

***THE WOOD TREE AS A PEASANT CASH-CROP:
AN ANTHROPOLOGICAL STRATEGY FOR
THE DOMESTICATION OF ENERGY***

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Though differing in emphasis from each other, several attempts to explain rural Haitian poverty, including the field studies of Moral (1961) and the more recent literature searches by Zuvekas (1978) and Lundahl (1979), have concurred in their identification of deforestation and soil erosion as major impediments to economic well-being in rural Haiti.¹ Largely in response to Zuvekas' findings, several planners in the late 70's, aware that large sums of money had been wasted on unsuccessful reforestation and erosion control projects in Haiti, asked whether the root of the failure might not lie in Haitian peasant land tenure insecurity, in an unwillingness on the part of the Haitian peasants to make long-term investments in land in which they felt they had little long-term security.

Though such reluctance would make perfect anthropological and economic sense among a truly landless peasantry, this hypothesis appeared at odds with much existing anthropological research which indicates that Haitian peasants not only consider themselves owners of much of their land, but demonstrate their security quite concretely by investing thousands of hard-earned *gourdes* in the purchase of new plots whenever the opportunity arises (cf. Herskovits, 1971; Métraux, 1951; Underwood, 1964; Murray, 1977). In 1978, and at greater length in 1979 (Murray 1978; 1979), I proposed an alternative anthropological approach to the erosion problem, one that laid the blame for failed reforestation projects not on "Haitian peasant land tenure" or on the conservatism of a frightened peasantry, but rather on several crippling flaws that weakened the very design on which most of these projects had been based. The problem resided neither in the

culture nor the psyche of the Haitian peasant, the argument went, but in the behavior of planning and implementing institutions.

This general critique was accompanied by a specific series of alternative recommendations. The conceptual cornerstone was the suggestion to cease promoting the tree among peasants as a sacred, untouchable legacy for future generations (a message which is ignored at any rate) and to begin promoting the planting of fast-growing wood as a *privately owned cash-crop planted by peasants on their own land*. The marketability of wood as a fuel has been evident for decades in Haiti and had been discussed or documented in a series of studies specifically addressed to that issue (Earl 1976; Ewell 1977; Conway 1979; Voltaire 1979). During a prolonged visit to Haiti, the forester Michael Benge (1978) was particularly instrumental in acquainting local planners and implementers with the technical possibilities of fast-growing wood.

My own recommendations as an anthropologist focused principally on the institutional, organizational, and motivational dimensions of the task. I argued that if certain anthropological insights were applied and certain institutional barriers removed, a flow of resources would be activated, and Haitian peasants would plant millions of trees on their own land. These claims were put to the test when an \$8 million project, based directly on these recommendations, was prepared by USAID. At various points in the planning process, other research was contracted by this agency on one or another specific questions related to the emerging proposal (Smith 1980; Salinas 1980; Smucker 1981; Murray 1981). Despite heavy objections from several quarters against one or another controversial feature of its design, the Project was finally approved. The field operations began in the Fall of 1981.

The project has now been underway for over two and a half years. In view of the newness of the project and the controversial character of some of its design features, definitive judgments about its success must be deferred to the future. But the unprecedented and unexpectedly rapid planting of over five million project trees by Haitian peasants on their own land has given preliminary validation to several of the basic anthropological hypotheses. This burst of voluntary, unremunerated tree-planting by perhaps ten thousand peasant families all over Haiti renders the project at least worthy of description. It will be the purpose of these pages to provide such a description.

BASIC CONCEPT: THE IDENTIFICATION OF RELEVANT FLAWS

When queried by friends and neighbors as to how he is, a Haitian peasant experiencing particular economic stress at the moment will frequently respond: *A, ou konnen, monche, neg-la bare!* This incisive Creole answer ("Well, to tell you the truth, pal, this guy's blocked.") places the peasant in the same intellectual camp as many contemporary anthropologists. For the description of his own poverty as the *blockage of some flow* that could be occurring but is not indicates that the peasant has given his implicit approval to an entire tradition of anthropological theory and model-building, one that focuses not on static structures but on dynamic flows.

It is here being argued that the well-documented national catastrophe of soil erosion, and the behaviors that will reverse these trends, are best analyzed as a series of flows. More specifically I will propose a model which deals with three interlinked but partially autonomous flow-mediating structures:

1. the environmental structures and channels which directly mediate the flow of *agrarian energy*.
2. the structures linking peasants to the external world and involving them in the *flow of cash*.
3. the community-external institutional structures which, though mandated to convey resources and skills to rural communities, more often than not have siphoned off resources into the pursuit of alien institutional or personal objectives.

This latter point is particularly important. Both planners *and* peasants have expressed their frustration over the manner in which millions of developmental dollars sent to Haiti have been blocked from reaching the rural communities for which they have been earmarked. Some of the blockages have been erected before the front gate, as expatriate donors or implementers, with impeccable legality, structure financial flows in a manner that directs much of its volume back toward their own institution or those of other compatriots. But many other barriers have been erected within Haiti itself, strategically placed in such a fashion that much of the impeded flow is diverted, not back to its overseas fountainhead, but into the local chambers of Haiti's many institutional gatekeepers.²

Simultaneous attention to all three flows is therefore essential. An anthropologically informed planning strategy will avoid the common error of placing excessive attention onto "technical" problems—the flows of energy and resources into and out of Haitian peasant fields. Technical planning degenerates into a deceptive and trivial ritual unless equal

attention is given to redesigning the institutional channels which the resources must traverse before reaching peasants, and to structuring any technical input in a manner which holds out promise to the peasant of eventual cash flows. If the institutional channels are not clean, the money will be diverted and the peasant will be excluded. If on the other hand the project does reach him but holds out little realistic hope for an eventual cash-flow in his direction, he will nod a courteous thank you, return to what he was doing, and ignore the project.

AGRARIAN ENERGY CIRCUITS AND THE VANISHING TREE

Both planners *and* analysts must choose somewhere to start. I propose that we begin first by looking at the ground level structures.

From the point of view of the hills of Haiti, analysts have identified correctly (though implicitly) two problems. One concerns a material flow which has been occurring and which should be stopped; another concerns a material flow which is *not* occurring and which should be activated. The dysfunctional flow concerns Haiti's most significant and most tragic export. I am referring here, not to coffee, cacao, or anything of the sort. I am talking of the uncounted, irretrievable tons of precious topsoil that each year washes into the Caribbean sea. Though they agree on little else, all serious analysts of Haiti have correctly identified soil erosion as the gaping hole which sabotages all efforts, not merely to make the ship move forward, but even to keep it afloat.

Topsoil is lost primarily in the wake of the removal of the major physical structure which has protected Haitian soil: the tree. Where there is a forest canopy cover water reaches the ground, not in unimpeded torrents, but in softened drips and flows. And where there are arboreal root systems, most topsoil remains safely attached to the hillside even during heavy storms. It is the removal of this protective tree cover which unleashes the destructive downward flow of topsoil.

But the removal of the tree has also provoked the cessation of the second flow referred to above: the one which should be occurring but which is not. Throughout human history adaptive tropical hillside farming systems have maintained themselves through cycles in which the nutrients removed during the cropping stage are restored during a lengthy fallow stage. But the restoration comes principally through the mediation of the tree. The shifting cultivator removes the tree cover, burns off the desiccated vegetal debris (thus covering the plot with a veil of organically rich ash which increases yields during the first cycle), crops the ground for two or three cycles, and moves on to new ground to permit the regeneration of the tired

plot. The replacement of humus and nutrients occurs principally during this fallow period. The postharvest stubble from the abandoned plot yields to scrub, which in turn yields to thicker brush, which finally yields to the secondary growth tree. It is principally the tree, with its organically rich foliage and (in the case of some botanical families) its nitrogen fixing root systems, which serves as the major efficient cause of soil restoration.

This provides us with a very important corrective to certain popular criticisms leveled at the peasant. The cutting of trees by the Haitian peasant is not an irresponsible behavior against which he must be educated or coerced. Tropical cultivators have been cutting trees for some 15,000 years of human history. What is problematic is *the elimination of the fallow cycle* which would permit the soil restoring tree to carry out its historically recuperative role (cf. Boserup 1965).

CASH FLOWS

The curtailing or elimination by Haitian peasants of the restorative fallow phase can clearly be attributed on the one hand to demographic stress. Enough land is simply not available to cultivators to permit them or their family members to maintain the 15 or 20 year fallow cycle that would permit natural regeneration of the soil. But demography is only part of the story. Involved in the drama is another factor: the dependence of the Haitian peasant on *steady flows of cash*.

Field research by anthropologists, geographers, and economists has exposed the weaknesses of the traditional stereotype of the "subsistence peasant." Though pop articles may still talk about "subsistence farming" in rural Haiti, it is not at all clear that the Haitian peasants "produce most of what they consume and consume most of what they produce." Even allowing for regional variation, it appears more accurate to say that most Haitian peasants produce largely for a cash market, to which large percentages of each harvest are consigned. Furthermore much of the contents of their cooking pots are similarly purchased from that same cash market throughout much of the year. The model of the self-sufficient peasant is generally inaccurate and constitutes a faulty theoretical base on which to found development projects.

This involvement of the peasant in a cash economy activates three mechanisms which impede the tree-mediated regeneration of the soil.

1. *Intensive cropping independently of food needs.* Where a farming system's goal is to feed its members directly (as was the case in many former tribal systems) there is no incentive to produce substantially more than can be directly consumed. Food storage constraints and food spoilage problems

make systematic overproduction irrational. But where there is a cash market, there is no such built-in ceiling to the intensity with which land will be worked. The pull of additional cash will be much more vivid and compelling than the much vaguer and fainter negative payoffs from degrading soil.

2. *The cash-oriented livestock economy.* As is true of many other peasantries, the Haitian peasant uses livestock as an important element in his cash-generating repertoire. Livestock often serve as a bank. One tactic is for cash profits from food harvests to be invested in animals. Interest to the investment comes in the form of weight increases in the animal purchased and in terms of the offspring of female animals. But livestock must be fed. And the current practice of many peasants is to picket cattle in recently cropped fields. But this in turn profoundly alters the course of the regenerative process. Even if the land is left out of cultivation for a long period, the brush and tree species that would otherwise emerge are destroyed by the livestock. The land is rapidly taken over by grass, the regenerative cycle is broken, and the landscape changes to a barren savanna.⁴ This tragic sequence has already led to the removal of uncounted thousands of hectares of Haitian soil from agriculture. That is, in addition to population growth per se, cash-oriented livestock raising can provide a partially autonomous impediment to the reappearance of the soil restoring tree.

3. *The commercialization of wood.* But in addition to these factors, the general growth of the population and the appearance of an urban sector which depends on purchased charcoal for fuel energy has endowed the tree with a rapidly increasing economic value. The ancient practice of ignoring dead or fallen trees has disappeared forever. Even in the 19th century there was a vigorous lumber extraction industry (spearheaded not by the peasants but by lumber exporting companies). This industry continues, especially in pine regions. But more recently the growing charcoal market has triggered off feverish tree cutting behavior among poorer peasant groups who, during much of the year, have no other option for ensuring the continual flow of cash on which the Haitian peasantry as a whole has become so irrevocably dependent.

These observations can be rephrased in the idiom of resource flows. The current agrarian system in Haiti emerges as one in which major cash flow mechanisms operate in a manner which unleashes destructive downward soil flows and which subsequently impede the tree-mediated soil-recuperation flows that characterize tropical horticulture under more benign conditions. And let nobody underestimate the importance of the cash flows to the peasant himself. The peasant's awareness of and concern for this vital cash flow are much stronger and more pressing than his concern about

destructive soil flows or about the missing flows of nutrients back to the soil. What is central to the consciousness of the agronomist is present but *tangential* to the daily concerns and maneuvers of the peasant. And sadly, what is primary to the peasant—the need for a short term flow of cash income—is often poorly perceived or even dismissed as “short sightedness” or “inability to delay gratification” by many well-paid technicians presumably hired to help him.

CONCEPTUALIZING A SOLUTION: PROPOSAL FOR A SHOTGUN MARRIAGE

The problem can be seen as partially residing in the operation of incompatible flows. Is there no way of producing a technical “package” which maneuvers both flows into the same direction? I propose that we look carefully at the “demon” which is currently blamed for putting the final touches on the environment of Haiti—the market which currently exists for charcoal and construction materials. It is this market, many would argue, which sabotages forever any hopes of preserving the few remaining trees in Haiti.

I would like to argue that it is precisely this market which can restore tree growth to the hills of Haiti. The demon can be “baptized” and joined in wedlock to the ecological imperatives whose major adversary he has been up till now. With creative programming we can turn the tables on history and utilize the awe-inspiring cash-generating energy present throughout Haitian society in a manner which plants trees in the ground faster than they are being cut down. If this is to be done, it must be the peasant who does it. But he will *not* do it voluntarily or spontaneously *unless* tree planting contributes to the flow of desperately needed cash into his home. I propose that the mechanism for achieving this is the introduction of *cash-oriented agroforestry*.

For any such model to work it would be useful if the following principles were incorporated into planning.

1. New inputs must be capable of activating a flow of organic material back to the soil.
2. New inputs must be simultaneously capable of impeding or at least diminishing the current flow of topsoil down from the hillsides.
3. New inputs, to be adopted by peasants, must simultaneously contribute to or enhance the currently precarious short-term flow of cash on which peasant households depend.

To achieve these goals we can perhaps turn to the wood tree. Not only has the wood tree traditionally held soil on the mountainside and restored organic matter to the soil when local conditions permit an adequate fallow period. Most important, the wood tree and its products—lumber and charcoal especially—are now known by the Haitian peasant to be an effective source of cash.

The task of planning is to *formalize, systematize, and improve* what is already a latent process in rural Haiti. Up until now, the integration of the tree into the cash-flow regime of the peasant has been done in a fashion which prevents its simultaneous functioning as a soil-preserving and soil-regenerating mechanism. Creative planning, however, can structure inputs in such a way that the tree can be used simultaneously to serve both sets of general functions, the economic/financial functions of interest to rural households, and the long-term ecological functions of interest to macro-planners.

One specific strategy for achieving this integration in rural Haiti would be the design of a cash-generating peasant agroforestry system. In such a system, the vanishing tree will be reintroduced. Now it will function, not as a spontaneously regenerated piece of vegetation, but as a consciously planted and carefully maintained cultivate. That is, a conceptually simple but structurally significant link will be forged between two behaviors which have hitherto remained independent of each other:

1. The Haitian peasant's interest in cash-cropping.
2. The Haitian peasant's interest in cutting wood for sale.

The technical *and* economic prerequisite now exist which permit these two powerful elements of Haitian peasant behavior to be joined to each other for the first time in Haitian peasant history. It is now technologically possible for fast-growing wood trees to become one more crop which the peasant deliberately plants with the conscious purpose of harvesting that wood. If this is done wood trees would cease being treated as gifts of nature and would become a cultivated *crop*.

If this is achieved, both ecology and economy can be served. The peasant will be in effect protecting and restoring his soil with this new crop, but he will be achieving this as a secondary function subservient to a much more immediate imperative, that of providing cash to feed, clothe, and shelter his family. It is this transformed integrated farming system producing both food and wood that is here being referred to as *cash-cropping agroforestry*.

ORGANIZING THE RESOURCE FLOW

The preceding sections have focused on identifying and articulating the underlying principles of the Haiti Agroforestry Project. The following section will turn to a brief discussion of some of its operational features.

Overall Institutional Arrangements

From the point of view of its major funder, USAID, the Project's most unorthodox and controversial feature is its use of non-governmental implementing channels. An \$8 million grant was divided among three "Private Voluntary Organizations." One of these, Operation Double Harvest, was funded principally to provide seedlings, produced in small containers, which could easily be shipped to different Project regions in Haiti. The other two grantees, Pan American Development Foundation (PADF) and CARE, were funded to do outreach activities, to establish the organizational and delivery mechanisms which would interest peasant households in tree planting, and to deliver the seedlings to those communities and households that had agreed to participate. CARE focuses its agroforestry activities in the Northwest corner of Haiti. In contrast, Proje Pyebwa (the Creole name of the office established under the grant to PADF) works throughout the rest of Haiti.

The Choice of Tree Species

The project is based on the fast-growing wood tree. Among the major species used thus far by the Project are *Leucaena leucocephala* (aka Ipil Ipil); *Cassia siamea*; *Azadirachta indica* (aka Neem); *Casuarina equisetifolia*; and *Eucalyptus camaldulensis*. For regions of higher altitudes pines (especially *Pinus occidentalis*) are used. And some slower growing more valuable woods such as mahogany and cedar have also been used.

Not all trees are planted, of course, in every community. The particular combination of trees that will be sent to a particular community depends on the altitude, rainfall, and soil conditions in that particular community.

Some observers have expressed surprise at the Project's choice of the wood tree over the fruit tree. In a country beset by malnutrition, the fruit tree strikes such observers as a better option than the wood tree. Under more careful scrutiny, however, the advantages evaporate.

From the point of view of contribution to rural income, the fruit tree is a risky and questionable option. All the fruit in a region is ripe at the same time; prices consequently plummet. Preservation and storage options are virtually nonexistent for the ordinary peasant community. The presence of hundreds of thousands of mangos rotting on the ground throughout Haiti gives eloquent testimony to the low credibility of the fruit tree as a cash

crop. Nutritionally, the oft-mentioned reliance of many Haitian peasant communities on mangoes and other fruit at certain times of the year may be true. But this dependence is a signpost pointing, not to a solution, but to a problem. Five hundred mango trees will provide the ordinary peasant household with neither an adequate homegrown diet nor enough cash to purchase adequate food. In contrast, five hundred wood trees, sequentially harvested by the peasant on a sustained yield micro-rotation, will provide income to permit improvement of what is already a major food acquisition device in rural Haiti: purchase in local markets. Fruit tree seedlings can be provided as a supplement; but the fast-growing wood tree still remains the most promising economic option for generating cash for the peasant and, consequently, for being planted by peasants in large numbers. At the present it appears to be the best foundation on which to build tree planting activities in Haiti.

The Production of Seedlings

One of the most important technical elements of the Project is the use of seedling produced in small containers rather than in the heavier and more commonly used polyurethane bags. The transportation dilemmas created by the latter are enormous—the ordinary pickup truck can carry only 250 seedlings. With the small-container seedlings, a pickup truck can transport up to 20,000 seedlings in one trip. Furthermore, the peasant himself can carry over 500 transplantable seedlings as opposed to five or six seedlings in heavier containers.

During the first two years of the Project, most of the seedlings used by Proje Pyebwa were produced near Port-au-Prince by one of the grantees. The seedlings were shipped by truck to the rural areas. This was a startup strategy to permit rapid takeoff of the Project. At present, however, more than a dozen regional nurseries have been set up. The production of seedlings has thus been decentralized and brought closer to the recipient communities themselves.

Organizing the Flow of Information, Seedlings, and Money

With some exceptions, the staff of Proje Pyebwa does not attempt to organize peasant communities themselves. Rather they link up with local “operational” PVOs who are already involved in development activities in different parts of Haiti.

The most common operational arrangement utilized by the project is a “contract” signed between the Project and the local PVO. The Project agrees to furnish seedlings and technical assistance to the PVO and the peasants whom the PVO assists to enter into the project. In addition, the Project makes available a fund from which the PVO can pay local

animateurs, village residents who will organize the enrollment of tree-planting peasants, the transmission to these peasants of the various technical options, the actual delivery of the tree, and the periodic survival surveillance during the 12 months after planting.

The standard contract has several components, the first of which is a statement of general principles to which both parties agree to adhere.

1. The tree as a cash crop.
2. The need for fast-growing wood trees.
3. The need to integrate trees with preexisting agricultural patterns.
4. The need for the peasant to plant trees on his own land as a condition of security that he will be the eventual beneficiary of the tree.
5. The agreement to plant a minimum number of trees.
6. The right of the peasant to harvest the trees when they can be of economic use to him.

These general principles are then followed by a specific agreement by the PVO to hire a designated number of animators to plant a designated number of trees on the land of an agreed-upon number of peasants. A further element is a detailed description of the responsibilities of the *animateur* at all phases of the project. This is followed by a specification of the manner in which the *animateurs* will be paid—generally on a “contract” rather than a salary basis, according to the number of peasants for whom the *animateur* is responsible. Finally there is a detailed budget.

To assist the *animateurs* in their task, a series of Creole language data sheets has been designed. Each sheet has a specific function, and one sheet is filled out at each contact between the *animateur* and the peasant tree planter. This type of reasonably tight follow-up is necessary in view of the large numbers of trees and peasants involved in the project. It structures the activities of the *animateurs* in a careful way, provides at least some basis for assessing their performance and calculating their remuneration and, above all, gives at least some systematic managerial information on all subprojects.

Constructing Messages for Haitian Peasants

With the assistance of the collaborating PVO, Project staff will meet with farmers in potential tree-planting communities. Several messages are generally included in the presentation: “*Tree planting need not be for your children or your grandchildren only. You can make money from trees you plant.*” The trees provided by the Project grow rapidly. Under proper conditions, they can yield charcoal harvests in four years time. Even conservatively speaking current market conditions are such as to yield \$1.50 per tree (gross revenue) if the trees are harvested for charcoal. If the trees

are planted at two meter by two meter spacing (to permit two or three seasons of continued food cropping among the trees), a hectare of land can hold 2,500 trees. Assuming replanting of trees that do not survive the transplanting trauma, this means a potential gross revenue of \$3,750 from each hectare of land over a four-year period from the trees alone, not counting the additional revenue from the crops which can continue to be planted until shade competition becomes too great, and the revenue from animal grazing once the crops have been removed and the trees are large enough to permit grazing without damage to the trees themselves.

The general response of the peasants to this message has been unexpectedly positive. The negative experiences which many communities have had with some reforestation projects (especially those in which tree planting has been imposed from without) have not sufficed to blind peasants to the economic value of trees. What most surprises the ordinary peasant group to whom this presentation is made is:

1. the large number of widely spaced trees that can fit onto a unit of land;
2. The manner in which cropping can continue for the first two or three seasons and in which livestock grazing can subsequently be reintroduced.

That is, an effort is made to present fast growing trees which can mesh with and enhance rather than compete with the preexisting cropping and grazing patterns on which the Haitian peasants currently depend.

This presentation is made with several caveats. The very rapid growth rate, it is explained, occurs on reasonably good soil. On truly eroded, impoverished soil the growth may be slower. But it is also emphasized that some of the species, if left to grow even longer, will eventually be good for construction, even for sawed boards. The yield per tree, in terms of cash income, is substantially higher when wood is sold for construction purposes rather than as charcoal.

During conversations of this sort the peasants themselves frequently point out that wood can be used for both purposes on the same plot. If trees are planted more closely, charcoal wood can be cut down after only two or three years, leaving more widely spaced trees for larger construction growth. And even the branches of these trees can be used for charcoal, saving the trunk for more valuable lumber production.

To sum up, the presentation to the peasant community takes the form of a dialogue in which members of our project familiarize themselves with the economic and ecological underpinnings of the community, and in which the community becomes acquainted with the options.

“Take a Look for Yourselves.”

If there is local interest expressed, representatives of the community will be brought to a nursery using the small container system and to a plot where mature trees stand. Here they can see for themselves two critical patterns:

1. The rapid growth of the trees which we are offering.
2. The ease with which these trees can be transported to the planting site and placed into the soil.

Not every farmer can be brought to a site. In most cases the site visits are organized for those farmers who will serve as the local organizers of the Project for other farmers.

“You Will Be the Owners of Any Trees Planted.”

During the preliminary community visit, and during subsequent visits to the nursery and established outplantings, repeated assurances are given that the peasant who accepts and plants these trees is the owner of the trees. The project forfeits all rights in the tree once the peasant accepts it and plants it on his land. This reassurance is of incalculable importance. One of the fears that has undermined the effectiveness of many reforestation activities has been the fear on the part of peasants that the trees planted are not theirs. Even peasants who plant the trees on their own land are more often than not unsure, when questioned, as to who owns the trees. Many will say they belong to *konpanyia*—i.e. “the company,” a common and revealing way of referring to organizations such as FAO, USAID, and other project organizers, to distinguish them from *leta*, the State. In other regions peasants have been heard to refer even to trees planted on their own land as *pyebwa leta*—the government’s trees. To deal with this problem, peasants are assured—by us and by the local PVO—that they, not the Project, are the owners of the trees.

“As Far As We’re Concerned, You Can Cut the Trees When You Want.”

Another message that is repeated frequently during initial contacts and site visits is the message that our project, far from considering the tree to be a “sacred” object which must never be touched, views the tree rather as something which *should* be harvested when it is mature. This raises the issue of laws regarding tree cutting.

Most Haitian laws which deal with the tree emphasize prohibitions against cutting trees, or the need to secure permission and/or pay a tax for the privilege of cutting a tree. In general the use of the tree as a source of cash has generally been viewed by authorities and planners as a type of destructive irrationality on the part of peasants. One reforestation program

after another has come in with the finger-wagging message that the tree should be seen as a sacred soil-conserving, rain-drawing object which the peasant should plant but never cut. Tree cutting is viewed, not as a legitimate economic behavior, but as a type of economic misbehavior. This has produced a situation in which the peasant's use of the wood tree as an element in his cash-flow regime has been done in an implicitly surreptitious fashion. The peasant is aware of the existence of laws which in one manner or another would tend to restrict his tree-cutting behavior were the laws obeyed. And local forest agents are becoming stricter in forcing would-be tree-cutters to pay the required taxes. Despite the legal impediments, peasants do "regle afè yo"—settle matters—with local authorities and continue to cut trees, sell the wood, and generate cash income.

The Project openly discusses—with PVOs as well as peasants—the Haitian laws concerning the cutting of trees. It is stated clearly and repeated several times that the Project can make peasants the owners of the trees that are planted, but that they must continue to deal with local authorities as they have always done. They need not ask the Project for permission to cut the trees. But neither can the Project free them from the "tax" that local forest vigilantes currently charge, even for wood that a person cuts from his own property.

Despite open discussion of this matter, the Project has yet to encounter a peasant community that hesitates to plant trees because of fear of future government restriction in cutting. The virtually unanimous opinion of peasants consulted on this matter is that a person who plants wood will be able easily to "regle afè-li avèk leta," settle matters with local authorities. The key variable in Haiti is ownership of the tree that is planted on one's property. Once the ownership right is guaranteed, the peasant feels free to plant trees.

To emphasize this ownership the Project goes so far as to insist that if, after a year or so, the peasant changes his mind about the trees, he is perfectly free to pull them out. He will never get more trees from the Project. But he is free to do to the tree whatever he wants. The function of such an unusual message is to remove any fear in the peasant's mind that the Project retains any ownership rights in the tree which the peasant plants on his land.

Explaining the Main Conditions of Entry into the Project

If a given community has at least two dozen or so individuals who are interested in proceeding forward with a local tree-planting subproject, the Project explains to them the conditions of entry. There are only two genuine "conditions."

1. *The farmers must plant a minimum of 500 trees each.* (Even at two by two meter spacing, this is only a fifth of a hectare, as explained above.) This criterion and condition tends to be more startling to those outsiders who somehow "know" that peasants couldn't possibly have land for that many trees than to the peasants themselves, who generally do have within their own holdings, or those of their family, underproductive land which could be intercropped with 500 trees. In fact many peasants request more than 500 trees when the space requirements become clear to them.

2. *The trees must be planted on the land of the farmer himself.* Because the tree is being introduced as a crop, it should be planted on the same type of individually controlled land that other crops are planted on. Project staff scrutinize with skepticism any proposal that comes in requesting assistance for "communally owned woodlots." Requests for "communally owned" inputs generally come from organizers of peasants who are trying to encourage peasants to become more "community minded." But Project Pyebwa does *not* set out in principle to "improve the community orientation of the peasant." This may or may not occur in different cases. The Project is more concerned, however, with assisting farmers to treat wood as a crop. But for wood to become a genuine crop, it has to be planted as other crops—that is, on land owned and operated by the peasant himself. There are regions of Haiti where peasant *groupman* do in fact have some communally run productive activities. The Project does furnish trees to such groupman, but only where the peasant members of the group are also willing to take trees for their own personal land as well. The Project further ascertains whether a "communal organization" proposal truly corresponds to what the peasants in the region are interested in undertaking, or is rather the "pet project" of some higher-level developmental professional.

Preparing for Delivery of the Seedlings

1. *Site Visits.* For every peasant that has enrolled in the project, a rural amateur visits the plot of ground where the 500 trees will be planted. Information is gathered on the slope and general soil type of the plot, on the previous and current agricultural uses to which the plot has been allocated, ownership status of the plot, and the manner in which the peasant plans to plant the trees.

2. *Technical Instruction.* Efforts are made to instruct farmers not only in the proper techniques for planting and caring for the trees, but also in the different options available to the farmer for integrating the tree into his own preexisting agricultural and livestock regime.

3. *Setting a Date for Delivery.* Based on general rainfall patterns in the region, a tentative delivery date is decided upon, to be confirmed when the rains actually begin falling. Each farmer has to come to the nearest roadside to pick up his consignment of 500 trees on the day appointed.

4. *Packing the Seedlings.* A delivery system has been designed which permits seedlings to be removed from the containers in the nursery and rapidly shipped to the peasants who will plant them. Cardboard carton boxes are prepared and lined with heavy plastic paper. The seedlings are thoroughly watered before packing. Once a box is full, the plastic lining is folded over the top of the seedlings as well and the flaps of the carton are folded in. This system preserves the moisture of the seedlings and permits them to survive several days in the box.

5. *Delivering the Seedlings.* The project foresters are each responsible for a region of the country and are each furnished with four-wheel drive diesel pickup trucks. Each pick-up can transport some 20,000 seedlings—that is, enough to furnish 40 farmers with their consignment of seedlings. Dates and dropoff points will have been prearranged with the farmers.

6. *Following Up on the Trees.* Each plot where 500 trees have been planted is visited at fixed intervals for twelve months after planting. Survival counts are carried out and questions are posed concerning the causes of any tree mortality that has occurred since the previous visit. In addition observations are made concerning the presence of other crops planted among the trees, to observe new patterns of land use emerging among peasant tree planters.

PRELIMINARY PROJECT RESULTS

1. The effectiveness of this approach in stimulating the planting of trees by peasants must be judged as impressive in any quantitative measure. The original goal was the planting of three million trees in four years. The three million trees had already been planted before the Project had reached its second year. As of current writing, the Project is in the middle of its third year and has already planted nearly six million trees. In terms of sheer numbers of trees, then, the results are promising.

2. Numbers of trees planted is by itself a potentially deceptive measure of project output. An anthropologist would in fact reject this output as one more failure if the six million project trees ended up on the property of two or three landowners. Of great importance, therefore, is the fact that the trees of Proje Pyebwa stand on the property of over ten thousand peasant families in hundreds of Haitian villages. The Project has succeeded in stimulating unprecedented peasant interest in tree planting and in structuring resource flows in such a way that the outputs do in fact reach their intended peasant beneficiaries.

3. From an early pattern of collaboration with a limited range of local PVOs, the Project has now entered into collaborative arrangements with

several dozen PVOs, many of them with similar projects in other countries. The replicability of the Project is thus being enhanced.

4. From early dependence on one major source of seedling supply, the Project has encouraged the creation of more than a dozen regional nurseries, managed not by Project staff, but by the PVOs themselves, who will remain working in Haiti long after the Project has terminated.

5. Tree survival rates vary by region, the principal determining factor being the amount of rainfall. In some regions a project will have to plant 120 trees to have 100 alive after two years. In drier regions a Project may have to plant 300 trees to have 100 remain alive. But what is important is that mortality appears to be associated, not with livestock deprecation, but with climatic stress. That is, the peasants are not only planting trees; they are also according them the same protection against livestock which they accord to their other crops. This suggests that the central objective of the project is being met: the introduction of wood as one more crop in the agrarian inventory of the Haitian peasant.

6. From initial dependence on one donor the field staff has been able to generate more than a half million dollars in funds and/or technical support from Switzerland, Canada, Belgium, and Ireland. The expatriate composition of the field team has also diversified. In addition to the Americans who formed the original expatriate technical core, the Project has received inputs from individuals born in Canada, Belgium, England, Switzerland, and Iran. The importance of this international diversification is to be measured not only in terms of additional resources to this particular project, but also to the diffusion of an approach to other donors. If Proje Pyebwa were ever to succumb to certain pressures that have menaced it from the outset, these other donors and PVOs will have had the experiences permitting them to continue this approach to tree planting on their own and to replicate it elsewhere.

THE FUTURE OF THE PROJECT

The preceding presentation leaves many unanswered questions in the three domains of planning on which the Project rests; technical planning, micro-economic planning, and institutional planning. Foresters, for example, will be dissatisfied with the low survival rates in some drier areas and insist on the need for better technical control in these areas. In the same technical vein soil conservation technicians will be interested in the development of more sophisticated "packages" in which the tree is more effectively combined with mechanical measures of erosion control. Very little emphasis is given to the erosion control function of the tree in the current modus operandi of the Project.

Anthropologists, in turn, will keep a close eye on the microeconomic impact of the cultivated tree on the overall flow of food and money into the peasant household. Will the tree genuinely be integrated into the agrarian activities of the peasant in a way that does not diminish the food-growing activities of peasant households? And will the increased commercial value created by the tree on formerly unproductive land lead to new land-acquisition dynamics by non-peasant groups? When the trees are harvested and the wood or charcoal sold, what percentage of the profits will go to intermediary truckers rather than to the peasants themselves? To repeat: an anthropologist would find many unanswered questions in the preceding presentation.

But all of these technical and microeconomic questions are *secondary* to what continues to be the major black cloud on the horizon of the Project: the institutional issue. If the flow of trees onto the hillsides is ever interrupted, it will probably be due to the behavior of one or another institution or bureaucracy.

The most hotly debated feature of the Project—from its earliest planning days to present—is the non-governmental nature of its implementation. The funds come principally from expatriate “public sectors.” But the implementers are in their entirety private citizens of several donor nations working in collaboration with hundreds of private local Haitian organizers. Had the project gone through the local public sector channels normally entrusted with such funding, there is good reason to doubt whether six *thousand* trees would have been planted in the time that six million trees have been planted using the new channels.

Though some Haitian officials have privately congratulated Project staff and urged them to continue current policy, others have criticized this non-governmental tree planting as being a *de facto* affront to the sovereign right of Haitian government authorities to control and use donor funds as they see fit. The expatriates who planned the Project, many of them experienced in rural Haiti, were unmoved by these bursts of urban, middle- and upper-class patriotism and were much more impressed during the planning stage with the pleas of peasants all over Haiti to channel the Project *away* from government routes. But the flag-wavers *continue to elicit sympathetic echoes among recently arrived expatriate administrators*. There is still a belief that such projects *should* be run through governments. And a recent evaluation of the Project has suggested that in its next phase it should establish operational links with the Haitian government. This recommendation stems not from operational considerations (the flow of trees would probably stop), but from political and philosophical considerations. And what is most paradoxical is the fact that the “government-to-government” arguments tend to come, not from the current high-level management of the

USAID mission in Haiti, but from younger officers who are philosophically uncomfortable with “development through Private Voluntary Organizations,” who have no particular personal involvement with Haitian peasants, and who perhaps have visions of succeeding in Haiti where their predecessors have failed—visions of themselves backstopping a multi-million dollar government-run reforestation project, before moving on to some other country.

Dreams are to be encouraged. But in an institutional portfolio filled with problem-ridden projects and multimillion dollar farces, let would-be repairmen direct their attention towards projects that need remedial attention. It would be tragic if young theoreticians were allowed by their superiors to tamper with one of the few Projects successfully transferring donor resources to Haitian peasants. Freedom from interference by governmental officials or government employees is one of the major design features that has kept the trees flowing in Proje Pyebwa. It requires no degree in Anthropology to know that, “if it ain’t broke, you don’t try to fix it.”

NOTES

¹The project to be described in these pages is funded principally by USAID/Haiti, though additional grants have been made directly to the field office by the governments of Canada (through the Mission Administered Fund of the Canadian Embassy in Port-au-Prince), Switzerland (through Helvetas, a developmental organization that also operates with private funds), and Belgium (through its support of a volunteer Belgian technician working in the Project).

The first draft of this paper was written while I was Director of the Haiti Agroforestry Project of the Pan American Development Foundation, one of the USAID grantees. The paper has been revised to incorporate more recent information on the Project.

Not present at the Conference were four individuals to whom I owe a special debt of thanks: William Sugrue, who made possible my initial research on reforestation; Michael Benge, the forester who first introduced me to the world of agroforestry and to the “miraculous” *Leucaena leucocephala*; W. Stacy Rhodes, the Program Officer who pushed through, managed, and defended the interests of the Project at all phases; and Fred Conway, a fellow anthropologist who coordinated the overall Project and shared with me two turbulent years in the “belly of the beast.”

²There is a widespread and well-founded belief that developmental funds entrusted to Haitian government Ministries may never reach the peasants in any useful form. What is perhaps less well known to many Americans is the fact that most diversion of American development funds away from peasants is done by those American institutions—public and private—that are created or hired to carry out development activities. These matters will be dealt with in a forthcoming publication.

³Perhaps the strongest argument for the “non-subsistence” nature of the rural Haitian economy can be found in De Young (1958). But evidence for the cash-orientation of peasant life is also present in Simpson (1940), Métraux (1951), Moral (1961), Schaedel (1962), Murray

(1977), and other descriptive studies of rural life. The bulk of "cash-crops" produced are not export crops, but crops consumed internally in Haiti. For descriptions of the market system through which these crops move, see Mintz (1960), Underwood (1970), Locher (1975), Murray and Alvarez (1975), Girault and LaGra (1975).

⁴For an analysis of changing Haitian landscape patterns see Palmer (1976). The evolution of landscape in the Dominican Republic had earlier been analyzed by Antonini (1968).

HAITI— TODAY AND TOMORROW

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Study

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