

Being Female

World Anthropology

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Being Female

Reproduction, Power, and Change

Editor

DANA RAPHAEL

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General Editor's Preface

Being a male, the General Editor is surprised that until now anthropology has never devoted a book exclusively to either males or females. However, as the present book explains, the male-bias in anthropology is just now beginning to be recognized as a stumbling block in our undertaking of human behavior. This book therefore is a welcome contribution for the statement it makes that the former anthropological reports have been lopsided; that females essentially have been overlooked in the ethnographic literature; that most ethnographies were by males and about male activities; that the viewing of the world from a male vantage has distorted our understanding and slowed our science; that the present volume which is skewed predominantly to looking at female interests clearly does not claim to right all these distortions, but only to start to balance the scale as one necessary step in the evolution of our science.

Like most contemporary sciences, anthropology is a product of the European tradition. Some argue that it is a product of colonialism, with one small and self-interested part of the species dominating the study of the whole. If we are to understand the species, our science needs substantial input from scholars who represent a variety of the world's cultures. It was a deliberate purpose of the IXth International Congress of Anthropological and Ethnological Sciences to provide impetus in this direction. The *World Anthropology* volumes, therefore, offer a first glimpse of a human science in which members from all societies have played an active role. Each of the books is designed to be self-contained; each is an attempt to update its particular sector of scientific knowledge and is written by specialists from all parts of the world. Each volume should be read and reviewed individually as a separate volume on its own

given subject. The set as a whole will indicate what changes are in store for anthropology as scholars from the developing countries join in studying the species of which we are all a part.

The IXth Congress was planned from the beginning not only to include as many of the scholars from every part of the world as possible, but also with a view toward the eventual publication of the papers in high-quality volumes. At previous Congresses scholars were invited to bring papers which were then read out loud. They were necessarily limited in length; many were only summarized; there was little time for discussion; and the sparse discussion could only be in one language. The IXth Congress was an experiment aimed at changing this. Papers were written with the intention of exchanging them before the Congress, particularly in extensive pre-Congress sessions; they were not intended to be read at the Congress, that time being devoted to discussions — discussions which were simultaneously and professionally translated into five languages. The method for eliciting the papers was structured to make as representative a sample as was allowable when scholarly creativity — hence self-selection — was critically important. Scholars were asked both to propose papers of their own and to suggest topics for sessions of the Congress which they might edit into volumes. All were then informed of the suggestions and encouraged to re-think their own papers and the topics. The process, therefore, was a continuous one of feedback and exchange and it has continued to be so even after the Congress. The some two thousand papers comprising *World Anthropology* certainly then offer a substantial sample of world anthropology. It has been said that anthropology is at a turning point; if this is so, these volumes will be the historical direction-markers.

As might have been foreseen in the first post-colonial generation, the large majority of the Congress papers (82 percent) are the work of scholars identified with the industrialized world which fathered our traditional discipline and the institution of the Congress itself: Eastern Europe (15 percent); Western Europe (16 percent); North America (47 percent); Japan, South Africa, Australia, and New Zealand (4 percent). Only 18 percent of the papers are from developing areas: Africa (4 percent); Asia-Oceania (9 percent); Latin American (5 percent). Aside from the substantial representation from the U.S.S.R. and the nations of Eastern Europe, a significant difference between this corpus of written material and that of other Congresses is the addition of the large proportion of contributions from Africa, Asia, and Latin America. "Only 18 percent" is two to four times as great a proportion as that of other Congresses; moreover, 18 percent of 2,000 papers is 360 papers, 10 times the number

of "Third World" papers presented at previous Congresses. In fact, these 360 papers are more than the total of ALL papers published after the last International Congress of Anthropological and Ethnological Sciences which was held in the United States (Philadelphia, 1956). Even in the beautifully organized Tokyo Congress in 1968 less than a third as many members from developing nations, including those of Asia, participated.

The significance of the increase is not simply quantitative. The input of scholars from areas which have until recently been no more than subject matter for anthropology represents both feedback and also long-awaited theoretical contributions from the perspectives of very different cultural, social, and historical traditions. Many who attended the IXth Congress were convinced that anthropology would not be the same in the future. The fact that the next Congress (India, 1978) will be our first in the "Third World" may be symbolic of the change. Meanwhile, sober consideration of the present set of books will show how much, and just where and how, our discipline is being revolutionized.

The present book is ably complemented in this series by Ruby Rohrlich-Leavitt's *Women cross-culturally*, which describes the position of women today, especially in developing countries. Other books in *World Anthropology* which will also be of special relevance to the present one deal with primatology, ethnicity, migration, medical anthropology, mental health, adolescence, the family, and so on.

Chicago, Illinois
July 14, 1975

SOL TAX

Acknowledgments

Not only I, but almost all female anthropologists owe Margaret Mead a measure of gratitude. A volume on “women” by anthropologists seems a most appropriate place to recognize her contributions.

Margaret Mead was calling for a woman’s view in anthropology long before most anthropologists even guessed that what we were writing and reading about in most societies was predominantly male-centered.

Hers is a constant voice requesting that the female dimension be added to our perspective. Not surprising then, once feminization took hold within our discipline, she was one of the first to remind us not to throw out the males or their point of view either.

Not only was Mead the catalyst for legitimizing the study of female concerns, but she was instrumental, above all others, in bringing females into anthropology. I, like many of my same-sex colleagues, might not have considered this discipline had it not been for her precedent and her very presence which gave us leave to work on those subjects most interesting to us. The courage it took so many decades ago to present material about women has been a good example for us. On the other hand, she never let us, her graduate students, use a cultural bias toward male interests as a crutch. When we offered complaints instead of accomplishments, she would retort, “Never mind that, just get to work.”

I want also to thank those women who came to my rescue in Chicago during the IXth International Congress with such willingness when I was caught with too little time, too many papers, and the chaos that such a marvelous and huge undertaking inevitably creates.

I refer to Rounaq Jahan, Lucile Newman, Anke Ehrhardt, Marilyn Hoskins and Lola Hanson.

Marion Cardozo, so helpful in editing this material, deserves much praise and many thanks.

One last thought. In a section of acknowledgments, even though it seems redundant — a bit of gratitude that goes without saying — I should like to mention the encouragement, unique foresight, and enormous durability of Sol Tax. To me his open invitation for innovation has become a new platform in anthropology.

DANA RAPHAEL

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Introduction

DANA RAPHAEL

This volume on the acts and actions of females doesn't pretend to represent all of womankind, all female problems — human and non-human, or even all the areas about females that social and biological scientists are investigating. It represents research interests of those who attended the IXth International Anthropological Congress, September, 1973, and though basically concerned with human beings maintains the anthropological tradition of including other primates as well.

The sample of concerns presented have three major foci: REPRODUCTION, POWER and SOCIAL TRENDS. A contrapuntal theme running through all the papers is that of CHANGE. The scholars represented include a psychologist, a physician, a neuroendocrinologist, a political scientist, a musicologist, a public health administrator, a primatologist, and a variety of professors and students of anthropology.

The content reflects a preoccupation by the world's females with the processes of pregnancy, childbirth, lactation and abortion. In fact, most women spend most of their adult lives either pregnant or lactating or worried about being or not being either pregnant or lactating. And, contrary to popular opinion, most women in non-Western cultures do not find their lives unrewarding, frustrating, or a waste of time. In fact, concern with family/infant/child matters appears to be at least as satisfying to the female as the male role is to her father, husband and sons.

The rather pejorative argument that lack of exposure means women are happy where they are and thus don't want to change, is as questionable as suggesting that modern Western women ought to be dissatisfied with their lot because they don't know how swell it is going to be in the year 2074. No doubt many women are not content with some dimensions of their

lives but non-female roles are not the answer either. They want their lives improved, their hunger abated, their children educated, and they want a general increase in the variety of their options. Individual freedom and self-determination appear to be related to the number of choices and options that are open. An extension of choices rather than a denial of current roles is a central concern of today's women.

Noticeably absent from this collection are any papers on sexual behavior. There were none offered. Though this may be regrettable, it comes as a surprise only to those who think of human female reproductive behavior as synonymous with sexual behavior.

The first section of this book deals with those aspects of the reproductive cycle which are exclusively female — childbirth, lactation and mothering. However, as Margaret Mead mentioned during her discussion of these papers at this session, even such an intimate experience as breastfeeding should no longer be examined in the limited light of a mother/infant interrelationship. Intrinsic to that activity is someone to feed that mother who feeds the child, someone to care for the needs of that mother and someone to give status and community to that child. The social unit of the breastfeeding pair must include a male (probably father of the child or husband of the mother) and several supportive others (probably mother's mother) and other females. Without such mothering of the mother, without such supportive help, even such a natural process as breastfeeding is affected and the infant's life is endangered (Raphael 1973).

It is particularly in those areas which have a biological base that the broad view of anthropology can make a most valuable contribution. Throughout this section, the presence of the larger networks of influence and the idea of a continuity of human behavior with that of other mammals has been emphasized.

Fundamental questions are raised in the first section. What is maleness and femaleness? What is the frequency of abortion in primates? What American childbirth practices are considered aberrant in other cultures? Are there universal patterns in the *rites de passage* of matrescence, becoming a mother? What are the nutritional needs of human females during pregnancy? What are the attributes of an alliance called "marriage?" What needs of the new mother determine the choice of "matridomiparas"¹ residence? What other factors determine matrilocality?

The second section focuses on a non-male view of power. Domestic power is separated from public power. Females are depicted primarily and

¹ This term was coined by Conrad Arensberg to express the return of a primiparas female to her own mother's (and father's) home with or without her spouse during the perinatal period.

dominantly involved with decisions and authority in the home sphere but having a large influence as well on public decisions and power. Several strategies are described of how women exert their influence in the public arena. Since women are hardly ever in the public/political scene, even in those cultures where matrilineality/matrilocality is the dominant pattern, what is it that prevents them from being there? where are they? and what are they doing?

We know the average female spends most of her waking hours reproducing and rearing children, so more than likely she would not be available for other commitments until she is done with her reproductive years. But how about the women who fail to reproduce at all? One could ask why these females are not trained or permitted to learn the role-requirements for leadership. One answer is that the non-reproducing female is not identified as such until she is an adult.

The women who have become political figures in their own right have done so either after their reproductive years were over or because certain unique life situations have permitted them access to the kinds of information and experiences which could be transformed into active political behavior. Apparently, human beings did not find it economically feasible until recently for people in any culture to train both males and females to assume power roles and child-rearing roles.

Our responsibility as social scientists, then, is not to define power as public, domestic, male or female, and then to put a prejudicial value on such a definition, but to look at where people are and what they do with the time and the resources available to them. We are not suggesting that interactional analyses of power relationships have not been made. They have. We are saying that little has been done to adjust the criteria so that the power roles of women are more clearly understood.

The last section introduces general trends of change in female life patterns as they have been subjected to such forces as urbanization, educational accessibility, food supply, and family planning or lack of it. Many trends are highlighted here. The similarities in content are overshadowed by the variety of results as each culture responds to new challenges in different ways, depending on the history and current stage of economic development of each.

It is sad but true that anthropologists had to wait to obtain information about women until enough female ethnographers were trained who could enter, observe and describe the inside scene so often not available to men. The focus on women, stimulated by the women's liberation movement in the United States, has also been helpful. The movement has encouraged women to study other women.

An impression that women have been hidden behind the veil and are now coming out is too simplistic. More realistically, one can see that many avenues have opened to women with the adoption of Western economic influences and patterns. Far greater choices of activity exist, or are potentially available.

Since we propose adding a female perception to a view of the world, the reader might question whether we too are not distorting reality by this new female-centered approach. Certainly we are and yet we forge ahead, not unaware of the difficulties, because we sincerely believe that this is a necessary next step in the development of our science. We hold that the proper unit for anthropological investigation must include males/females/children/others within a given environment.

There are several new and controversial arguments introduced in this book. For instance, a much broader continuum of normal "male-type" behavior in the female is proposed. Concepts of power are reevaluated. A division into public and domestic spheres is defined within which male/female contributions are seen as interaction on a multidimensional plane mutually influential. The position of women in terms of power is argued as largely related to the time-consuming reproductive and child-rearing functions. One conclusion is that female power to determine the lot of each generation is as great if not greater than the male/political input.

The contributors to this section also persuasively contend that a woman's matrescence, heretofore ignored in the literature, may be her most dramatic *rite de passage*, that a definition of marriage needs the criterion of many factors not just one, that friendship can be substituted for kin, that affectional and instrumental functions can be delegated to different individuals, that women change occupational roles with more ease and less disruption in non-Western cultures, and that policies of "unequalness" favoring working women during pregnancy and the early years of child rearing might be in the offing.

On the whole, it seems that the female perspective throughout this book offers new explanations and insights for phenomena which to date have never been satisfactorily or adequately analyzed. By adding a biological basis of universal dimension based on real problems with real people (including female people) we are getting nearer the truth.

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SECTION ONE

Reproduction

Reproduction: Introductory Notes

LUCILE NEWMAN

This session on the status of women addresses itself to a major aspect of female role behavior — reproduction.

Status is a social rather than a biological term, and yet we as women are continually beset by cultural differentiations of status rooted in biological differences. Equality is not identity, and social equality should not require biological identity. We approach the female here precisely at the point of biological differentiation from the male — her reproductive role — and attempt to assess what this capacity means, or could mean, in terms of status.

Academic interest and scientific research in many of these areas has been sparse. We know more about lactation in the cow than in the human, more about nutrition in the chicken than in most mammals. We know much more about abstract kinship than about the experiences of mothering and fathering and growing up in a family. We know so very little about the diverse aspects of human reproduction and what they mean for the status of the female. We feel the researchers whose works are included here are contributing new understanding to this dual relationship.

Anke Ehrhardt, a neuroendocrinologist, discusses the effect of maternal sex hormones on the fetus in the prenatal period and the potential effects of such hormones on postnatal behavior. The scope of laboratory experimentation on the effects of human sex hormones is necessarily limited. Ehrhardt has worked with individuals exposed to high levels of androgen (male sex hormones) before birth.

“The evidence,” claims Ehrhardt, “reveals that genetic females who were exposed to high levels of androgen, either due to maternal intake of masculinizing drugs or to their own hyperactive, erroneously working

adrenal cortex in a medical condition called the adrenogenital syndrome... show... consistently similar behavior profiles. These individuals exhibit a high energy expenditure in outdoor athletic and 'rough-and-tumble' activities throughout childhood and a reduced interest in dollplay and infant care-taking. Their fantasy and play rehearsal of marital and maternal adult roles are far lower than those relating to work away from home." She notes, however, that these androgenic hormones do not reverse gender identity. They do not cause the affected individual to identify as male.

Ehrhardt's studies were consistent with earlier studies of hermaphrodites by John Money which showed that the one most important variable in determining a person's self-image as a female or a male is the sex in which the individual is raised as a child. The study group of prenatally masculinized females showed social behaviors within the range of accepted female behavior in our society but clustered toward "tomboyish" activities. Hormonal factors certainly have an effect on some social differences between males and females as well as variation among females and males. Ehrhardt suggests that there are hormonally based variations in inclination toward maternal behavior.

Poirier's study of the socialization process of other primates supports these findings. Males show more aggressive behavior, more rough and tumble play, more peer group interaction. Females tend to be more gentle, more interested in infants and, unlike the males who are actively "pushed out," they remain in close proximity to the mother. From the very beginning the sexes are handled differently and dissimilar rhythms in the interactional patterns between them and adults result. He suggests that origination of these patterns is in the differential behaviors emanating from the infant due to the presence of either male or female hormones. The pervasiveness of the "facts" of maternity is as dominant and apparent in the activity and character traits of nonhuman primates as it is in the food production actions or power roles of human females.

Anthropology has in the past suffered less than many other disciplines from Platonic ideal types and has focused instead on diverse models within which patterns were sought. Now evidence is emerging of a biologically based diversity within the two gender groups themselves refuting the concept of ideal femaleness and maleness which so frequently leads to status and hierarchical distinctions. Ehrhardt's (and Poirier's) findings support and strengthen the argument that a variety of social roles, each equally acceptable and respectable, should be available to members of both sexes.

Just as Ehrhardt's paper reveals that biological factors influence without determining behavior, Dana Raphael's concept of the *rite de passage* of

matrescence, of becoming a mother, suggests that biology is not enough. Giving birth to a child does not automatically unleash a previously contained flood of maternal behavior. Nor, as she shows, does it determine when a woman becomes a mother, a decision that varies from culture to culture by months, even years. The process of matrescence includes a subtle, supportive process of socialization into motherhood. In many cultures and for most women becoming a mother is their most dramatic life crisis.

The emphasis on marriage in the Western anthropologists' own culture may have been responsible for blinding us to this fact. Raphael's work serves to remind us that culture and biology are inextricably inter-related and interacting. In our complex, dehumanized society, it should come as no surprise that voluntary organizations outside the family, such as La Leche League, should arise to fulfill the supportive role traditionally played within the family. Such voluntary associations appear to be cultural artifacts of an urban age.

There has been far more theoretical work dealing with the difficulties of defining marriage than in considering motherhood. Dillingham and Isaac contend that a definition of marriage must be inclusive of all sorts of alliances, including female-female "marriage". They suggest three criteria: the legitimization of children, the establishment of jural (kin) relations, and a public verification of the union by proclaimed public act.

Next to come under close scrutiny is the nutritional status of women during pregnancy and the effects of inadequate nutrition on the offspring and on society. John Robson calls for evaluative field work to supplement present laboratory studies on the way nutrition affects reproductive performance. Such studies should include observations of the mother before, during, and after pregnancy; descriptions of food habits; measurements of food intake; and objective assessment of nutritive value. A significant advance toward a method of obtaining nutritional information in the field is anticipated with publication of *The ethnographic field guide to human reproduction* by Dana Raphael.

An example of the kind of data which Robson considers ought to be gathered is provided by Judit Katona-Apte. Her ethnographic study demonstrates, among other things, selective attention to male children in the distribution of food, differential and better health treatment of males, and the nutritional deprivation of pregnant females at a time when they most need sufficient diets.

Anthropological literature has long recognized that the circumstances under which birth takes place vary greatly from society to society. How others give birth — their peculiar customs in relation to birth — has al-

ways invited investigation. Papers by Suzanne F. Wilson and Niles Newton suggest that anthropological investigations of birth practices do more than focus on quaint customs. They enlarge the possible choices and suggest that women question present practices in light of a cross-cultural perspective.

Suzanne Wilson conducted a cross-cultural study to test Raphael's hypothesis that in many societies socialization to motherhood takes place usually in the home of the woman's *own* mother. She reviews the extent of the custom which holds that a woman return to the supportive environment of her natal home to give birth to her first child no matter what her residence pattern. A new term "matridomiparas" was coined by Conrad Arensberg to describe where the parturient female stays — with or without her spouse — during the critical perinatal period.

Another researcher (Divale) deals with factors determining matrilocality. The paper was included here as an interesting contrast to the Wilson paper. The hypothesis is based on factors totally unrelated to biological or reproductive functions.

Ying-Ying Yuan's paper describes how American women use each other in temporary friendship relationships to fill the supportive functions necessary during the reproductive years. With the lessening role of the kin group, friendship becomes important. The women questioned by Yuan admitted they would prefer to ask close kin for help with child care, a pattern which is common around the world. However, in the United States kin tend to be too far away to fill this role. Instead, temporary friendship relationships are established which function for short term assistance and daily companionship, answering the new mothers' mutual daily needs. Friendliness, not friendship, characterizes the quality of their relationships.

Yuan separates this instrumental, functional pattern of interaction from the affectional arrangement between BEST FRIENDS. Best friends are usually formed during the critical teenage period. However, since these friends do not usually live near each other, they are not available to help with day to day problems. They serve an entirely different function from the helping acquaintance-friends. It is these latter neighborly friends whom most American middle class women call upon for support during their matrescence.

Niles Newton discusses the negative impact of obstetrical professionalism on the conditions of birth. In particular, Newton questions two of the "modern" practices characteristic of American medicine — the standard practice of performing an episiotomy (making an incision in the perineum which is said to be performed to avoid a tear) and withholding nourish-

ment during labor, a custom which introduces a sense of deprivation when the physical and emotional needs of the woman in labor are acute. Her paper suggests that women should be able not only to seek a gratifying birth experience but also to avoid potentially threatening practices.

Ethel Nurge continues the anthropological tradition of seeing *Homo sapiens* and other primates as subject to many similar biological processes. Her discussion of spontaneous abortions stresses our animal heritage. Deliberate or induced abortion is strictly a human phenomenon and one of the oldest. Nurge presents statistics showing that whenever women are given the chance, many of them opt to terminate some of their pregnancies. Unfortunately, only at a few places and during certain times in history have women had the freedom to make this decision with the consent of their society and safe methods. Even when the option is nominally available, far too often the power of decision-making lies with pro-natalist groups such as the family, state, or religious authorities. Where legal abortion has been available, women have used it. Where it has been unavailable, illegal abortion practices have resulted in a high death rate among pregnant women.

Where choices are open, practice can be improved. Nurge cites the use of menstrual extraction (also called menstrual induction or minisuction) as an early and safe method of abortion. The availability of menstrual extraction, a procedure performed before conclusive evidence of pregnancy is available, has important implications for the status of women seeking health care.

The practice suggests a new locus for decision-making power around therapeutic interventions. It has traditionally been the prerogative of the physician to diagnose and to recommend therapy. With abortion, a woman after a pregnancy test decides on therapeutic intervention and seeks a physician who will perform it. With menstrual extraction, which Nurge terms "the pregnancy test for those who don't want to be pregnant," the woman herself identifies a potential pregnancy without diagnostic help from a physician. Early abortion, therefore, becomes an occasion for a woman to exercise autonomy. As such it becomes a problematic issue in health care, for it challenges traditional notions about who is in charge.

We have gathered here new and essential information, some of which has related reproduction to biosocial factors. We have suggested there may be a normally-based variation in an inclination toward maternal behavior. We have proposed that becoming a mother is not simply a biological process but a bio-social process. In preparing to give birth, we advocate that women should be able to seek supportive services and avoid damaging ones. Finally, we found that abortion is sought whether or not it is

legal, whether or not there are drastic consequences. An important theme recurrent throughout these papers is the need to recognize a wide variety of behaviors as being within the limits of normal femaleness and normal reproductive behavior.

Socialization of Non-Human Primate Females: A Brief Overview

FRANK E. POIRIER

Most non-human primates are socialized and learn the life-ways and traditions of preceding generations within a social group. There an animal learns to express its biology and adapt to its surroundings. Differences in primate societies depend not only upon biological factors but upon the circumstances and setting within which individuals live and learn. The composition of the social group, and the particular balance of inter-animal relationships, determines the nature of the social environment within which the young learn and mature.

One of the most exciting lines of research in socialization studies deals with the diverse handling of males and females in the rearing process. A direct relationship exists between the socialization and learning processes of infants and their subsequent adult roles (Poirier 1972, 1973, 1974; Poirier and Smith 1974). Goy (1968) notes the high level of hormones circulating in the blood of newborn rhesus and suggests that during fetal or neonatal life these hormones may act on the undifferentiated brain cells to organize certain circuits into male or female patterns. And, they may act to produce or influence behavioral patterns. For example, hormonal influences at a critical developmental period may affect later sensitivity to certain stimuli. Such a situation could account for the varying reactions of males and females to infant natal coats. Hormones may also reinforce some behavioral patterns and not others. A female may derive pleasure from hugging an infant to its chest, whereas a male may prefer the large muscle movements and fast actions involved in play-fighting and aggressive behavior (Lancaster 1972).

Gender differences in role patterns are partly due to the dynamics of group social interaction. Social roles in animal societies, as in human societies, are not strictly inherited (Benedict 1969). Laboratory studies, for

instance, indicate that primates without social experiences lack marked sexual behavioral differences (Chamove, et al. 1967). Studies of the mother-infant interactional dyad in pigtail (Jensen, et al. 1968) and rhesus macaques (Mitchell and Brandt 1970) clearly show that there are sexual differences in the development of independence from the mother. The effects of such early behavioral trends are apparent later in adult life (Poirier 1972, 1973).

Differential treatment occurs right from the beginning due perhaps to the mother's reactions to dissimilar behavior in the male and female young. Developmental studies of laboratory-reared rhesus (Mitchell 1969; Mitchell and Brandt 1970) and the provisioned Cayo Santiago colony (Vessey 1971) show that mothers threaten and punish their male infants at an earlier age and at more frequent intervals than female infants, whom they restrain, retrieve and protect.

A major differentiating feature of male primates is the larger amount of aggressive output they exhibit (Poirier 1974). The infant male's characteristic predisposition toward rougher play and rougher infant-directed activity is subtly supported by both the mother's behavior and the observation of other mother-infant interactions (Mitchell, et al. 1967).

In a recent study of nursery school children, Knudson (1971) found similar gender-related differences in play and aggressive behavior. Boys engaged in a higher total frequency of dominance behavior than did girls. Boys showed more physical dominance behavior while girls exhibited a significantly higher proportion of verbal dominance. The frequency of rough-and-tumble play was significantly higher and the establishment of dominance rankings far easier for boys than for girls.

Another early behavioral difference between male and female pigtail macaques was described by Jensen, et al (1966). They found that, where an adult male was missing in a deprived laboratory environment, the behavior of the male infant was more adversely affected than the female's. Nash (1965) reviewed much of the literature relevant to the role of the human father in early experience and indicated that the father's absence is more harmful to the later behavioral development and role playing of boys than of girls.

Early differences in maternal behavior quite clearly affect the infant's socialization and the learning of adult roles. The mother's early rejection of the male infant forces the infant into earlier contact with other male infants, usually in the form of peer play groups. They are often found in age-graded play groups which move farther and farther from the mothers as they age. Young females, however, usually remain with the adults.

Macaque and baboon play groups generally include more juvenile

males than females. In hamadryas baboon groups the ratio is about 8 to 1.

Young females remain with the adult females of the family group but the young males join the play groups. Sociographic analyses show that male juveniles interact in larger groups. Females for the most part prefer to associate with only one partner. Preliminary sociographic results reveal a similar pattern in human children (Kummer 1971).

A recent study of feral baboons shows that there are consistent differences in the expression of the mother-infant relationship and peer interactions as early as 2 or 3 months (Ransom and Rowell 1972). By the time the transitional period to the juvenile stage occurs, sexual differences in the frequency, initiation, withdrawal, duration and roughness of play bouts are present. These differences increase with age until, by the time their mothers again give birth, young males have joined relatively permanent peer play groups where they spend much of their time. Young females, however, avoid rough and prolonged peer group interactions and most of the time remain with the mother's subgroup. During the next four or five years, males continue to interact mostly with each other. They cluster on the periphery of the group and are generally avoided by mothers and other females. In this same period, females maintain close proximity to adult females. Gender role learning through experiences with older individuals of both sexes differ markedly.

Other behavioral differences in nonhuman primates become pronounced early in life. Vessey (1971) found that the most striking qualitative difference between male and female rhesus infants was the occurrence of mounting behavior in males and its absence in females. Among baboons, females are more consistently involved in close associative behaviors such as grooming, and are usually in closer proximity to other animals than are males. Males, however, begin the process of peripheralization earlier in life (Nash and Ransom 1971).

In studying socialization and learning processes characteristic of male and female non-human primates it is very important to relate them to adult roles. The role a female must learn is that of BEING A MOTHER. Field and laboratory studies have consistently shown that females (even by the juvenile stage) are more closely attached to the mother, show more interest in young infants (Spencer-Booth 1968; Chamove, et al. 1967), and are gentler (less aggressive) in their social relationships than are males. Field reports note that (most, perhaps all) adult females have experience in caring for young even before they themselves give birth. It seems reasonable to conclude that playing a mothering role as a juvenile contributes to the success of the primiparous mother. See, for example, Lancaster's (1972) study of vervet play-mothering.

This does not mean that all maternal behavior patterns are inborn, for we know that a total lack of social experience leads to the development of very infantile and aggressive mothers. A laboratory study by the Harlows, Dodsworth, and Arling (1966) found that motherless mothers raised in semi-isolation, or females deprived of peer interaction, responded to their first infant with active rejection and hostility. However, they also found that social experience with an infant, no matter how minimal, affected maternal behavior. The same females who rejected their first infant often accepted the second.

Although some basic patterns of maternal behavior may be relatively inborn, learning plays an important part in the development of skills in performing them. Many studies note that young juvenile females are inept in handling infants, but when they reach adulthood they can carry and handle infants with ease and expertise (Jay 1962; Lancaster 1972; Struhsaker 1967). The dynamics of the maternal learning process occur under the mother's watchful eyes. Instances of carelessness, clumsiness, or real abuse are punished. Through a simple conditioning process, juvenile females learn appropriate behavior patterns with their reward being the continued presence of the infant. Laboratory studies support the idea that this early experience may be a kind of "practice" for adult maternal behavioral patterns (Seay 1966).

CONCLUSION

Learning is an important process in acquiring the primate social roles. In large part, rather than inheriting their behavioral patterns, males and females learn them at an early age. Mothers and other group members soon discern sex differences and react to them. Thus very early in life males and females are reared differently. Males are soon forced away from their mothers into peer groups. They learn to be assertive, aggressive individuals. Females, on the other hand, remain closely attached to their mothers and learn to interact with other females. Most importantly, they learn how to care for infants. The socialization and learning processes of the male and female non-human primate, although overlapping, differ in important respects. The processes for the female seem to be geared toward producing a healthy, effective mother. The human situation, however, greatly differs in that females have many options and alternatives concerning the assumption of their biological role of motherhood. This is an important point.

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