Child-Care Practices in Four African Societies:
A Controlled Comparison
Anne M. Reynolds

Anthropologists have long been interested in the relationship between the sexual division of labor and the role of women in child-care. Some authors (Brown 1970; Ember 1983) have suggested that child-care duties limit women's economic contribution, particularly in societies that practice intensive agriculture. Brown (1970) suggested that the degree to which women participated in subsistence production was dependent upon the compatibility of subsistence activities with simultaneous child-care responsibilities. She hypothesized that, if the economic role of women was to be maximized, their responsibilities in child-care must be reduced or the economic activity must be such that it can be carried out concurrently with child care (Brown 1970:1075). While she discussed two examples of tribal societies which employed substitute caretakers, Brown focused instead on societies that lacked substitute caretakers but were still dependent on the labor of working mothers. She refuted the suggestion that women perform certain subsistence tasks for physiological and psychological reasons. Instead, Brown suggested that only certain economic pursuits could accommodate the simultaneous child-care responsibilities of women (Brown 1970:1077).

Studies such as Brown's seem to imply that women are limited economically by their child-care duties. On the contrary, women make major contributions to the subsistence economy in a number of societies, ranging from hunting and gathering groups to industrialized nations. One way that women have increased their economic contribution is through the use of substitute child caretakers. Several prominent anthropologists have suggested that substitute child care during infancy affects the cognitive, behavioral, and emotional development of children (Ainsworth 1977; Bowlby 1952; Rabin 1965; Spiro 1958). Proponents of this view presume that substitute care differs somehow from "mother-care".

This paper will examine how child-care practices are influenced by the economic role of women. It will consider several cases where the economic role of women has been maximized by reducing the mother's responsibilities for child care. It is hypothesized that child care practices should be significantly different where the mother's responsibilities are reduced than they are when the child's mother is the primary caretaker. If it is true that mothers are more nurturant, it is expected that where individuals other than mothers are the child caretakers, the early child-care practices will be 1) harsher, 2) earlier at onset, and 3) more abrupt than if the mother has primary responsibility for child care. When the mother's responsibilities are reduced, care of the child could be given over to men, children, or other women.

While men are sometimes involved in child care, this is rare, and they are never the primary caretakers. Men seem to look after children only when all other possible caretakers have been ruled out. Societies with
substitute caretakers either turn care over to the older children or to other women. These other women may be relatives of the child, servants or slaves, or cowives in polygynous societies. It is further expected that there will be differences between child-care practices in those societies with child caretakers and those with adult (women) caretakers.

Pilot Study

In order to test these hypotheses, several societies in which women made a major contribution to subsistence were needed. These societies were selected during a "pilot study". Sanday's (1973) cross-cultural study of women's contribution was highest in shifting agricultural and horticultural societies. The region with the highest average contribution by women to subsistence is Africa (Sanday 1973:1690). The universe from which the four societies were ultimately chosen consisted of all African societies in the Cross-Cultural Codes of "Subsistence Economy and Supportive Practices" (Murdock and Morrow 1980). Thirty-one African societies were identified in which agriculture contributed more to local food supply than all other techniques combined or where agriculture supplied less than half of the total food supply, but more than any other subsistence technique. These societies were then classified according to the amount of women's contribution to agriculture. The contribution of women in agriculture, care of domestic animals, fishing, hunting, and gathering are listed in Barry and Schlegel's (1981) code of women's contribution to production.

The universe of African horticultural societies was divided into two categories — those in which women contribute 75% or more to agricultural production and a control group of those in which women contribute 25% or less to agriculture. The final sample consisted of nineteen societies: eleven societies in which women's contribution was 75% or more and eight in which it was 25% or less. In order that there be a clear distinction between categories, nine societies falling between 75% and 25% contribution were dropped and three others were dropped for other reasons, leaving nineteen societies in the final sample.

The categories of high female contribution and low female contribution were further divided according to whether the principal infant caretakers and companions were children or adults. Barry and Paxson (1980) coded infancy caretakers in three categories: children, adult family members, and others (including employees). See Table 1 for the results of this analysis. It was presumed that the adult caretakers would be the child's mother in those societies where women contributed 25% or less to agricultural production and that one of these societies would serve as the mother-care control, against which other child caretakers could be compared. Barry and Paxson's code was then used to determine which individuals were the child caretakers in the nineteen societies (see Table 2).

This analysis produced the first surprise of this study. Even in the societies where women made almost no contribution to agriculture, mother-care was rare. No African horticultural society in the final sample of nineteen societies had exclusive mother care. Only three of the seven societies where female contribution is low had principally mother-care for infants, but even in these three cases, other caretakers had minor roles in child care. The other four low female contribution societies had principally mother-care, but others had important roles in child care. Child caretakers far outweigh adult caretakers among societies with high female contribution.
Table 1
Primary Infancy Caretakers

SOCIETIES WITH HIGH (75% OR MORE) FEMALE CONTRIBUTION TO SUBSISTENCE
- 11 SOCIETIES*

<table>
<thead>
<tr>
<th>Child Caretakers</th>
<th>Adult Caretakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thonga</td>
<td>Ganda</td>
</tr>
<tr>
<td>Mbundu</td>
<td>Nkundo Mongo</td>
</tr>
<tr>
<td>Suku</td>
<td></td>
</tr>
<tr>
<td>Bemba</td>
<td></td>
</tr>
<tr>
<td>Kikuyu</td>
<td></td>
</tr>
<tr>
<td>Ibo</td>
<td></td>
</tr>
<tr>
<td>Azande</td>
<td></td>
</tr>
</tbody>
</table>

*NO DATA - Fon, Lozi

SOCIETIES WITH LOW (25% OR LESS) FEMALE CONTRIBUTION TO SUBSISTENCE
- 8 SOCIETIES*

<table>
<thead>
<tr>
<th>Child Caretakers</th>
<th>Adult Caretakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bambara</td>
<td>Nyakyusa</td>
</tr>
<tr>
<td>Kenuzi Nubians</td>
<td>Tallensi</td>
</tr>
<tr>
<td></td>
<td>Songhai</td>
</tr>
<tr>
<td></td>
<td>Hausa</td>
</tr>
</tbody>
</table>

*NO DATA - Wolof, Mao

1Only those societies with 75% or more or 25% or less female contribution to subsistence appear in this table. Code taken from Barry and Paxson (1980) Column 15 "Principal Relationships", (a) Infancy Caretakers. Categories of caretakers include children, adult family members, and others (including employees). One high female contribution society and two low contribution societies have "other" caretakers, but do not appear in this table because this type of caretaker falls outside the scope of this study. The three societies with "other" caretakers are the Banen, the Kaffa, and the Amhara.
Table 2
Role of Mother in Child Care\(^1\)

<table>
<thead>
<tr>
<th>HIGH FEMALE CONTRIBUTION SOCIETIES</th>
<th>DURING INFANCY</th>
<th>DURING EARLY INFANCY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thonga</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Mbundu</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Suku</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>CHILD INFANT CARETAKERS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bemba</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Kikuyu</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Ibo</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Azande</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>ADULT INFANT CARETAKERS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ganda</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Nkundo Mongo</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LOW FEMALE CONTRIBUTION SOCIETIES</th>
<th>DURING INFANCY</th>
<th>DURING EARLY INFANCY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bambara</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Kenuzi Nubians</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Nyakyusa</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Tallensi</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Songhai</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Hausa</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

**INFANCY CODES**
1—almost exclusively mother
2—principally mother, others minor
3—principally mother, others important
4—mother provides half or less of care
5—mother significant, less than all others

**EARLY CHILDHOOD CODES**
1—almost exclusively mother
2—principally mother, others important
3—spends half or less of time with mother
4—majority of time spent away from mother
5—practically all time spent away from mother

\(^1\)From Barry and Paxson (1980), Column 13, "Role of Caretakers", (a) infancy, (b) early childhood.
The four societies chosen from the final sample of nineteen African horticultural societies represent three of the four categories in Table 1. While it would be interesting to see what child-care practices are like in societies with low female contribution and child caretakers, there was a problem in obtaining information on either of these societies. Instead, two examples of child caretakers in high female contribution societies were chosen. Because mothers must supervise the children who act as caretakers, the two societies were chosen to represent differing amounts of mother involvement in child care. Since there was no example of exclusive mother-care, an example of principal mother-care in a low female contribution society was chosen to represent "mother-care". The other three societies in the controlled comparison represent substitute or "other-care". One represents adult care; the other two represent differing amounts of child care. The final sample of African horticultural societies for the controlled comparison consists of the Ganda, the Mbundu, the Ibo, and the Hausa.

**Controlled Comparison**

These four societies were chosen because they have a number of features in common. All four are African horticultural societies which derive more of their local food supply from agriculture than they do from all other subsistence techniques combined and have patrilineal descent. Three out of four have initial patrilocality post-marital residence; the Ganda have neolocal residence, but new homesteads are usually established in the neighborhood of the husband's relatives. Polygyny is practiced to some extent among all of the groups, with some variation in family forms. The independent variables in this study then, include geographic region, level of subsistence technology, descent, postmarital residence patterns, and marriage practices. What does vary in these societies is the role of the mother in infant care and care of small children. There are two types of variation in this regard. On the one hand, there is mother-care versus other-care. On the other hand, substitute caretakers are either adults or children.

Three aspects of these four societies were examined in detail. Because this study is concerned with how child-care practices vary with different child caretakers, child-care practices were the major focus of attention. The study grew out of an interest in the relationship between the woman's roles in child-care and subsistence production. Therefore, the role of women in subsistence as well as the use of child labor in subsistence was examined. Other activities of women in addition to subsistence production were considered. The overall status of women in these four societies was another feature taken into consideration.

The Hausa of Northern Nigeria were chosen to represent mother-care in the comparison. Their subsistence is derived from the cultivation of grains such as Guinea corn, millet, maize, and rice. Some roots are also cultivated. While women harvest some crops, men perform the bulk of the horticultural tasks, leaving women free to pursue craft and trade activities. Child care is left to the women, as are the chores of cooking and sweeping. Hausa household organization is in the form of a "gandu" or joint family farm of two or more patrilineally related men, their wives, and children. The men of the compound farm a common farm, and the joint family shares a common food supply. A compound contains as many huts as there are wives. Hausa marriage is virilocal with initial patrilocality. Polygyny is permitted, cowives being ranked in order of their marriage to the common husband.
Polygynists also take concubines from among the slaves. The mother, her children, and, perhaps, a concubine form a separate unit within the family. While the mother is the primary infant and child caretaker, an older sibling may look after the child if the mother is busy. Hausa women enjoy considerable freedom to pursue their economic activities in spite of child-care responsibilities and cannot be said to have low status in this society (Smith 1965; Madauci, Isa, and Dausa 1968).

The Mbundu of Angola are the first of three societies having substitute child caretakers. Mbundu women make a high (75%) contribution to agriculture which provides most of Mbundu subsistence. The principal crops are maize and beans. The Mbundu assume sustenance will come from horticulture, but also engage in a number of other "professions". Trade is important in the Mbundu economy as they are ideally situated on several major waterways which serve as trade routes. Children work in the fields beginning about age six. Each Mbundu household is a self-contained unit of a man, his wife or wives, their children, and related or unrelated dependents. From one to three such households are enclosed in a compound. Each wife has her own hut, granary, chickens, and fields for herself and her children. The households of an Mbundu compound are usually patrilineally related through the heads of households. The Mbundu mother is the principal infant caretaker, but an older sister plays an important role in taking care of the infant. In early childhood, a Mbundu child spends less than half its time with its mother, being left in the village with its caretaker. The status of Mbundu women is equal to that of men; they have their own occupations and play important roles in subsistence and trade (Childs 1949).

The Ganda of Uganda have adult substitute caretakers rather than child caretakers. Ganda subsistence is derived from the cultivation of the banana or plantain. Ganda women contribute 75-80% of the subsistence production and also fetch water, gather firewood, make baskets, cut thatch, and care for children. When cotton was introduced as a cash crop (about 1904) men began to cultivate, but they had little to do with horticulture previously. The normal residence group is the elementary family; when sons and daughters marry, they establish a separate household. The homestead contains the house and huts of the household head and garden plots. Separate huts contain the kitchen and sleeping quarters for adolescent children or the mother of the household head. Many Ganda children do not grow up under the care of their own parents; there is a traditional custom of sending children away from home to be reared by relatives. This is done immediately after weaning and is considered beneficial because the child will receive a stricter upbringing than if it remained in its parents' household. Children make an important contribution to the Ganda economy by herding and working in the gardens. Ganda women have a great many duties to perform and have less free time than men. Their duties keep them at home and the emphasis in Ganda society is on the male (Southwold 1965; Nsimbi 1956).

The Ibo of Nigeria occupy a continuous territory and share many social and cultural features, but there are marked differences among the major Ibo groups. Here, we will be considering the Isu-Ama group of the Southern Ibo. They have a root crop economy, cultivating the yam, cassava, and taro. Women have the major role in cultivation of these crops, contributing about 75% of the productive labor. While farming provides the local food supply, trading is also important in the Ibo economy. Women dominate the village market system of the Ibo, dealing in domes-
tic products. Men are responsible for long distance trade. The production of palm oil and kernels for trade involves both male and female labor, but the men's task is only to harvest the palm fruits, while women must process the oil and extract the kernels, a time-consuming task. The Ibo have exogamous patrilineages, and post-marital residence is virilocal. Polygyny is the ideal, but only wealthy men can afford many wives. The Ibo man strives to have a large compound by bringing in more wives, affines, apprentices, and pawns. Daughters marry out of the domestic group, but sons are encouraged to bring wives into the compound. Households within the compound may be nuclear families or mother-children units of a polygynous family. Ibo mothers provide half or less of the care of their children, even in infancy. A very small baby may be left with another woman of the house group, but the Ibo custom is to leave infants and small children in the care of older children. During early childhood, the Ibo child spends the majority of its time away from the mother. In addition to child-care chores, Ibo children are expected to help in the fields, fetch wood and water, make mats, and help in village house building. Ibo women have high socioeconomic and legal status (Uchendu 1965; Green 1964; Forde & Jones 1950; Leiber 1971; Leith-Ross 1965).

Analysis

An analysis of the child-care practices of these four societies revealed interesting differences between mother-care and other-care. The specific child-care practices examined were: the age and manner in which the child was introduced to supplementary foods; the age and manner of weaning; the age and manner of toilet training; whether child training is accomplished through punishment or not; and the age at which a child is considered a person.

Supplementary Feeding

All four societies introduce supplementary foods into the baby's diet at an early age (see Table 3). The Mbundu give supplementary foods from birth; the Ganda from three months on, the Hausa from seven months on, and the Ibo before eight or nine months of age. We see supplementary food introduced slightly later in the case of mother-care than it is in the cases of other-care.

I could not get information on the age at which supplementary food is introduced to the Ibo baby, but it has to be earlier than eight or nine months of age when the Ibo baby is weaned. The Hausa baby is introduced to supplementary food at approximately the same age the Ibo baby is being weaned. The Ganda and Mbundu administer supplementary foods, with force if necessary. Information on Ibo methods of feeding is lacking, and the information on the Hausa suggests the introduction of supplementary food is less harsh, given the facts that it is introduced later and in liquid form.

It is interesting to note how these findings relate to the results of Nerlove's (1974) cross-cultural study of women's workload and infant feeding practices. She found that women who begin supplementary feeding of infants before one month participate to a greater degree in the subsistence activities of agriculture, hunting, fishing, and animal husbandry than do women who begin supplementary feeding after one month. Nerlove did not consider women's participation in gathering as she felt that task to be compatible with simultaneous breastfeeding (1974:208).

Although the relationship between early supplementary feeding and high female contribution to subsistence is statistically significant for Nerlove's cross-cultural sample, it
### Table 3

**Child-care Practices**

<table>
<thead>
<tr>
<th></th>
<th>Hausa</th>
<th>Mwundu</th>
<th>Ganda</th>
<th>Ibo</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mother-Care</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Infancy</strong></td>
<td>principally mother</td>
<td>principally mother</td>
<td>principally mother</td>
<td>mother less than half</td>
</tr>
<tr>
<td><strong>Child</strong></td>
<td>others minor</td>
<td>others important</td>
<td>others important</td>
<td></td>
</tr>
<tr>
<td><strong>E. Childhood</strong></td>
<td>principally mother</td>
<td>half time or less spent with mother</td>
<td>majority of time away from mother</td>
<td>majority of time away from mother</td>
</tr>
<tr>
<td><strong>Caregiver</strong></td>
<td>others important</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Other Than Mother</strong></td>
<td>child</td>
<td>child</td>
<td>adult</td>
<td>child</td>
</tr>
<tr>
<td><strong>Age Suppl. Food</strong></td>
<td>7 mo.</td>
<td>from birth</td>
<td>3 mo.</td>
<td>-</td>
</tr>
<tr>
<td><strong>Complete Weaning</strong></td>
<td>2-2 1/2 yrs.</td>
<td>12 mo.</td>
<td>3 yrs.</td>
<td>8-9 mo.</td>
</tr>
<tr>
<td><strong>Harsh Weaning</strong></td>
<td>NO</td>
<td>NO</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td><strong>Toilet Training Began</strong></td>
<td>before 6 mo.¹</td>
<td>(6-12 mo.),</td>
<td>after 18 mo.¹</td>
<td>2 yrs.</td>
</tr>
<tr>
<td><strong>Harsh</strong></td>
<td>NO</td>
<td>YES?</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td><strong>Use of Punishment</strong></td>
<td>(NO)</td>
<td>(NO)</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td><strong>Indulgence</strong>²</td>
<td>indulgent</td>
<td>indulgent</td>
<td>usually affectionate</td>
<td>usually affectionate</td>
</tr>
<tr>
<td>a) Infancy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) E. Childhood</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹Data supplied from Barry and Paxson (1980)

²Code from Barry and Paxson; code takes into account all aspects of treatment and care; important criteria included rewards for crying and pain infliction. Severe treatment and highly affectionate represent the two extremes, indulgent is the second most affectionate rating, usually affectionate the third, and some severity is the fourth. Only extreme severity is more severe than some severity.

( ) Parentheses indicate explicit statements were lacking in the ethnographies, rating supplied by extrapolation from relevant comments.
is not borne out by the findings of this controlled comparison. While this in no way reflects upon Nerlove's work, it is still important for those interested in child-care practices. Even when the mother has little work to do in the area of subsistence production, we see supplementary feeding at the (relatively) early age of seven months. We also see Ganda mothers who make a major contribution to the subsistence economy beginning supplementary feeding after one month of age. Supplementary feeding in these four societies does not directly vary with the mother's role in the subsistence economy.

Weaning and Toilet Training

Child-care practices other than the introduction of supplementary foods in these four societies show an interesting pattern, with Hausa opposed to Ganda and Ibo, while Mbundu is intermediate. Hausa weaning is later and gentler than that of the Ibo. It is also more gentle than that of the Ganda, but weaning among the Ganda and Mbundu is also later than among the Ibo (see Tables 4 & 5).

Toilet training among the Hausa is earlier but less harsh than among the Ganda and Ibo. Mbundu toilet training is also early (before 12 months) but is more harsh than among the Hausa, less harsh than among the Ganda and Ibo (see Tables 6 & 7). The use of punishment in child training replicates this pattern, but my information on this subject is less complete.

Both the Ganda and Ibo stress discipline in child training; punishments include scoldings and beatings. There is little information for the Hausa or Mbundu regarding the use of punishment, but the Hausa can be assigned to low use of punishment since they do not use it either for weaning or toilet training. The Mbundu fall between the two extremes once again. There is a report of physical punishment for the Mbundu, but it certainly was not a major characteristic of their child-care practices. Therefore, I tentatively assign them to low use of punishment but feel they fall between the Hausa on the one hand and the Ibo and the Ganda on the other. The Hausa may use punishment in child training; if so, the Mbundu are more like the Hausa than they are like the Ganda and the Ibo (see Table 8).

Summary

To sum up the differences between mother-care and other-care in these four societies, we can say that there are indeed differences between the two categories of child-care. Mother-care introduces supplementary feeding slightly later, at approximately the same age Ibo children are being weaned. Toilet training is earlier, but not harsh. Weaning is later than among the Ibo, and less harsh than the late and abrupt weaning of the Ganda.

Overall, mother-care is less harsh and also more indulgent than other-care. The Barry and Paxson (1980) code for infancy and early childhood gives the Hausa a low but indulgent rating during these times (see Table 3 for an explanation of what indulgence ratings include). Mbundu get a medium indulgent rating for infancy, but in early childhood are usually affectionate with occasional harshness or deprivation. The Ganda were coded as having some degree of severity during early childhood, but not extreme harshness. The Ibo were coded as usually affectionate during infancy, but with occasional harshness or deprivation.

When we compare adult substitute caretakers with child substitute caretakers, we see a significant difference only in the age of weaning. The societies which give care
Table 4
Age of Weaning

<table>
<thead>
<tr>
<th>MOTHER-CARE</th>
<th>HIGH</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFTER 1 YR.</td>
<td>Hausa</td>
<td>Mbundu Ganda</td>
</tr>
<tr>
<td>AGE OF WEANING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>UP TO 1 YR.</td>
<td></td>
<td>Ibo</td>
</tr>
</tbody>
</table>

Table 5
Severity of Weaning

<table>
<thead>
<tr>
<th>MOTHER-CARE</th>
<th>HIGH</th>
<th>LOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
<td>Hausa</td>
<td>Mbundu</td>
</tr>
<tr>
<td>SEVERITY OF WEANING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td>Ganda</td>
<td>Ibo</td>
</tr>
</tbody>
</table>
Table 6
Age of Toilet Training
MOTHER-CARE

\[
\begin{array}{|c|c|}
\hline
& HIGH & LOW \\
\hline
BEFORE & Hausa & Mbundu \\
1 YR. & & \\
\hline
AGE & & \\
\hline
AFTER & Ganda & Ibo \\
1 YR. & & \\
\hline
\end{array}
\]

Table 7
Severity of Toilet Training
MOTHER-CARE

\[
\begin{array}{|c|c|}
\hline
& HIGH & LOW \\
\hline
LOW & Hausa & \\
\hline
SEVERITY & & \\
\hline
HIGH & Mbundu? & Ganda \\
& & Ibo \\
\hline
\end{array}
\]
of infants over to small children wean their babies at least two years earlier than the Ganda, who give care of young children, but not infants, over to other adults. The Ganda infants are cared for principally by their mothers and continue to be breastfed for at least two years, often three.

Note that the Ganda mothers forcibly introduce solid food at three months of age. The garden plots of Ganda women are within the compound and it may be that the closer proximity of their gardens as well as the nature of the plantain crop allows them to continue breastfeeding longer than Mbundu or Ibo women, who must travel some distance to their farms and whose crops demand different cultivation techniques.

There is no strict dichotomy between the case of mother-care and the cases of other-care. We see, instead, a sort of continuum from the Hausa with principal mother-care to the Ibo with negligible mother-care. The Hausa always appear in the opposite box from the Ibo which suggests there are significant differences between principal mother-care and negligible mother-care. The Mbundu and Ganda fall midway between these two extremes. The Mbundu have a higher degree of mother-care in early childhood than do the Ganda which places them closer to the Hausa along this continuum. Our continuum, then, looks like this:

HIGH MOTHER-CARE / / / / / / / / LOW MOTHER-CARE
Hausa Mbundu Ganda Ibo
When the child-care practices of these societies are viewed in light of a continuum rather than a dichotomy between mother-care and other-care, we see that as the amount of mother-care decreases, child-care practices change. The age of weaning gets earlier, weaning and toilet training are more abrupt and harsher, and use of punishment is more common. Following Barry and Paxson's (1980) code for indulgence, indulgence also decreases as we get further away from high mother-care.

The two main hypotheses of this study were borne out. There were significant differences in child-care practices in those societies where the mother's role in child care was reduced. Child-care practices in these societies were earlier at onset, more punitive, and less indulgent than among the Hausa, who had primarily mother-care. There were some differences between the society with adult substitute caretakers and those with child substitute caretakers, but not enough to confirm or disconfirm the third hypothesis. What differences there were between adult and child substitute caretakers most probably reflect differences in the amount of participation by the mother rather than differences between the substitute caretakers. The only significant difference in the three societies with substitute caretakers was in the age of weaning. Other child-care practices which should reflect the care given by the substitute rather than the mother did not show any significant differences.

Conclusion

This analysis has shown that 1) women's economic role varies even in societies with similar subsistence systems, and 2) there is a relationship between the woman's economic role in her society and the child-care practices of that society. It is important to note, however, that even in societies where women contributed less than 25 percent of horticultural labor, women employed substitute child caretakers. This suggests that other considerations besides economics affect the child-care arrangements made by women.

Women's child-care responsibilities should not be used carte blanche to explain the division of labor by sex. Arguments such as those advanced by Brown (1970) and Ember (1983), that the decline in women's agricultural contribution after the introduction of the plow are compromised by the results of this analysis. On the contrary, this analysis demonstrates that even in horticultural societies, women leave their children in the care of others. This would seem to be an alternative, then, in societies that have adopted the plow.

Further, this analysis shows that, even among societies with very similar subsistence economies, women have differing roles in subsistence production. This suggests that, instead of a single explanation for the decline in women's contribution in intensive agriculture, several factors may be at work. Detailed ethnographic analysis of societies undergoing such changes is called for, rather than cross-cultural generalizations based on outdated ethnographies.
Endnote

1 The findings of this pilot study show that in these African horticultural societies, all infants spend some time away from their mothers and most spend a significant amount of time in the care of other caretakers. In early childhood, except for the Hausa, these children spend from half to the majority of their time away from their mothers. These findings have important implications for explanations of other social institutions in African society which have assumed a close, intense bond between mother and child. It should be pointed out that in three societies of the original thirty-one sampled, almost exclusive mother-care was coded for infancy. The data for these societies are meager or contradictory, and there are other caretakers besides the mother (the societies are Fon, Konso, and Azande).
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