A Cross- Cultural Summary, HRAF Press New Haven

3. Comparisons involving no breast-feeding cultures do not exist in primitive cultures. Studies comparing individuals breast-fed for 2.5 years or longer vs. no breast-feeding in contemporary cultures are urgently needed.

TABLE 2. SOCIAL-BEHAVIORAL CHARACTERISTICS OF CULTURES THAT DISCRIMINATE HIGH SUICIDE FROM LOW SUICIDE CULTURES
Textor Code 473, N = 88

% Culture Communality	Sample Size (N)	Textor Code	Social-Behavioral Descriptor
80	84	109	Caste system present
76	88	472	Narcissism is high
75	73	209	Patrilocal residence
74	30	148	Personal crime is high
73	86	242	Polygynous marriage common
73	88	262	Wives obtained for some consideration
72	36	356	Adolescent pair courtship present
71	67	196	Inheritance rights are high
71	44	303	Early oral satisfaction is low
70	84	419	Military Glory Emphasized
65	52	318	Overall indulgence of infant is low
64	87	474	Boastfulness is extreme
63	87	137	Display of wealth is high
63	85	420	Bellicosity is extreme
62	88	110	Slavery present
51	36	335	Indulgence of child dependency is low

Textor Code 473: "Sensitivity to Insults" is rated "High" if: "Public humiliation frequently leads to suicide or some other violent response; Interpersonal insults frequently leads to suicide, homicide, vendetta and demands heavy remuneration; Ethnographer says explicitly they are acutely sensitive to narcissistic wounds, easily take offense, pride is wounded, not merely feeling rejected, unloved or deprived.

N = 32 (High Suicide Cultures); N = 56 (Low Suicide Cultures) N = 88 (Total Culture Sample)
All relationships are statistically significant : $p < .05$

% Culture communality is the sum of the percentages of cultures found to be in the expected direction, e.g. high narcissism with high suicide cultures (29/47 cultures =62%); plus low narcissism with low suicide cultures (38/41 cultures = 93%) . The average = 76% cultures in predicted relationship.

High suicide cultures are characterized by high narcissism, personal crime, caste system, boastfulness, display of wealth, slavery present and military glory emphasized. Early infant oral satisfaction and overall infant indulgence is low. Adolescent courtship is present where the culture is patrilocal, marriage is slightly more polygynous than monogamous and wives are obtained for some consideration

TABLE 3. SUICIDE CULTURES AS A FUNCTION OF WEANING AGE, INFANT PAIN AND ADOLESCENT SEXUALITY

WEANING AGE 2.5 YEARS OR LONGER

SUICIDE CULTURES

HIGH SUICIDE	Infant Pain	LOW SUICIDE	Youth Sex
Balinese	Yes	Ainu	+
Jivaro	Yes	Andamanese	+
Kwakiutl	Yes	Aranda	Irrelev
Nuer	Yes	Arapesh	Irrelev
Nyakyusa	Yes	Cheyenne	-
Ojibwa	Yes	Chukchee	+
		Cuna	-
		Kurtachi	+
		Lakher	+
		Lepcha	+
		Lesu	+
		Manus	-
		Murngin	Irrelev
		Navaho	+
		Siriono	+
		Tallensi	+
		Thonga	+
		Venda	+
		Wogeo	+
		Woleaians	+
6		20	(17)

77% (20/ 26) cultures where weaning age is 2.5 years or greater are low suicidal cultures.
82% (14/17) cultures with weaning age 2.5 yrs and greater support youth sex have low suicides.
Irrelevant since marriage occurs shortly after puberty, thus high sexual pleasure.
Premarital Sex TC 392; WA > 2 Yrs TC 330; Baby Carry TC 317; Infant Pain TC 324

Source: R. B. Textor (1967). *A Cross-Cultural Summary*. HRAF Press, New Haven.

N.B. Textor Code 473 is not a pure measure of suicide but is mixed with homicidal behaviors.

TABLE 4. RAPE RATES IN THE 15 MOST AND 15 LEAST VIOLENT STATES (PER 100,000 POPULATION)

COMPARING STATE RAPE RATES IN 1996 and STATE RANKS OF DANGEROUSNESS 2005 1= Safest; 50 = Most Dangerous AS A FUNCTION OF STATES THAT ENDORSE "PADDLING" OF CHILDREN IN 1999

High Rape Rate	State Rank	Low Rape Rate	State Rank	Low Rape Rate	State Rank	High Rape Rate	State Rank
41.8-65.6	Violence	19.6-27.5	Violence	19.6-27.5	Violence	41.8-65.6	Violence
Paddle States		No Paddle States		Paddle States		No Paddle States	
		SD	19.6 5				
NM	63.5 45	WV	19.6 6	PA	25.3 21	AK	65.6 39
DE	62.6 31	IA	19.7 9	ID	26.3 11	MI	57.0 40
FL	52.1 44	ME	20.9 3			NV	53.4 50
SC	49.2 46	WI	21.0 10			WA	51.1 30
OK	46.8 35	NY	23.0 23			MN	50.0 16
TN	46.5 43	CT	23.1 12			UT	41.8 13
CO	46.2 27	ND	24.1 1				
TX	43.8 42	NJ	24.7 18				
KS	42.6 20	VT	26.7 2				
		NE	27.1 17				
		MT	27.1 7				
		HI	27.5 28				
N = 9		N = 13		N = 2		N = 6	
82%	73%	68%	74%	18%	18%	32%	34%

82% of Paddle States Had High Rape Rates;
68% of Non-Paddle States Had Low Rape Rates
Chi-Square = 10.47, P < .005, N = 30

32% of Non-Paddle States Had High Rape Rates;
18% of Paddle States Had Low Rape Rates

73% of Paddle States Ranked Most Dangerous
Median Rank Defined Most and Least Dangerous

74% of Non-Paddle States Ranked Least Dangerous
$\chi^2 = 8.68$, $p < .01$, N = 30

Rape Rates from the *Uniform Crime Reports* (*FBI)*, October 4, 1997 and "State Rankings 1998", Morgan Quitno, Lawrence, Kansas, <www.morganquitno.com>
Paddle and Non-Paddle States from listing by PTAVE, 1999, at www.nospank.org

TABLE 5. WEANING AGE: 24 MONTHS OR LESS V 36 MONTHS OR MORE IN HIGH AND LOW SUICIDAL TRIBAL CULTURES

	Weaning Age Months		
	24 MO/Less	36 MO/Plus	Sum
High Suicide	18	11	**29**
Low Suicide	13	23	**36**
Sum	**31**	**23**	**65**

Chi Square Equals 4.41; $p < .05$, N = 65

1. **62 %** (18/29) of high suicide cultures have weaning age onset of 24 months or less.
2. **64%** (23/36) of low suicide cultures have weaning age onset of 26 months or greater

3. **38 %** (11/29) of high suicide cultures have weaning age of 2.5 years or greater.
4. **36 %** (13/36) of low suicide cultures have weaning age onset less than 2.0 years.

5. **77 %** (20/26) of low suicide cultures have weaning age onset of **2.5 years or greater** (previous Textor study).

These data support the following conclusions:

1. The additional culture samples from Barry and Paxon (1971) in evaluating both high and low suicide cultures has reduced the prediction of low suicide cultures with weaning age of 2.5 years or greater in Textor from 77% to 64%. Given the nature of cross-cultural data and other factors this degree of variation should not be surprising.

2. There is no question that the benefits of breastfeeding for the prevention of suicide will be much greater in the American culture where only 6.8% of mothers are breastfeeding at one year of age. Only about 10% of tribal cultures breastfeed for 12 months or less compared to 93.2% of American mothers who breastfed for 12 months or less (NHANES III data)--National Health and Nutrition Survey Examination 1988-1994.

THESE DATA SUPPORT THE NECESSITY OF BREASTFEEDING FOR 2.5 YEARS OR LONGER TO REALIZE THE OPTIMAL BENEFITS OF BREAST FEEDING FOR SUICIDE PREVENTION and OTHER HEALTH BENEFITS FOR CHILD AND MOTHER

TABLE 6. LOW SUICIDE CULTURES and WEANING AGE RANGE AND AVERAGE IN MONTHS

	Weaning Age Months			Weaning Age Months	
	Range	Mean		Range	Mean
AINU	48-60	54	LAU		
AMERICANS			LEPCHA	36-48	42
ANDAMANESE	36-48	42	LESU	30T	30
ARANDA	36	36	MANUS	30-36	33
ARAPESH	30T	30	MURNGIN	30T	30
ARAUCANIANS			NAMA		
AYMARA	24-32	28	NAVAHO	31	31
CHENCHU	--		PAPAGO	18-36	27
CHEYENNE	30T	30	PUKAPUKA	15	15
CHIR-APACHE			RWALA		
CHUKCHEE	36-72	54	SANPOIL		
COMANCHE	--		SIRIONO	36-48	42
COPR ESKIMO	36-60	48	TALLENSI	36	36
CREEK	--		TANALA	--	
CROW	--		TAPIRAPE		
CUNA	48-60	54	THONGA	30-36	33
CZECHS			TIMBIRA	24	24
DOBUANS			TIV	24-30	27
FON	24-36	30	TODA	24	24
GANDA	36	30	VENDA	30T	30
GOND	24-36	30	VIETNAMESE	36+	36
HANO			WITOTO		
IBAN	--		WOGEO	36	36
INCA	24	24	WOLEAIANS	30T	30
KASKA	24-36	30	YAGUA		
KAZAK	48-60	54	ZUNI	12-60	36
KURTATCHI	30T	30			
LAKHER	24-36	30			
LANGO					
LAPPS	12-24	18			

Low suicide cultures from Textor, R. B. (1967). *A Cross-Cultural Summary*. HRAF Press, New Haven CT. Code #473 N = 56.

Weaning age from Barry III, H. and Paxson, L.M. (1971). Infancy and Early Childhood: Cross-Cultural Codes 2. *Ethnology*. X(4):466-508. N = 28

AVERAGE WEANING AGE OF LOW SUICIDE CULTURES EQUALS 34 MONTHS

TABLE 7. HIGH SUICIDE CULTURES AND WEANING AGE RANGE AND AVERAGE IN MONTHS

	Weaning Age Months			Weaning Age Months	
Culture	Range	Mean	Culture	Range	Mean
ABIPON	36	36	MAORI	10-24	17
ALBANIANS	36	36	MARQUESANS	12	12
AIORESE	24-30	27	MASAI		
ASHANTI	24	24	NUER	30T	30
AZANDE	24-28	36	NYAKYUSA	24-36	30
AZETIC	36	36	OJIBWA	30T	30
BALINESE	30	30	RIFFIANS	60	60
BEMBA	24-36	30	SAMOANS	24	24
BHL			SIWANS		
CHAGGA	36	36	SOMALI	12-24	18
HAIDA	24	24	TIKOPIA	9	9
HEBREWS	36	36	TROBRIAND	24	24
IFUGAO	24-36	30	WARRAU	24-36	30
JIVARO	36	36	WOLOF	24	24
KOREANS	24-36	30	YAHGAN	24	24
KWAKIUTL	30T	30	YUROK	24-36	30

High suicide cultures from Textor, R. B. (1967). *A Cross-Cultural Summary*. HRAF Press, New Haven CT. Code #473 N = 32.

Weaning age from Barry III, H. and Paxson, L.M. (1971). Infancy and Early Childhood: Cross-Cultural Codes 2. *Ethnology*. X(4):466-508. N = 28

AVERAGE WEANING AGE OF HIGH SUICIDE CULTURES EQUALS 28 MONTHS

**TABLE 8. ESTIMATED DAILY REQUIREMENTS (MG/KG)
OF THE ESSENTIAL AMINO ACIDS FOR INFANT, CHILD AND ADULT
(MERCK MANUAL 15TH ED-1987)**

Amino Acid	Adult		Infant	% Adult	Child	% Adult	
Histidine	16		26	**163**		19	**118**
Isoleucine	13		46	**354**		28	**215**
Leucine	19	93	**489**		44	**232**	
Lycine	16		66	**247**		44	**275**
Methionine/Cystine	17		42	**235**		22	**129**
Phenylalanine & Tyrosine	**19**		**72**	**379**		**22**	**116**
Threonine	09		43	**478**		28	**311**
Tryptophan	**05**		**17**	**340**		**09**	**180**
Valine	13		56	**431**		25	**192**

FROM: *The Merck Manual. Nutritional and Metabolic Disorders*. P. 920. Fifteenth Edition.1987. Merck & Co., Inc. Rathway, NJ Infant percent value of adult requirements were calculated and added to Table.

Modified from Energy and Protein Requirements. Report of a Joint FAO/WHO Ad Hoc Expert Committee. WHO Technical Report Series No. 724. Copyright 1985 by FAO AND WHO

Fazzolari-Nesci, A., Domianello, D., Sotera, V. and Raiha, N.C. (1992). Tryptophan fortification of adapted formula increases plasma tryptophan concentrations to levels not different from those found in breast-fed infants. *J. Pediatric Gastroenterology and Nutrition*. May. 14(4): 456-459.

Hanning, R.M., Paes, B., Atkinson, S.A. (1992). Protein metabolism and growth of term infants in response to a reduced-protein, 40:60 whey: casein formula with added tryptophan. *Amer. J. Clinical Nutrition*. December 56(6):1004-11.

Kamimura, S., Eguchi, K., Sekiba, K. (1991). Tryptophan and its metabolite concentrations in human plasma and breast milk during the perinatal period. *Acta Medica Okayama.* April 45(2):101-106.

Lanting, D.I., Fidler, V. Huisman, M., Touwen, B.C., Boersma, E.R. (1994). Neurological differences between 9-year old children fed breast-milk or formula-milk as babies. (1994*). Lancet*. Nov 12 344(8933):1319-22.

Neuringer, M. (1993). Cerebral cortex docosahexaenoic acid is lower in formula-fed than in breast-fed infants. *Nutrition Reviews*. August 51(8):238-41.

Newman, J. (1995). How Breast Milk Protects Newborns. *Scientific American.* December

TABLE 9. ESTIMATED DAILY AMINO ACIDS REQUIREMENTS (MG/KG) OF THE ESSENTIAL AMINO ACIDS FOR INFANT, CHILD AND ADULT (Merck Manual 17th Ed-1999-2005)

Amino Acid	**Adult**	**Infant** (4-6 mo)	**Infant % Adult**	**Child** (10-12 yr)	**% Adult**
Histidine	--	29	**---**	--	**-**
Isoleucine	10	88	**888**	28	**280**
Leucine	14	150	**107**	44	**314**
Lycine	12	99	**825**	49	**408**
Methionine/Cystine	13	72	**553**	24	**185**
Phenylalanine & Tyrosine	**14**	**120**	**857**	**24**	**171**
Threonine	07	74	**106**	30	**429**
Tryptophan	**03**	**19**	**633**	**04**	**133**
Valine	13	93	**715**	28	**215**
Total	**86**	**715**	**4684**	**29**	**2135**
Average	**11**	**89**	**586**	**29**	**267**

FROM: *The Merck Manual. Nutritional and Metabolic Disorders*. Section 1. Nutritional Disorders. Seventeenth Edition. Centennial Edition 1999-2005. Merck & Co., Inc. Rathway, NJ Infant and child values of adult requirements were calculated and added to Table. Online Edition http://www.merck.com/pubs/mmanual/

TABLE 10. Suicide Risk Factors: Surgeon General Satcher. M.D.

1. Previous suicide attempt
2. Mental disorders--particularly mood disorders such as depression and bipolar disorder
3. Co-occurring mental and alcohol and substance abuse disorders
4. Family history of suicide
5. Hopelessness
6. Impulsive and/or aggressive tendencies
7. Barriers to accessing mental health treatment
8. Relational, social, work, or financial loss
9. Physical illness
10. Easy access to lethal methods, especially guns
11. Unwillingness to seek help because of stigma attached to mental and substance abuse disorders and/or suicidal thoughts.

12. Influence of significant people--family members, celebrities, peers who have died by suicide--both through direct personal contact or inappropriate media representations

13 Cultural and religious beliefs--for instance, the belief that suicide is a noble resolution of a personal dilemma

14. Local epidemics of suicide that have a contagious influence

15. Isolation, a feeling of being cut off from other people.

No statistical evidence is given that would weight these risk factors, which are primarily social in nature, or how well they predict suicide from matched control groups. Since suicide is a brain-behavior disorder, it is alarming that no mention is made of the brain or how the above "risk factors" are related to specific brain processes and structures that are known to mediate depression and suicide. From: http://www.mentalhealth.org/suicideprevention

Satcher, D. (1999). *The Surgeon General's Call to Action to Prevent Suicide.* U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, Washington, DC

Table 11. Suicide Risk Factors: James W. Prescott, Ph.D.

The following developmental factors, as causative for the development of depression and suicide, are primarily based in psychobiology and are offered for comparison to the Surgeon General's risk factors that are primarily based upon social factors that are “after-the-fact” of suicide are not truly prevention but suicide control.

1. Unwanted pregnancies and the birth of unwanted children.

2. Stressful pregnancies due to a variety of biological, social and psychological factors, e.g. unwanted pregnancy, lack of prenatal care, domestic violence, use of drugs during pregnancy, etc.

3. Stressful delivery, birth and perinatal experiences due to a variety of biological, social and psychological factors, e.g. high risk pregnancy, respiratory distress, obstetric medications, circumcision trauma that produces aberrant adrenal-cortical functioning, etc.

4. Separation stress of newborn/infant/child from mother throughout development.

5. Insufficient or no breastfeeding of infant/child. Brain neurotransmitter deficits associated with lack of breastfeeding bonding, particularly, brain serotonin and dopamine.

6. Lack of baby carrying on the body of mother/father during the first year of life.

7. Onset and duration of institutional infant and child day care (under three years) where little or no bonding can occur with associated brain neurotransmitter deficits.

8. Child abuse and neglect, particularly sexual and emotional abuse with associated brain deficits involving both structure and function. Self-mutilation.

9. Frequency/ duration of infant/child crying with aberrant adrenal-cortical functioning.

10. Infliction of physical and emotional pain (humiliation) upon the infant/child by parents and/or caretakers, as a routine form of control, punishment and discipline.

11 Punishment and denial of the emerging sexuality of children, e.g. punishment and shame for masturbation.

12. Parent/child separations, e.g. divorce, foster care, day-care, adoption, and separate parent-child vacations. Measures of parental indifference, alienation and rejection.

13. Punishment, guilt and shame over other naturally sexually expressive behaviors during adolescence.

14. Number, extent and quality of child/ youth friendships, a measure of emotional-social health.

15 Failed or absent youth love relationships, a measure of emotional life stress.

TABLE 12. TWO CULTURAL BRAINS

LIMBIC-SUBCORTICAL EMOTIONAL BRAIN

		PAIN	PLEASURE
NEOCORTICAL BRAIN	**PAIN**	**Theistic Religions**	
		Patrilineal	
		Gender Inequality	
		Sexual Puritanism	
		Addictive Synthetic Drugs	
		Authoritarian Control	
		Pain Is A Moral Good	
		Depression-Violence-War	
		NeuroDissociative Brain	
		Science of Pain-Depression	
		BioMedical Health Model	
		Legislative Gender Inequality	
		Politics of Betrayal	
LIMBIC BRAIN	**PLEASURE**		**Earth Religions**
			Matrilineal
			Gender Equality
			Sexual Liberty
			Natural Botanical Drugs
			Egalitarian Freedom
			Pleasure Is A Moral Good
			Joy-Happiness-Peace
			NeuroIntegrative Brain
			Science of Pleasure-Happiness
			BioBehavioral Health Model
			Legislative Gender Equality
			Politics of Trust

James W. Prescott, Ph.D. Presented at: Society for the Scientific Study of Sex: "Sex and the Brain" Midcontinent & Eastern Regions June 13-16, 2002 Big Rapids, MI and Society For Cross Cultural Research 32nd Annual Meeting Feb 19-23, 2003 Charleston, SC. From: Prescott, 2005., http://www.violence.de/archive.shtml