

**PEOPLE OF THE FOREST:
THE WAORANI**

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*With best regards -
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The traditional homeland of the Waorani is a vast area encompassing approximately 20,000 square kilometers of forest, most of which would technically be classified by biologists as tropical moist forest and tropical wet forest (Cañadas 1977; Sanchez 1976; 25). The territory is extremely three dimensional in the western portion where it begins to ascend the eastern foothills of the Andean cordillera. As it stretches further eastward it begins to lose some of this ruggedness, but even in its gentlest aspect it is characterized by an infinitude of *arroyos* slicing into red clay ridges.

The territory embraces the first parallel south, defined by the Napo River on the north and Curaray River on the south, and falls between approximately 76° W and 77°30' W. The borders have been maintained by generations of hostility between the Waorani and all outside groups. Because of this, the Waorani are known to outsiders primarily as *Aucas*, a Quichua word meaning « savage » or « barbarian »; similarly, the Waorani refer to all outside groups as *cowode*, which basically means « non-human ». They refer to themselves as *Waorani* or « people » and regard all outsiders as cannibals. When referring to one individual, they use the term *Wao*. Also, when using the term as an adjective, such as in « a Wao house », they use this uninflected form. To be consistent with Wao practice, I will use both forms in this review of their traditional culture.

The ethnohistory of the Waorani is difficult to unravel because of their protracted isolation from the outside world, an isolation exemplified in the fact that at the time of their first sustained peaceful contact with the outside world in 1958, only two loanwords from the outside could be ascertained (Peeke 1973:4). To date, no linguistic congeners have been found, putting the Wao language in that astounding array of linguistic isolates which predominates along the base of the Andes in the upper reaches of the Amazon's tributaries (Meggers 1975:152; Lathrap 1970:70). This lack of linguistic affiliation, combined with a lack of specific detail in the oral tradition regarding migrations, lack of extensive archaeological data, and lack of adequate references to the Waorani in the historical chronicles make it extremely difficult to say with any degree of certitude when the Waorani moved into their present domain or where they originate. Wao oral history says simply that they originated « downriver » and migrated to their present homeland « long ago ». Their present ceramic tradition demonstrates no clear affinities with earlier traditions described for the Napo and other parts of eastern Ecuador (cf. Evans and Meggers 1968; Lathrap 1970: 145 ff.). Since no systematic archaeological investigations have been done in the Wao territory proper, archaeological evidence cannot be used to reveal how long their present ceramic tradition has existed in the area.

Apparently, until the end of the 19th century the Waorani occupied only a segment of the territory they held when they were contacted in 1958. While the historical chronicles kept by the early missionaries of the XVI-XVIII Centuries leave a great deal of confusion about who the specific groups were that the early travellers contacted (Naranjo 1977), careful reading reveals that much of present-day Wao territory was controlled by other groups such as the ubiquitous Zaparoan speakers who encircled the Waorani. The banks of the Curaray and Napo Rivers were inhabited by Zaparoan speakers into the 20th century (Jouanen 1977; Tessman 1930:486), and apparently the Waorani were confined to the hinterland away from the major rivers.

A number of features in the culture point to the fact that the Waorani adapted to that interfluvial environment some time ago and were not squeezed into it in recent years. Even with the disappearance of the Zaparoans since the turn of the century the Waorani did not move in to fill the vacated territory along the Napo or Curaray Rivers. In fact, they avoided it. In their view the major rivers are the land of the *cowode*, and thus to be avoided. Even the afterlife is structured to reflect this pattern:

there the Waorani will live in the hills and the cowode will live along the river bottoms just as they do now. If the Waorani had been recently pushed off the floodplain onto the impoverished soils of the interfluvium, one would expect to find them hoping, either in their projections into the afterlife or in dissatisfaction with their location here on earth, for a return to the floodplain. Instead, they fear it, both because of cowode and because of the rivers themselves, stating no desire to live there, and, in fact, consciously avoiding the area except to go there on spearing raids.

Nor have the Waorani developed a cultural system centered around exploitation of the major rivers. Economically, their pursuits are confined to the interfluvium. Of the more than fifty species of fish and other aquatic animals available to them, the Waorani have traditionally eaten only a few. Larger fish such as catfish, which abound in the rivers, are regarded as taboo along with all waterfowl and any animal which eats fish. Even turtle eggs, which are hunted intensely during certain seasons by most Amazonian groups, were ignored by the Waorani. Instead, protein was obtained almost exclusively from hunting the forest mammals. Fishing was done, but on a much smaller scale than among other indigenous groups in Ecuadorian Amazonia, and confined to very few of the species found in the small feeder streams. Only recently have the Waorani begun to utilize and exploit the large number of niches available to them in the waterways.

Similarly, they did not have a knowledge of canoe-building and use until very recently when they learned it by observing neighbouring Quichuas. Even today, those groups that remain out of contact with the surrounding cultures do not utilize watercraft for travel. They prefer to travel by foot, avoiding the larger rivers which bound their territory.

Houses traditionally have been built upon hilltops, away from the streams and rivers. In addition to serving for defense purposes, the Waorani say that building on hilltops protects them from the likelihood of flooding which would force them out, or worse, drown them since they had no knowledge of swimming. In short, nearly all aspects of the culture are oriented to the interfluvium, not to the river systems.

Some anthropologists such as Lathrap (1968, 1970) have suggested that the interfluvial cultures of the upper Amazon are devolved representations of earlier agricultural societies which once flourished upon the major floodplains or *varzea* in Amazonia. According to him they were pushed off the major rivers by successive waves of migration from the central Amazon basin until they were forced into isolated pockets in the hinterlands where their agricultural and river way of life had to change to meet the stringent requirements of impoverished soils and limited resources. They began to rely less upon agriculture and the protein resources of the rivers and turned more to the forest for its products.

This is an appealing hypothesis which seems to be fairly readily documented for the area in Peru that Lathrap studied. However, until more evidence is amassed, the matter must be left open to discussion for the Waorani. There are a number of items which need to be assessed before the conclusion is totally accepted. First, the entire cultural base of the Waorani, including the system of cosmology, demonstrated a profound embedding of the interfluvial adaptation. The legends I have collected thus far do not mention a life adapted to the *varzea* although they do mention downriver origins, a fact consistent with Lathrap's hypothesis. They do not have any oral traditions of making or using canoes, a trait which would be of prime importance for *varzea* cultures. But even more significant, stone axes are said to be made by the creator *Wangongi*, not made by man. A critical item for a culture that is heavily dependent upon agriculture is axes for clearing the jungle to plant, and it seems strange that a society that was supposedly so thoroughly agricultural should lose its knowledge of how to manufacture stone axes, although it retained other agricultural practices. That they have no tradition of making axes, depending instead on finding them lying in the forest, and do not even associate these stone axes with man, but with the creator, seems to indicate that agriculture is a relatively recent innovation among the Waorani - that they acquired axes from the forest along with the knowledge of agriculture.

It may be argued that cultural devolution was so great and disruptive when the Waorani were forced off the major rivers that they forgot in a short period of time how to make axes and canoes, forgot how to swim, and gave up eating the waterfowl and fish still available to them in even the smaller streams. That possibility must be left open, but then to accept the plausibility of a subsequent embedding in mythology of supernatural origins of axes forces one to accept the explanation with more reservation. Until the data are more complete, the possibility must still be allowed that groups such as the Wao-

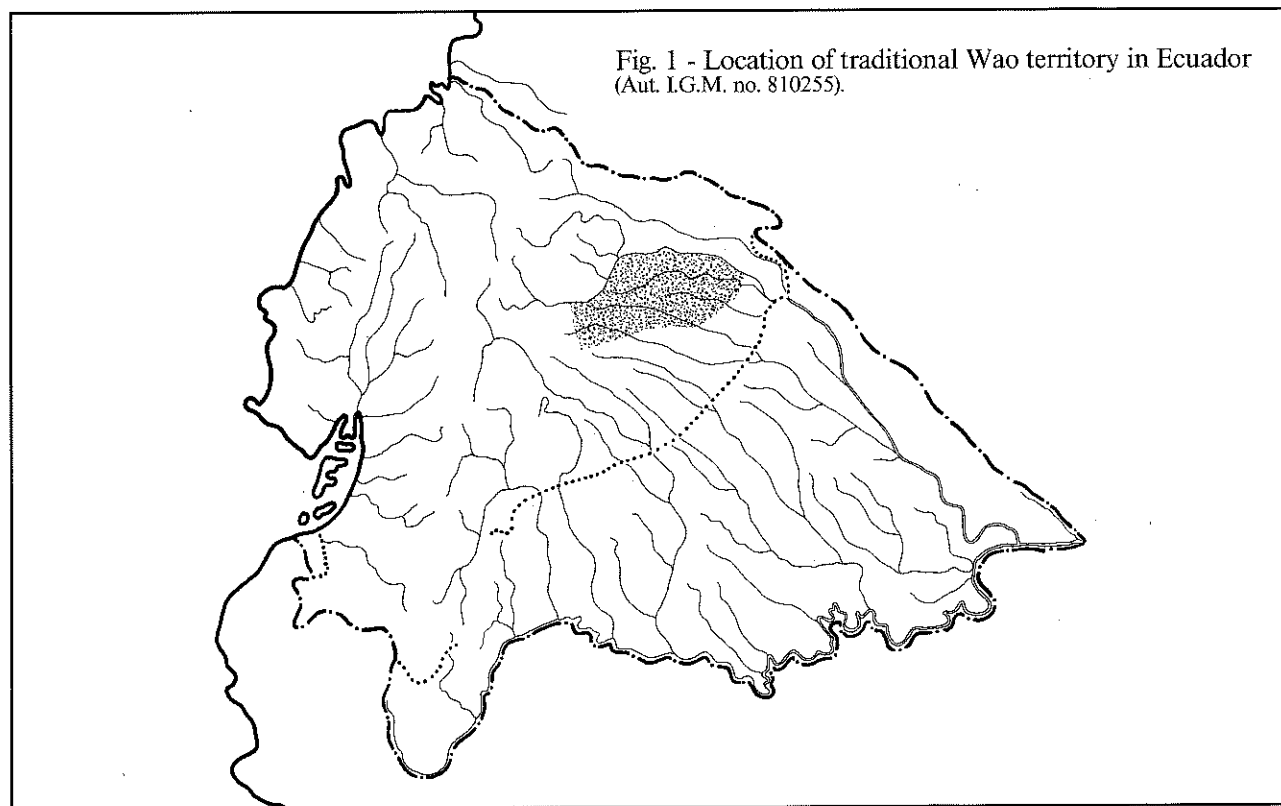
rani represent an ancient system of dual exploitation of separate niches, a system in which some groups exploited the *varzea* and others like the Waorani exploited the interfluve. The possibility must be allowed that they have always been oriented to the interfluve and only recently began agriculture as agriculturalists began expanding their influence.

Demographics

The distribution of the Waorani in their environment reflects not only the stringent nature of their environment, but also their isolation from the outside. When a sustained peaceful contact with them was effected in 1958 the Waorani were divided into four major groups dispersed over their territory. They numbered no more than 500 individuals occupying a land base of approximately 20,000 square kilometers, or .025 persons per square kilometer. Stated differently, that's 40 square kilometers of land for every man, woman and child among the Waorani. The traditional settlement is composed of one or two houses in a clearing chopped from the forest. Twenty or thirty minutes' walk from the first houses is another cluster of houses, composed of individuals closely related to those from the first cluster. These larger aggregates thus form « neighborhood clusters », the community of extended kin to whom one relates throughout most of his life. At the time of contact the Guiquetaidi were one such neighborhood cluster, the Baiwaidi another, the Niwaidi another, etc.

Each of the neighborhood clusters was situated several days walk from the next nearest one and maintained a relationship of hostility to the others, eg. the Niwaidi were hostile toward the Guiquetaidi, Baiwaidi and Wepeidi. In most instances the major groups of neighborhood clusters were not entirely certain where the other clusters were, who they were or how many they numbered. They simply designated them as the « downriver Waorani », « upriver Waorani », or « overland Waorani » and knew that they were not to be trusted.

The neighborhood clusters kept a buffer zone between themselves and the borders of cowode land. The cowode, Quichua and Ecuadorians in particular, believed that the Waorani numbered far more than they did because of the Wao custom of making unpredictable, sporadic raids upon cowode up



and down the Napo River, the Curaray River and other areas bordering the Wao territory. The random and dispersed nature of Wao raids upon the outside gave the appearance of large numbers of Waorani controlling a vast territory, when in fact, what the dispersed nature of the raids reflected was the incredibly dispersed character of a small population trying to maintain extensive internal buffer zones among their own hostile members.

The degree to which the internal and external hostility affected the Waorani is best demonstrated in the statistics indicating cause of death. In genealogies covering the past few generations, over forty-one per cent of the deaths were a result of Waorani spearing other Waorani in their vendetta. Today, scarcely an adult beyond the age of twenty-five can be found who did not lose at least one parent in a spearing raid. Similarly, most adult males of that age have participated in raids against enemy groups of Waorani.

Nearly eight per cent of the total deaths in the same period were Waorani who were shot by *cowode*, particularly Quichuas making raids of reprisal against Waorani. As Udo Oberem, an anthropologist who studied the Quichua groups near Wao territory in the 1950's stated: « *De vez en cuando, los Quijos (Quichua) realizan una expedición represiva a la región de los Aucas (Waorani). Armados con fusiles, van en búsqueda de una casa de los Aucas y matan a todos los que encuentran* ». (1971:101) (Parenthesis mine). But reprisal raids weren't the only factor contributing to Wao statistics. At the turn of this century rubber gatherers operated up and down the Napo River basin wreaking havoc upon any indigenous group they happened to encounter. In some cases they murdered those they found, and in other cases they took them off as slaves. The Waorani remember their deeds well and can recount them in detail. They should. In recent generations they lost nearly nine percent of their numbers, mostly women, to those searching for slaves.

Figure 2 illustrates graphically the kind of fate the Waorani expected to meet prior to the past two decades. In data extending up to five generations I was told of only three individuals who had died of old age. For nearly two years I was told that one of those individuals had simply « died, becoming old, so they speared him, threw him in the river and he died ». Now I accept the other two « natural » deaths with considerable skepticism. But the point to be made is that the Waorani experienced an extraordinary rate of death by violence of one sort or another.

The Household

The extended household *nanicabo* is the basic social unit in Wao society. A typical house will likely be centered around an older man with his wife or wives and their children. Generally, the senior male slings his hammock in one corner of the house next to an entrance, a brother of the man or of his wife slings at the opposite end of the house next to the other entrance, and unmarried sons and married daughters with their husbands and children locate along the sides of the house, leaving a central walkway the length of the house. Each nuclear family maintains its own fire and cooks and eats independently of the others unless a highly productive hunt brings more meat into the house than usual. At such a time cooking and eating may be more cooperative.

The preferred pattern for residence is matrilineal, with the new groom moving into the household of the wife's parents. However, numerous circumstances, such as the death of a girl's parents before her marriage, or heavy pressures brought to bear by the groom's parents, can divert the ideal pattern into any number of options. In some cases the new couple may move in with the groom's parents or even in with an older married brother who has established an independent household. Nor is the pattern fixed once the new couple establishes the locality of their residency; they may shift back and forth among a couple of households.

The system is not rigid but allows for a great deal of flexibility defined by not only the desires of relatives who want to attract the new couple into their sphere of influence but also by the desires of the new couple themselves. This system, which anthropologists call the « kindred », reflects perfectly the mood which surrounds all of Wao culture and thinking: a freedom of choice within certain broad boundaries – a lack of rigid definition for behavior.

When males reach puberty they may decide to build a separate small house near their parents' house

and live in that for up to two years until they are married. In some instances several teenage boys may move into a house together, remaining dependent upon their parents to get food and cook for them. However, during times of possible attack they are not likely to separate themselves from the main house.

When a couple's children begin to reach their teen years, the couple is likely to set up a new household independent of the parents' household. This is even more likely to happen when the household has gotten large and younger unmarried children or young married couples with very small children are still in the household. But if there are no other children to remain with the older generation, eventually the responsibility and very slight edge of influence that an older man and woman have over the others in the household gradually shift to the other experienced, but younger, males. At this point the older couple can be said to be living in the house of their younger children, rather than the younger ones living with the older ones.

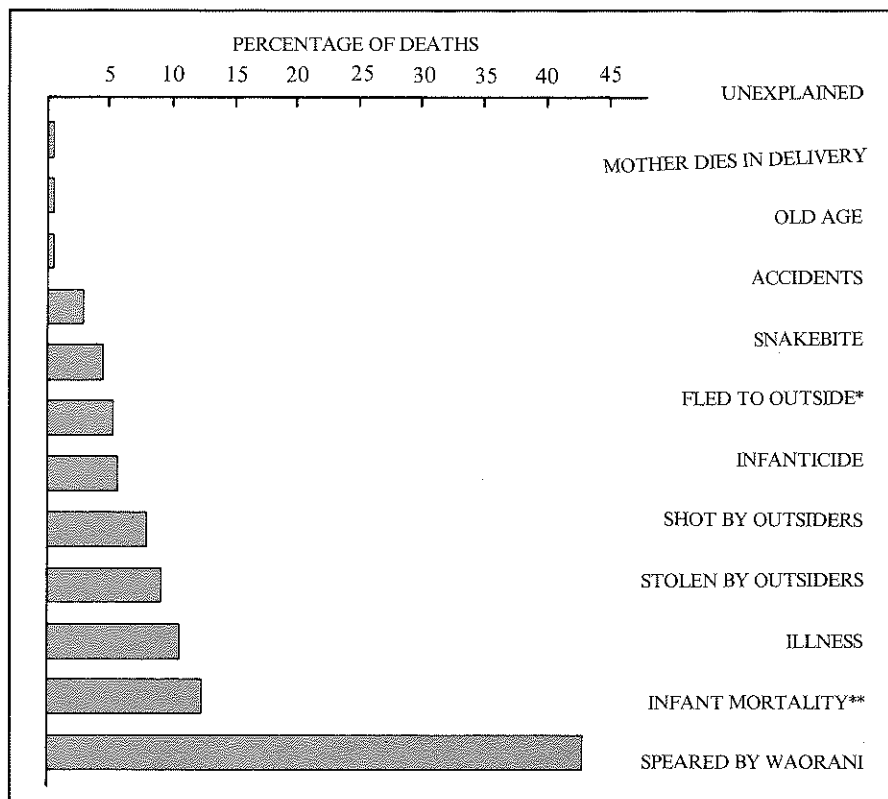
As new households are established they generally remain within the same neighborhood cluster. It is not unusual for two houses to be built within half an hour's walk of one another by two men who have decided to remain close to one another to exchange children as spouses. Visiting back and forth between the houses of a neighborhood cluster is frequent, and each household monitors closely the activities of the others.

One of the features the Waorani developed in their settlement pattern as a response to the frequent raiding by other Waorani and *cowode* was that of maintaining two or even three separate living sites. They plant gardens, *quewencode*, in a given area, and while they are eating the product of those gardens, they have gardens which are maturing in another area a day or two away from the first. After they have harvested and eaten what is available in the first garden they move to the other location and begin living off the gardens there. Since they live on the Equator where there are no seasons and since they subsist primarily upon manioc (*Manihot esculenta*) which is reproduced by planting the stems of the harvested plants, they are continuously planting gardens at the same time that they harvest. After two or three months, when they have consumed the manioc that was ready at the second location and have planted new gardens there, manioc in a third garden site is ready for harvest. So they move there, repeat the process, and by this time a new garden is ready in the first location.

Fig. 2
Causes of Wao deaths.

Based upon data extending to five generations of genealogies, excluding post-European contact data (Dgr.: J.A. Yost).

* as far as the Wao are concerned, this is the same as a death.
** includes aborted, stillborn or any death within a few days following birth.



The advantages of such a system are multiple. First, it gives the people a place to flee to in the event of a raid. Waorani who have had to flee from their homes and not had alternate living sites say that it is an extremely difficult life. The jungle is not an easy place to survive if you have to flee in the middle of the night and leave all tools, weapons and even fire behind. No Wao says he would ever want to repeat the experience of living off the wild for several months, hoping the enemy will not return to hunt him down. During such times meat is the principle source of nutrition, and as much as the Waorani depend on meat, they define the experience as nothing more than starvation. But the alternate gardens provide them with a place of refuge where they can recoup their strength, meet the others who were also forced to flee and begin to manufacture those tools and weapons lost in the raid.

Secondly, the alternate living sites disperse the pressure upon an area. This does two things. It disperses the pressures on the resources, such as game, making it easier to harvest those resources for a longer period of time, but it also reduces the visible evidence of habitation in a given area. Trails are less used and gardens are smaller, making it difficult for an enemy group to locate the houses for raiding.

It must be added that when a family moves to one of the alternate sites this does not mean that the entire extended family moves at the same time or even to the same location. The senior male and his wife may move to location «B» from their original location, whereas a daughter and her husband may move to location «C» at the same time and another daughter and her husband may remain at the original location only to move at a later date (Figure 3). There are even occasions when one or more of the wives of a man may remain at the original site while the husband and another wife may go off to an alternate site to weed the gardens for a week or two while the husband and other wives remain. What this does to household composition is to present a picture of constantly shifting structure.

When the neighborhood clusters are taken as the point of focus the picture is even more complex, for individuals from separate households at one location may become part of the same household at an alternate living site.

What this accomplishes is to distribute one's affiliation among the widest number of relatives possible. It affirms one's ties with numerous people, not just a restricted number from a single household. It makes it possible for one to keep affinal (ties resulting from marriage) as well as consanguineal (biological) relationships in focus.

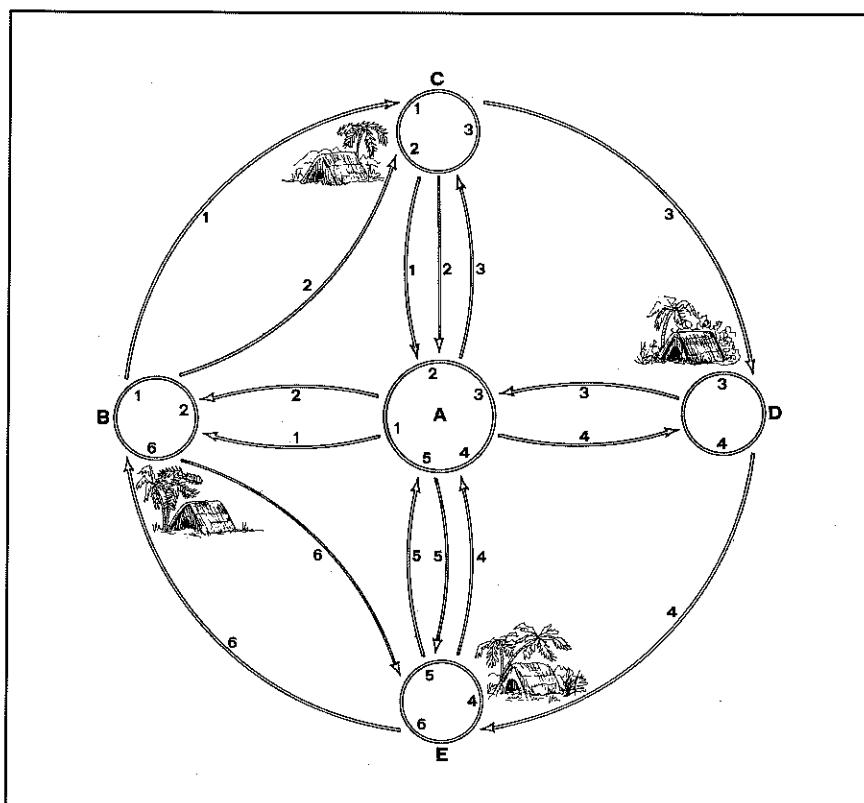


Fig. 3
Pattern of possible cyclical rotation to alternate living sites.

Numerals represent nuclear families in the rotation cycle and letters represent alternate living sites.

Kinship and social organization

Undoubtedly the broadest concept of social relationship is that of « Waorani » which is defined in opposition to « *cowode* ». Waorani includes all persons who speak the Wao language and whose parents are both Waorani, whereas *cowode* includes not only those who speak a different language than *Wao tededo* but also the children of any Wao-cowode marriage. Thus the son of a Wao woman and Quichua man is defined by the Waorani as *cowode* even though he may grow up in a Wao household and speak *Wao tededo*. He lacks the necessary condition to being Wao – the proper ancestry through both parental lines. However, in the next generation the children of such a halfblood may be regarded as Wao if their mother is fullblood Wao.

Traditionally, the concept of Waorani as a social functioning unit in opposition to *cowode* is very weak. At times Wao groups formed ephemeral alliances to raid *cowode*, but these were highly tenuous and infrequent. Probably the strongest expression of the unity of being Wao was when local groups accepted into their numbers fugitives from a raid that had totally dispersed another local group. At such times the common basis in the language and the ability to trace common descent from some distant ancestor made it possible to accept them as Waorani.

Within the general concept of Waorani are a number of subclassifications. *Warani* (not to be confused with Waorani) are simply « others », those Wao individuals for whom no relationship to a common ancestor can be traced, even though the Wao language and cultural traits are shared. It refers to those for whom some common descent is thought possible but cannot be found. It is for those whose ancestors all spoke only *Wao tededo*, and were therefore not likely to have been *cowode*. The relationship to *warani* is very fragile, most likely to result in hostility, and marriage to *warani* is unacceptable until some connecting link can be found which erases the definition as *warani* and makes it possible for them to call one another *mona waenquicaya* (« in a cross-cousin relationship »).

In opposition to *warani* are those Waorani who are *guirinani*, all people for whom there is a kin term of address or reference. A notable exception to this classification are cross cousins, who are not regarded as *guirinani* even though their relationship is easily traced. Cross cousins belong, instead, to the *arorani*, an amalgam of relatives among whom marriages are arranged.

The significance of these general classifications begins to emerge more clearly when the system of kinship terminology is examined. The Wao system of designating kin is bifurcate merging, which is to say the kin terms make a distinction between the mother's sisters and the father's sisters. They are called by separate terms *bada* for the mother's sisters and *mænte* for father's sisters (see Figure 4). Likewise, the father's brothers and the mother's brothers are called by separate terms, *mæmpo* or *maapo* for the father's brothers and *bæ* for the mother's brothers.

On the other hand, some of the people in the generation above « ego » are merged into a single term. All brothers of the father are called by the same term as the father *mæmpo*, or in some case *maapo* and all sisters of the mother are called by the same term as the mother, *bada*. It can be added that all males in the second generation above « ego » are called *mæmæ* and all males in the third generation above « ego » are called *mæmpocoo*. All females in the second ascending generation are *ñæñæ* and those in the third are *badancoo*. The males in the generation above these would be *mæmæncoo* and females *ñæñæncoo*, although practically speaking these terms are seldom used.

It is apparent to most people that the children of one's mother are one's brothers and sisters, or siblings. Likewise, the children of one's father are also one's siblings. The consequences of this in the kind of system described here are that the children of my father's brother are all regarded as my brothers and sisters, since I call my father's brother « father ». Similarly, my mother's sister's children are also my siblings since I call my mother's sister « mother » (Figure 5).

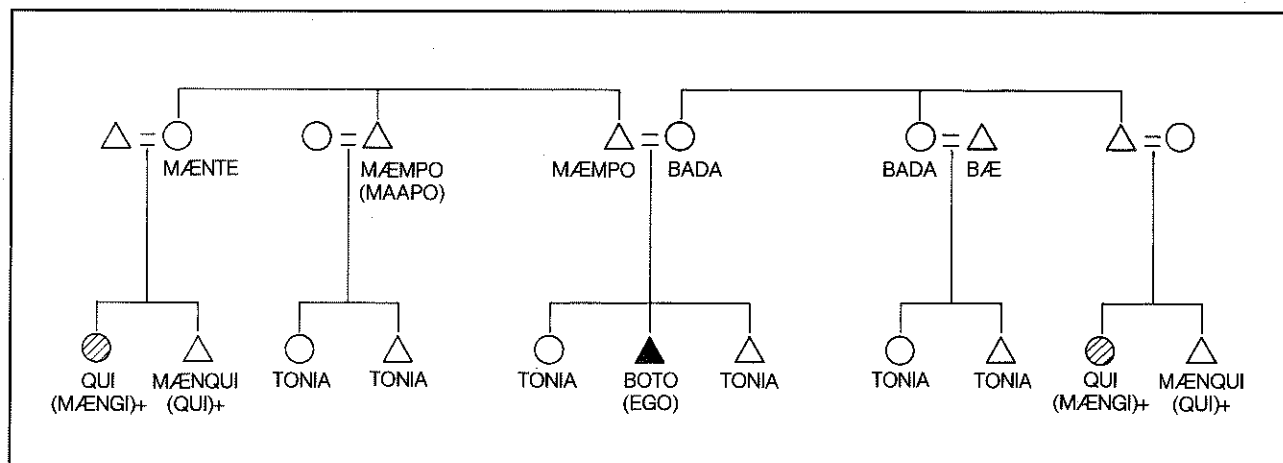
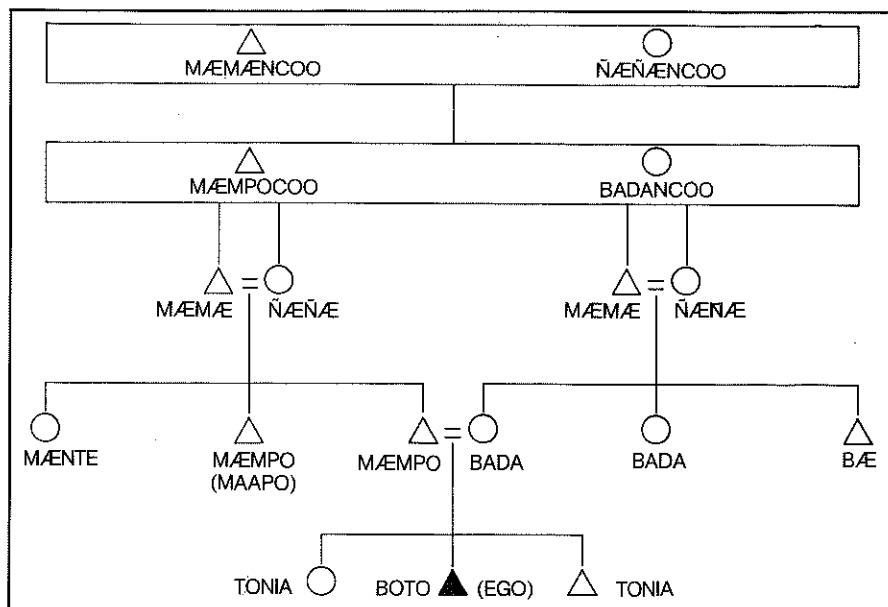
Examination of the terms consequently used for my mother's brother's children (*mænqui* and *qui*) and my father's sister's children (*mænqui* and *qui*) demonstrates the issue of central importance in this system. These cousins are not called my siblings, because they are children of my « aunts » and « uncles », not children of my « mothers » or « fathers ». Anthropologically speaking, they are my « cross cousins », whereas the children of my *mæmpo* and *bada* (fathers and mothers) are my « parallel cousins ».

Why is it so important to work through the complications given here? Because the entire issue of Wao

Fig. 4
Wao terms of address
for ascending generations.

- △ indicates males
- indicates females
- = indicates a marriage
- ▲ the person who is the centre of focus on the chart
- ⊗ potential spouses for *ego*
- + terms used when *ego* is female

Fig. 5
Cousin terminology
in the Wao system.



social relationships and particularly marriage hinges upon an understanding of this system. No Wao is supposed to marry any person who does not fall into the category *qui*. That is, a Wao may marry only a cross cousin, never a parallel cousin. To marry a parallel cousin would be to marry a child of one's classificatory mother or father, that is, one's own sibling or *tonia*. That would be incest. Even beyond that, to marry anyone other than a cross cousin or *qui*, for example someone from an unknown group, is to marry outside the proper pattern. It does occur, particularly when the groups get quite small and the number of available spouses is severely limited, but it is viewed as a « wild » marriage.

When a group as small as the Waorani establishes a pattern of refusing to marry outside the group, the network of relationship among the individuals becomes very tightly interwoven. For example, fewer than twenty Waorani of the current population of nearly 630 are truly unable to trace their ancestry to some common source. They can find a common ancestry among themselves, but cannot link themselves to the rest of the Waorani. The remainder of the population, however, can trace their common ancestry so that they can all define their relationship to one another as siblings, aunts, uncles, fathers, mothers, etc. When two groups first contact one another the first thing they do is begin to discuss genealogies in order to find the common point that they might share and from that to be able to define in very specific terms how each one relates to another.

The purpose in defining the specific relationship is to establish how individuals are to interact with one another. The various dyadic relationships between kin carry differing rights and responsibilities. For example, the interaction between a man and his father is going to be different than that between that man and his brother or his cross cousin. Once the relationship is known, the involved individuals

know how they must act and respond to the other. If the relationship is not known, there is ambiguity in the interaction which results in uncertainty and even suspicion. Properly speaking, there is no interaction in Wao society apart from kin relationships. The Waorani overtly state that the purpose in having numerous kin around oneself is to ensure survival – to have assurance of someone to supply meat, to chop trees, to plant and weed gardens, to manufacture tools and hammocks, to cook meals, etc. In fact, among the adults I have never heard anyone address someone else with the kin terms except when making a request for something. To use the kin term is to impress upon the addressed individual that he has obligations as such-and-such a relative to give you things you request. Thus, when someone says «*ba*» or some other kin term to someone else, it is guaranteed that the conversation will quickly result in a request for goods, food or aid.

Marriage

Given all of this, it is only natural that Waorani should try to use kinship to manipulate the social world, and the most conspicuous way of doing this is by arranging marriages. Reproduction is essential to the survival of any population, and marriage is the culturally approved route of assuring that it occurs in an orderly fashion. But beyond that, marriage ensures that the progeny are legally accepted and assigned a position in the social world, and it expands an individual's bonds to people outside of his own immediate kin, creating a broader circle of people who can be turned to for aid. It is therefore no surprise that marriages are of primary concern to the Waorani.

But since the population is small, and since marriage can take place only in a very restricted pattern, it is not unusual for potential spouses to be a scarce commodity. This means that the spouses a group has available for exchange can enable them to manipulate the social environment to gain security. Those who have sons or daughters ready to marry are in a good bargaining position with those who need them, particularly if one group has no other alternatives and the other does have alternatives available.

It becomes important for groups to guarantee that they will have spouses available in the future. This is accomplished through various agreements. For example, frequently two men will be married to each other's sisters, and will agree to live in the same neighborhood cluster. Such an arrangement keeps the brothers and sisters in the same geographical area, but also assures that when the children of the two couples grow up they will be available for exchange in marriage, because they are cross cousins. As the children are born and grow, the parents may make agreements to marry them to children from the other household. In fact, it would not be unheard of for an adult man to be betrothed to an infant at birth if that man had no other potential spouses available. When the girl reached seven or eight years of age he might then take her into his own household to raise as his wife. On some occasions two infants have been married in a ceremony and then both of them raised by one another to adulthood.

But the normal pattern is for the parents to agree to marry their children to one another and then during some fiesta to perform the ceremony on the unsuspecting couple after they have reached puberty. Fiestas are a common occurrence, and although the young couple probably know that they will eventually be wed, they frequently do not know exactly when. During a normal fiesta, as the fiesta proceeds in its regular course with drinking and dancing, one of the older men will select the potential groom to lead one of the men's dances, an event that takes place all the time. The unsuspecting youth takes his place at the head of a long line of dancers, each with his hands on the shoulders of the man dancing in front of him, and they snake into the house hosting the fiesta. At this point the males who have participated in making the marriage arrangements set the surprised bride in a hammock, plunk the groom down beside her in the hammock and lead the entire fiesta group in singing a song such as the following:

« Like a pair of *miinta** always flying together
you two will be,
'Wanting my *miinta*' he takes her and flies,
Like a pet he takes her, his *qui*.
Seeing the beauty of the *miinta*, he looks upon her.

When it rains he will bring food
and she will eat;
In the forest, thirsting for drink, he will return,
his *miinta* will give him drink.
Take your *miinta* to a smooth, beautiful place
and set her down to perch.
There the two of you will live together in peace.

* *miinta*: the beautiful blue and gold macaw, *Ara ararauna*.

Then the couple is given a bowl of the fiesta drink which they share with each other, and older individuals, frequently, but not necessarily, a *bæ* or *mænte* lecture them in their matrimonial duties and responsibilities for one another. More singing follows, and the ceremony is complete. The fiesta then proceeds as before.

It is not at all unusual at this point for one of the males to begin to fume in anger because he was not consulted in the arrangements. One of the fathers, an uncle or a brother may have had other hopes for arranging a marriage more to his own advantage, and the wedding takes him by surprise. As he thinks about it, his anger builds and he begins to rage threats against those who did not consult him. Others will attempt to appease him with promises and gifts, and in rare cases the marriage may even be annulled because of his intransigence. But in most cases the marriage stands, and the couple is left to make the transition to married life. Following the fiesta the shocked newlyweds go to the house of one of their parents to reside until they can come to some definite and thought-out decision as to where they want to reside on a more permanent basis.

It must be stressed that marriage is an economic arrangement binding two groups of people, not just the couple involved. After the marriage of the couple, the parents of each take on new kin terms for one another. Prior to the marriage of the couple, the groom's father called the bride's father *mænqui* (« cross cousin ») and vice versa. But following the marriage, their relationship becomes one of *ñan*, or « co-parents-in-law ». The mothers likewise change their reference from *mængi* to *ñan*. The significance of this lies in the new privileges and obligations which are invoked by such an alliance. It symbolizes a reinforcement of the network of social relationships that ensure the survival of individuals and, therefore, the group.

The only proper marriage is to one's *qui*, but this does not mean that one has only one person he can potentially marry. It must be remembered that a man is likely to have several *qui*; some will be daughters of one woman, and some daughters of his mother's brothers or father's sisters. During times of intense raiding, males are likely to be in short supply, or put the other way, females are likely to be in surplus. Most societies, and the Waorani are no exception, deal with this through multiple marriage, or polygyny. A man is obligated to marry a *qui* for whom no other proper spouses are available. This may mean that a man takes on not only his first wife, but also some of her true sisters and her parallel cousins as well. Sisters prefer to be married to the same man since it means that they are more likely to remain together in the same household, continuing the pattern they were raised in. No matter what the relationship is between a man's wives, however, each maintains her own section of the house, cooks her own meals, plants, weeds and harvests her own gardens, produces her own necessities, etc. In childrearing, however, the wives are likely to share responsibilities, taking turns caring for each other's children while the other works her garden.

When a population is as small as the local groups the Waorani traditionally live in, raiding or illness can have penetrating consequences upon the population. In a group of fifty people, the loss of two or three children or a couple of women can easily throw the sex ratio out of balance. Since the Waorani kill women and children as well as men in their raids, it is not surprising that some of the small groups found themselves facing a shortage of marriageable women. In these cases the flexible Waorani used the opposite of polygyny, polyandry, to ensure that the excess males were properly cared for and that they contributed to the survival of the group. Two brothers would marry the same woman, hunt for her, clear the forest for her gardens, and help raise the children. The practice was not institutionalized in the sense that it occurred frequently or in all groups as polygyny did, but when the situation demanded it polyandry could legitimately be followed.

Economics and subsistence

One of the most impressive impacts a visit to the Waorani leaves is their robust physical constitution. When they can avoid diseases brought in by civilization, their health is astounding. As the data presented in Figure 1 demonstrate, prior to contact with Europeans illness did not present a major threat to the Waorani. Biomedical studies of the Waorani (Larrick, Yost, Kaplan, King and Mayhali: 1979) revealed none of the diseases of modern man, such as high blood pressure, heart disease or cancer. In general, the people are in a state of health that is to be envied, a state that is a result of strenuous physical exercise, a high level of nutrition, and selection.

The foundation of their excellent health is their diet, which comes primarily from agricultural and hunting pursuits. The major volume of food is gleaned from cultivated crops, which the Waorani produce in slash-and-rot agriculture. The major crops, sweet manioc (*Manihot esculenta*), plátano, corn, peanuts, sweet potato, peach palm (*Guillelma gasipaes*), and a number of minor cultigens supply almost all of the carbohydrates the Waorani consume and a fair supply of the vitamins and minerals necessary to adequate nutrition.

After selecting a proper location for planting a garden, preferably a well-drained hillside, the men and women begin clearing the underbrush from the forest with machetes, carrying it to the perimeter of the garden site. When an area of .2 to .5 an hectar has been cleared of underbrush, the women begin planting the manioc under the still standing canopy, poking a hole every meter or so in the soft cool soil with a simple stick and inserting two cuttings from a recently-harvested manioc plant. Meanwhile the men begin to chop the trees covering the area, and when that is completed they clean the branches from the fallen trees and carry them to the edge of the cleared site. Leaf litter is left on the soil to protect it from the leaching and compacting effects of direct rainfall and from the scorching sun.

While the manioc grows, other cultigens are intercropped in the garden. Plátano and banana are planted around the perimeter of the garden along with corn, and later camote is introduced among the manioc plants. In flatter, sandy soils the Waorani intersperse peanuts with the manioc. The women have to weed their gardens with machetes every three or four months until the manioc gets high enough to block out the sun and keep weeds from flourishing.

The corn is the first crop ready for harvest, followed by peanuts, manioc, plátano, and finally, the peach palm. Most of the types of manioc mature in eight or nine months although some will mature in as short as four, and others may require well over a year. The plátano requires a year and the peach palm at least four to mature. Since manioc is planted in the greatest quantity, it takes longer to consume than the other crops. Fortunately, manioc has its own built-in storage system. Although it matures in nine months, it can be left in the ground unharvested for over a year without rotting. The advantages of this in the humid tropics where storage is such a problem are obvious.

Once the manioc has all been harvested the garden is abandoned and left to grow back to forest. After twelve years or so, when the soft balsas have matured and are beginning to be crowded out by hardwoods, the Waorani may clear and replant the plot, but to try to shorten the cycle by planting earlier is to guarantee a reduction in crop yields. The soils in the Wao territory are impoverished to begin with – some of the poorest in Ecuador (Soudet & Custode: 1978) – and clearing the protective forest canopy exposes them to the direct effects of the harsh climate. In addition, the forest is a closed system in which the nutrients are locked into the vegetative process. Planting a single crop and waiting for the forest to regenerate the soil does not injure it, but the Waorani have learned that to try to extract a series of continuous crops from the same plot has a destructive impact on the area and results in disappointment.

When the manioc is ready for harvest, the women collect the tubers every couple of days, enough to feed their family for short periods. They boil the tubers after removing the tough skin and make most of it into a drink by masticating some and mixing it with a mass which has been pounded into a fine mash. They allow this to set overnight, slightly fermenting, and then mix it with water to form the staple *tepa*, which they consume in great quantities every day. Scarcely a meal is served without it at certain times of the year. In seasons when the plátano is ripe it is served as a drink substituting for *tepa*, and from January through April the peach palm ripens and replaces both *tepa* and plátano drink as the staple.

Although agriculture provides nearly all of the carbohydrates, the Waorani get most of their protein through hunting and fishing. They hunt the animals and birds of the forest canopy with the blowgun and poison darts. Typically, a man leaves the house in the early dawn hours before sunrise so he can be in the forest during the period of the day when the animals are the most active. Carrying nothing more than his blowgun and dardholder, he will hunt until he has gotten meat for his family or until late afternoon forces him to return to the house to avoid being caught in the forest after dark. Toucans (*Ramphastos cuciveri*) and wooley monkeys (*Lagothrix lagothricha*) are the animals he is most likely to succeed in killing, although half a dozen other species of monkeys and several species of guans and curassows (*Cracidae*), quail (*Phasianidae*), tinamou (*Tinamidae*) and parrots (*Psittacidae*) are also commonly blowgunned.

When someone in the household finds evidence of a herd of wild pigs (*Tayassu pecari* and *T. tajacu*) in the area, he informs the group and the following day men and women alike may accompany him in search of them. Each man carries several heavy chonta spears, decorated with his own design to help him identify the animals he kills. The women will likely go with nothing, intending to help track the game and to carry it home after the kill. If anything is killed, all who participated in the hunt get a portion, and if they are particularly successful, other households will be given a portion even though they may not have participated. If some one borrows a spear, he is obligated to share a major portion of the kill with the owner of the spear.

Normally the Waorani eat the meat simply boiled with manioc and without any flavoring spices of any sort, even salt. If they get an unusual amount, they may roast it to preserve it for several days, but it is usually eaten long before it has a chance to begin to spoil. Their environment has taught them to eat what they have when they have it. To try to save anything for the future is to risk losing it to spoilage.

The list of animals which are taboo for the Waorani is not extensive. Deer, tapir (*Tapirus americanus*) and jaguar are taboo for many indigenous groups spread over Amazonia, and the Waorani are no exception. Also on their list of taboo animals are cayman and any of the larger fish in the rivers and lakes. In fact, there are many more taboos on aquatic life than on terrestrial game. It must be emphasized that at certain crisis periods in their lives the Waorani observe taboos beyond those listed above. However, these are for specific individuals at specific times in their lives; they are not general taboos for the tribe as a whole, and they do not generally apply for a lifetime. They are intended for specific purposes, and once the purpose is fulfilled, the taboo is lifted.

Although hunting provides the greatest portion of protein in the diet, the Waorani do not totally neglect the resources available to them in the streams. Using cultivated and wild poisons, they poison the small feeder streams to make it possible to catch large numbers of the smaller fish in their scoop nets. In some areas they use long thin chonta spears to spear the fish, but that is not a widespread practice. As with the hunted game, the fish are usually prepared by boiling with manioc, not roasted or smoked.

Protein and carbohydrates alone do not produce the high levels of health exhibited by the Waorani. Whenever they are in the forest for any purpose, they are continuously alert for wild fruits or honey which they gather and eat on the trail. Because this has not been studied systematically for groups like the Waorani, we do not know what this contributes to their nutrition, but very likely it forms a significant source of vitamins and minerals in their diet.

Division of labor

Every human society assigns certain kinds of tasks to certain individuals and other tasks to other individuals. Among the Waorani the most apparent division of labor is between men and women and between the old and the young. Generally speaking, it is the man's role to provide his family with meat, clear the large trees from the forest so the gardens can be planted and to protect the household and engage in warfare. The woman's sphere of influence covers the agricultural tasks – planting, weeding, harvesting – preparing the meals and caring for the children. However, the flexibility which pervades Wao culture does not demand that strict boundaries be maintained between the tasks of men

and women. Women may engage in hunting, and men may engage in more of the agricultural tasks than just chopping trees. The Waorani say that men perform those tasks that are too difficult for the physically smaller women and that the women perform the other tasks. However, under certain circumstances the rules for behaviour may be broken with few or no negative sanctions. Among the Waorani it is extremely advantageous for a women to hunt with a blowgun from time to time, and she may do so with no fear of any negative reaction from others.

The vagueness with which many tasks are identified with men or women can best be seen in the fact that the various separate neighborhood clusters define male and female tasks differently, even though they share a common recent historical relationship to one another. For example, among the Wepeidi the men make chambira twine and weave the hammocks, and women chop and carry the firewood. Among the Guiquetaidi, on the other hand, the women do all of those – spin twine, weave hammocks, chop and carry firewood. Interestingly, the two groups were originally part of the same neighborhood cluster that was split and dispersed by a raid in the early 1930's.

Of course adults do much more work than young children. Into their teen years the boys seem to do very little strenuous work like chopping trees, whereas the young girls begin to carry serious responsibilities such as caring for younger siblings, helping their mothers in the gardens or carrying water by the time they are five years old. The boys do hunt a great deal in their youth, but this carries very little of the sense of responsibility that a young girl's tasks carry. When they marry, almost overnight the young couple is ushered into the world of adult responsibility. The shock is greater for the boys, who have been free to do pretty much as they please all their lives, than it is for the girls who have been carrying responsibility since early childhood.

In spite of the different role assignments for the sexes, there remains an atmosphere of equality between men and women (Wilson and Yost: 1979). It is true that there are different roles for the sexes, but the assessment of greater value or worth on one sex or the other because they perform different tasks is lacking. To the Waorani, role assignment is simply role assignment. It means no more than the fact that different people do different things. It does not mean that men are more valuable because they chop trees or that women are less valuable because they weed the gardens or cook the meals. In Wao thinking, the idea of relative worth is not a concept relevant to the consideration of sex roles.

Social control and the distribution of power

The concept of equality among the sexes is a concept which governs much of Wao social relationships. That is, Wao political structure could best be described as egalitarian. There are no classes, and no castes; in fact, there are no people who can be pointed to as chiefs or leaders in a general sense. It is true that leadership does exist, but it is situational by nature. A man becomes a leader for a specific event, and when that event has passed, his cloak of leadership disappears. For other events, other individuals act as leaders, depending for the most part upon who initiates the activity and how well he or she can convince others to participate. Only through the stimulus of scarce resources introduced from the outside can a general leader – someone who acts as a leader for most situations – emerge (cf. Yost 1980a).

In addition to being very egalitarian, the Waorani are intensely independent and individualistic. An example illustrates best: Tomo came to my house and began talking with me. In the course of the conversation he mentioned that he had recently acquired a shotgun from a *cowode*, but it was broken. Would I repair it for him? I agreed, so he told his ten year old son, Quipa, to run across the stream to the house and bring the shotgun. Quipa ignored his father, just standing silently.

« I said to bring my shotgun, » he repeated firmly.

Quipa looked at the ground, silent.

Tomo took a threatening stance. « Bring my shotgun right now. »

« No! » Quipa retorted and ran off to play with some other boys.

« He says 'no' », Tomo repeated rather matter-of-factly.

There was no anger, no condemnation, no frustration in his voice. He turned to retrieve the shotgun himself. He had made a request, and his son had not wanted to comply with it, so in allowable Wao

fashion he had refused. Every individual has that right. He will not be forced, and usually others will not attempt to force the issue. They will recognize the individual's right to act independently and honor it.

But all of this takes place in the context of the need for group cooperation to survive. Every individual knows that he cannot forever act independently. He must walk the tightrope between asserting his own individuality and cooperating with the group. This tension between individualism and the need for group cooperation is apparent in many areas, illustrating the existence of the need to cooperate to survive in the demanding tropical forest environment, but at the same time the need to be able to act and live independently in the harsh environment when separated from the group. A person who becomes too dependent on others becomes inept at surviving the daily demands of jungle existence and also becomes a burden on society.

Each group has several individuals who contribute very little to the household economy. They are *wantayi*, lazy. They do not chop trees or plant manioc like the ideal Wao should. They depend upon close kin to do this for them, and the relatives tolerate them by supplying their needs. Eventually someone tires of it and rails at them for being so *wantayi*. They respond by spending a day hunting or helping someone else in their gardens, since they likely don't have gardens of their own. The group is temporarily assuaged, and the individual reverts back into his inactivity until pressure is brought to bear again. As this demonstrates, the primary mechanism of social control is peer pressure, made effective by the need to feel accepted and worthy. When an individual, for whatever reasons, is unresponsive to peer pressure, there are few mechanisms available in the culture to force him into compliance. Ultimately, the threat of death by spearing can operate, but this is an extreme method of control, and obviously not one that can operate efficiently on a daily basis in minor matters.

Warfare

The reputation the Waorani have gained worldwide is the result primarily of their aggressive stance toward *cowode*. The statistics presented in Figure 1 relate vividly the reasons for this reputation. But the Waorani were not only aggressive toward the *cowode*, they were also aggressive among themselves. In fact, it can be argued that much, but definitely not all, of the aggression displayed toward the outside was a reflection of the internal hostility. The separate groups that existed prior to contact were in large part due to the internal hostilities.

But why the internal hostilities? Reams could be written on the question from a number of explanatory levels – psychological, historical, ecological-demographic, culturological – but I will confine this discussion to the one the Waorani give. As they see it, their warfare is a vendetta. At some point in the distant past one Wao killed another – the reason has long since been forgotten – and the sons of the victim avenged his death. That sparked a long series of revenge killings that have continued down into recent years, dispersing the various enemy groups over their immense territory.

Typically, when a man is killed in a raid, his sons or other surviving descendants are obligated to avenge his death, preferably upon those who killed the man. They may have to wait for years either for the opportunity to present itself or until they reach an age at which they are capable of carrying out a raid. From time to time alliances were effected, particularly following a period of intense raiding which appeared to the Waorani to threaten their very existence. But invariably, as individuals reflected upon the past and considered their vulnerability to other groups, the alliances were ruptured by surprise raids by one of the groups. The Waorani are explicit about the cyclical nature of the hostilities, referring to times of peace as *piyani cate* and times of hostility as *piinti quewente*.

The reasons the Waorani give for spearing others are broad: the death of someone in the group, an accident which resulted in injury, severe illness, someone getting lost in the forest, frustration at not being allowed to marry, anger resulting from an argument, a series of unlucky events (for example, continued bad luck in hunting), birth of a malformed child, to obtain spouses, to obtain iron tools, the entrance of outsiders or enemy groups into their territory, shaman activity, etc. These are all the final impulse, the psychological impetus necessary to give them the final shove actually to embark upon a raid which could mean their own death. But ultimately, the explanation can be found in the need to

avenge earlier killings. When one's child dies, it must be because a shaman in the group who killed your relatives caused it. That shaman has to die. If there is no immediate group who can be blamed for the death, then the death must be avenged upon the *cowode*.

Once someone decides to carry out a raid, he will try to enlist followers from his own neighborhood cluster or household and they proceed with determination. Usually they begin shaving and decorating spears, each man making his own distinctive shape and size spear and his own feather design or decorative features. The purpose of the identification marks is to ensure that survivors of the enemy will know without doubt who did the killing and come to fear the killers. As they work, they recall past grievances and work up their anger, until each man has completed six to ten spears to carry. When there is no moon, and after a thunderstorm has passed carrying the souls of their intended victims to the heavens on the lightning, they sing in the early morning hours to ensure that the enemy will be home when they get there to kill, and then at dawn move quickly in the direction of the enemy group. The women and children usually leave the house and go into hiding until the raiding party returns.

The men move through the forest for days or weeks if need be until they find the houses of an enemy group. At that time they may take a number of approaches depending upon numerous factors. They secretly survey the houses for a day or two attempting to determine who the group is, how many they are, what their activities are and how they might be related to themselves. If the group has relatives they know, a few may approach them openly without evidence of arms and suggest an alliance feast to initiate a raid upon the *cowode* or another group. Then during the feast or during some other unguarded moment they and those who remained hidden will stage a surprise raid. Or they may resort to any number of other deceptive ploys to get them to relax their guard. In some cases they may actually go ahead with the alliance and move in a raid against the *cowode* or another group.

If the group contains no recognizable relatives, the raiders will remain hidden and wait until a very dark night when silhouettes cannot be seen against the sky through the thatched house. They will approach the house, verify that everyone is sleeping or inattentive, and either burst in or sneak in and kill as many as possible before they can escape. Unless they have agreed before hand to spare certain individuals for specific reasons, men, women and children are all killed. In the total chaos of screaming victims, terrified children, furious, yelling raiders, smoke from trampled fires and the blackness of the night the raiders have to be alert not to spear their own men, and some intended victims escape into the dark forest.

After all are dead or have fled into the forest, the invaders pillage the house for blowguns, machetes, axes or any other valuables and then burn the house and leave, either to flee home or, if they think there is good chance for further success, to continue the raid against other houses in the neighborhood cluster.

When the men return home they nettle and beat the young boys who did not accompany them in the raid to ensure that they will grow up to be good spearers and to live *piings*, or angry. Soon thereafter the entire group abandons their living site, burning the houses and sometimes even destroying their gardens as they move on to one of their more distant garden sites. For many months after, they live in a state of continued alert, barricading the house entrances at night, maintaining guards throughout the night, checking the trails and surrounding area for footprints, concealing the trails around the houses, and setting up ambushes along the major trails near the old burned houses. Since they had no dogs until very recently, they also tether their pet harpy eagles (*Harpia harpya*) and caracaras (*Daptrius americanus*) near the house to scream a warning every time someone approaches the clearing. Within a year, life has become so relaxed again that one wonders if the raiding ever occurred in the first place.

Cosmology and the spirit world

The flexibility noted in so many areas of Wao culture is also observed in interpretations of the structure of the universe. Since so much of cosmology is subject to speculation, not to empirical observation, it is only natural that there would be differences of opinion as to the nature of the universe, the spirit world and life after death. In reality, it would probably be impossible to make a statement that some Wao somewhere would not contradict. The description I will give here is therefore eclectic in

that it fits no single person's description perfectly, but is rather an attempt to consolidate the various views into a single, albeit imperfect, statement. The universe can best be viewed as a disc, earth, covered by the vault or dome of the sky, which lies just above the cloud tops (Figure 6). Beyond that are other tiers of discs and domes or nothingness, depending upon the individual describing it. Below the earth is the underworld, *tarominadānepo* where the *babitade* or «no-mouth-ones» live. Very few people claim to know anything of the underworld, except that its entrance is likely to be through a deep hole in a river or lake, and that it is probably shaped like earth with trees, rivers, hills, sunshine, the moon, etc. The *babitade* who live there can neither talk nor eat since they have no mouths.

The earth itself *omæ* is viewed as a flat disc (Figure 7) encircled by *ñānaentibæ*, the great waters. Earth is higher to the west than to the east, causing the rivers to flow toward the sunrise. When they reach the edge of the earth at the great waters, they flow around the perimeter of the earth back to the west where they form the headwaters of the rivers again. Some argue that the waters do not flow around the perimeter of the disc, but up over the vault of the sky and thence back to earth in a giant waterfall to the west. The course of the sun and moon is across the dome of the sky, down to the horizon and then back to the point of rising via the perimeter of earth's disc that the great waters follow.

The nature of man is quite complex, but a very simplified version of it would be that man has a soul *onowoca* which is centered in the brain and which ascends to heaven at death, another soul which resides in the heart and becomes a jaguar at death, and a body which either rots or becomes transformed into any number of jungle animals, *bagai*, at death.

Waorani live here on this earth and at death their *onowoca* ascend. According to some they encounter a giant boa at the base of the clouds and if their nasal flares are pierced they are allowed to pass on into *onæ*, the heavens. If their noses are not pierced, they are turned back to earth where they are consumed by worms. Once in heaven, they live as they did here on earth, hunting, chopping, planting, and spearing. There is considerable debate as to what happens after they die from spearing or other causes there. Some say it is nihilism, others say you pass to another tier where you live forever, others say you return to earth as a termite, and still others maintain that there is no spearing and no death in heaven.

All animals which are hunted for food, and a few others, have souls. When these animals, including

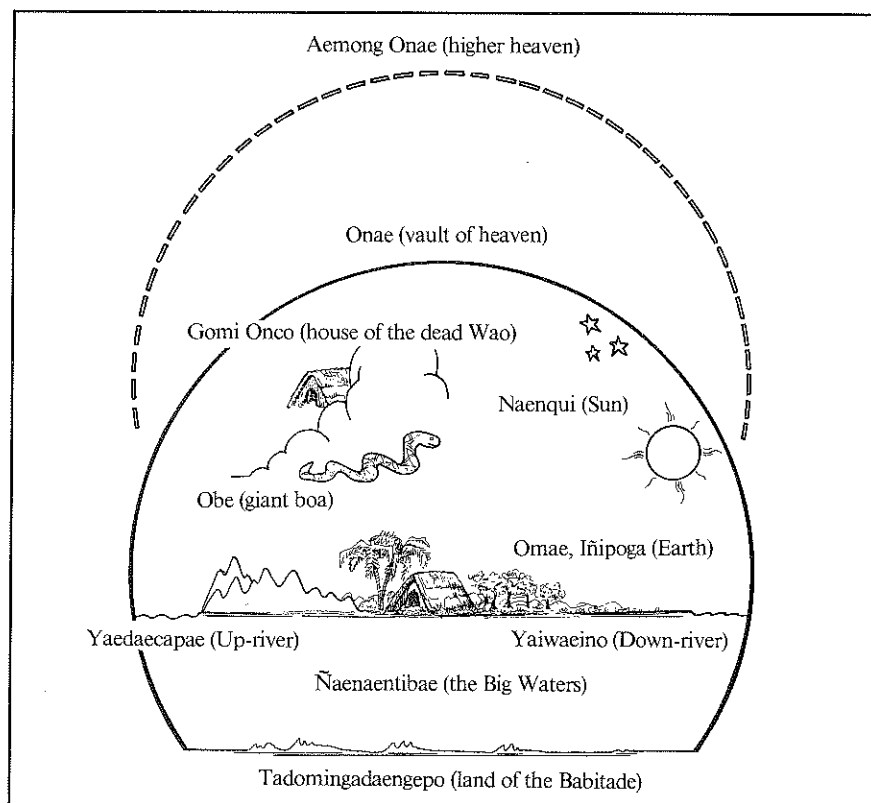


Fig. 6
Structure of the universe.

The existence of one or more «Aemonga Onæ» beyond the visible «Onæ» is a matter of controversy among the Waorani.

edible fish, are killed and eaten, their souls rise to heaven where they become a food resource for Waorani in the afterlife. Therefore, to kill game on this earth is to assure yourself of a good supply of meat in the afterlife. Trees that produce edible fruit are used in making tools, housing or weapons also have souls which ascend to heaven when they are cut down. Strangely, cultivated crops such as manioc do not have a soul. They will be in heaven, however, since certain Waorani have returned to earth and retrieved these plants after dying.

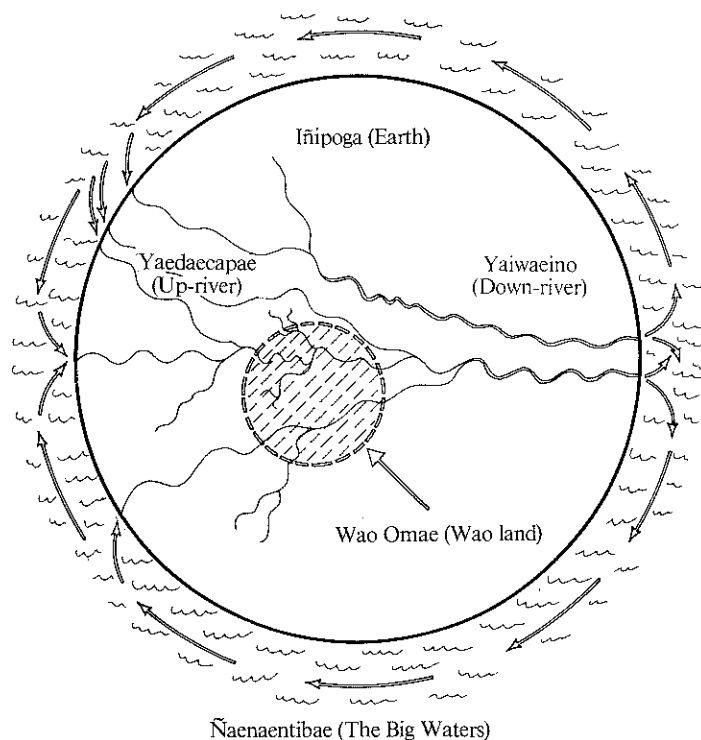
Tools such as axes and machetes do not have souls. Therefore they may be buried with a person at his death so he may take them along into the afterlife. Before a person dies, he or she may request that certain items be placed in the grave for later use. One of the reasons given for infanticide, burying a child with a father, is that the father requests it so he will not be lonely on the afterlife.

In traditional Wao belief most spirits are malevolent. The shaman, *ido*, has spirit helpers, *wenæ*, he can call upon to inflict sickness, accidents, snakebite, injury or death on his enemies, but he has none that he can call upon to prevent such problems. The *wenæ* live in heaven and come to the *ido* when he summons them. There, under the control of *mii* (*Banisteropsis caapi*), the *ido* communicates with the *wenæ*, instructing them where to go, in what form, and what to do. After they have accomplished their assignment, they return to him to tell him they have obeyed and then return to heaven. The victim falls to the intended malevolence, and others attempt to determine who might have sent the *wenæ*. When they determine the guilty person, they may go to him, accuse him and insist that he come cure the victim, since only the *ido* who sent the *wenæ* can cure the evil the *wenæ* has brought. Thus, just the act of asking someone if he is an *ido* is to accuse him of evil, and to ask someone to cure is to accuse him of having bewitched.

The *ido* walks a swinging tightrope. If he refuses to cure, they are likely to accuse him of worse things and kill him. If he agrees to cure, he is admitting that he sent the *wenæ*, and they are likely to kill him at a later date, especially if the victim dies. The *ido* who can develop enough credibility to be feared, but at the same time not be too threatening, is a clever man indeed. Part of developing that credibility lies in communicating with his « two children », usually two spirit jaguars or two pumas, to divine the location of a herd of wild peccary that the group can hunt. Beyond that, the Waorani feel that the *ido* does little that is socially redeeming.

Fig. 7
Earth as viewed from above.

Orientation is not given in terms of the four cardinal directions, but in terms of « *yaedaecapae* » (up-river), « *yaewaino* » (down-river) and « *betamonca* » (across land).



Technology

One of the foundations of egalitarianism is equal access to the resources available to a society. In traditional Wao culture all individuals had access to practically everything the other had, because everything was derived from the forest. With the exception of steel axes and machetes, which some individuals obtained through raiding, if someone needed something he could get it simply by making it himself or trading with someone who was adept at making the item. Since different people have different strengths and weaknesses, a very slight degree of specialization developed in a few areas of the culture. A man who makes better blowguns than others is asked to make blowguns, and a man whose poison seems to be more effective is asked for his poison. According to the system of generalized reciprocity which governs Wao interaction, these men can, in turn, ask for meat or some other item or service at a later date. This does not mean that they rely upon trading their blowguns or poison to get meat, only that they may use it on occasion. Instead, each man and each woman must be able to survive from the jungle on his own abilities.

The most common resources in a jungle are, of course, trees and other vegetation, and, consequently, almost everything the Waorani use, from housing to weapons, tools and even clothing is made from vegetative materials. The houses vary in construction, but are generally a thatched palm roof which extends to the ground. The dirt floor is usually six to seven meters wide and twelve to fifteen meters long. The corner posts and rafters are lashed together with vine, and the thatch is tied to the rafters with the same. The houses are simple in design, quick to construct and rarely last more than a year before they are abandoned or burned down and rebuilt.

The principle household item is the hammock which is made of twine twisted from dried strips of chambira leaves (*Astrocaryum tucama*). Each adult and child beyond the age of eight or so will have his or her own hammock, and two or three children up to six or seven years of age may sleep together in the same hammock for warmth. Other items woven or knotted from the same chambira twine include fishnets, carrying bags, and necklaces.

Almost every male over eight years old owns a blowgun. It is made of two or three-meter lengths of any one of various types of chonta wood (*Iriartes* sp.) about three centimeters thick and cut to match each other with a groove down the mating surfaces. When the two lengths are put together the grooves form a one-centimeter hole the length of the blowgun. The two pieces are wrapped with vine, sealed with beeswax and then the bore is enlarged, straightened and polished with a long rod which is worked in and out with water and sand as an abrasive. The final product is heavy but effective. The darts, thirty-five centimeters or longer, are shaved from a palm stem, dried and then coated with curare (*Strychnos* sp.). Fifty or so are carried in a bamboo dardholder slung around the neck, but in an emergency others can be made in the jungle while a man walks. These would not be poisoned, but they would be effective in bringing down small birds or squirrels. The poisoned darts are effective in killing any of the monkeys and birds as large as guans.

Hard chonta wood spears are also an important possession for any male. Each man normally keeps several stored in the thatch of the house to keep them dry and for quick access. During times of possible raiding he will also keep some hidden on a trail near the house where he can grab them if he is forced to flee. The spears are generally two to three meters long, three centimeters in diameter and circular in cross section for most of the length except for one end which is triangular with sharpened edges and notches. The Waorani sharpen both ends so that a broken spear is still functional. They decorate the spears with feathers, achote (*Bixa orellana*), cotton string and vine, and wrap the center portion with a rough vine to give a good grip when their hands are wet from rain or perspiration.

Even since acquiring steel tools, the Waorani have continued to fashion machetes from chonta. They use several styles, one for heavy chopping and two others for clearing weeds or preparing manioc. They use small knives from bamboo, which is razor sharp when first split, and from splinters of stone. Once a fire is started, they try to keep it burning or at least keep the coals glowing continuously. If somebody's fire goes out, they borrow hot embers from someone else's to rekindle theirs. Even when moving from one garden site to another, they will carry a smoldering piece of log so they will be able to start a fire quickly when they arrive. However, if for some reason they lose the fire, for example in fleeing from a raid, they can restart another with considerable effort with a hand drill of two pieces of

wood. A flat piece of thin, soft wood (*Bixa orellana*) is laid on the ground on top of kapok (*Bombax* sp.), and a hardwood drill spun between the hands into this until the friction produces an ember to ignite the kapok.

Storage and carrying containers include baskets woven from leaves or various fibers, bowls made from gourds, the fishnet with its wooden rim removed to form a string bag, bags of bark cloth for storing kapok, bark cloth slings to carry infants, and clay pottery. The pottery is plain with no decoration of any sort, no coloration, except for achote smeared over some storage pots, and no glaze. Vessels are made in four different sizes and shapes: for drinking, for carrying water, for cooking or for storage, for keeping the dart poison. Although zoomorphic vessels are not fashioned today, some of the older people say they can remember their grandmothers making vessels in zoomorphic shapes.

The Waorani cultivate small quantities of cotton to spin string from which they make their only article of clothing for daily wear, the *komi* or G-string. Both sexes wear the *komi* at all times, and to be caught without it would be a matter of shame since that would be nudity. They also wear ear labrets from balsa wood (*Cecropia* sp.) or chonta. The ear lobe is perforated with a small spine and then stretched as rapidly as possible until the hole attains a diameter of approximately four to five centimeters. The labrets are then painted white with a chalky clay and inserted in the holes to clearly show that this person is truly Wao, not cowode. Likewise, the hairstyle is a statement of being Wao. The hair of both men and women is cut across the front in bangs straight back to a point behind the ear where it hangs down to the shoulders. The eyebrows, facial hair and temples are usually plucked, which emphasizes the strong features in the brow.

At a fiesta the Waorani take special efforts to make themselves attractive to the opposite sex. They paint their ear labrets to a brilliant white, don woven cotton armbands, tooth necklaces, leg rattles and bright feather crowns, and paint their bodies with achote and various other mineral and vegetal pigments. Some crush exotic smelling plants over their bodies or wear them on their arms and in their hair.

As the preceding description demonstrates, Wao technology has few frills. Instead, it is quite simple and utilitarian. It must be. Moving as frequently as they do and with the uncertainty surrounding raiding, they are forced to keep their possessions to a minimum. To expend a great deal of time and energy in making and transporting items over long distances only to have them stolen or destroyed in a raid would make little sense. So they keep their life materialistically simple. They do not bother to carry their tools or weapons to the forest every time they go; if they are in the forest and have need of a tool, they do not return home to get one. They know that if they need something they can substitute – a sapling pulled out of the ground, a rock along the stream's edge, a vine hanging from the trees, a spine on a tree, or leaves growing along the trail. They are continuously improvising from the natural environment to survive. Just as the forest can be relied upon to provide what is necessary to survive at any given moment.

Unfortunately, there are strong pressures at work which could result in the Waorani losing their traditional lands (Yost 1979:14). If that happens, the techniques for survival in the forest that the Waorani have developed over the centuries will not be sufficient to assure their survival into the future. Without the land base, their unique style of adaptation cannot be continued. Without it, they will be forced to change or will disappear. They are so intricately tied to the natural forest (Yost: 1980b) that destruction of it or denial of access to it will have disastrous results for them.

ECUUA

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◁ The eruption of the volcano Cotopaxi in 1743
from a drawing of Vicente de la Fuente, taken
from a sketch by Juan de Ulloa.