

## 6. THE KITCHEN, FUEL, AND WATER IN VILLAGE LIFE

### 6.1 The Village Kitchen

All human societies prepare food with the use of fire, and most societies establish functionally specialized locations whose spatial organization and material equipment facilitate the lighting of cooking fires. When these locations are enclosed or partially enclosed spaces -- as is generally by no means universally true -- we are dealing with what in English would be referred to as the "kitchen". In rural Haiti the lighting of cooking fires is generally done in such functionally specialized enclosures.

#### 6.1.1 Importance of the Kitchen in Nutrition Research

Any location which is the physical setting for such important nutritional and energy-consumption behaviors would be interesting to the anthropologist. But for nutrition researchers the kitchen is a particularly critical location where macroeconomic factors and "micro-cultural" factors all interact to determine the types and quantities of foods that actually enter the mouths of children. For those concerned with the larger economic picture, the observation of different kitchens is one excellent setting in which to see firsthand the results of differential food availability. For those interested in "cultural" factors -- a phrase which is frequently a poorly disguised paraphrase for "practices by which adults deprive children of food even when they have the food" -- the kitchen is the best place to sit, observe, validate hunches, and -- most importantly -- correct the class-biased stereotypes that frequently contaminate the "cultural-deficiency" claims of those planners who rarely spend much time actually sitting in the kitchens of those whose culture they would like to improve. It is in the kitchen itself that the critical separation and distribution of food generally takes place, and it is therefore here that differential patterns of parental "selfishness" or parental "self-sacrifice" actually unfold, as the decisions are made as to how much food is to be given to each family member. If households at the same apparent economic level are nonetheless

achieving different levels of nutritional well-being for their children observation of their respective kitchens is an excellent setting in which to begin a search for the possible determinants of these differences.

But the kitchen is also an important setting — perhaps the most important setting — for detecting the way in which harmful microorganisms make their way into the bodies of young children. The mutual causal interactions between childhood malnutrition and infectious disease are now known to be important, and the kitchen is perhaps the most important conduit for the transference of these microorganisms into the bodies of young human victims.

This transfer is made possible because of other physical tasks besides cooking that are essential components in the food chain of most human groups:

1. Food storage. Except in the most hand-to-mouth settings, there will be a store of uncooked food on which the family gradually draws. The locally available food storage techniques can be an important determinant of harvest disposition and subsequent dependence on purchased food. But more immediately poor storage can lead to the introduction of microorganisms into food which may not be completely killed in cooking. But it is the ineffective storage of cooked food that is much more conducive to the proliferation of microorganisms.

2. Water storage. The sources and quantities of water used can also impact on infectious disease. But the differential use of different sources of water, as well as the effective covering of water, also help to minimize the danger of infectious disease. But these patterns also occur either in the physical confines of the kitchen or at least in close association with kitchen events.

3. Kitchen implement cleaning and storage. There are two functionally distinct subgroups of kitchen objects that human societies utilize: vessels of different sorts for holding food, and hand-tools for cutting or moving the food within and between these containers. But in addition most societies also have two behaviorally distinct subsets as well: vessels and tools used in the

consumption of the food once cooked. Since these latter rarely if ever come into contact with germ-killing levels of heat, their effective storage and post-use cleaning is important for protection against disease.

4. Fuel Storage. A fourth nutritionally and hygienically relevant pattern that can be observed in the context of the kitchen is the availability of fuel. As we will see, fuel shortages can exert a detrimental impact either by:

- a. reducing the time allowed for cooking, or
- b. reducing the number of meals that are cooked on a given day.

Observation of the storage of fuel sensitizes the observer to the movements and increasingly frequent domestic shortages of this once abundant resource.

In short, observation of the kitchen can provide a number of important insights into behavior domains that exert a strong impact on the nutritional outcomes of any human community. Kitchen behaviors are rarely the ultimate causes of malnutrition in a society. But the kitchen is certainly a methodologically useful context in which to generate hunches as to where the locally relevant determinants are to be found in any given social setting, and to generate suggestions as to how outside agents might provide useful inputs.

#### 6.1.2 The Kinanbwa Kitchen

In Kinanbwa the kitchen is always separated from the house itself. People must pass outside to reach the kitchen, and food must therefore also be transported at least short distances "under the open sky" to be brought into the house itself, which is where adult males are in principle supposed to eat.

Kitchen structures are almost always smaller and of inferior construction to houses themselves. Even a house with a tin roof and rock walls will nonetheless have a kitchen with wattle-daub walls and a thatched roof. The most salient structural difference between superior and inferior kitchens consists in the number of rooms. The ideal is to have a two-room kitchen. One of these

rooms, kept under lock and key, will be the storage room (cham depo) where food, fuel, cooking implements will be kept, along with the family store of uncooked food itself. ( The elevated food storage structures seen in other parts of Haiti are unknown here ). The other room will be the "fire room" (cham dife) where the fuel is kindled and the food actually cooked.

Table II shows that a healthy minority of houses do manage in fact to have a two-room kitchen complex,

TABLE 2  
Kitchen in Kinanbwa

Type	(N)	(%)
Two Room	87	43.7
One Room	73	36.7
Ba Van	5	2.5
No Kitchen	34	17.1
TOTAL	199	100.0

and some eight out of ten village houses will have at least a one-room kitchen. In such cases storage functions will be shared between the kitchen itself and the house. The third category, the ba van, is not a permanent enclosed structure, but is rather a temporary barrier erected against the wind. Those houses that have no kitchen are either temporarily using the kitchen of some neighbor or relative or are temporarily cooking in the house itself. Many of the houses that have no kitchen have no resident conjugal couple. Such is the case in houses where older children live but continue to eat from their parental cooking pot.

The vast majority of kitchens are without systematic ventilation. There are no windows that are left in kitchens analogous to the windows that are built in houses. The strategy is, rather, to have as confined a space as possible to avoid disturbance from the strong breezes that blow across the Plain at certain times of the year. The problem of smoke, which is especially

serious when firewood is the fuel, is partially alleviated by the widespread practice of allowing the kitchen to fall into at least slight disrepair. This means that there will be cracks in the walls and spaces between the roof and the wall through which at least some of the smoke will escape. But the cooking procedure nonetheless continues to produce smarting eyes even in experienced cooks.

### 6.1.3 Independent Households and Separate Kitchens

Demographers and census takers sometimes define the "household" as all those individuals who eat from the same cooking pot and sleep under the same roof. This notion is in basic accordance with the village definition of household membership (moun kay-la). The definition must be extended to accommodate those older children who may not sleep in the paternal house itself but rather in a adjacent depo or empty house. But such individuals are still considered as moun kay because they are still dependent on the parents (sou kont paran-yo). This dependence manifests itself principally in their eating from the same cooking pot. Furthermore, in Kinanbwa, the definition of household member must be further expanded to include those absent mothers and daughters who are doing business in Port-au-Prince. But they are also moun kay because their food comes from the same fund (sot nan mem lajan) as the food that enters the village cooking pot and their money is in fact responsible for purchasing much of the food that goes directly into that pot. In sum there is an intimate association between being considered a member of the house and some form of regular participation in the family cooking pot.

But this has an inverse application as well. It means that each household must have its own separate cooking pot. But a separate cooking pot ideally means a separate kitchen as well, and a separate inventory of the numerous objects that go into the equipping of a rural Haitian kitchen. There are many compromise arrangements found. For brief periods of time two couples (generally parents and a married child) may eat from the same pot and pool resources. But such arrangements are extremely short-lived and fragile. And other cases can be found where a couple will "borrow" the kitchen of a

close relative, an arrangement that is made feasible by the vacancy of many village houses due to involvement in Port-au-Prince trade. But these arrangements are also considered temporary, and eventually each couple will establish its own kitchen. We shall see later that there is a great deal of food exchange that unites households. But such food-mediated solidarity manifests itself, not in joining resources to cook in the same pot, or the same kitchen, but in sending across the compound plates of food that each household has independently cooked in its own kitchen. An independent kitchen, and an independent stock of locally used kitchen supplies, is a prerequisite for adulthood and social respect in Kinanbwa.

## 6.2 Village Kitchen Equipment: Schematic Overview

The standard equipment found in the village kitchens of Kinanbwa consists of three basic categories of objects found in kitchens around the world: Physical support objects, vessels to hold the various foods and liquids during preparation and consumption, and a series of hand tools used in the physical alteration and transfer of the foods. A young couple wishing to set up a kitchen in Kinanbwa will have to purchase more than *twenty different specific types of objects that fall under these three general categories*. And most of these object types (such as bowls, spoons, pots) are such that the couple will have to purchase several members of the category to permit efficient and/or socially dignified execution of the various food-related functions. Figure 2 schematizes the contents of the village kitchen, identifying the specific local objects that constitute the rural Haitian solution to the more general food preparation tasks found around the world.

Figure 2

## The Village Kitchen

Object Types	Functions		Names		
			English	Creole	
SUPPORT OBJECTS	for cooking pots	c. charcoal	brazier	récho	
		c. wood	3-rocks	toua roch	
	for misc. objs.		table	tab	
	for human		small chair	ti-chèz	
CONTAINERS & VESSELS	for cooking	solids	iron pot	chodyè	
		liquids	alum.pot	bom	
		coffee	coffee pot	kafétyè	
		for fetching water		bucket	bokit
		for storing water gener. use		large jug	kanari
			drinking	small jug	krich
		for charcoal		sack	sak
		for vessels & tools		basket	panyé
		seasonings		bottle	boutey
		miscellaneous		gourde	koui
		for eating		plate	asyèt
				bowl	bol
		for drinking		cup	godé
HAND TOOLS	for grinding	coffee, grain	mortar	pilon	
		seasoning	sml.mortar	ti-pilon	
	for straining		strainer	grèp	
	for cutting		knife	kouto	
	for food transfer, stirring		spoon	kiyè	

### 6.2.1 Physical Supports for the Cooking Pot and the Cook

The cooking fire is the functionally critical component of any human kitchen. In rural Haiti it is rare for foods to be placed directly on the fire. With the exception of ears of corn or occasional sweet potatoes roasted as snacks, food in Kinanbwa are cooked in pots of one sort or another, and these vessels themselves are placed on some sort of physical support associated with the cooking fire. There are two fundamentally different types of support found in Kinanbwa and throughout rural Haiti.

The most common traditional support for the cooking pot is a quasi-triangular arrangement of three rocks. This support strategy is used whenever the food is being cooked over firewood. The burning wood itself is placed directly on the earth floor of the kitchen between the three rocks, and the cooking pot is positioned on top of the rocks. The resulting distance between the cooking pot and the fuel permits ventilation despite the contact of the fuelwood with the ground. The heat generated by the flame extends high enough to permit efficient cooking despite the distance between the cooking surface and the fuel itself. The "three-rock" arrangement thus balances the need for heat with the need for simultaneous ventilation to ensure continuous combustion. This arrangement is a cross-culturally common rural cooking strategy that appears to have evolved independently in different parts of the world. It is still by far the most frequently found cooking arrangement in rural Haiti.

When charcoal is used, however, the "three-rock" cooking pot arrangement becomes technologically infeasible. Because charcoal produces no vertically rising flame, its heat permits cooking only if there is no gap between the charcoal and the bottom surface of the cooking pot. The vessel must therefore be in direct contact with the charcoal. The "three rocks" would have to be removed to permit this direct contact. But this removal of the "three rocks" would create a ventilation problem. The floor surface would block air from beneath and the directly superimposed cooking vessel would eliminate ventilation of the charcoal from above. The fire would die.



The solution which has emerged in Haiti and in many other parts of the world is one in which the charcoal is placed on a cast iron brazier whose surface is located several inches above the ground and is perforated with numerous small holes large enough to permit ventilation from below but small enough to prevent loss of the charcoal. This cast-iron platform is referred to as the recho in Haiti, and is now a standard part of the kitchen equipment of even poorer rural households. The three rocks will be used for firewood, but the recho will be used in those increasingly common cases where the food is being cooked with charcoal.

Both the three-rock structure and the recho are placed directly on the earth floor of the kitchen, creating a situation in which the cooking pot is no higher than knee-level for the cook. This is in contrast to traditional cooking structures in Central America, for example, where the fire is made on a platform that permits women to maintain a normal standing position while cooking.

The rural Haitian woman, in contrast, must maintain her body in a lowered position while tending the cooking pot. Though most women have learned to adopt a squatting position for long periods, a special type of low chair (ti-chez-ba) is also part of the standard equipment of the rural kitchen. This permits a respite from the fatiguing squat that the woman would otherwise have to maintain.

Some kitchens will also have a table as part of kitchen furniture, but this is exceptional. Tables take up space and since most of the work is done in a squatting or low sitting position, there is little use of the waist-level table as a working platform that is found in other settings.

#### 6.2.2. Complementary Cooking Pots: Chodyé and Bom

Some world regions have fuelwood-based cooking technologies which interpose a fixed cooking surface as a vehicle for heat transfer between the flame and the food itself. The Central American tortilla, for example, is prepared by placing the ground corn directly on a fixed clay surface that forms part of the stove itself and is heated from below. Rural Haitian

cooking techniques do not employ any such fixed heating surface on which food is directly placed. Rather the food is first placed in a cooking pot. It is the surface of this pot which then conveys heat from the fire to the food.

All cooking pots in Kinanbwa are made of metal. There is no recollection among older informants that it was ever done differently. That is, households have always been dependent on purchase for their cooking pots, a practice that probably dates all the way back to the colonial period.

There are two types of cooking pots that are commonly placed over fire in the village. The most important is a cast-iron pot referred to as a chodye. It is in the chodye that cornmeal, rice, millet, plantains, and most other viv are cooked, as well as the occasional meat and fish that are consumed in the village. Chodye come in three general sizes. Every household in the village will have at least one chodye, and most have more than one.

But recent years have seen the increasing importance of lighter metal pots as well. Made of either aluminum or tin, these lighter pots are referred to as bom. Whereas the chodye is associated with the making of heavier vivs, the bom is seen as the most appropriate vessel in which to cook beans, soups, or any other liquid or quasi-liquid food. Though beans could theoretically be prepared in the chodye, village women prefer the bom for at least two reasons: 1) it comes with a lid that permits effective covering of the beans during a particular moment of the cooking, and 2) it is simply "better" to cook beans in the bom than the chodye.

The bom has other advantages as well. Because they are light weight, larger boms can be used as substitutes for the buckets that are normally used to fetch water. And also even the largest bom can be purchased for substantially less than the \$4.00 that must be paid for a large chodye. But the bom cannot be used as a substitute for the chodye. It is too thin to withstand the long, intensive heat necessary for the proper cooking of cornmeal and other grains. Thus both types of cooking pots

now play essential roles in the village kitchens, and all but the poorer households will have at least two different sized members of each of these two cooking pot categories.

### 6.2.3. Eating Vessels and Eating Utensils

One occasionally hears chilling accounts of rural Haitian eating habits that depict a level of poverty so extreme that:

- 1) people have no plates from which to eat; and
- 2) adults are so hungry that they deprive children of food.

Such accounts leave one with the impression that in rural Haiti when the cooking is done, there is a mad dash into the kitchen as family members elbow their individual way to the pot to scoop out a few morsels of food with their bare hands before other family members beat them to it.

Needless to say, such schemes are not part of the daily routine of village kitchens, nor have we ever witnessed such an intrafamilial free-for-all. Every village house has a variety of bowls, plates, and gourdes and in fact the plat manjé ("plate of food") is one of the most appreciated gifts that has become a local symbol of solidarity. We shall see below that the food is spooned out onto the plates (or plate equivalents) by the cook in a fairly fixed, traditional order. But for here it is only necessary to point out that eating does not as a rule occur directly from the cooking pot. As is true in most human societies, there is an intervening distribution process in which the cooked food passes first from the pot in which it is cooked to a bowl, plate, or some other functional equivalent that will be handed to the individual family members.

The rule is that each family member eats from a separate plate. Even children will each be given their own separate plates of food. If children are observed eating from the same plate, probably one of two things is happening:

1. An older sibling is allowing a younger sibling to eat some of the food from his or her plate. Such food sharing is a very common scene. But the younger child will have received his or her own plate as well.
2. Neighbors' children have been given a plate of food. When children from outside the compound "happen" to be present when food is being given out, they may receive a collective plate from which they can eat. There are strong rules governing such food gifts, and they will be discussed below.

The "plate of food" that each person in the family receives may not be dished out onto an object that an outsider would literally call a "plate". In fact most food is dished out onto deeper rimmed vessels which in English are more akin to the "bowl" than to the "plate". These deep-rimmed plates are more suitable to the serving of corn meal and liquid bean puree, which is such an important meal in the village. But other objects can be used make shift as plates as well, especially koui (hollowed-out half shells of tree-grown gourdes) and the flat lids that come with the earlier-described bom cooking pots. Women and children are more likely than adult males to be given food on such substitute plates.

### 6.3 Cooking Fuel: From Firewood to Charcoal

We were impressed at the manner in which fuel scarcity had become a nutritionally relevant issue in the period between our earlier and later research. Formerly taken somewhat for granted, the availability of fuel at any given moment is now a delicate factor that can influence not only the thoroughness with which a given meal will be cooked, but even the frequency with which meals can be cooked. The increasing status of fuel-as-a scarce-resource is merely one new element in the stress that has come over the rural economy.

For the most part, charcoal is an urban fuel. Most cooking in rural areas, even areas which supply charcoal, continues to be done

with firewood. But the very charcoal economy itself undermines the local firewood base in regions of intensive charcoal exploitation. Kinanbwa is located in an area that used to be an important supplier of charcoal to Port-au-Prince. But charcoal is made from trees that grow wild. Never has any Haitian peasant community grown the wood from which charcoal is made. The disappearance of original wood stands, and the competitive, premature cutting of secondary stands before full maturity, has resulted in the virtual disappearance of large stands of trees. This has undermined, not only the charcoal economy, but also the traditional patterns of firewood gathering.

The economic response of villagers was to become occasional purchasers of charcoal themselves for their own domestic fuel needs. But what began as an occasional behavior (which was already present during our research in the early 1970's) has become now a regular and essential expenditure for many village households. And now the presence or absence of fuel in a house has become one of the dimensions which distinguishes better-off from worse-off families. In the following sections we shall discuss the manner in which villagers now manage their domestic fuel supply. As with so many other domains, what unfolds before the observer in the village of today is not "traditional fuel use patterns," but rather the evolution of traditional patterns toward a situation of increasing scarcity.

#### 6.3.1 Traditional Firewood Gathering

Firewood gathering has traditionally been the work of women and children, especially the latter. Children would go out in small groups to gather small amounts of firewood. The major traditional source of firewood was the deadwood gathered from wild growing trees. The ownership of the land was never an obstacle in traditional firewood gathering. Most land in this part of Haiti is privately owned. Public land or "community woodlots" are unknown in this particular region.

Much land on which trees stand is collectively owned by a kin group, since local practice subdivides land that is good for cropping but frequently leaves intact land that is not used for agriculture. But even persons with no ownership rights can gather wood.

Some people push these rights somewhat further and will actually chop branches off trees for firewood. But the practice of chopping entire trees down for firewood, which is the prevailing practice in much of Central America (where firewood provision is a male task), is unknown in this part of Haiti. Widespread tree chopping is, rather, associated with the charcoal economy. Firewood gathering has traditionally been directed toward dead wood or toward branches of living trees.

Not all dead wood is material for firewood gathering. There are about half a dozen dead trees whose trunks and branches lie untouched right in the residential compound of Kinanwa. These dead trees, however, are saved from the firewood gatherers by their status as boua sèvis ("service trees"), that is, trees inhabited and claimed by one or another group of locally venerated spirits. The wood can be used to light fires only for ceremonies directed toward those spirits.

### 6.3.2 The Making of Charcoal

Most charcoal has traditionally been made by peasants who continue to use firewood for their own domestic use. The making of charcoal has never been done on any large scale with a view to domestic use. Any domestic use of home-made charcoal is generally in the nature of a marginal utilization of a small portion of a product that was made principally with a view to sale. But as firewood has become scarcer, those individuals in the community who make charcoal will extract increasingly large portions for their own home use.

The favorite trees for making charcoal locally are the gayak and the bayaonn trees. The charcoal made from these woods is superior in at least two senses:

1. A given volume of charcoal from these trees lasts longer. It is "heavier". Lighter woods have charcoal which burns too fast.
2. Charcoal from these trees is almost completely smokeless. Inferior brands of charcoal emit smoke and leave larger quantities of ashes.

The charcoal from the bayaonn and gayak trees is thus able to fetch a higher price on the market.

Kinanbwa villagers who make charcoal use the traditional earth kiln that is found all over Haiti. The tree is chopped down and the wood is split into smaller pieces. These pieces are stacked in horizontal layers on top of a base of smaller wood. Depending on the number of layers, occasional levels of small kindling wood may be inserted. When all the wood is stacked, the entire structure is covered carefully with pay (vegetal debris) to block out all air, and this pay is in turn covered with a layer of earth. Care is taken to leave no apertures through which wind could enter. A small entry hole is then made at the bottom of the pile and some kerosene will be poured over the kindling wood accessible through the hole. A fire is then struck and the hole once again covered up. Depending on the size of the wood pile, the carbonization process may take two or three days. The kiln is then demolished and the charcoal maker rakes out (ralé) the charcoal, generally with a hoe, and puts it into sacks.

The producer will get a better price if he sells the charcoal in one of the three regional markets within several hours travel from the village. But persons with a small amount of charcoal will rarely undertake long distance transportation expense and will prefer to sell their charcoal for about three gourdes less per sack to the unending stream of itinerant merchants who scour the countryside looking for charcoal.

### 6.3.3. Growing Scarcity of Wood

Most of the trees in the region have been cut down because of this charcoal making activity. In fact the entire Cul-de-Sac Plain has lost its former status as the principal supplier of charcoal to Port-au-Prince, a role that has now fallen to the Northwest. But not only has wood for charcoal grown scarce. Essential house-building wood has also become scarce and expensive. The wood to build the frame of an ordinary village house now costs nearly \$100.00. Older informants recall when it could be purchased for \$10.00.

In view of the growing scarcity of wood and its increasing value, at least some farmers have begun taking a more jealous proprietary interest in the bavaonn trees remaining on their land. Neighbors still have rights to dead wood without asking the owners' permission. But a stranger slashing a living branch may now be challenged.

Farmers who have such trees to protect may themselves use the branches for charcoal. But if the trunk is straight it will be saved for use in house frames. The general principle with respect to tree care is: trees will be used for charcoal only if they are not good for lumber.

But what is important in this is that the scarcity of wood has not led to the spontaneous emergence of the planting of wood trees. They are still seen as something that leve pou ko-1, grows by itself. The suggestion of growing wood trees, which we discussed with peasants, was one which they found promising and somewhat intriguing. But our own notions that they would plant them for charcoal were quickly corrected by most informants, whose own view of the matter was that, if they took the trouble to plant the trees, they would wait the extra time necessary to have the tree usable as lumber. Only the crooked growing trees (krochi), or the branches of the straight trees would be used for charcoal. It is also interesting, and revealing of the cash-orientation of the farmers, that no informant spontaneously mentioned the use of



trees as firewood. They would undoubtedly use some of the wood for this purpose, but they entertain the ideas of new technologies principally insofar as these innovations are viewed as a possible direct source of new cash income. Their response is palpably less enthusiastic concerning suggestions whose effect would be to enhance their own domestic self-sufficiency without simultaneously generating more cash. This response pattern should be taken into account by planners of nutrition interventions.

#### 6.3.4. Charcoal vs. Firewood: Patterns of Change

The turn to charcoal has occurred principally because of the growing scarcity of firewood. People would prefer the return of the good old days, when wood was so abundant that nobody had to cook with charcoal. Firewood is now so scarce that children would have to spend several hours a day in ranging longer distances to find increasingly smaller amounts of wood. Families without cash to purchase fuel are now forced into the use of brambles and thorn bushes as fuel, with disastrous results to the efficiency of food preparation. Now men themselves have become scavengers of wood. It is now a common sight for men to lug large quantities of wood from the fields to their homes, a behavior that would have been most unusual in the wood-abundant days of yore.

But though the turn to charcoal has occurred only through necessity, the turn has definitely occurred. There is no family in the village which uses only firewood or only charcoal. It is a matter of the balance. Out of 204 houses, 166 (81.4%) reported using more charcoal than firewood. This charcoal is in its vast majority purchased. This means that the purchase of fuel has now become a central element in the village food economy. In this sense the village of Kinanbwa has probably gone further along the road to commercialization than most other rural communities. The purchase of food is an essential part of the economy of most Haitian communities. But now even the purchase of fuel is working its way into the rural economy of at least some regions. That is, increasing economic stress in rural Haiti does not lead to withdrawal from the cash economy, but rather to deeper, more disadvantageous involvement.

#### 6.3.5. Charcoal vs. Firewood: Patterns of Preference

The incorporation of charcoal in the rural economy has occurred by economic force. But villagers concur in their views that it is superior to firewood in its cooking properties. In the first place, the food cooked with charcoal is viewed as having a better taste: less smoke enters the meal. Secondly, it is easier to cook as well, smoky firewood causing smarting eyes. Thirdly charcoal permits unencumbered cooking in all weather. During heavy rains water enters the kitchens, which are left purposefully with openings to achieve at least some ventilation. This interferes with the cooking process. Furthermore, since eating is not done in the kitchen, at least not by adult males, rains make the transfer of food from the kitchen to the house a very wet and muddy process.

One option is to cook in the house itself. But the smoke emitted by firewood makes cooking in the house impossible for families who depend on that fuel. A family with charcoal in contrast will simply move the rechos to the house and do most of their cooking there during heavy rains.

This means that the disappearance of wood has led to dependence on what is viewed as a superior fuel. But the expensiveness of this new fuel led to the evolution of new cooking practices, which are worth discussing.

#### 6.3.6. Conservative Cooking and Reduced Meals: Effect of Fuel Scarcity

We can identify at least four effects of the increasing scarcity of firewood and the dependence on charcoal. Three of these could exert negative nutritional impact.

1. Fuel Conservation Strategies. People recall the days when fires would be kept lit all day long, at least in the form of embers. Such perpetual fires reduced the time invested in the starting of the fire to the lighting of the morning fire. Persons with abundant charcoal may

still do this. (It will never be done if little children are to be left alone for any time, out of protection, not only for the child, but also for the kitchen and the house). But most people now put out the remaining embers after cooking to use them again the next meal. Now cooks have to calculate precisely how much charcoal they need, and the most frequent error now is to underestimate. Children are constantly being sent across the village to purchase emergency quantities of charcoal in the village boutiks discussed earlier, to keep the cooking fire from extinguishing, thus delaying the meal preparation time. The delays are frequently prolonged when an adult in the house finds that the quantity of charcoal given by the boutik owner is insufficient with respect to the money paid and the adult himself will return to discuss matters. When the mother is absent and the cooking is being done by a daughter, admonitions will be given to make sure that the fuel lasts until the cooking is done. Fuel conservation is a new skill that cooks in times past never needed to learn.

2. Cooking with only One Fire. Discussions of rural cooking generally refer to "the cooking pot and the fire", a practice which we have followed. In reality, however, many households will simultaneously light two fires. It will be recalled that the ideal meal consists of both a viv and a vyann. These are virtually never cooked simultaneously in the same pot. When fuel is abundant, two fires will be lit. Cornmeal, for example, will be cooked over one, while bean sauce will be cooked over the other. Where there is fuel scarcity, however, the family will light one fire, cooking first the bean sauce in the bom and only then cooking the chodve of cornmeal. This can lengthen the cooking time by nearly an hour. But such one-fire meals now appear to be the most common practice in the village.

3. Undercooked Meals and Less Boiling of Water. Fuel scarcity can simply lead to removing the food from the fire before it is adequately cooked. Furthermore earlier reference has been made to the practice of boiling all water given to young infants under three months old. But such water boiling becomes more difficult under conditions of fuel scarcity.

4. Smaller Meals or One Meal Days. We also have evidence that the absence of sufficient fuel may actually lead to the cooking of smaller meals. Under normal circumstances, of course, it is the quantity of fuel that is adjusted to the quantity of food. But where fuel is lacking, the opposite may be the case. Furthermore at least some "one-meal" days in certain households were produced, less by absence of food, than by absence of fuel. Ordinarily households will be able to make the fuel match the food. But now it is becoming less unheard of for the contents of the cooking pot to be downwardly adjusted to the absence of sufficient fuel.

#### 6.4. Water in the Domestic Economy

Food, fuel, and water are the three key ingredients in most human kitchens. We have seen the increasing stress that has come over the first two resources in Kinanbwa. We are also familiar with other settings in which water is a scarce resource during certain times of the year and have been told that in certain regions of Haiti cooking may be constrained by the scarcity of this resource. In Kinanbwa, however, water is still abundant and readily available for domestic use during the entire year.

##### 6.4.1. Sources and Uses of Water

There are three major sources of kitchen water in Kinanbwa : wells, springs, and rainwater. The latter is used by only very few families, who capture it from tin roofs in drums. Thus domestic water can be said to come basically from wells and springs.

All families get water from both sources. The water table of Kinanbwa is very high and there are some half a dozen wells in the community. The wells are associated with the names of the householders who dug them, but there is no restriction of access to any of the wells. This is at least partially due to the fact that houses in Kinanbwa are almost all built on commonly-owned inheritance land. Village custom allocates exclusive usufruct to the builder of a house, but not to the digger of a well.

Virtually all of the wells in Kinanbwa have saline water which is virtually never used for drinking. Certain of the wells in the nearby town, located on higher ground, have fresh water which many consider to be potable. But for drinking and cooking, the villagers will rely on the water from one of two springs located between twenty minutes and a half an hour by foot from the village.

In discussing the different taste of water, villagers use the same dichotomy that they were found to use in comparing the tastes of different foods: light (leje) vs. heavy (lou). The fresh water of the springs is light; the saline water of the wells is heavy. Fortunately for the village, there is a fairly regular supply of "light" water for drinking, which is threatened only when exceptionally heavy rains inundate the area around the spring.

The four major uses to which water is put are not, of course, substantially different from uses found in other cultures:

1. Drinking
2. Cooking
3. Bathing
  - a. of young children
  - b. of older children and adults
4. Washing
  - a. pots, dishes, and utensils
  - b. clothes
  - c. sprinkling down the patio

As we have indicated, all drinking water must be dlo dous (fresh water) in terms of the absence of salinity, and leje in terms of its taste. For neonates, drinking water must not only be leje but also boiled.

Cooking is also done only in fresh water. But this is principally because saline water causes the cooking process to be prolonged. The perceived disadvantage of this is less in terms of time less than in wasted fuel.

Bathing is done either in local irrigation canals or -- quite frequently -- in large basins of water brought to the house. The water may be saline. Most bathing is done in saline water, not because there is a preference, but because such water is available right in the community rather than through a twenty minute walk. Even young children will be bathed in this local well water. But in the earliest weeks of life the water will be heated up on the fire. Then for several months more, the daily-afternoon bath will be done with dlo soley -- water placed in basins and left to warm in the sun. Adult males and females will frequently bathe from basins. Males will always go inside the house. But custom permits females to bathe outside of the house or on the front porch, the only social restriction being that they cover their lower genital area.

The washing of clothes is done also with more easily available salty water. Most clothes washing is done in standing water several hundred yards from the village. But on other occasions water will be brought to the house and the clothes washed in a basin. Part of daily housekeeping also entails sweeping floors and the open space in front of each house. But water will be first sprinkled on the ground of the floor. This is one of the first tasks done each morning.

The washing of cooking and eating utensils, pots, and pans is also done first thing in the morning. Village practice treats this as a task to be done before a meal rather than after. The prevailing technique is to place all the dirty dishes and other objects in a large plastic basin,

which is filled with water. Soap is also used, but with skyrocketing prices its use has become visibly more conservative (as was seen to be the case with fuel as well). Sometimes a local leaf (lyan savon) will be added to the wash water, and the cleaning itself may be done using leaves. Sticky foods will be removed either using sand or a type of scouring pad made of leaves. Families that can afford it may buy a metal pad from the market. The rinsing will be done either in the same or another basin once the washing of all objects has been done. Water use is sparing in the rinsing, since the same young girl who is doing the washing and rinsing may be the one that will have to fetch an extra bucket of water if her use of the water is too prodigal. The pots, plates, cups and utensils are dried and stored in huge baskets.

#### 6.4.2 The Fetching and Storage of Water

Water is brought to the kitchens by women and children. A common village sight is a group of children of both sexes, each carrying a vessel suited to his or her size, parading off together to fetch water. Children about to go after water may stop by the houses of friends to look for company in this task. Along with their empty buckets or pots, they will also have clothes or twisted leaves which they will interpose between their heads and the filled water vessels. Carrying is done on the head.

Young boys will quickly "outgrow" water carrying. Teenage boys, and even pre-teens, will be very self-conscious about being seen carrying out this activity defined as a female task. Girls may not hesitate to laugh at an older boy who is seen carrying water, a practice that results in the effective extinction of water-carrying behavior in boys. Older boys may congregate near the sources of water, but this is to bathe (always "downstream") or to joke with the girls. The absence of females in certain houses because of female trading activities, will sometimes result in water carrying by adult males. Only lower status males would do this, but it does not appear to be exceptionally embarrassing. But despite these exceptions the vast majority of the water that enters Kinanbwa

kitchens is brought there by young females. Sometimes, especially in larger families, a girl may have to make up to eight trips for water on a given day. Younger girls have been seen to cry in protest when they have been ordered back for yet another bucket of water. After the third or fourth trip, the socializing function of water gathering can no longer compensate for its tediousness. And the girl may find no companions to accompany her in any case.

There are four major vessels used in the domestic water system. Two of these are for both carrying and storage; the other two for storage only. Both buckets and large bom (the aluminum cooking pots) will be used to carry water. The bom may be preferred for getting drinking water because the bom comes equipped with its own lid and can be covered. Drinking water is generally covered. The well water brought in buckets, used for cleaning and bathing, will not generally be covered.

But much water is transferred from the carrying vessels to clay containers. The larger of these is referred to as a kanari and will be used to store water for common use. But many families also have smaller clay jugs, called krich, which are used exclusively for drinking water. These krich each come equipped with their own clay lids. They are able to cool the water. Visitors may often receive portions of krich water poured into special glasses reserved for visitors.