DOCUMENT RESUME

ED 188 762 PS 011 525

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TITLE Sex Roles: A Product of Socialization or a Biological Heritage.
PUB DATE [75]
NOTE 36p.

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Aggression; *Females; Literature Reviews; *Males; *Nature Nurture Controversy; *Sex Differences; *Sex Role
IDENTIFIERS Harlow (Harry F); *Monkeys

ABSTRACT

This paper reviews selected studies of aggression in males and females and concludes that physiological, emotional and behavioral differences exist between the sexes. Primate studies, conducted by Harlow, are employed as evidence that sex differences in aggression are primarily biological and not primarily cultural phenomena. It is further concluded that sex differences are essential to the survival of the individual and the family and that the conceptualization of sex differences in terms of socialized sex-roles is fundamentally mistaken. (RH)

Sex Roles:

A Product of Socialization or a Biological Heritage

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Abstract

A review of the literature on the topic of sex roles, and aggression in particular, with an emphasis on possibility of biological origins of behavior. Geared to the level of an inexperienced reader with little or no background in the field.

Sex Roles

AGGRESSION

In the very youngest of children, in the formative years of life, there is a very detectable, visible difference between the "sweet" little girls and their "hellish" little counterparts, the boys. While the miniature women play quietly with their dolls the boys are terrifying mothers with their violent, often destructive play. Our question is whether or not the basic postulate that boys are really more aggressive than are girls is a statement of fact, or only a reflection of a socialized opinion.

We shall approach the answering of this question from two angles. Firstly, we will establish whether or not there is actually a quantitative difference in aggression between the sexes, that is, whether one sex is actually more or less aggressive than the other. Later, we will investigate the qualitative differences, and show that there is more than one way to react to a situation, and that the sexes simply choose different responses.

One of the first experiments that drew a fairly definite conclusion on the issue of amount of comparative aggression dealt with the sharing of balloons. Two women scientists from Ohio State University drew the following conclusions from their research:

> "Compared with boys in the control condition, boys in the three affect conditions combined had higher aggressive scores.
>
> "Girls, on the other hand, were less aggressive in the affect conditions than in the control condition, with none of the individual groups differing significantly from the control group...."[1]

This means that when put to the test, or in the affect conditions, the girls' reaction was less than in the control situation, whereas the boys reacted aggressively to the sharing situation in every case, and in all three different situations. This is important in beginning to understand that the male response to frustration, or threat, is more aggressive, or selfish, than is the females'.

To further this point we review evidence compiled by a Michigan State team. Two scientists set out to measure the effects of realistic versus cartoon violence on children. After viewing films they were observed playing, and the effect of the films on the violence was measured. Although not directly a study on sex differences in aggression, the outcome helps us understand better how the female's reaction differed from the males'. Their findings are rather illuminating:

> "Figure 1 (pictured below) also reveals that the boys were generally more aggressive than the girls and that there is little difference in the frequency of aggressive responding between the

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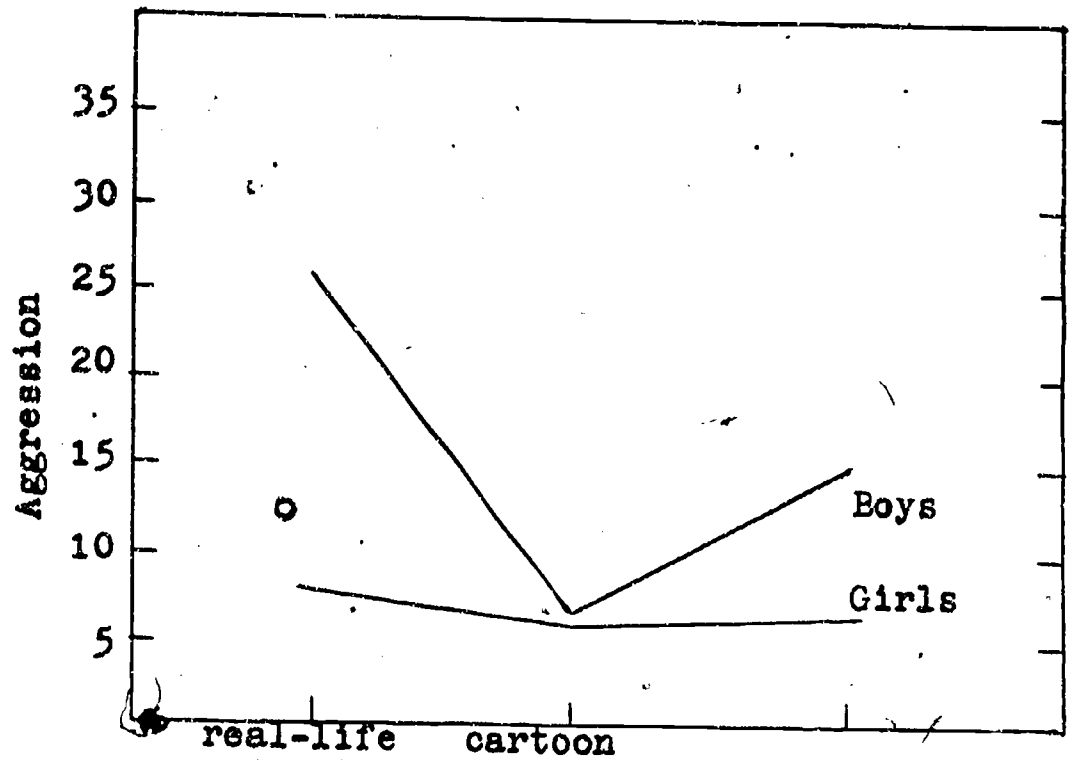
[1] Harris, Mar, B., and Claudia E. Siebel, (Ohio State University), "Affect, Aggression, and Altruism," Developmental Psychology, Sept. 1975, vol. 11(5), pp. 623-627.

aggressive cartoon and control conditions. Therefore, it appears that disinhibition of aggression occurred only in boys..."[2]

Notice the reference to "disinhibition" of the aggressive response in boys, seeming to imply that there is some sort of inhibitory process in operation in the human mind. We now reproduce graphic representation of their results:



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The importance of the two different stimuli presented to the children, the cartoon and the real-life aggression, is that this tested the children's reaction to both an imaginary as well as a realistic aggressive model. Note that the type of aggression the children saw still produced

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[2]Hapkiewicz, Walter G., and Robert D. Stone, (Michigan State University), "The Effect of Realistic versus Imaginary Aggressive Models on Children's Interpersonal Play," Child Study Journal, 1974,vol. 4(2), pp. 47-57.

[3]Ibid. p. 54.

the same basic trend in results, clearly showing the difference between the sexes' responsive nature.

Another team, three experts from Rutgers, produced comparable results by creating a situation involving the sharing of toys, with the mothers present. It is important to note that the children used were of the same economic status, so it should be expected that their upbringings would be quite similar. It is also important to note that even with the mothers present the boys seemed to be less inhibited to aggress than the girls. Their results:

> "Boys displayed significantly more aggression than did girls. The median score for boys was slightly lower than the highest score obtained by any girl."[4]

What this means is that the highest score obtained by any girl was only slightly higher than the average score obtained by the boys. The table that accompanies the report illustrates that the exact difference is almost 50% higher for boys.

Results of t-test between Boys' and Girls' Aggression in the Presence of Mother

Variable	Boys	Girls
Mean aggressive score	5.66	3.93
Standard deviation	2.61	1.44
Number	60	19

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[4,5] Guerney, Bernard G., Margot Rau, and Lillian Stover, (Rutgers State University), "The Effect of Realistic Versus Imaginary Aggressive Models on Children's Interpersonal Play," Child Study Journal, 1974, Vol 4(2), pp. 47-57.

Now, this sort of phenomenon, that of the boys being so much more aggressive than their female counterparts, is not applicable only to children. In an experiment dealing with adults as the major subjects the results reflected the same basic tendencies as did those dealing exclusively with children:

> "Women constructed fewer aggressive sentences than did men,...more highly feminine sex role identifications constructed fewer aggressive sentences than those with less feminine sex-role identifications.
>
> "The hypothesis that, following arousal, men would show more total and more direct aggression was borne out."[6]

This experimenter designed her experiment to discover whether sex-role identifications had any effect on aggressive expressions, as well as whether or not the feminine or masculine sexes differed at all from each other. As she herself put it, the hypothesis that men really were more aggressive than were women held true, and even the femininity of the female subjects had an effect, as the more feminine were less aggressive.

So, now we understand that there really is a definite difference between the human sexes in terms of aggressive responses to frustration, sharing, and even aggressive stimuli. We have learned that aggressively natured films, even though

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[6] Rappaport, Joan C., "Sex Differences in Aggression: With Special Reference to Sex-role Identification and Mode of Handling Aggression," Dissertation Abstracts International, Sept. 1972, Vol. 33 (3-B), p. 1294.

based on fantasy, disinhibit aggressive tendencies in males, and have the exact opposite effect on females. We have also universalized these results, in terms of age, by presenting evidence showing that even adults showed a differing reaction to aggressive cues according to their sexes.

Now we will examine one last case study. In this simulation the subjects were insulted by a confederate (one who is part of the experimental crew), and later were asked to administer shocks to this same confederate under the guise of a learning experience.

> "The results seem to indicate that an inhibitory process is present in female subjects....Insulted male subjects do not show a similar inhibition, but rather they gave more shock....
>
> "The results can be interpreted as indicating that under a state of strong arousal female subjects inhibit aggressive responses in the presence of aggressive cues...."[7]

The graph of their results:

Mean Intensity of Shock Administered by Subjects

Treatment		Boys	Girls
Insult	Violent Tape	7.02	1.87 ←
	Neutral Tape	4.07	4.30
No-Insult	Violent Tape	4.40	3.96
	Neutral Tape	6.01	1.32 ←

[7]Schuck, Soloman Z., et al., (Monmouth College), "Sex Differences in Aggressive Behavior Subsequent to Listening to a Radio Broadcast of Violence," Psychological Reports, June, 1971, Vol. 28(3), pp. 931-936.

The difference in the intensity of shock given under a violent, aggressive cue is so massive in the insult situation that there should be no doubt in any educated reader's mind that this evidence conclusively proves that there is a difference, clear and measureable, between men and women, with respect to aggression. Therefore, we have proven the first point of this paper: There is a quantitative difference in aggression between men and women.

Now, we shall concentrate on the qualitative difference; that is, we shall try to show how the sexes differ, and how they show their aggressive feelings.

Anne McIntyre, of Cornell University, constructed a very sophisticated experiment to find out which types of aggressive responses were more often used by which sexes. She chose five categories of aggression: total aggression, physical aggression, verbal aggression, direct aggression, and indirect aggression. Males, suprisingly enough, scored higher in only two of the five categories, but these two are by far the more visible types of aggression: physical and direct.

> "There was a striking sex difference in the use of physical modality for aggressive expression. Girls used physical aggression so much less than boys that the aggression of girls was predominantly verbal."[8]

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[8] McIntyre, Anne, (Cornell University), "Sex Differences in Children's Aggression," Proceedings of the Annual Convention of the American Psychological Association, 1972, Vol. 7(1), pp.?

Correlations of Social Activity and Aggressive Rates

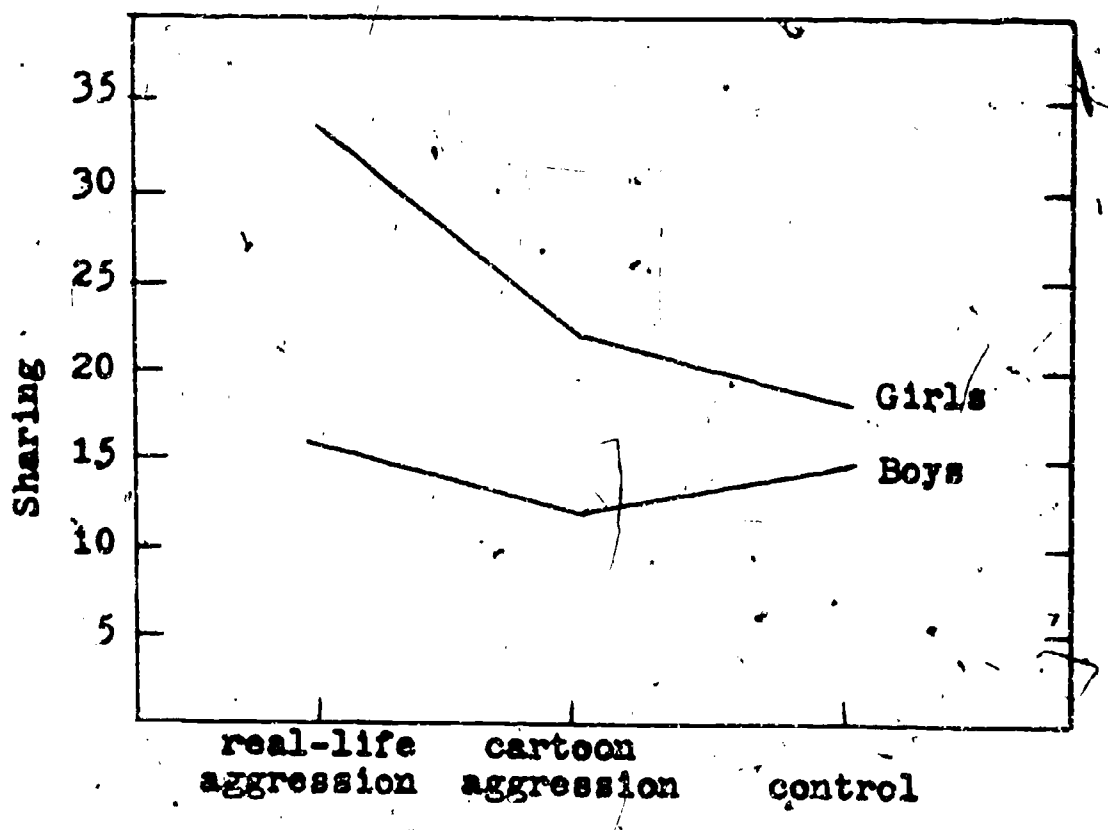
Group	Total Agg.	Physical Agg.	Verbal Agg.	Direct Agg.	Indirect Agg.
Males	.69	.76	.72	.73	.76
Females	.72	.62	.74	.60	.85
All Subjects	.52	.32	.64	.50	.50

Note: All figures are accurate to .05.

Now we have a new insight into the different ways that we can express our aggressive feelings. We also know that these different ways are to a large extent determined by our sex. Let us now look into this further.

On page 7, we cited an article by two Michigan State researchers. One should also recall that many of the experiments cited so far have dealt with situations where sharing, or not sharing, was the basis of the design for measuring aggression. Now, we combine these two thoughts, and we present another finding from the Michigan State team's results.

These men found that the aggressive responses of the boys did not mean that the girls were not responding at all. It simply meant that they were responding differently. Note the results as we reproduce their graphed results: (see following page)



Their explanation:

> "While the boys were more aggressive than the girls in every condition, the opposite pattern of results occurred for sharing behavior. Assuming that the test situation was indeed frustrating, it appears that, when thwarted, boys were more likely to react aggressively than girls who responded by exhibiting more socially acceptable behaviors such as sharing.
>
> "Thus, it appears that the dominant response pattern of the girls was sharing and that the aggressive films served to intensify their performance of this response."[11]

So, while the boys were fighting about things, under the same conditions the girls were trying to share. It is very important to note here that this cannot be interpreted

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[10,11] Hapkiewicz, Walter G., and Robert D. Stobe, (Michigan State University), "The Effect of Realistic Versus Imaginary Aggressive Models on Children's Interpersonal Play," Child Study Journal, 1974, Vol. 4(2), pp. 47-57.

to say that boys are mean and that girls are cheerfully good-natured. This means quite a bit more than that simple a comment could ever imply.

The findings seem to indicate that, when faced with an emergency or a frustration, or violence, and the like, a male is more likely to react with aggression, and a female is more predictable in terms of verbal aggression, or indirect aggressive displays. In fear inducing situations, a man would be violent, or aggressive, and a woman would be more verbal, or more surrendering, as is indicated by the sharing behavior. We shall substantiate this further.

To help further support this we shall requote the two-woman Ohio State team previously cited. If one will make an effor to recall, their experiment dealt with the sharing of balloons a situation that would be most frustrating for the average child, as there were not enough for each child to have his own. Recall that their results, quoted on the second page of this chapter, showed that the girls' response did not show significant changes from what it was in the control situation, whereas the boys "in the three affect conditions combined had higher aggression scores."[12]

As a result of these, and other findings of the experiment, the following conclusion was drawn:

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[12]Harris, Mary B., and Claudia B. Stober, (Ohio State University), "Affect, Aggression, and Altruism," Developmental Psychology, Sept. 1975, Vol. 11(5), [illegible]

> "It appears that for boys, thinking angry, sad, or happy thoughts may increase overall level of aggression, whereas for girls any of these thoughts may serve to decrease aggression.
> "...arousal leads to increased anger and aggressiveness in boys, but to increased anxiety, guilt, and inhibition of aggression in girls."[13]

Before we proceed any further it is essential that we stop and take notice of the repeated use of the word "inhibition". It has been used thus far to convey to the reader a sense of inevitableness, to an extent. That is to say that there is obviously an aggressive nature to man that these scientists recognize and expect. When a person does not react aggressively to a situation that would normally demand an aggressive response then it is said that this person's aggressive feelings have been"inhibited". It is very important that we realize that this continual repetition of these words shows us that science has accepted, for now, that these are normal human behaviors, and the lack thereof, or deviation from them, is due to some sort of inhibition. Our ultimate goal in this paper is to learn whether or not this inhibition, or the lack thereof, is due to socialization, or to biology.

We proceed now with the qualitative search.

In a study of the effects of frustration and attack on the vascular system, and the sex differences in these effects,

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[13]Harris, Mary B., and Claudia E. Siebel, (Ohio State University), "Affect, Aggression, and Altruism", Developmental Psychology, Sept. 1975, Vol. 11(5) pp. 623-627.

a doctor at the Duke University Medical Center found the following results: "Males evidenced a greater rise in sytolic (blood) pressure than did females; whereas, no sex differences were noted for diastolic (blood) pressure."[14] The systolic blood pressure refers to the pumping action of the ventricle as it puts blood out of the heart, and on its way to the body. An increase in this pressure could be caused by a number of things, including adrenaline, or constriction of blood to the "gut" area. This is the pressure that would be attributed for men reacting to emergencies in a "gut" manner; quick, aggressive responses.

So, now, we learn that there is even a physical difference, according to this doctor. But, by far and away, his more important findings dealt with the mood of the subjects he worked with. He devised a method of quantitatively measuring the "felt depression" of a subject under both frustrating and attack conditions. His results are reproduced below:

> "Females also reported more felt depression after being frustrated or attacked...., a pattern of emotional response not shown by male subjects."[15]

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[46] Gentry, William D., (Duke University Medical Center), "Sex Difference in the effects of Frustration and Attack on Emotion and Vascular Processes," Psychological Reports, Oct. 1970, Vol. 27(2), 383-390.

Degree of Felt Depression Reported by Subjects

Sex	Control	Frustration	Attack
Males	4.00^{B}	3.60^{ab}	3.50^{ab}
Females	2.80	4.20^{B}	4.10^{B}

Note: Cells having common superscripts are not significantly different at the .05 level. A high score is a high felt depression.

One should immediately note that the females' depression level increased by almost 50% in the two test conditions, whereas the males decreased significantly. Also, it is important to notice that the females' depressed level in the test conditions is equal to that of the male in the control, meaning that the male is more depressed when he is not aggressive, and that the female is more depressed when she must react to an aggressive situation. The male, once again, is by far more comfortable and adaptable in aggressive conditions.

It is also important to look in retrospect at the repeated use of "emotions" in explaining the females' responses to aggressive sort of situations. Mary Harris's experimental observations included such words as, "angry, sad, or happy thoughts," and she also used "inhibition" as an explanatory word, as did several others. It should be obvious to the reader that the emotional difference between the sexes also

comes into play when we deal with violence, sharing; aggression in general. But, for our purposes we will leave it at that, and we will not deal in any detail with this topic of emotionalism as a sex difference.

It is an important element, however, in our original argument. The less emotional one would be, as far as socially acceptable emotions are concerned, the better suited for battle he would be. One scientist even put an interesting topic related to this "battle" idea to the test. He produced conditions such that females had to react to aggressive males, and visa-versa, as well as situations where members of the same sex had to react to each other. His results:

> "...females perceive aggressive male opponents very negatively, and males view counteraggression from other males as not being particularly aggressive. On the other hand...males seemed to be much less willing to tolerate an aggressive female opponent and they abandoned sex-role inhibitions against expressing aggression toward females...."[16]

This means that the males felt nothing bad at expressing aggression toward either sex, but the girls were once again inhibited from showing any active aggression. In a war-like situation they would, therefore, be less adequate, on the whole, than their male counterparts. This is not any attempt at chauvinism, by any means, but simply the statement

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[16]Biller, Henry B., and James R. Shrotell, (Mid-Fairfield Child Guidance Center, Norwalk, Connecticut), "Aggression in Children as a Function of Sex of Subject and Sex of Opponent," Developmental Psychology, 1970, Vol 3(1), pp. 143-144.

of a cumulative argument proving that males are more suited for that specific unfortunate job.

We now have answered one of our two initial questions. But, the inquiry into the possibility of a biological basis for these symptoms is yet to come.

SOCIAL OR BIOLOGICAL ROOTS

Perhaps the only way we could really determine whether or not these sex differences were due to learned, social experiences, or due to some innate force within, (a force that would go back to some grass-roots origin, and would dominate in emergency situations, unless socialized against), would be to isolate a human being, totally, from any interaction with a real mother, or a socialized individual of any type. If we could do this, and then observe his behavior in response to frustration, aggression, and basic problems requiring some sort of unconditioned response, then we could say, with little reservation, that these responses he had employed would be, to a large extent, instinctive, or innate, or at least unlearned and unsocialized.

Obviously, this sort of laboratory is not only impractical, but inhumane, and inconceivable. But, what if we could reach out to a close relative in the animal kingdom, one that had proven in the past to be accurate in duplicating human responses to other stimuli, one that even would share various human characteristics, both physically and character-wise. If we could create the aforementioned situation of total desocialization with him, and many of his peers, then we might be able to draw some good conclusions, comparatively speaking, as to how man would react.

Thanks to perhaps one of the greatest scientists in his field, we can draw upon an enormous resource of experients of this essential nature. Dr. Harry F. Harlow, of the University of Wisconsin is the man to whom we shall find ourselves greatly indebted for the results of this treatise.

Of course, it is first essential for us to establish the credibility of this interspecies comparison, for obviously this is not a subject to be tampered with at will. Much research must go into the choice of a proper species for use in such an endeavor, and even then, the interspecies comparison will only be valid for a couple of characteristics.

Recall the important nature of depression in the investigation of aggression. Several of the articles already cited in this paper have dealt with this topic, especially the quote and diagram from William D. Gentry, of Duke University Medical Center. Depression is an element of superior importance in the evaluation of aggressive responses to aggressive stimuli and cues.

In reference to this, Dr. Harlow wrote: "Beyond depression, interspecies psychopathological generality is a proposition based more on faith than fact."[17]

Dr. Harlow chose carefully. He uses the Rhesus monkey for his experimentation, a species of primate terribly similar to man, especially in the emotional sense. In

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[17] Harlow, Harry F., (University of Wisconsin), "Induction and Alleviation of Depressive States in Monkeys," In N.F. White (ed.), Ethology and Psychiatry, from the Clarence M. Hinks Memorial Lecture, held at McMaster University, 1970. Toronto, Canada: University of Toronto Press, 1974, xi.

reference to this cross comparing, between our species and the one the doctor chose, he said the following:

> "Some years ago we produced a syndrome of childhood depression in infant monkeys that is so much like child anaclitic depression that no thinking man has, and no thinking man ever will, question an enormous, near total generality from monkey to man."[18]

He stated in the same article, in defense of his use of the interspecies scientific studies:

> "It (the test) merely demonstrated that a greater degree of intellectual generality existed between man and monkey than Goldstein could concede."[19]

It should be important to clarify, without referring to some note or appendix, that Goldstein is the man, or one of the men, responsible for deciding that "men alone are capable of abstract thinking."

Another important item to bring to the attention of the reader is the use of the word "depression" in reference to the results of experimentation. This same word, and its implications in aggression, and in sex-differentiation, was discussed in "Aggress[illegible]", when we illustrated the chart by Dr. Gentry, of Duke University Medical Center. So, we have an immediate point of reference in our understanding of the similarities between man, and this Rhesus beast. We shall capitalize, as is possible, on this point of departure.

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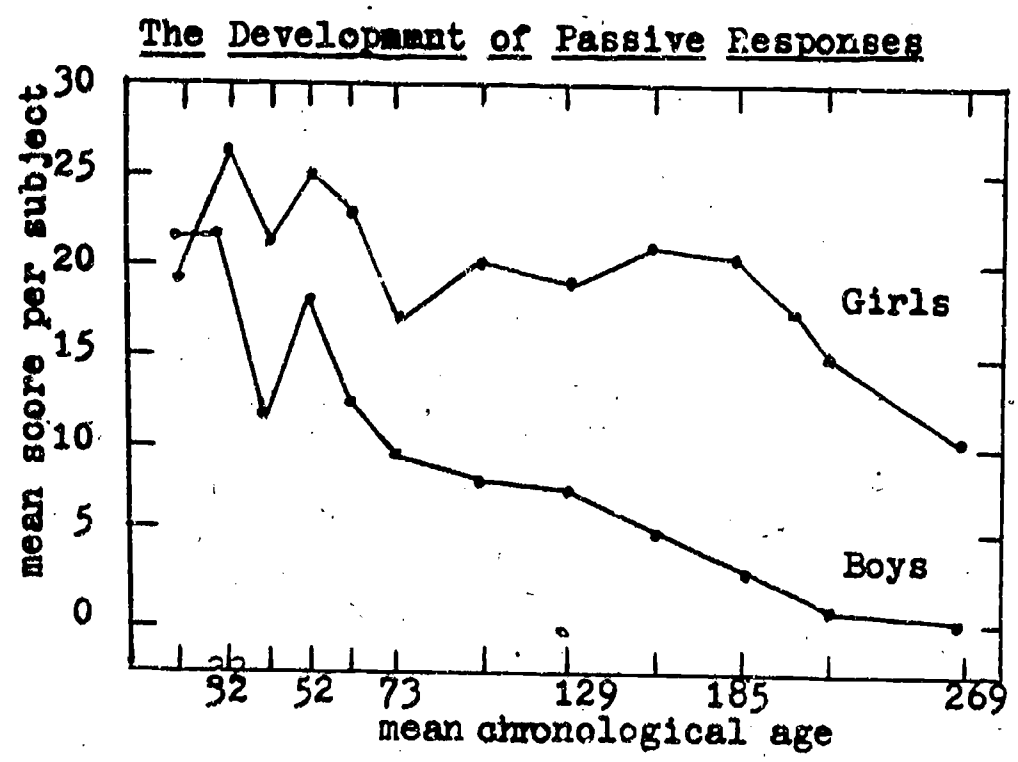
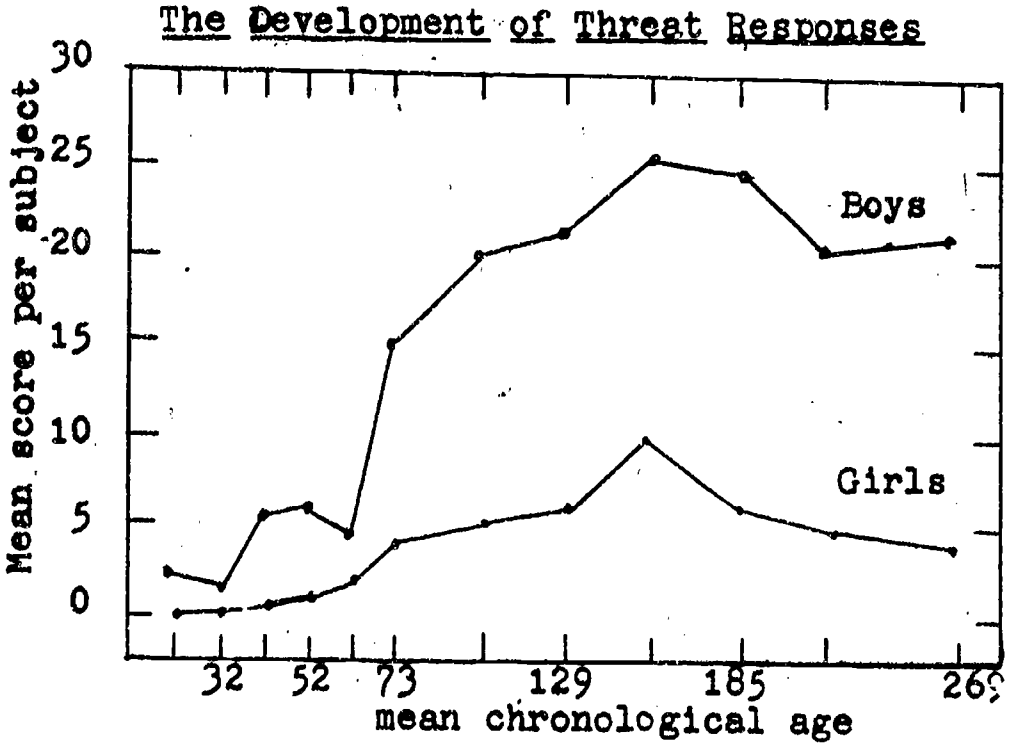
[18] Harlow, Harry F., (University of Wisconsin), "Induction and Alleviation of Depressive States in Monkeys," In N.F. White (ed), Ethology and Psychiatry, from the Clarence M. Hinks Memorial Lecture, held at McMaster University, 1970. Toronto, Canada: University of Toronto Press, 1974, xi.

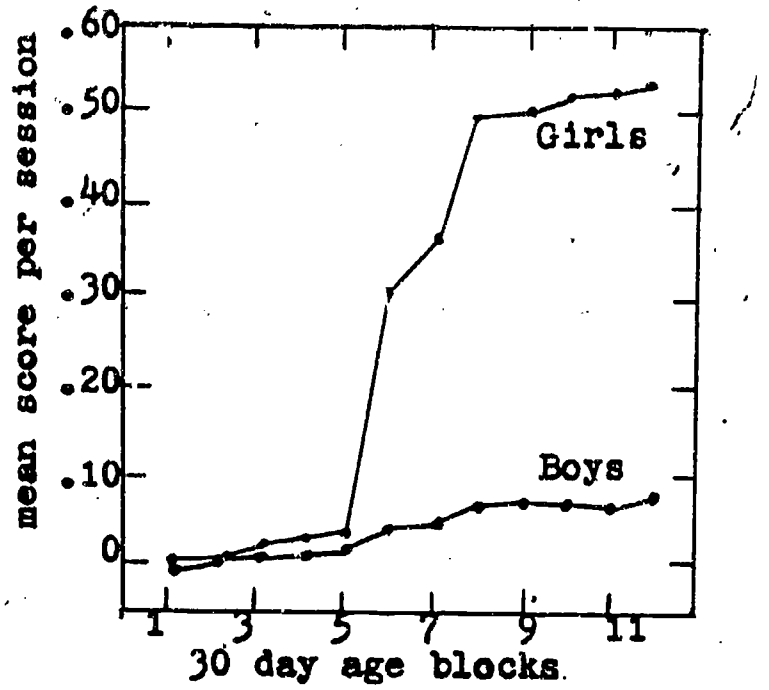
[19] Ibid.

In an article entitled, "Lust, Latency and Love," Dr. Harlow observed, and graphed, some very specific, and distinguishable characteristics of developmental personality in his monkey subjects. These are his results, and I concur in their meaning.

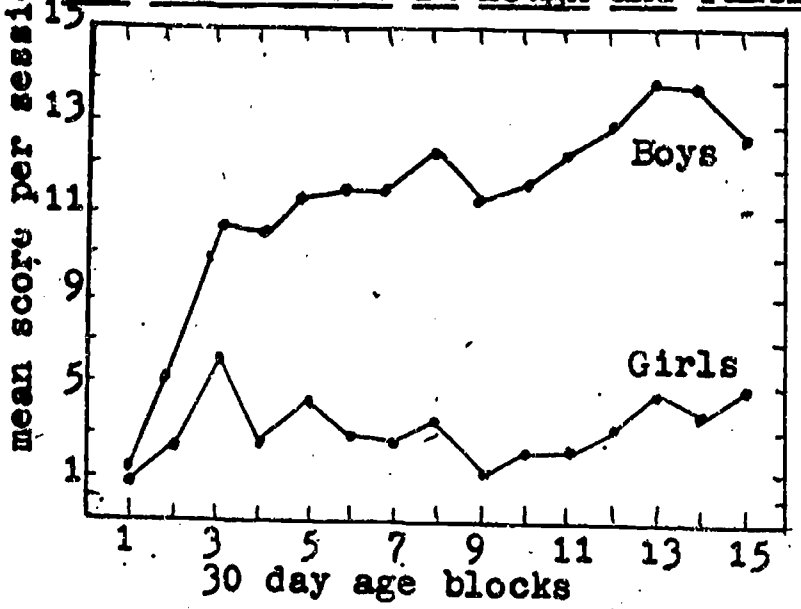




Development of Grooming Behavior



Sex Differences in Rough and Tumble Play



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In reviewing these graphs' meanings, it is very clear that these unsocialized monkeys show behavior patterns congruent with the behaviors expected of a monkey raised under normal conditions. The female developed a very definite "passive" response pattern, the male a distinctive "threat"

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[20]Harlow, Harry F., (University of Wisconsin), "Lust, Latency, and Love: Simian Secrets of Successful Sex," Journal of Sex Research, May 1975, Vol. 11(2), pp. 79-90.

posture preoccupation, and the female finally perfected herself in the art of grooming, a talent that the male seemed uninterested in developing. And when their playing patterns were compared there was no parallel at all between the aggressiveness of the little male and his little female counterpart.

So, this should stand to prove that there is definitely, undoubtedly, and substantiably a difference between the sexes in terms of aggressive tendencies, even in these monkeys that had no model, or mother, to imitate. There was no possibility of socialization, except from other unsocialized monkeys. There is no doubt in the educated man's mind that this difference is not a sex-role, but rather, as we shall soon learn, a "sex-differentiating pattern of behavior."

Let us substantiate this further, and at the same time amplify on the more important question of why these differences exist. Nature never designs something for no reason. She always has a purpose in her workings, and it stands to reason that if a difference between the sexes does exist, then there must be a purpose behind it.

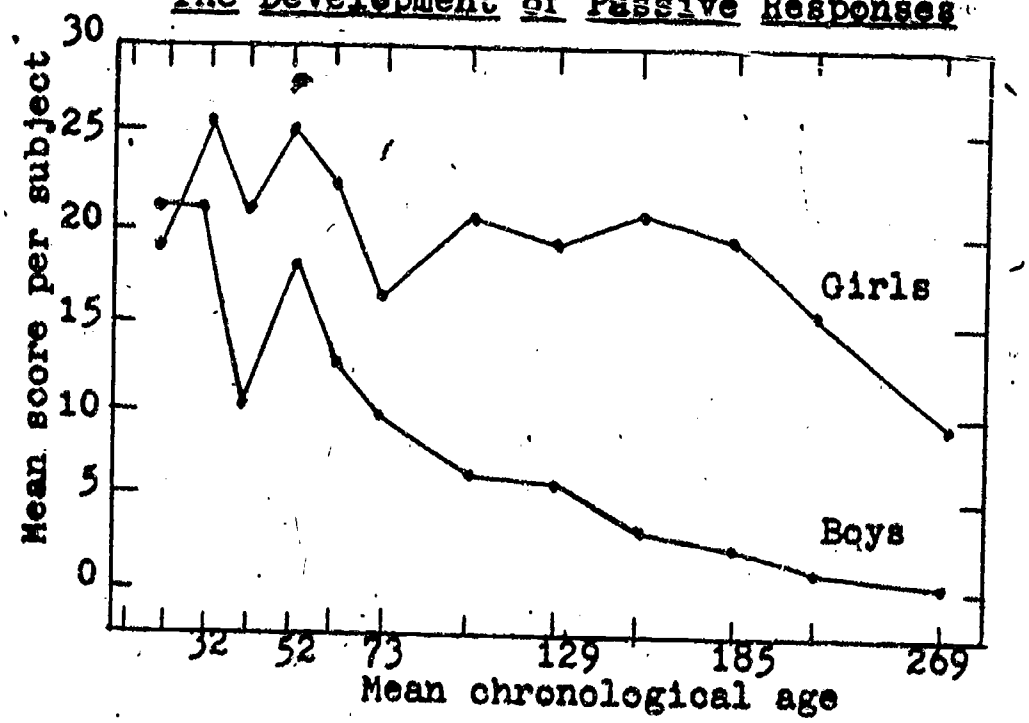
First, notice that Dr. Harlow chose three very distinguishable characteristics in animal behavior with which to deal: Passivity, threat postures, and later to come will be rigidity. These are all very sex oriented. However, Dr. Harlow made this important statement:

> "It should be noted that none of these patterns is the exclusive prerogative of either sex. All

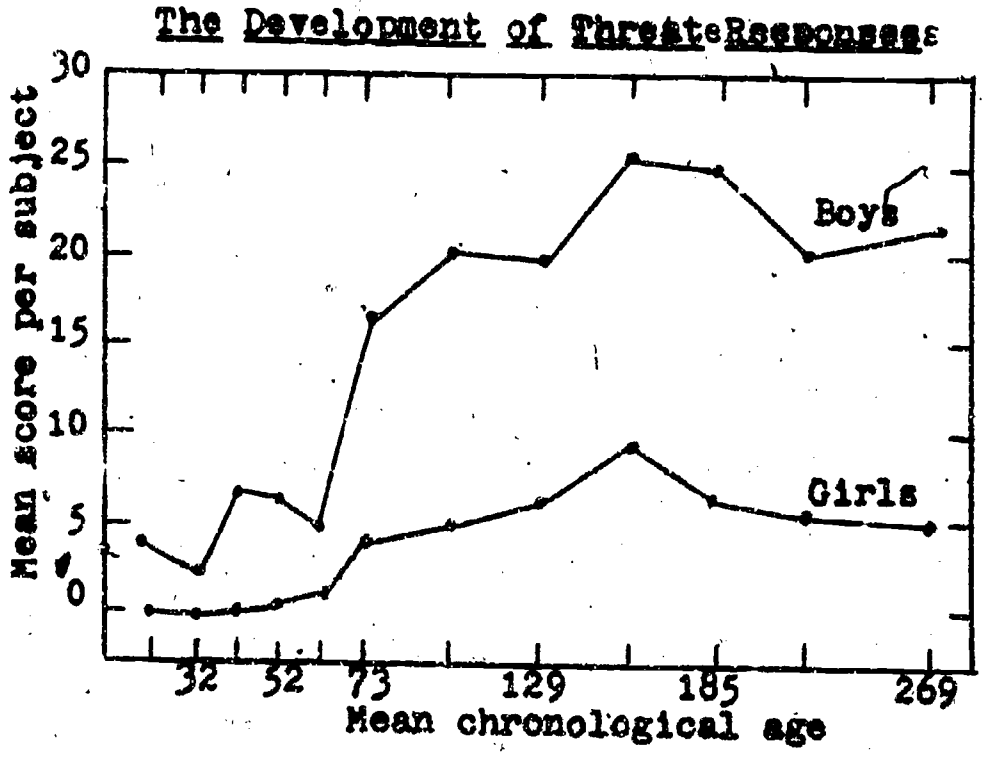
> monkeys are probably thoroughly capable of manifesting all of these patterns, but all three patterns are sex-differentiating in terms of frequency of appearance and developmental trends."[21]

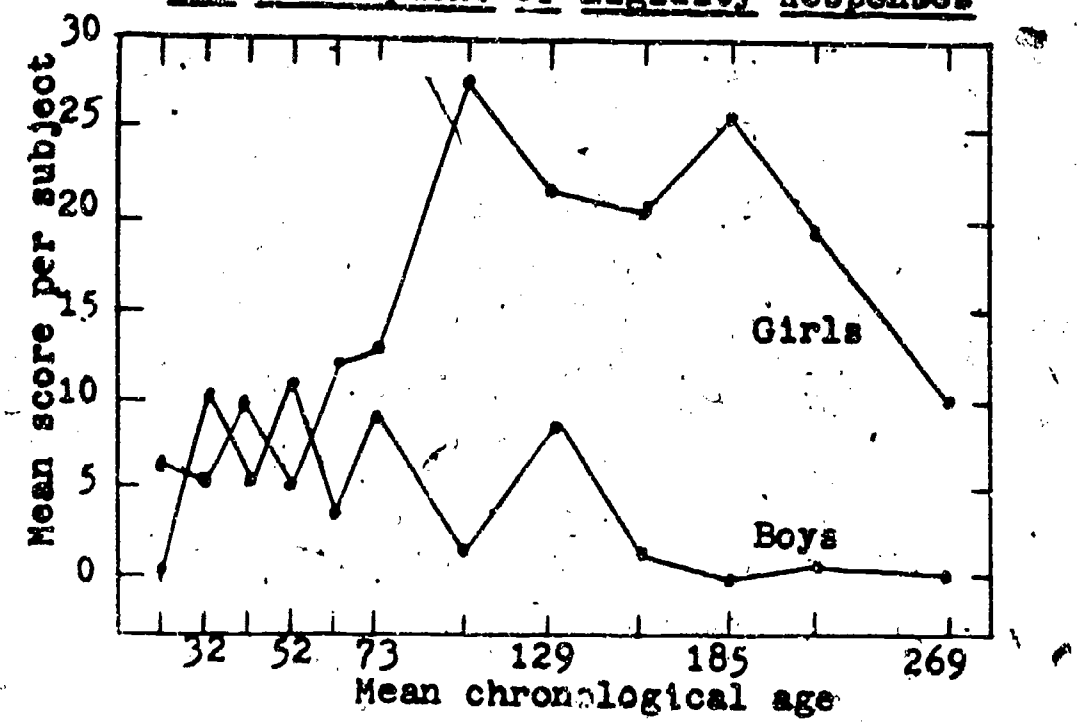
This means that these responses, although universal to both sexes in ability to be performed, are only carried out by one of the two sexes in significant amounts. Hence, the title "sex-differentiating."

In another similar experiment, Dr. Harlow produced more graphs, and then volunteered an interpretation of note:



[21] Harlow, Harry F., and Leonard Rosenblum, (University of Wisconsin), "Maturational variables in Influencing Sexual Posturing in Infant Monkeys," Archives of Sexual Behavior, 1971, Vol. 1(2), pp. 175-180.





"These three sex-differentiating patterns have been observed with little or no loss in infant monkeys raised on Inanimate surrogate mothers. Inanimate surrogate mothers cannot train their infants in predetermined sex-roles or sex behaviors. We believe that there is an overwhelming body of evidence to the effect that the patterns of threat, passivity, and rigidity are primarily native."22

Note that final phrase, "primarily native." This is Harlow's way of saying 'instinctive", or of saying that they

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22 Ibid., p. 175-180

are not learned, conditioned responses that a mother, or peers, bring out in the little ones. These are attitudes and drives that are inborn, and are a part of the animal. The implication is that these same drives, or analogous ones, are functioning in man.

Now recall the quote from Joan Rappaport, when she proved that the aggressive response in males was also an adult phenomenon.[23] Now Harlow parallels this finding with his own monkey evidence:

> "These three patterns are clearly sex-differentiating and become progressively more sex-differentiating with increased age."[24]

This is illustrated by referring to the graphs on the previous pages. This pattern continues until it reaches its climax, its apex, with the advent of progeny.

Why is it that these patterns seem to be so closely connected with the coming of offspring? Could this imply that perhaps part of their reason for being is related to the rearing of the infant, and the survival of the family unit?

This is the conclusion that we have been working towards for this entire paper: the proof that these sex-

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[23] Rappaport, Joan C., "Sex Differences in Aggression: With Special Reference to Sex-role Identification and Mode of Handling Aggression," Dissertation Abstracts International, Sept. 1972, Vol. 33 (3-B), p. 1294.

[24] Harlow, Harry F., and Leonard Rosenblum, (University of Wisconsin), "Maturational variables in Influencing Sexual Posturing in Infant Monkeys," Archives of Sexual Behavior, 1971, Vol. 1(2), pp. 175-180.

differences are essential to the maximizing of the survival possibilities of the individual, and ultimately, the family. Because of this natural need for them they were innate, not taught.

Let's look into this further.

> "We do not believe that any of these three sex-differentiating behavior patterns is a direct sexual pattern, but we do believe that they do predispose infant monkeys to engage in activities which, mediated and shaped by learning, lead to reproductive behavior."[25]

Without these drives the two sexes would be inadequate in the art of "love making." They are essential, from an early age, in the preparation for reproduction. How?

> "The threat response is an expression of positive dominant behavior, and both passivity and rigidity are expressions of submissive sexual acceptance."[26]

What is initially interpreted as violent becomes an irreplaceable part of the monkey's reproductive behaviors. Now, let us see what validity they hold once the progeny has arrived, and notice, with a flexible mind, the employing of these attitudes that these creatures had developed so young in their lives.

> "We tested a group of preadolescent female monkeys and a group of preadolescent male monkeys at a developmental age prior to any consideration of passion or progeny to see how they would respond to newborn monkey infants. We discovered the obvious - the only discovery that most people ever

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[25] Harlow, Harry F., and Leonard Rosenblum, (University of Wisconsin), "Maturational variables in Influencing Sexual Posturing in Infant Monkeys," Archives of Sexual Behavior, 1971 Vol. 1(2), pp. 175-180.

[26] Ibid.

> make. The female's exhibited strong affectional maternal responses to the neonates. The males showed no affectional responses of any type whatsoever. The females had never seen any infants previously. The males never wanted to see any infants again."[27]

The male seems to be interested in activities other than cuddling, or affection. His mind and matter are more centered and concentrated on defense, and on aggression, while the mother is obviously nuturing the offspring. Even these desocialized infant monkeys knew these were their "duties", and in order to switch roles they would have to be taught, or socialized against them.

Another quote from Harlow:

> "Even after the appearance of progeny it is still easy to tell the female from the male, since the female is the animal that is cuddling and nursing the infant. The male does not play these roles because he lacks the female's mammary magnificence and he is more devoted to cannine capabilities."[28]

This is not to imply that the male is cruel or insensitive. It simply means that his duty, in the effort to insure the survival of the offspring, is to defend the mother, as she is almost totally defenseless while she is doing her duties. "Both the mothers and the fathers have their functions - succulence in the mother, and social security in the father."[28] Each has his or her role in providing for the survival of the progeny, that massive in-

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[27] Harlow, Harry F., and Helen E. Lauersdorf, (University of Wisconsin), "Sex Differences in Passion and Play," Perspectives in Biology and Medicine, Spring, 1974, Vol. 17(3) pp. 348-360.

[28] Ibid.

vestment that will insure the survival of the genetic code of each parent involved.

In another experiment, the doctor observed the following:

> "Preadolescent females directed significantly more positive social behavior and significantly less hostility toward the infant than did the males. These results are taken as evidence that hormonal changes at puberty are not the only variables producing sex differences in infant-directed behavior." [29]

Even before puberty ever arrives, with its new mysteries, and its stronger, more direct drives for procreation, there is already a definite infant-directed response pattern in the developing stages. These little monkeys don't appreciate baby monkeys because they were taught to. Biology teaches little girl monkeys to enjoy child care, and it teaches the little boys to find other, more aggressive roles. This is very congruent with what we observe in human children, with the average little girl enjoying dolls, and the average little boy getting more out of a tustle.

> "The primary contribution of the present study was the identification of differential infant-directed response patterns in sexually immature male and female monkeys. The females typically exhibited maternal-like affiliative patterns toward infants, whereas the males exhibited patterns of indifference or hostility." [30]

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[29] Chamove, A., Harry F. Harlow, and G. Mitchell, (University of Wisconsin), "Sex Differences in Infant-directed Behavior of Preadolescent Rhesus Monkeys," Child Development, 1967, Vol. 38(2), pp. 329-335.

[30] Ibid., pp. 329-335.

We are now to the point where, as thinking human minds, we should be more than capable of fathoming the indelible connection between these necessary sex responsibilities, and what we often criticize today as forced, or socialized sex-roles. These sex-roles are only the bare remnant of what were once Rudyard Kipling's Jungle Book's "bare necessities" of life. Our distant relatives, those primates of afore, developed these sex patterns in order to survive, and those that did not possess these characteristics were unfit, and did not survive.

> "Successful primate societies are obviously aided and abetted by meaningful divisions of labor that are best achieved through biological fact rather than sociological friction. Sex differences in primates appear both in anatomical form and in behavioral patterns, and they appear early in life and then differentiate further. The fact of sex differences does not discriminate between one sex or the other. Actually, the complementary functions of each are enhanced. There is nothing demeaning in being either female or male. Sex differences are essential because of the complicated and complementary functions required to meet the needs of all successful higher-order social animals--particularly the primates."[31]

The sex differences are not society invented fantasies, but deeply rooted biological necessities of the far off past. We were not always so self sufficient.

Of course, we must view modern man in a new light altogether. We are the ultimate in biological progress; just ask one of us--we'll tell you. We, for some alien reason, totally

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[31] Harlow, Harry F., and Helen E. Laudersdorf, (University of Wisconsin), "Sex Differences in Passion and Play," Perspectives in Biology and Medicine, Spring, 1974, Vol. 17(3), pp. 348-360.

denounce, or at best tolerate, any connection between ourselves and the animal-biological world which we live in, yet we are forever, and will forever be, a part of it.

> "In humans, a biologically oriented attitude toward sex differences is usually either ignored or only briefly mentioned. It is generally believed that sex differences are to a large extent culturally determined by a process called "sex-typing." The data of the present experiment presents unequivocal evidence that biological variables in monkeys also significantly influence adolescent responses directed toward infants, that is, maternal-type behaviors."[32]

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[32] Chamove, A., Harry F. Harlow, and G. Mitchell, (University of Wisconsin), "Sex Differences in Passion and Play," Perspectives in Biology and Medicine, Spring, 1974, Vol. 17(3), pp. 348-360.

RELEVANCE AND SUMMARY

There should be no doubt in our minds that there is a difference between boys and girls, and, as has been emphasized in this paper, this difference extends, in a very real manner, to the behavioral aspects of people, as well as the physical. In our experiences with our peers, or more importantly with those students we shall have an opportunity of influencing, let us be certain that we accentuate that difference, without doing so disproportionately, and bring out the good in the two sexes, and not only reward the passivity of the female because it is easier to control. We must also be sure to mark well the words of Dr. Harlow: "The fact of sex differences does not discriminate between one sex or the other. There is nothing demeaning in being either male or female."[33] Although boys should be well behaved, they should be boys.

And, as for our original question, on the better warrior material, I would suppose that I was opposed simply because the women of the class "didn't want to take that sitting down," so they expressed opinions that, I'm sure,

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[33] Harlow, Harry F., and Helen E. Laudersdorf, (University of Wisconsin), "Sex Differences in Passion and Play," Perspectives in Biology and Medicine, Spring, 1974, Vol. 17(3), pp. 348-360.

they would never have expressed had a woman been the author of my comment.

One final word from Dr. Harlow to sum up the entire matter:

> "Biology, however, is always first, and culture is always second."[34]

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[34]Harlow, Harry F., (University of Wisconsin), "Lust, Latency, and Love: Simian Secrets of Successful Sex," Journal of Sex Research, May 1975, Vol. 11(2), pp. 79-90.

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