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LIBERIAN STUDIES JOURNAL

Edited by:

**Svend E. Holsoe,
University of Delaware**

**David M. Foley,
University of Georgia**

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Cover photograph: Stone sculpture, Paynesville, Monrovia area.

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PRELIMINARY REPORT ON AN ARCHAEOLOGICAL
SURVEY OF LIBERIA

Creighton Gabel, Robert Borden, Susan White

During the course of 1973, the three authors¹ undertook an archaeological survey of the Republic on behalf of the U.S. Educational and Cultural Foundation in Liberia. Although detailed data analysis and description are still to be completed, an outline of the results is presented below.

This survey represented the first full-time project of its kind in Liberia. Earlier activities and observations reflect the spare time investigations of non-archaeologists or, in two instances, of archaeologists whose commitments of the moment lay essentially elsewhere. As a result, there are very few publications on Liberian archaeology, and in fact most of the previous collections and minor excavations have gone unpublished.

In 1965-67, Dr. Cecily Delafield,² while working for the Episcopal Mission Office in Liberia, conducted some work with the help of USAID and Peace Corps personnel in the western coastal area, Lofa County, and Cape Palmas. She reported a series of old settlements and burial sites of presumed Iron Age date between the mouth of the Lofa River in the west and Buchanan to the east as well as two microlithic sites in the vicinity of Monrovia and Marshall. She also did a bit of digging in Loma and Bandi country in the northwest and participated in some salvage work on a burial island off Harper in the far southeast. Rather little detail on any of these finds has been reported.

For five years prior to the initiation of our project, the U.S. Geological Survey carried out a major mapping survey of Liberia in conjunction with the Liberian Geological Survey. Dr. Warren Coonrad, the director of the American field team, was kind enough to pinpoint for us the locations of a number of archaeological sites and stray finds on 1:250,000 quadrangle maps. A number of these sites, which

1. All from the Department of Anthropology and African Studies Center of Boston University. Gabel and Borden were supported by research awards from the Fulbright-Hays Program and White by a fellowship from Canada Council.

2. C. Delafield, "Recent archaeological investigations on the Liberian coast," (paper read at the Liberian Research Conference, Bloomington, Indiana, 1970).

almost certainly include some of Delafield's coastal ones, were relocated and further examined.

In 1966, the Ministry of Information, Cultural Affairs, and Tourism reported the discovery of a burial or cache containing sherds and iron objects at the ELWA missionary station just outside Monrovia. In the same year, a farmer at Mehnkolo in Grand Cape Mount County accidentally uncovered a cache of pottery while digging clay for a house floor. Nineteen whole vessels were recovered and are now in the National Museum at Monrovia.

In 1968, Dr. John Atherton³ of Portland State College made a three-week swing through Liberia in the course of an archaeological project based in Sierra Leone. He reported a surface site, or series of them, along a logging road southwest of Zleh Town, near Tchien in Grand Gedeh County, which appeared to be of "Sangoan" type. Atherton also visited a ceramic site north of Zorzor in Lofa County, probably the same one from which came three pots donated to the BU group by Pastor Joseph Wold of the Lutheran Church. This cache, as described by Wold, would appear to have been a ritual one similar to that at Mehnkolo, in this case exposed by a road-cut. The site is probably Loma, but according to Atherton a few sherds he picked up here resemble pottery found in Sierra Leone.

A German geographer, Willi Schulze,⁴ has briefly described a number of old iron-smelting sites in Kpelle territory and in the Putu Range. Most of the furnaces and slag heaps seen by him and/or us appear to be of recent origin (Fig. 1) although two or three may be older. A radiocarbon date (GX-3401) of 270 \pm 190 years (A.D. 1680) was obtained by us from a buried smelting furnace at Kpotomai in the Wologizi Range, northwestern Liberia. We were able to discuss Schulze's work with him while he was spending a brief period back in Liberia. One member of our group, Susan White, made particularly good use of his suggestions and information later, while collecting oral traditions connected with smelting and smithing.

A North American archaeologist, Kenneth Orr,⁵ who spent five years working for the Liberian Government as a community development advisor has described several sites: abandoned towns or villages in Bong County; a ceramic site at Bernard Beach in Monrovia; a settlement and burial site at Kle, northwest of Monrovia; and two ceramic sites near Salayea in northwestern Liberia. Orr carried out a brief salvage excavation at Kle, recording a number of features in the process.

3. J. Atherton, "Archaeology in Liberia: problems and possibilities," West African Archaeological Newsletter, XI, (1969), 19-21; "Liberian prehistory," Liberian Studies Journal, III, (1970-1971), 83-111.

4. W. Schulze, "Early iron industry in the Putu Range in Liberia," University of Liberia Journal, IV, (1964), 29-35; "Early iron smelting among the northern Kpelle," Liberian Studies Journal, III, (1970-1971), 113-127.

5. K. Orr, "An introduction to the archaeology of Liberia," Liberian Studies Journal, IV, (1971-1972), 55-79.

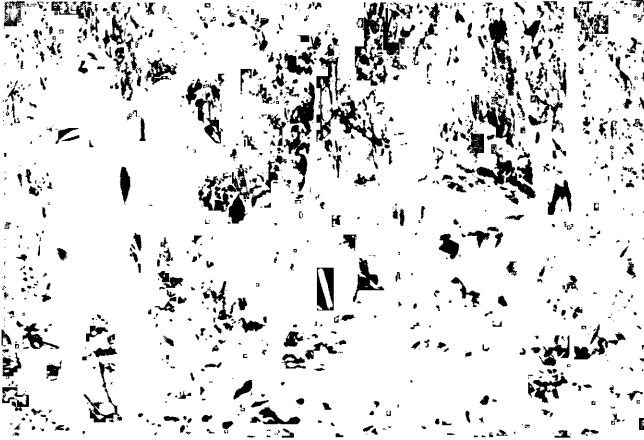


Fig. 1. Iron smelting furnace, Voloblai, central Liberia.

None of these sites seems to be of great age.

Exploration for archaeological sites in a forest area such as Liberia is bound to be conditioned by both heavy vegetation cover and relative scarcity of useable roads. In general, the best chances of discovery lie in examination of road-cuts, quarries, cultivated fields, construction sites, or other artificial exposures; rock shelters; and natural erosion features, which in this area seem largely limited to beach or coastal lagoon bluffs and higher river banks. The latter are not uniformly distributed due to the prevalence of mangrove growth along much of the coast and along large stretches of rivers and streams. Old towns are abundant throughout much of the country, but few are likely to be more than 150-200 years old. They are recognizable mainly either in terms of the presence of specific types of trees or, occasionally, of features such as smelting furnaces, house depressions, or "medicine" rock piles. Local informants are usually able to guide one to a number of such sites. Normally, it is difficult to trace the actual extent of the settlement or identify many features because of the overgrowth. Settlement mounds, which figure so greatly in the archaeology of some regions, seem to be absent altogether; villages simply are not occupied long enough in most cases for any significant midden depth to accumulate and encapsulate cultural change through long periods of time.

Shell middens, which provide excellent stratigraphic profiles in some neighboring countries such as Senegal and Ivory Coast, were very scarce in the areas surveyed. Those seen, mostly tidal segments of western rivers, were very small and probably of recent origin. Some, in fact, were currently in use. The presence

of larger and older middens, however, should not be ruled out, since the survey did not cover most of the central and southeastern coasts -- which are accessible by car only at one point (Greenville) between Buchanan and Harper.

Extensive efforts were made to locate and test rock shelters, in the hope that these might provide the beginnings for a stratified cultural/chronological framework. Most of those reported to us and subsequently investigated unfortunately turned out to be large rocks without overhangs, rock crevices without dirt floors, or collapsed sections of underground watercourses bored through the laterite. Particular localities searched for caves and shelters included Bolahun, Yandohun, Suehn, and Careysburg in the west; the Gbanka area in central Liberia; and the Zleh and Sanniquellie areas of the east. Two occupied shelters finally were found and test-excavated, and several smaller ones were observed to have hearths or sherds on the surface. Some of the latter may have been used as refuge places in the forest during recent tribal wars, or so our guides often thought.

Before beginning the survey, it was decided that it would be appropriate to employ the Standard African Site Enumeration System⁶ since no other system was in official use for recording sites and cataloging their contents. The SASES divides the entire continent up into grid units one-quarter of one degree square and every site within each grid is numbered sequentially as found (FoBm 1, 2, 3, etc.). Thus, even a country as small as Liberia is subdivided into nearly 150 units which are defined quite independently of political and ethnic boundaries. The system is being used effectively in East Africa, and it is hoped that future investigators as well as the Government will continue to do so in Liberia.

Initially, the three members worked together as a team for the most part, following up leads and generally assessing the problems and possibilities of archaeological research. Later work was done more often singly or in pairs, with Borden concentrating on earlier lithic materials and White on traditional iron-working. Throughout the course of the project, our most valuable ally and collaborator was Mr. S. Jangaba M. Johnson, retired research historian with the Ministry of Information, Cultural Affairs, and Tourism, who gave freely of his seemingly endless store of ethnographic and historical knowledge and frequently served as our sponsor in dealing with officials and citizens of Grand Cape Mount and Montserrado Counties.

The archaeological sites identified fall into several categories according to type and cultural content. With respect to the former, one could include quarry/workshop sites, settlements, cemeteries, rock shelters, and smelting sites. The exact nature of some sites is not entirely clear and probably would not become so without far more extensive investigation. Only one small shell midden and one rock-art site

6. C. M. Nelson, "The possible application of the Standardized African Site Enumeration System (SASES) to Liberia," Liberian Studies Journal, IV, 2(1971-1972), 137-145.

were recorded. In terms of cultural content, the range of sites is from one of "Sangoan" affinities to ones representing the European contact period. In a general sense there are:

1. Aceramic lithic occurrences
 - a. macrolithic "Sangoan"
 - b. microlithic
 - c. indeterminate assemblages
2. Ceramic occurrences
 - a. pottery and lithic material
 - b. pottery alone or with iron
 - c. tribal pottery and European trade goods

Most of the above are represented by surface indications and may include, especially in the case of 2a and 2c, some fortuitous mixture of artifacts. But at least two sites in the interior had ceramics and microliths, without metals, in clear stratigraphic association.

Although macrolithic occurrences of Sangoan type have been noted elsewhere in West Africa, there has been only one prior report in Liberia.⁷ An effort was made to relocate this site, but even with the help of two individuals who had originally accompanied Atherton it was not possible to find any additional material. This may have been due in part to the fact that the motor track along which the specimens were found is now abandoned and largely overgrown, although some short sections are still clear enough to examine. Harry Gillmore, former director of the Tubman zoo at Totota, who initially called Atherton's attention to this area, also gave us a few Sangoan-type specimens found on another road-cut in the Ziehe town region. Returning there with him, we were able to find only a few non-diagnostic artifacts. Assuming we were just unlucky, these discoveries do seem to suggest the presence of such industries in the zone of high forest, and the constant extension of logging-road networks may expose more examples.

During the course of surveying the region west of the St. Paul River outside Monrovia, we noted the existence of many quartz outcrops -- mostly in the form of large boulders -- between Clay Ashland and Royesville. We soon found that a number of these (Fig. 2) were associated with heavy cores, flakes, scrapers, and pick- or chopper-like artifacts. Eventually, we identified one site on each side of the river; one site in the Virginia area just west of the river; three road-cut exposures and another site on a farm on the Brewerville-Suehn road (Fig. 3); and scatters of such artifacts in and around Royesville itself. Three additional sites near the river may fall in the same category, and Borden found another possible occurrence just north of Suehn. Stray finds were picked up on the surface elsewhere

7. Atherton, "Archaeology in Liberia."

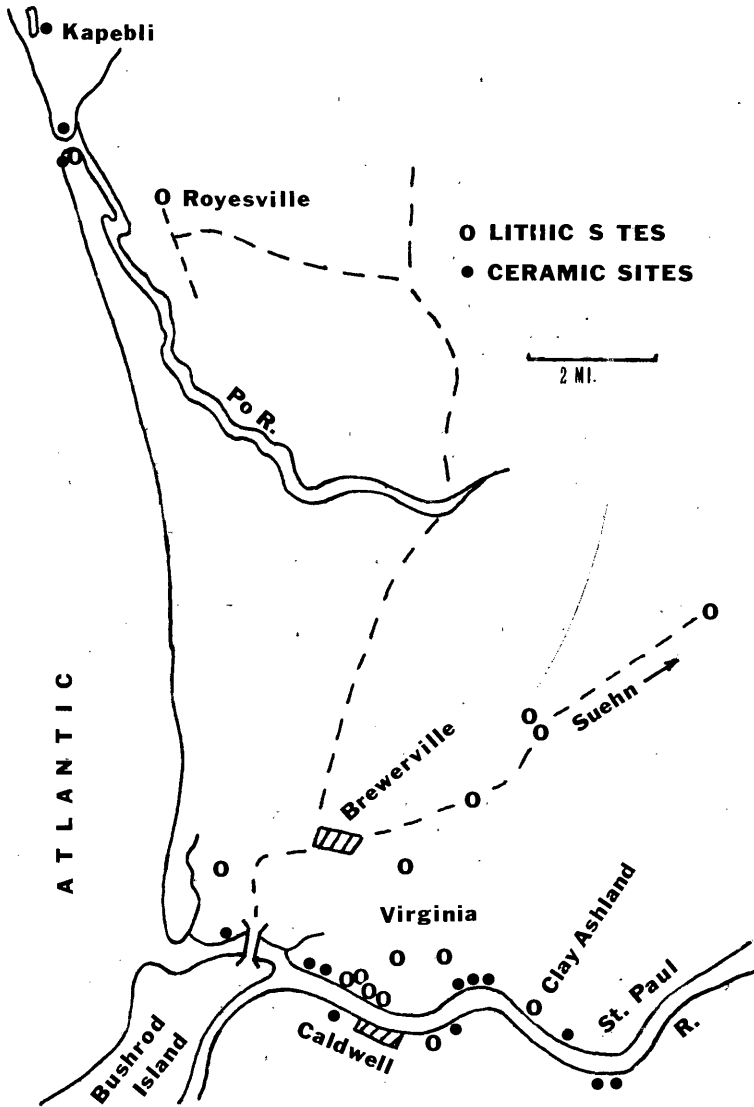


Fig. 2. Archaeological sites, St. Paul River area, western Liberia.

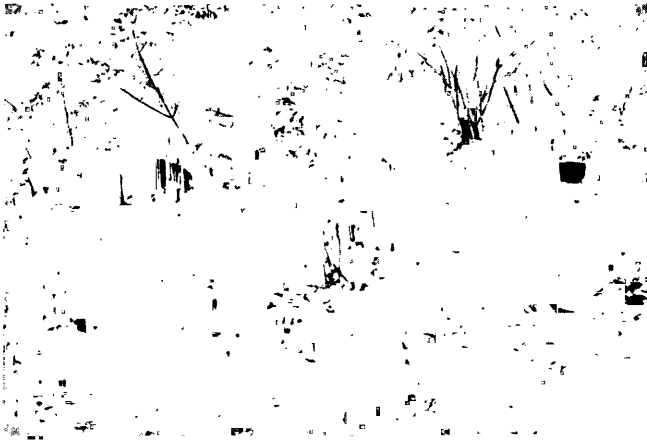


Fig. 3. Sangoan quarry site near St. Paul River.

in the general area. In a number of instances, retouched artifacts were mixed with flaking debris accumulated as the result of modern quarrying for construction material, which tended to confuse the picture somewhat. However, sealed occurrences were found in river clays and gravels in the first sites mentioned, at Clay Ashland and Caldwell. Of the two sites, excavation at Clay Ashland on the west side of the St. Paul proved more productive; artifact-bearing deposits extended from the top of the bank to a depth of two meters (Fig. 4). A comparably deep pit at the Caldwell site produced only a handful of artifacts, although a substantial number of implements was collected on the tidal flat just below the bank.

A more dubious site was located in an erosion gully on the Ganta-Sanniquellie road in Nimba County, where most of the quartz was clearly naturally-fractured. Quartz stream gravels and outcrops were examined in other areas without positive results.

Altogether, approximately half a ton (± 500 kgs.) of such material was obtained, but in no instance was any bone, charcoal, or other organic material found. Thus, while a late Pleistocene date is suggested on typological grounds, there is no means of establishing the exact chronological status. These particular lithic sites would seem to dispel any notion that the coast of Liberia was unoccupied until recent centuries, and the suggestion of such sites in the eastern interior may be indicative that Stone Age hunters reached the coast through areas of high forest.

Scattered microliths were found in most parts of the country visited, even along many forest trails worn deep by continual foot-traffic, but rather few large concentrations were encountered.

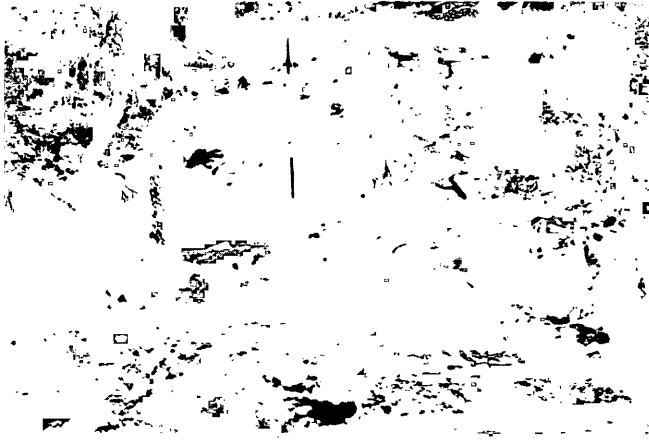


Fig. 4. Stratified Sangoan site at Clay Ashland, St. Paul River.

One example was discovered in a sand quarry near Banyo Town, just outside Monrovia between the Brewerville road and the ocean. Hundreds of quartz microliths lay on the surface over an area of about half an acre. A few miles away on the north bank of the St. Paul below Clay Ashland was found a small tidal beach about 8 meters long and 7 meters wide which was littered with microliths that appear to have eroded out of a stratum a half-meter or so below the top of a 3-meter clay bank. This site included the only piece of worked bone (point?) we were able to retrieve anywhere in the country. Just upstream on the same side of the river was recovered a small assemblage of microlithic cores, flakes, and scrapers.

Another site, of very modest dimensions, was located at the U. S. Telecommunications installation on the Monrovia-Harbel highway. A small concentration of microliths lay on the surface of a sandy area, apparently exposed when the ground was leveled by bulldozing.

A comparable situation prevailed at a site near Bassa Point, opposite Marshall at the confluence of the Gba, Junk, and Farmington Rivers. This was originally discovered by Delafield's group and had been extensively collected previously. Small concentrations of chert and quartz microliths were found in an abandoned oil-tank storage field covering several acres. Much of the material clearly had been exposed by leveling the area and construction of fire revetments during World War II.

On the easternmost extremity of the Mesurado River behind the National Police Academy at Paynesville, a myriad of artifacts occurs, ranging from stone tools to Dutch gin bottles. The former are concentrated primarily along or near the top of

the drainage slope and to this extent are separable from material of more recent origin. The greater proportion of the stone implements lay in an area of about 12 x 20 meters.

In the whole area between Harbel and Monrovia, sand pits along the main highway behind the coast contain odds and ends of microlithic artifacts, and therefore some sites may be expected to be found.

In the interior, microliths were commonly encountered, but usually singly or in very small groups. One rather interesting occurrence, which included small, unifacial and bifacial points, was noted along a road-cut at Bolahun, between the Holy Cross Monastery and leper colony, in Northwestern Liberia.

To the extent that one can characterize these various assemblages in general, it can be said, first of all, that cores and flakes usually vastly outnumbered retouched specimens. Although the knapping techniques sometimes appear quite sophisticated, there is only occasionally any evidence of a blade technique. Apart from utilized pieces, tools include convex and concave-edged scrapers, *pièces esquillées* (micro-adze bits with shattered working edge), drills or burins (the majority with a retouched edge intersecting a natural fracture or snap at an acute angle), backed flakes or bladelets, and small unifacial or bifacial points. Geometric segments (crescentic or trapezoidal) are rare.

Two road-cut sites in Virginia Township, just north of the St. Paul, with relatively heavy quartz cores, flakes, and scrapers are probably to be included among the Sangoan sites in the same vicinity, but there is insufficient diagnostic material to be certain. On the north bank of the river itself, just upstream from the second microlithic site mentioned, were collected a number of stone artifacts, among which were both microlithic ones and at least one good Sangoan pick. Immediately above this was another occurrence that incorporated two picks and a retouched steep core along with microlithic cores, flakes, scrapers, burins, *pièces esquillées*, and a possible bifacial point.

Any or all of these sites may represent mixed surface occurrences, and each falls within the southeastern edge of the Royesville-Clay Ashland quartz dikes where both Sangoan and purely microlithic sites are found as discrete entities.

A majority of the ceramic sites discovered are located along the western coast, including the lower courses of major rivers such as the Mafa, St. Paul, Farmington, and Mechlin. At least for the moment, and until concrete evidence to the contrary is obtained, most of these probably should be viewed as late Iron Age or historical. In a number of instances, this is fairly well borne out already by artifact typologies, associated trade goods, or the nature of the sites themselves. Even where percussion-flaked stone implements are present, this may represent either mixtures of older and younger materials or some continuation of stone-tool use (other than that of querns, anvils, and the like) by Iron Age communities -- perhaps especially in areas where procurement of indigenously-made metal goods depended on trade with other tribal areas.

Two localities, both previously known, were briefly investigated in the Robertsport region of Cape Mount. One is a settlement or possible cemetery site at the mouth of the Mafa River near the Lake Piso bar mouth. Most of the artifacts seen

by us from this erosion bank are in the possession of ex-PCV Robert DeYoung, who had picked up a number of specimens of pottery including a nearly complete large beaker with stamp-decorated body and carinated rim with zoned incising. This contained an iron bracelet and some quartz chips when found. Particularly well-represented, however, were bases of high-pedestaled pots. No trade goods were seen, and only one or two chunks of fractured quartz were recovered.

The other site is an oceanside settlement below the Tubman Research Center at Robertsport. This is probably Vai and -- because of the quantity of European crockery, gin bottles, and clay pipes -- it is not likely to be very old. It has been extensively collected by various European and American residents over the years. Test pits suggested the midden to be approximately 50-60 cms. deep. Most of the pottery is relatively coarse-textured and buff to tan in color. Decoration is fairly simple (stamped chevrons or semi-circles; incised bands, chevrons, wavy lines, and cross-hatching; cord-marking; stab and drag; and dentate stamped) although rims are quite elaborate, with everted lips and/or carinated rims typical. Numbers of the vessels have ring bases, but flat and slightly concave ones also occur.

Another probable Vai site is the one at Mehnkolo already mentioned, although the pottery is somewhat different (possibly because this appears to have been a ritual deposit). Apart from the cache-hole, which is still exposed, the most notable features are a number of stone grave-circles. Since the settlement was at least old enough to have forgotten and was uncovered only when the land was re-cleared for farming, excavation of the graves in particular might prove rewarding with respect to obtaining data on early trade in the hinterland behind Cape Mount and Cape Mesurado.

We visited the Kle site mentioned by Orr only briefly. This old Gola (or Dei?) settlement also had disappeared from memory. Orr's salvage work at the time a power substation was being constructed produced an iron knife, four forge or furnace tuyeres, and an iron bracelet along with some sherds bearing punctate, impressed, and incised decorations. He mentions no European trade goods.

Dr. Coonrad of the USGS drew our attention to a lagoon site (Fig. 5) on the beach just west of the Po River mouth. Here, large quantities of sherds are eroding out of the bank over an area at least 30 meters wide. Cutting back a pair of vertical faces produced more pottery, some of it extending down to a depth of about one meter. No worked stone and no iron was found, and imported goods seemed to be absent. Most of the sherds are worn and of reddish color, although there is some buff, tan, and gray ware. Decoration is quite bold, with deep linear or curvilinear grooving and incising, stamping, and linear stab-and drag designs. Cordmarking is absent. Most sherds seem to have derived from S-curve pots or shouldered bowls with flat or ring bases. This region is one in which salt-making from sea water was an important industry in earlier times, which may be confirmed by the presence of large cinders such as one might expect from the use of protracted, very hot fires employed to reduce salt water to a useable paste. Local Vai informants claimed this to have been a settlement founded by Dei people fleeing the Kle area after one of the Sofa wars in the late 19th century. However, a radiocarbon



Fig. 5. Iron Age site on lagoon near Po River mouth, western Liberia.

date (GX-3308) of 865 ± 155 years (A.D. 1085) was subsequently obtained, and the USGS now reports a date (W-2957) of 960 ± 200 years (A.D. 990), suggesting that the site is most likely to have been first occupied in the 10th or 11th centuries. This would help explain the absence of imported trade goods at a settlement lying within a zone of early "Americo-Liberian" occupation and of sustained European contact from the 15th century onward.

An attempt was made to re-locate an Iron Age "burial" site reported by Delafield on the east side of the Po River mouth, but this appears to have been destroyed by local treasure hunters (who left signs of very recent shoveling in the bank), and we found nothing more than a few quartz microliths eroding out of the sand bluff immediately overlying the diorite base. A date (W-2953) of 4210 ± 250 years (2260 B.C.) obtained by the USGS may relate to these rather than to the presumed burials. Across the bar mouth, we investigated an old town site, reputed to be Dei. Although this was heavily overgrown, we located and excavated the town "medicine," which proved to include a clay pot, a crockery plate, a glass demijohn, two stoneware gin bottles, an iron knife, and an iron kettle.

Slightly further east, about a dozen ceramic sites were identified along the lower St. Paul River (Fig. 2), where concentrations of sherds have eroded out of the bank, probably over a long period of time, and now lie scattered along the mud flats exposed at low tide. Most of the sites are likely to be Dei, who occupied this part of the river prior to the establishment of Settler townships in the mid-19th century, although the pottery is not identical on all of them. Sites at Bromley Mission may

relate to the time of "King" Bromley, the Dei chief who fought the Settlers early in the last century, although his settlement of about 150 huts is said to have been located some distance into the bush behind the river.⁸ A few of the sites include worked quartz, but it was difficult to establish the nature of the association with the pottery, and the same is true of the imported crockery and glass that litters much of the shore. With the exception of one occurrence near the rail bridge out of Monrovia, which has a substantial and well made microlithic assemblage that seems to derive from a somewhat lower stratigraphic horizon than the pottery, the quartz specimens are mostly irregular, nondescript chips and chunks with no formal attributes. This again is an area where a sustained excavation program might produce significant data regarding early trade, lying as it does so close to Cape Mesurado. As discussed above, it certainly is of importance with respect to pre-Iron Age stone industries. Its accessibility and proximity to Monrovia make it an ideal place for future work.

The distribution of pottery along the beaches and lagoons from the St. Paul to the Farmington seems almost continuous. A series of exploratory pits dug at intervals along the coast by the Liberian Geological Survey some time ago enabled us to make a series of quick checks on the depth and extent of such occurrences, where the pottery seemed to be mostly in the upper 40-75 cms. of the sand. This area is free of mangrove swamp which characterizes so much of the coast, but the scrub brush growing immediately behind the beach is often nearly impenetrable except where there happens to be a trail cut through. Therefore, the exact area of these old farms or settlements is difficult to establish. The pottery in the majority of these occurrences (which, if recent, should be Bassa) is very poorly made, with large grit inclusions and with no more than the very simplest cord-marked, stamped, or incised decoration. Many of the sherds appear to come from large reddish, thick-walled pots with no decoration whatever. Little resemblance is seen to any of the St. Paul ceramics. At one spot near ELWA, two nodules of ironstone and a couple of chunks of iron slag may provide a link with the iron cache found a little further back from the beach a few years ago.

Two sites along this stretch do have pottery somewhat more similar to some of that recovered along the St. Paul and provide a contrast to the bulk of neighboring occurrences. These are lagoon sites at Cooper's Beach and Cole's Beach, where inverted bowl rims and curvilinear and zoned stamping or incising are quite common.

No imported artifacts were seen anywhere along this section of the coast, and worked stone is absent except for a few microliths at one spot on the Cooper lagoon.

The entire course of the Farmington River between the Firestone Plantation at Harbel and the Atlantic outlet was explored by boat, with only two significant sites being found. These lie fairly close together a short distance above the mouth on the

8. G. Brooks, "A. A. Adee's Journal of a Visit to Liberia in 1827," Liberian Studies Journal, I, 1 (1968-69), 56-72.

west bank. One site yielded a quantity of thick, rust-colored pottery with simple punctate, stamped, cordmarked, and incised decoration. There are none of the more ornate designs represented in some of the St. Paul sites or even those at Cooper's and Cole's Beaches. Pot bases are mostly of simple concave or ring type, although a large portion of one high-pedestaled goblet was found. Sherds from the other site are similar but tend toward buff, brown, or gray coloration. Two iron bracelets were recovered from the former site and several small quartz cores from the latter.

Quite a substantial site -- and again presumably Bassa -- was located on the tip of a small peninsula between the Mechlin and St. John Rivers opposite the town of Edina. Here were obtained numbers of sherds and partial vessels with thick cross-sections and uncomplicated incised, stamped, or punctate designs. One decorative motif, also noted in the Farmington River samples, consists of small, sharply defined stamped circles that appear to have been executed with a piece of narrow-gauge metal tubing. Globular-bodied pots of various sizes with flaring rims seem to be most characteristic. Along with the ceramic material were found three iron bracelets, a short piece of iron tubing, an iron knife-blade or spearhead, four upper grindstones, and a couple of pieces of fractured quartz. It appears likely that excavation of this site might produce some excellent ceramic specimens as well as a quantity of metal artifacts.

Little can be said concerning the boulder carving (Fig. 6) on the Paynesville-Bushrod Island Road behind Monrovia. The sculpture is of a Negroid face, executed with some degree of skill. Probably it was the handiwork of Bassa people, but no one any longer remembers who may have been responsible (although there are various folktales about it among the local inhabitants and some visitors still leave offerings of leaves or coins on top of it). Nothing else like it is known in Liberia as far as we are aware, but the small nomoli from the western part of the country testify to the existence of stonecarving traditions.

In northwestern Liberia (northern Lofa County), a number of "old towns" were seen, including two in the vicinity of Masambolahun and three near Kpademai and the LISCO mining camp in the Wologizi Range. Local oral traditions concerning these were collected by White, who spent considerable time in the region doing research on Loma and Bandi iron-working. Also, the hilltop on which the Holy Cross monastery at Bolahun is situated is known to have been a Bandi burial ground (likely to have been severely disturbed when the area was leveled for construction in the 1920s). We also investigated the report of another "stone face" recently discovered near Kbangemai, near the Sierra Leone border, but this proved to be nothing more than an imaginative reconstruction of an unusual erosion feature. The area in general, however, is full of large rock outcroppings which may have provided some liveable rock shelters.

We did find and test one shelter further to the east, between Kolahun and Bolahun. This overhang, called Kokasu (Fig. 7), is located in an area of relatively dense bush and faces down into a steep valley near the Kaihar River. Although the floor is several meters wide and about 15 meters long, the maximum height of the



Fig. 6. Stone sculpture, Paynesville, Monrovia area.



Fig. 7. Kokasu Shelter, near Kolahun, northwestern Liberia.

shelter is no more than about 1.5 meters. A trench excavated in the hard laterite produced the base of a cordmarked pot and a number of plain and linear incised sherds in association with several dozen microliths, charcoal, and fragments of oil-palm nutshell. A charcoal sample (GX-3310) yielded a date of 1500 ± 200 years (A.D. 450). Whether the site belongs to the early Iron Age (in spite of the fact that no evidence of metallurgy was found) or represents something more akin to the "Guinea Neolithic" is not clear.

A similar but larger shelter (Fig. 8) was found near the village of Sopiè, about an hour's walk east of Samniquellie in northeastern Liberia. This overhang has a floor area of about 10x12 meters (plus an even larger sloping area in the rear) and a maximum height of about four meters. A test pit in the upper meter of laterite yielded over 500 microliths, a pottery-smoothing stone, and a quantity of sherds. Stone tools include utilized cores and flakes, *pièces esquillees*, scrapers, burins, backed flakes, and three or four crescentic segments. Perhaps most notable is the fact that quartz crystals -- most of them showing edge-wear, flaking, or retouch -- constituted about 20% of the lithic assemblage. The pottery consists mostly of rather thick and friable bowl sherds with cordmarked, incised, or stamped decoration. There were also found part of a pot strap-handle and four irregular cylinders of fired clay which Mano informants thought to be wornout pottery-stamping tools. Oil palm nutshell was retrieved at this site also. Charcoal samples gave dates .



Fig. 8. Sopié Shelter, near Sanniquellie, northeastern Liberia.

(GX-3309, GX-3402) of 3400 ± 200 years (450 B.C.) and 2360 ± 125 years (410 B.C.), demonstrating more clearly than at Kokasu the existence of a pre-Iron Age ceramic horizon in Liberia. Both sites lie within the forest zone, just south of the savannah.

During the course of checking out possible Sangoan sites in the Zleh Town area of Grand Gedeh County in eastern Liberia, we also investigated a number of "rock shelters" which had been reported to us by various people who knew the region. While there were some crevices or small overhangs in the rocky uplands above the town around Mt. Veni, none appeared to have any substantial occupation material beyond a few sherds and an occasional piece of fractured chert or quartz.

A quick tour was made of Cape Palmas in the southeastern extremity of the country. Our interest there centered mostly on the Russwurm Island cemetery which has been known for many years. Construction of a port facility at Harper has now very largely destroyed the island's archaeological value, although Delafield and others carried out some salvage work in the 1960's. Much of the original artifactual content has been carried off by visitors, who picked up trade beads, brass ornaments, and other grave goods almost as soon as the bulldozers exposed them. Although possibly used by the Kru first, the island was mainly a burial place for the Grebo who now occupy the area. On the leeward side of the island, where most of the burials are said to have been found, we did discover a shallow and apparently undisturbed bit of shell midden lying immediately on the rock base. From this, we obtained a number of sherds and a radiocarbon date (GX-3307) of 225 ± 170 years (A.D. 1725).

At nearby Cavalla, a few miles closer to the Ivory Coast border, we obtained permission to examine another cemetery, this one lying in a palm grove adjacent to the beach. While not as well known to outsiders, this is another Grebo burial place in which 18th and 19th century trade goods are abundant. This one, however, is still in use, and the combination of grave digging and uprooting of trees during windstorms has brought quantities of artifacts to the surface. We were able to pick up numbers of iron and brass bracelets and anklets, potsherds, tradeware, and the like within a short time.

A few miles west of Harper, we also visited a cemetery used by the non-Christian Grebo of the Fish Town area. This is in fact a functioning ossuary on an offshore island, where coffins are taken out by dugout canoe and left in stacks among the brush (Fig. 9.). Relatively new caskets lie on top of or among others in



Fig. 9. Coffin repository on Fish Town Island, Cape Palmas.

various stages of disintegration. The area is littered with skulls and post-cranial bones, many in a good state of preservation, and also with cooking and eating utensils abandoned after funeral feasts. Informants claimed the island to have served this function "for as long as anyone can remember," although bodies formerly were wrapped in mats. We did note a number of old brass bracelets among the debris, which may confirm the fact that such a mortuary practice has prevailed for some time. We were also told by the Cavalla elders that bodies of their "big men" were taken to the Fish Town island for disposal until a few years ago when a storm swamped a funeral canoe and its occupants drowned. Since both communities

belong to the Klemonweh chieftaincy and are among the "seven original Grebo towns,"⁹ this may explain the desire to share a common resting place for their deceased. In any case, the island ossuary represents a most interesting and unusual archaeological site in the making.

In our report to the U. S. Educational and Cultural Foundation, the following recommendations were made:

1. We strongly suggest continued use of the SASES grid already developed for Liberia, and to promote this we are providing the Ministry of Information, Cultural Affairs, and Tourism with duplicate copies of our site survey sheets for the use of Liberian and foreign scholars.

2. Historians and linguists are urged to define specific local and regional research problems susceptible to archaeological investigation. Joint work of these various specialists in the field should be encouraged, and it should be done quickly in order to salvage as much oral history as possible.

3. Every effort should be made to collect and preserve examples of tribal arts and crafts and to record their sociological significance before these data disappear from ethnographic view. Archaeologically, this is especially important for ceramics, which normally constitute the most abundant, well preserved, and culturally-sensitive artifacts in later prehistoric and early historic sites. Without such a baseline from which to work backward in time, it will prove very difficult to document earlier tribal and sub-tribal distributions and migrations --particularly when one moves beyond the range of oral histories.

4. Because of the interest among historians concerning European trade during the 15th to 19th centuries, it would be very useful to collect and identify the various types of imported artifacts (brass, copper, glass, beads, pipes, crockery, and so on) according to their time and place of origin and their distribution in Liberia. Since radiocarbon dating is of minimal reliability for establishing the age of sites during the recent historical period, this kind of information, if sufficiently well organized, could be extremely valuable chronologically.

5. From the Liberian viewpoint, it is probably more important that Iron Age and historical archaeology -- which can directly help define the backgrounds of present-day peoples -- be given priority. Since the stone industries so far recognized have counterparts in West Africa as a whole and do not for the most part reveal connections with specific living populations, their study is likely to have less immediate impact on the development of Liberian research and teaching in history and the social sciences. Also, the use of oral traditions in conjunction with recent archaeology adds a greater urgency than is true of earlier periods.

6. Given the difficulties of site-survey and the problems of age-assessment in Liberia, programs of regional research would seem preferable to further attempts of a national scope. Obviously also, some problem-oriented research is bound to

9. W. Schulzè, A New Geography of Liberia (London, 1973), 48.

be more appropriate to some geographical theaters than to others (e.g., early European trade on the coast, forest vs. savannah adaptations in the far northwest, early iron-working in the northern and central interior, and so on).

7. From a scientific standpoint, there would be some value to intensive survey and excavation within restricted ecological zones as a means of documenting and understanding changing cultural adaptations through time. Our results on the lower St. Paul River, with over twenty sites (excluding Settler ones) from Sangoan to historical, show that such a strategy is feasible.

8. As is the case in most other West African countries already, there should be a trained Liberian official charged with the specific responsibility of collecting, recording, and preserving archaeological sites and materials. Presumably, this would be best effected through the National Museum, the Cultural Affairs Bureau of MICAT, or the University of Liberia. If no formally trained person is available in the near future, an alternative solution might be to enroll a college student or graduate in a vacation archaeological field-training school in a neighboring country such as Ghana or attach an individual for a limited time to another West African museum with archaeological collections and staff, preferably in a museum situation providing some opportunity for field trips. The best alternative, however, would be to enroll a suitable candidate in a M. A. program in archaeology in either Ghana or Nigeria. Training in West Africa rather than the U. S. or Europe is suggested for two reasons: the much smaller expense likely to be incurred and the enhanced opportunity to deal directly with problems and materials appropriate to this part of the world.

9. While making a plea for the protection and preservation of Liberian antiquities, one also ought to include those pertaining to the Settlers. Although the archaeology of this portion of the population has scarcely been considered, it is a heritage which should not be ignored. As colonial archaeology in the U. S. has amply demonstrated, a great deal of information can be obtained from the excavation of historical settlements which never appears in archives, even when these are abundant.

We wish to express our appreciation to the following people: Dr. A. E. Nyema Jones, Minister of Lands and Mines; Hon. J. Henrique Smith, Deputy Minister of Local Government; Hon. Bai T. Moore, Assistant Minister for Cultural Affairs; Dr. Warren Coonrad, U. S. Geological Survey; Father Joseph Parsell, Holy Cross Mission, Bolahun; Dr. and Mrs. John Gay, Cuttington College; Dr. Jane Martin, University of Liberia; Peace Corps Volunteers Earl Strassberger, Robert DeYoung, and Wally Herzog; Pastor Joseph Wold of the Lutheran Church; and Mr. Harry Gillmore of Kakata. Our debt to Mr. S. Jangaba M. Johnson was acknowledged at the beginning of the paper.

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LIBERIAN GUNPOWDER

Percy Tham

During conversations in 1960 with Samuel Gbeyi, son of the chief of Old Gbapa Town, he mentioned that gunpowder has been produced in the Nimba mountain region for some time. This reference encouraged the author to secure additional data about locally manufactured Liberian gunpowder. Several town chiefs confirmed the suggestion that non-imported gunpowder was in general use for many years, and they described, in general terms, the steps followed in its production.

Some time later, the author visited Pari, a small town in the Gio district, some distance from the Nimba area. Again the local manufacture of powder was mentioned and the account of its production was in basic accord with that supplied by informants, in the Nimba region. The similarities of technique are obvious from the two accounts.

NIMBA GUNPOWDER

The author's informant, Samuel Gbeyi, described the procedure used in gunpowder productions as follows: First, the leaves and roots of a marsh plant are taken and dried over a fire. These dried plants are then placed in a hamper made of palm thatch, and water is poured over them. This filtered matter is collected in a pot and boiled until a residue accumulates. This is then sun-dried into a soda-like substance. At the same time, the branches of a fern, locally called the parasol tree [*lolo* in Mano], are burnt to a coal-like state. Finally, two spoonfuls of the "coal" and one of the "soda" are pounded in a mortar, and then sun-dried. The product is gunpowder [*dien* in Mano].

GIO GUNPOWDER

The author's informant in Pari described a similar production procedure. The surface layer of dirt floors in old barns, material permeated with cow droppings, is scraped off and used, however, in lieu of the leaves and roots of vegetable matter. This impregnated earth is crushed and then placed in a basket. Water is poured over

the mass, and the residue is collected in a pot. This is boiled, and the sediment, dried in the sun, produces a soda-like substance. Combined with the ashes of a burnt fern in a manner similar to that used in the Nimba area, an explosive mixture is produced. It is said, however, not to be as powerful as that made in the Nimba region.

ELATOSTEMA PAIVAEANUM

The greater strength of Nimba gunpowder is attributed locally to its manufacturing process which uses a plant as the source of nitrogen. The author naturally sought to secure a specimen of this marsh plant so that it could be identified. A few hours before leaving the Nimba area to embark on a flight from Liberia to Sweden, the author managed to get to the Jete river (also known as the Peakpeheli), and there collected samples of the plant. These were placed in a plastic bag in the hope of keeping them fresh until they could be examined. Arriving in Stockholm just before Christmas, it was learned that the plants could not be examined until after the holiday season. As soon as the National Museum reopened, the now rather bedraggled specimens were submitted to the staff for identification. The Swedish National Museum has one of the most comprehensive herbariums in the world, and one of the staff specialized in the rain forest region of Central Africa. Because of the deteriorated condition of the sample, an attempt had to be made to identify the plant from the author's memory. At last while turning over the leaves of the herbarium, the author saw his plant. It was immediately identified as *Elatostema Paivaeum*, described in the herbarium as "Fieldlayer in deep shade under shrubs. Height to 1 m. Lower stem thick and very soft with abundant sap. Corolla greenish-white." Flora of West Tropical Africa by J. Hutchinson and J. M. Dalziel, was then consulted. It states that the plant is indigenous to Tanzania, Guinea, Ghana, Cameroon, and Ferdinand Po. Liberia must now be added to this listing.

The specimen was then handed over to an experienced nurseryman at the adjacent Bergian Garden. Although very weak, the sample managed to produce several small green shoots under this expert's tender care.

THE PRODUCTION OF GUNPOWDER SAMPLES

The next step was to secure some samples of Liberian locally-produced gunpowder for analysis. In 1961, the author made known this desire to Samuel Gbeyi. Three years passed before he was successful in inducing an old man of Gbapa Town, one of the few remaining who had engaged in its manufacture, to produce a sample using the traditional method. This sample consisted of grey-black uneven grains, most with a diameter of 1 - 2 mm. The author's experiments showed that it flared up as a normal black gunpowder would.



The Nettle Plant "*Elastostema Paivaeaeum*" (as per the herbarium)

A sample was taken to the well-known Nitroglycerin Aktiebolaget at Gyttop, Sweden, in 1964. The research scientists there had earlier indicated their interest in examining a gunpowder made locally in West Africa. Their analysis revealed the following:

Proportion of dampness = 2.3%. The following figures are adjusted to be valid for a dry sample.

Eighty per cent of the sample was soluble in water. The solution was brown-colored. In a qualitative analysis of the part soluble in water, a strong reaction for potassium was obtained and traces of iron were found. Of the negative ions a strong reaction for nitrate was obtained. Furthermore, carbonate could be proved as well as traces of phosphate and chloride.

After evaporating, the soluble part was heated over a flame down to melting generating a strong gas and also evolutions of flame (sparks, glow) were obtained. Sixty nine per cent of the sample was left after the melting.

Twenty per cent of the sample was insoluble in water and also in carbon bisulphide (sulphur is lacking). After ashing the insoluble part only about one per cent was left. The ashing occurred quietly without producing a flame.

A quantitative analysis of the gunpowder was carried out and calculated in the same way as for a normal gunpowder. The following analysis was obtained:

KNO_3 = 75.5 % At the nitrate determination

Sulphur = 0.0 % 70.0 % KNO_3 was obtained.

The result of the KNO_3 determination is not so reliable as the soluble part of the sample which also contains compounds other than KNO_3 .

A part of the sample was handed over to the ammunition works where a shot-cartridge (cal. 12) was produced with the same load-weight as used for common sporting-powder. The intention was to measure the speed of the shots but it was not successful as the shots presumably did not reach as far as the target, a distance of 35 meters.

CONCLUSION

It has not been possible to clarify in complete detail the composition of the

sample. For the most part, the sample consists of potassium nitrate (70 - 75 %) and coal (20%). The sulphur used as the integrating medium in an ordinary black gunpowder is lacking, but in lieu of it, other integrating compounds soluble in water are found, but they have not been clearly analysed. At a practical shooting-test the sample proved to be considerably weaker than an ordinary black gunpowder. To the analysis report the factory appended additional comments. As it was not possible to measure the speed, the percussion-cap probably did not ignite the gunpowder in the correct way.

Two alternatives are plausible to explain the low effect. Either the sensitive-ness of the gunpowder was too low, owing to factors forgotten at the analysis, so that over-ignition did not occur. Otherwise, it may be that the firing was locally in a way other than by means of a percussion-cap.

It is the author's opinion that it would be of ethnological interest to try to throw more light on the use of gunpowder in the Liberian interior. Some obvious questions that remain to be answered are: Was this technique of gunpowder production developed indigenously? Was powder of this type utilized for making fire for domestic purposes? Could ignition have been produced by flint and steel? Was this powder used in imported rifles, and, if so, what sort?

ENTREPRENEURSHIP IN LIBERIA¹

W. Penn Handwerker

INTRODUCTION

This paper briefly reviews the question of entrepreneurship in Liberia. First some background material is presented in a review of a recent article on Liberian tribal entrepreneurs. Second, the role of kinship obligations in entrepreneurship is

1. This paper is based primarily on 15 months field research in Liberia between September 1968-September 1970. Research was supported initially (September - December 1968) by the Ford Foundation, and later (September 1969-September 1970) by a Pre-Doctoral Fellowship (#1-FOI-MH44672-01) and Research Grant (#MH 12095-01) from the National Institute of Mental Health. The data cited in tables and percentages in the text derive from (1) a 25 percent probability sample of the market sellers in Monrovia (N=595) and (2) a haphazardly gathered sample of 43 market sellers who had withdrawn from trade. Ex-traders are not visible and to obtain any data at all it was necessary to ask when and where possible if a person had ever done business in a market place and why they had stopped. Analysis of these data was undertaken with due regard for potential bias, and although points made in this paper are phrased as if this sample was representative of all withdrawn market sellers, readers should note that there are no formal assurances on this point. Background data (informal and intensive interviewing and participant observation and studies on a variety of specific topics) for the surveys were collected by the author; the survey interviews themselves were carried out largely by Liberian research assistants. Other pertinent data on the methodology, scope and findings of this research may be found in W. Penn Handwerker's, "The Liberian Internal Market System" (Ph.D. dissertation, University of Oregon, 1971). Acknowledgements are due to Professors Vernon R. Dorjahn (University of Oregon), and Barry L. Isaac (University of Cincinnati) and Mr. Thomas Saye Johnson for their help in formulating the present version of this paper. I alone am responsible for its faults.

is discussed with reference to market sellers in Monrovia. Third, a brief description of the Liberian market system is presented as introduction to explaining why some people enter trade and others do not and why some people remain in trade and others withdraw. Finally, some implications of the data are discussed, and considerations for research on entrepreneurship in Liberia are summarized.

SOME PRELIMINARY CONSIDERATIONS: A NOTE
ON THE "TRIBAL ENTREPRENEUR"

A recent report² concerning 41 Liberians engaged in businesses not an occupation of their forebearers observes that (a) tribal entrepreneurs are rare, (b) remarkably youthful, (c) complain of competition from Lebanese and inability to obtain reliable help, (d) rarely keep financial records and appear to be plagued generally by a lack of business skills, (e) do not conduct business in their home areas, (f) did not leave their home areas for the purpose of conducting business, and concludes that (g) the culture of the Liberian tribal village is probably hostile to enterprise. "A" and "b" are inaccurate, "c" and "d" are critical, but overlooked in preference to "e", which is interesting but nothing more in the absence of any data with which to interpret the fact, and "f" which is trivial. "G" is poorly formulated, a *non sequitur* even when interpreted generously, and in an acceptable (falsifiable) formulation (e.g., Liberian tribesmen are prone to reject innovations in preference to traditional or customary methods of doing things, or, kinship obligations hinder capital accumulation) is, respectively, false,³ and an open question generally but not the case among the most numerous Liberian entrepreneurs (market sellers), the only group of entrepreneurs in Liberia to have been investigated systematically. "The Tribal Entrepreneur" raises crucial issues concerning the developmental process in Liberia, and is the first paper to focus on entrepreneurship. Its importance in this regard is almost wholly vitiated by a plethora of theoretical, methodological, logical and empirical

2. David F. Ross, "The Tribal Entrepreneur in the Emerging Liberian Economy," Liberian Studies Journal, III, (1970-71), 143-154.

3. Leslie C. Hendrickson, "Kinship, Achievement and Social Change in Tribal Societies," Ph.D. dissertation, University of Oregon, 1970, deals with some of the theoretical issues involved in the context of an analysis of 1300 wage-laborers in Liberia.

errors.⁴ Even in error, however, the report remains instructive. With the objective of making clear some of the considerations that need to be made in research on entrepreneurship in Liberia, the difficulties enumerated above are reviewed.

That tribal entrepreneurs⁵ are common is manifestly demonstrated by the fact that upwards of 75 percent of the farm households in villages along the roads (especially in central Liberia, and in some cases considerably off the roads) have begun to raise cash crops (coffee, sugar cane, cocoa, etc.) of one sort or another, and roughly the same percentage of those households also have women selling foodstuffs.

4. The report exhibits not only a methodology for which interpretation is difficult (for instance, we are not told which data come from village locations and which from town locations, nor which refer to shops and which to stores), but faulty implicit assumptions about how societies work (cf. Homer G. Barnett, Innovation, (New York, 1953) and Ward H. Goodenough, Cooperation in Change (New York, 1963), misleading constructs about non-industrial societies (cf. Joseph Gusfield, "Tradition and Modernity: Misplaced Polarities in the Study of Social Change," American Journal of Sociology, LXXII (1967), 351-362), and an apparent ignorance of the pertinent literature on entrepreneurship in other countries of tropical Africa (e.g., P. T. Bauer, West African Trade (London, 1963, 2nd edition); Abner Cohen, "Politics of the Kola Trade," Africa, XXXVI (1966), 18-35; Raymond Dumett, "The Rubber Trade of the Gold Coast and Asante in the Nineteenth Century," Journal of African History, XII (1971), 79-102; Polly Hill, Review Article of "Markets in Africa," Journal of Modern African Studies, I (1963), 441-453; idem, Migrant Cocoa-Farmers of Southern Ghana, (Cambridge, 1963); Luther P. Gerlach, "Traders on Bicycle: A Study of Entrepreneurship and Culture Change among the Digo and Duruma of Kenya," Sociologus, XIII (1963), 32-48; William O. Jones, "Economic Man in Africa," Food Research Institute Studies, I (1960); Margaret Katsin, "The Role of the Small Entrepreneur," in Economic Transition in Africa, edited by M. J. Herskovits and M. Harwitz. (Evanston, 1964); Peter Kilby, African Enterprise: The Nigerian Bread Industry. (Hoover Institution Studies No. 8, Stanford University, 1965); S. P. Schatz, "The Capital Shortage Illusion: Government Spending in Nigeria," Oxford Economic Papers, XVII (1965), 309-316; Guy Hunter, The New Societies of Tropical Africa (New York, 1962), Chapter 7, has a lucid short introduction to the subject of African traders.

5. Defining entrepreneurs as people who had started a business that was not a traditional business for a member of his tribe or family, as is done in Ross, "The Tribal Entrepreneur," p. 146, automatically excludes most Mandingo, who, with the Bassa, comprise the largest segment of the sampled entrepreneurs. Apparently, the report rightly chooses to include as entrepreneurs almost anyone who runs a business with the objective of obtaining money. In any group of entrepreneurs one is likely to find some who are markedly creative and who incorporate their innovations into their

Neither of these activities is "traditional," having become prevalent only within the last twenty years with the growth of markets for food (cities, towns, and concessions), access to those markets (roads) and the diffusion of new technologies. Although initially arising independent of one another, these activities have become interdependent within recent years.

There are, of course, two separate issues involved in an assertion of frequency: (1) a judgment about the absolute numerical value involved, and (2) an evaluation of the relative supply. More pertinent to research, the relative supply of entrepreneurs cannot be assessed except in relation to (1) a statement of demand for the services offered for sale or (2) the proportionate lack of entrepreneurs with specific attributes (red hair or Liberian tribesmen) in one or all sectors of the national economy, or (3) a statement of non-economic constraints on the supply (those beginning and those withdrawing) of entrepreneurs in combination with an assessment of both of the foregoing statements. "The Tribal Entrepreneur" would like to demonstrate non-economic constraints, but it is not clear whether the proposed constraints would bear on the entrance of entrepreneurs, their withdrawal, or both, and in any event the data presented in the report have no bearing on the matter.

There is, indeed, a non-random distribution of Liberian entrepreneurs within the national marketing structure. As throughout tropical Africa, there are three principal, largely distinct marketing channels in Liberia: (1) a three-tiered system for imports (Euro-American firms dominating import and national wholesale and retail functions, and African clustered primarily in low-level retail functions as shop-merchants, hawkers and traveling market sellers), (2) a series of specialized channels moving exports to world markets in which the numerical bulk⁶ of what

businesses, others who are not so creative but who do incorporate innovations of others into their businesses when they are proved to be useful, and still others who consistently reject innovations. The matter of innovation and change is an empirical one not to be understood by defining it into the objects of investigation. A preferred definition of entrepreneurs is that of Katsin, "The Small Entrepreneur," p. 182, who suggests that we look at entrepreneurs as independent, self-employed managers who carry the risk and claim the gains of an enterprise conducted with the objective of obtaining money profits.

6. Although a few African store merchants and traveling traders participate in the channeling of cocoa, coffee, palm kernels to the Liberian produce Marketing Corporation, the sole exporter of the commodities, Lebanese dominate the first-order bulking stage for these items. It should be noted that both here and above, all that is meant by "dominate" is a numerical value. The political economics of this trade have not been investigated.

entrepreneurship exists⁷ is African, but is restricted to producers of cash crops (perhaps 50 percent of Liberian farm households) and a small number of diamond merchants, and (3) a system of market places through which local produce, principally, is channeled to aggregates of non-food producers in towns (e.g., Cbarnga), concessions (e.g., Harbel), and cities (e.g., Monrovia). With the exception of some aspects of some of the channels for rice, palm oil and fish, this third channel of market places is exclusively African. "The Tribal Entrepreneur" makes no attempt to refer to the historical data necessary to explain this distribution, nor does it clearly explicate these marketing structures. Although, in one sense there is a "lack" of Liberian entrepreneurs within some sectors of the national marketing structure, explanation for the non-random distribution that exists must be framed with historical data and field enquiry cannot be undertaken efficiently without understanding where one's entrepreneurs fit into the national structure.

In particular, research on entrepreneurship must be cognizant of the different classes of businesses that exist. Each different class of business caters to different types of demand and proper evaluation of barriers to entrance and causes of withdrawals entails a consideration of types of demand and their complementarity. For instance, a commonplace distinction in Liberia is that between "stores" and "shops." Lebanese are said to have stores; Liberians are said to have shops. The most often cited physical determinant is that stores have two wide, sliding doors while shops have but one door. The implied distinction is that, in comparison with shops, stores feature a vastly larger variety of goods for sale, and have a much larger volume of trade. This distinction focuses on the complementary functions of different classes of firms, stores and shops, which, at present and not without significant exceptions, are generally headed by people from different ethnic groups (Lebanese and Liberians). Shops are found together with stores in all the cities and towns, and the larger villages on the roads, in Liberia. In these locations stores are located in centralized "business districts," usually where the highway runs through upcountry towns, and in cities such as Monrovia, in areas centralized for a variety of functions (e.g., Waterside, Camp Johnson Road, around neighborhood markets). Store merchants, be they African or Lebanese, stock the largest number (ranging up to several hundred) and the widest variety of goods (e.g. farm equipment, clothes, medicines, household items, beverages, foodstuffs, tobacco and sundries), and appeal to the largest possible number of wants for imports in the local community. In contrast, shop merchants serve local neighborhood communities outside centralized business districts. In addition, shops are found in the absence of stores in the smaller villages alongside and

7. The corporations extracting iron ore and producing rubber, and those engaged in manufacturing at least partly for export do not constitute entrepreneurs. However, such firms as the Mesurado Fish and Cold Stores Company constitute a notable example of high-level firms conducted by Liberian entrepreneurs.

away from the roads, and among such small population aggregations as labor-camps at private rubber plantations. The stocks of these merchants, while generalized, are restricted to beverages, foodstuffs, and small household articles such as soap, perhaps paper pads and pencils. The variety of goods offered for sale is consequently smaller, ranging from up to 50 different commodities in Monrovia shops to 10 or less in shops located in upcountry villages. Shops cater to a restricted demand for imported foodstuffs and so forth that can be met traveling only a short distance, perhaps on short notice (e.g., before a meal), and at times (notably, Sunday) at which stores are closed. (Upcountry, both shop and store merchants are also likely to function as producer-wholesalers, but this channel deserves separate attention.)

The data just reviewed are not intended to suggest that there is no "lack" of Liberian entrepreneurs as store merchants. It should be emphasized, however, that explanations for the number of such merchants (and others, e.g., tailors, barbers, etc.) in a community must consider the types of demand that exist and realize that the existing store-shop phenomenon in large part is a function of (1) the intrusion of Lebanese into this sector of the import trade in the early 20th century, and (2) the intrusion of Liberians into what was until recently a realm dominated by Lebanese. This area of the Liberian economy is largely unexplored and the dynamics of the movement of Liberians into retail commerce of this sort have not been delineated. My own data on shop-merchants in Monrovia (including interviews of c. 50 shop-merchants) are largely unanalyzed, and data on shop merchants alone explores only a few aspects of the problem. The data on page 148 of "The Tribal Entrepreneur" (observations "c" and "d", above) are most valuable and systematic interviews with Liberian store merchants along these lines will be critical in understanding this phenomenon. Further, it should be noted that the question of the supply of entrepreneurs has two facets, oversupply as well as undersupply. Literature on the subject,⁸ especially that concerned with food marketing systems, generally has been concerned with the question of oversupply.

To demonstrate that the sampled entrepreneurs were youthful, "The Tribal Entrepreneur" relies on the observation that 85 percent were under 50, 50 percent were under 40, and 41 percent were under 35 years of age. But it is only by comparison with the life span in North America and Western Europe that these men may be judged as youthful. According to the 1961 Liberian census and its projection to 1969,⁹ which probably under-represents younger age categories, roughly 87 percent of the

8. William O. Jones, Marketing of Staple Food Crops in Tropical Africa (Menlo Park: Stanford Research Institute, 1969).

9. Liberian Census: Summary Report (Monrovia, 1962); Economic Survey of Liberia, 1968 (Monrovia, 1969).

male population was under 50, 75 percent was under 40 and 69 percent was under 35 years of age. A generous interpretation suggests that the sampled entrepreneurs are no older than other Liberian men; a more realistic appraisal suggests that, except for the oldest age category, the sampled entrepreneurs tend to be older than other Liberian men. In the absence of other data (e.g., on differential access to capital) the significance of age is uncertain. In addition to age, and more generally important when considering entrepreneurs, the approximate date of the firm's creation should be recorded.

"The Tribal Entrepreneur" focuses on the observation that people do not conduct business in their home communities and that it violates the "normal expectation." A consideration of this observation ends with the suggestion that the sampled entrepreneurs made a sharp break with their past. The conclusion that the Liberian tribal village is hostile to enterprise is drawn as a possible reason the sample made this sharp break. The principal difficulties with these statements are that (1) they ignore the fact that migration to work (of any sort) has become a normal expectation made of young men throughout Liberia,¹⁰ (2) that the "normal expectation" in business would be to locate a firm at a site whose demand would support it, and (3) that the questions bearing on the possibility of breaks entrepreneurs make with their pasts, the difficulties of establishing a business in an upcountry village and so forth simply were not asked.

On the one hand, the smallest petty trader will tell you that, if you are to make a profit, you must go to locations "where the people are plenty." The fact that the sampled entrepreneurs did not conduct business in their home communities is interesting, but hardly unexpected if these communities were villages, and "The Tribal Entrepreneur" presents no grounds for assessing its significance. Indeed, the report ignores data (on demands for services or goods supplied) bearing most critically on its significance. Judging by the conclusions, the report would like to suggest that people avoid their home communities in setting up a business, perhaps even failing if

10. Vernon R. Dorjahn, "Some Aspects of Migration in Liberia" *Liberian Studies Journal*, II (1970), 139-142; idem., "The Effects of Labor Migration on Rural Liberia," in *Liberia: an Evaluation of Rural Research*, edited by Richard Fulton. (Rural Africana, No. 15, Summer, 1971); Jeanette E. Carter, "Household Organization and the Money Economy in a Loma Community," Ph.D. dissertation, University of Oregon, 1970; Augustus F. Caine, "Rural Education and Research in Liberia," in *Fulton Liberia*; Frederick D. McEvoy, "Traditional and Contemporary Patterns in Sabo Labor Migration," *Liberian Studies Journal*, II (1970), 153-166; idem., "History, Tradition and Kinship as Factors in Modern Sabo Migration," Ph.D. dissertation, University of Oregon, 1971; James C. Riddell, "Labor Migration and Rural Agriculture among the Gbannah Mano," Ph.D. dissertation, University of Oregon, 1970.

they do not avoid these communities, because of kinship and friendship obligations which "compell" one person to help another. Unfortunately, the entrepreneurs themselves were not asked about this facet of their businesses. With the data presented in the report itself, the closest we come to an answer to this question is the observation that people did not migrate for the purpose of setting up a business. If it were not so obvious that most of the male migration in Liberia within the last two decades has been tied to education and wage-labor, the data would contradict the conclusions. With regard to the problem at hand the data are simply trivial.

There is no one answer to why people set up businesses at one location rather than another. In general, however, it seems as though where one goes to set up a business depends largely on either or a combination of (1) the location at which one (or the spouse of a female) resides while working for wages (and accumulating capital, seemingly the most typical background of the small-scale male Liberian entrepreneurs), (2) the location at which one can obtain the training (as a driver, tailor, brick-maker, etc.) for self-employment, (3) where one is sent as an apprentice in a trade or marketing firm, and (4) most important, the local demand for what one can supply in the way of products, services or both. In most village locations, for instance, there is little demand for either imported or locally produced food, or the services of barbers, carpenters, tailors, television repairmen and so forth. Entrepreneurs consequently cluster in locations where there are larger populations who rely on the use of money to meet most or all of their subsistence wants. As indicated above in discussion of shops and stores, each town or city itself has a complex marketing structure organized according to differences in demand. Further, it should be noted that different factors must be considered depending on the type of enterprise under investigation. Accessibility to land in one's home area through kinship or village ties is important in drawing some people back to such communities when their objectives are to engage in small-scale cash cropping. Accessibility to large plots of land for plantation cash cropping is determined by still other factors. Finally, there is a deterrent to return to a home area for cash cropping when plantation cash cropping has taken significant amounts of land from adjacent communities.

On the other hand, the existence of numerous cash croppers in village locations itself refutes the suggestion that entrepreneurs generally make breaks with their past. More to the point of "The Tribal Entrepreneur", it does not follow that because entrepreneurs (or anybody else) do not live or conduct business in their home communities that they have made any significant break with their past, or with their home communities. "The Tribal Entrepreneur" offers no data (e.g., on visits, gifts, sources of capital, sources of labor where firms engage employees) whatsoever in support of this assertion. Contrary to this assertion, the available evidence suggests that people rarely make sharp breaks with their past.¹¹ Kinship relations (within a town

11. Jeanette E. Carter, "The Rural Loma and Monrovia," Liberian Studies

between towns or between a town and a village) are commonly maintained by a continuing flow of gifts, visits, food and money exchanges even (and in some cases especially) among entrepreneurs.

Some people, perhaps especially in urban areas, do make breaks of varying degrees of sharpness with their kinsmen and friends left upcountry. Why a person divorces himself from his kinsmen and home community cannot be answered clearly at present. Entrepreneurship alone, however, is not responsible for these breaks. Although some breaks are made because kinsman and friends are a drain on the capital or proceeds of businesses, other breaks are made simply in the process of formal schooling and acquiring a taste for urban living and employment for wages or salaries. Still other breaks are made because a person's kinsmen left upcountry die, or because kinsmen's demands on the wages or salaries of non-entrepreneurs are judged to be too great. Although such breaks imply a shift in where a person sees that his primary interests lie, the relative importance of the variables listed above, and others, in explaining this shift has yet to be determined.

FRIENDSHIP AND KINSHIP AMONG MONROVIA MARKET SELLERS

Implicit in the foregoing discussion, and the most important issue directly raised by "The Tribal Entrepreneur", is the role of kinship obligations in entrepreneurship. Although I deal with this topic in more detail elsewhere,¹² a brief consideration of data on entrepreneurs operating in the Liberian market system in Monrovia illustrates points that should be considered in future research on this subject.

As Isaac¹³ points out in his review of this problem among entrepreneurs in Pendembu, Sierra Leone, there is no single, invariant relation between kinship (and close friendship, which entails many of the same obligations) and entrepreneurship. These relations vary because obligations, often consisting only of a single instruction

11. cont. Journal, II (1970), 143-153, and the references in footnote 10. This phenomenon is found throughout tropical Africa, vide Lucy Mair, African Marriage and Social Change. Reprint edition. (London, 1969).

12. W. Penn Handwerker, "Kinship, Friendship and Business Failure among Market Sellers in Monrovia, Liberia, 1970," Africa XL (1973), 288-301.

13. Barry L. Isaac, "Kinship Obligations and Entrepreneurship: Conflicting or Complementary?", Sierra Leone Studies, n.s. XXV (July 1969), 24-29.

to "help", (1) involve reciprocal sets of rights and duties, (2) bind entrepreneurs to a multiplicity of kinsmen and friends, and (3) entail help for an indefinite number of activities and things, many of which (e.g., child care or housing) have only an indirect relation to the money, goods and services involved in a particular firm. Kinship and equivalent obligations simultaneously pose both a threat and a source of aid to entrepreneurs, and individual entrepreneurs usually are aware of and have experienced both facets of these obligations. Hence, assessment of the role such obligations play in business entails determination of (1) the uses to which these obligations are put both by entrepreneurs and their friends and kinsmen, (2) the reactions entrepreneurs have to demands of different kinds, as well as (3) an overall assessment of the balance of demands made to help received by entrepreneurs.

Market sellers in Monrovia are bound into a matrix of obligations with kinsmen, close friends and "good customers." Both entrepreneurs and their kinsmen and friends call upon one another for money, friendship is generally important in learning the skills of trading, and entrepreneurs utilize kinship, close friendship and "good customer" relations to obtain free transport, reliable sales and purchases, some concessions on exchange and a variety of other small aids in their businesses. On balance, market sellers view these obligations as generally helpful in operating their businesses.

Help from close friends and kinsmen possibly is most critical in initiating a business. Although 48 percent of Monrovia market sellers learned the skills of their profession largely through their own efforts, 37 percent were taught how to trade by friends. It has only been within the last few years that market selling has become prevalent in Liberia and the role of kinsmen in teaching the skills of trade, consequently, is small. Only 12 percent of the sampled market sellers in Monrovia reported learning how to trade from relatives. The rest of the sample, principally men, learned the skills of trading by working in shops or stores. While friends are most critical in teaching trading skills, kinsmen are most critical in providing aspiring traders with their initial capital. Sixty percent of the Monrovia market sellers reported that the capital used to begin business derived from kinsmen of one sort or another. Spouses, brothers and fathers are especially important for women. Individual savings constituted the initial capital for 21 percent of the sample, but savings (as often as not consisting only of the last paycheck) are generally important only among men, whose generally higher level of education affords them greater opportunities for employment outside market places. The remaining 19 percent of the sample obtained their initial capital from a variety of sources, some (9 percent) by producing their own commodities, the rest distributed among rotating credit associations (susu and company),¹⁴ mutual benefit societies, grants of credit from other

14. Shirley Ardner, "The Comparative Study of Rotating Credit Associations," Journal of the Royal Anthropological Institute, XCIV (1964), 201-229.

businesses and combinations of these and friends or kin. Although once engaged in trade entrepreneurs find themselves principally reliant on the proceeds of their firms for further capital, close friends and kinsmen retain their importance as secondary sources of capital. Although 40 percent of the sampled Monrovia market sellers reported that they relied principally on themselves for further capital, 58 percent reported that close friends or kinsmen could probably help and would be the first persons turned to in case of want. The remaining 2 percent of the sample was distributed over the alternative sources of capital listed above. It is the obligations between kinsmen and close friends that make such people the most accessible sources of trading skills and the small (\$0.50-20.00) amounts of capital characteristically used by market sellers.

Help from kinsmen and friends engaged in trading or transport activities and from "good customers" is most critical in assuring the viability of firms. More than 90 percent of the sampled market sellers had friends or, less frequently, kinsmen engaged in trade or transport and more than three-quarters of this group gave help to one another periodically. More than 50 percent of the sampled market sellers were bound to "good customers" (suppliers and buyers) of one sort or another, and all of these relationships involved periodic mutual assistance. On the one hand, help from kinsmen or friends engaged in trade or transport minimized short run expenditures and helped ease the burden involved in market selling. Retailers, for instance, would keep watch over the other's stocks when one or the other left the market, provided the correct change for a customer of the other when necessary, occasionally purchased stocks for the other, and in the absence of the other would make sales. Where the friend or kinsman was a driver, traders received lower transport costs and occasionally free rides. On the other hand, "good customer" relations helped assure the long run viability of both trading firms and consumers' households. In return for purchasing from suppliers regularly, market sellers were eligible to receive loans and credit at low or no interest, and received reliable supplies of good quality produce or other merchandise. In return for purchasing from suppliers regularly, market sellers were eligible to receive loans and credit at low or no interest, and received reliable supplies of good quality produce or other merchandise. In return for purchasing from market sellers regularly, consumers received good quality produce at low prices, and credit when it was needed. Market sellers themselves were assured of regular sales.

While kinsmen and friends often are critical in channeling funds to market sellers and together with "good customers" are generally helpful in a variety of ways, not all such people are unmitigated blessings. Some pose serious threats to entrepreneurs. As one trader noted, "Some friends and relatives come around to lure you to poverty. They will break down your market by asking for this and that which they would not pay for." More than three-quarters of the sampled Monrovia market sellers indicated that kinsmen came to them periodically for loans of money and about three-quarters of these traders received little or no assistance in return.

However, neither kinsmen nor friends are allowed to run rampant in their demands on the assets of entrepreneurs. Eighty-five percent of the traders giving aid to kinsmen, for instance, indicated that they gave help only when it was feasible. There is a flexibility in the relationships binding entrepreneurs to kinsmen, friends and good customers, and checks are placed on those who become overbearing. In part, this flexibility derives from the reciprocal nature of obligations. Good customer relations are instances of balanced reciprocity with a brittleness such that he who does not offer a good price to the seller often enough, demands too high a price from the buyer, or purchases from competing firms too often "spoils" the market and is no good customer. Relations between kinsmen and close friends are instances of a more generalized reciprocity whose lack of brittleness is compensated for by more reliable fulfillment of obligations. As one woman commented,

Friends cause small trouble like eating some of the fish from the market, but that's not the troublesome thing. And in doing this they give me help, like I might buy from them, or when they buy a lot of fish and mine are finished, I can go to them and ask to buy the same type I was selling and they will sell it to me [at no profit to themselves].

In part also this flexibility derives from at least a partial appreciation by beginning kinsmen and friends of the demands they place on entrepreneurs. For instance, traders just beginning business tend to find that their principal difficulties are in maintaining the proceeds of their firms and finding capital for initial growth. Such people are less likely than more established traders to be approached for help by relatives, and where they are they tend to find that the help they give is equal to or surpassed by the help they receive in return. It is common knowledge that the income of traders requires outlays of money, and to recover the initial investment, to obtain additional funds with which to subsist (and make loans) requires the sale of most of the items purchased at a reasonable price. Traders are not expected to fulfill all the requests made of them, and kinsmen and friends exercise some restraint in placing demands on traders.

Finally, this flexibility derives from adjustments traders have made to the context in which they must conduct business. Because traders have few or no employment alternatives outside of market places, they are reliant on their firms for income. The viability of firms, dependent largely on obtaining reliable supplies of good quality produce, making sales quickly and having available a minimal level of operating capital, is assured most reliably by the activities and abilities of traders themselves. Sales even to "good customers" depend largely on price, and no firm can be supported only by supplies obtained from and sales made to such customers. Moreover, in the short run even close friends and kinsmen are unreliable sources of capital. Behind the fact that 40 percent of the market sellers reported that further capital would have to come from their own firms is the situation that kinsmen and friends also must subsist on small amounts of money. Even if a person genuinely wants to help, often they cannot for lack of money. A premium is set on traders' abilities to adjust stocks and

prices to changing market conditions. Success in trading implies protection of at least a minimal amount of operating capital, and traders exercise control over the way money is allocated.

The reciprocal nature of obligations, the restraint exercised by nontrading kinsmen and friends and the control traders exercise over the allocation of funds combine to produce a situation in which (1) 86 percent of the Monrovia market sellers reported that friends and relatives do help their firms, (2) 50 percent of Monrovia market sellers reported to their kinsmen and friends posed insignificant threats to their firms, and (3) kinsmen and friends were reported to be a significant threat to firms in only a handful (7 percent of the sample) of cases.

As one might suspect from these data, kinship enters into the dissolution of firms only rarely, and where present, tends to be distributed randomly between both voluntary and involuntary withdrawals (See Table 1). People are as likely to withdraw from trade, for instance, because they are going upcountry to help plant rice as because a sister has eaten the capital.¹⁵

15. Although this observation appears to hold for trading intermediaries, it does not follow that it applies also to producers or to people whose income derives from sales of their services (e.g., carpenters, tailors). Indeed, there are reasons to suggest that the latter always may be subject to hardships imposed by the "unreasonable" demands of kinsmen and friends. The properties of money and goods are more readily agreed upon than are the properties, for instance, of time. Whereas the role of money in producing income for trading intermediaries is readily conceptualized when the use of money for subsistence becomes widespread, conceptualization of time is more varied and less directly tied to income, probably in all societies. Conceptualization of the role of time in actually producing income is, perhaps, especially elusive. Whereas it is readily demonstrable that with \$3.00 daily net profit a trader cannot simultaneously purchase \$2.00 of fresh stocks, \$1.00 of food for meals and lend her sister \$3.00, it is not readily demonstrable that a trader will lose money using an hour or two of his time making his brother a shirt. Ambiguity concerning the properties of time leads people appreciative of the hardships implied by requests made of intermediaries to expect much more from kinsmen (e.g., tailors, carpenters, masons, electricians, and perhaps cocoa producers) less reliant for income on money than on time and skill. The available data appear to support this argument, Vide Isaac, "Kinship Obligations". Assessment of this argument for Liberia, however, is a problem for future field studies.

TABLE 1.--Kinship factors in withdrawal from market selling reported by 43 Liberian market sellers who had withdrawn from trade, 1970

Kinship Involvement	Withdrawal		
	Voluntary	Involuntary	
yes	2	5	7
no	11	25	36
	13	30	43

Fisher's Exact Test (1-tail), $P = .5678$

As it usually has been posed, the question of the role of kinship obligations in entrepreneurship asks only "Would the trader enlarge his business if a kinsman did not beg him for money?" and assumes that traders have no choice but to grant requests made of them.¹⁶ Data gathered in Africa over the past few years suggests that the issue is more complex. The above formulation not only begs the question of entrepreneurial talent and market constraints and options, but also the reciprocal nature of such obligations, the uses to which such obligations can be put, and the reactions entrepreneurs have to demands of different kinds. Although kinsmen and friends do request assistance from traders, in return they are asked to help traders. Kinsmen provide capital to aspiring entrepreneurs and friends teach the necessary skills. Help from trading kinsmen and friends minimizes the daily expenditures and burden involved in market selling. Good customer relations help control long run risk in obtaining supplies and making sales.

Perhaps most important, the formulation above ignores the balancing of demands and assistance from which overall assessments of this issue derive. As apparent in the data reviewed above, a judicious, conscious allocation of funds is implied by market sellers' reliance for income on their firms and market sellers' reliance on themselves to assure the viability of their firms. To make this point is not to deny that periodically what might have been capital is used to pay taxes for parents, to

16. Isaac, "Kinship Obligations,"; idem., "Business Failure in a Developing Town: Pendembu, Sierra Leone," *Human Organization*, XXX (1971), 288-294.

make interest-free loans to friends or kinsmen, or to pay school fees and purchase books and uniforms for a brother's or sister's child. The point deserving emphasis, however, is that where kin ties can be said to have restricted growth, traders have chosen to accept those restrictions. Conversely, where traders have chosen to expand their businesses, kinship and close friendship obligations may be critical in a number of ways--channeling capital and market intelligence to the firm, and providing labor (children or young adults) for the additional tasks entailed by the expansion.

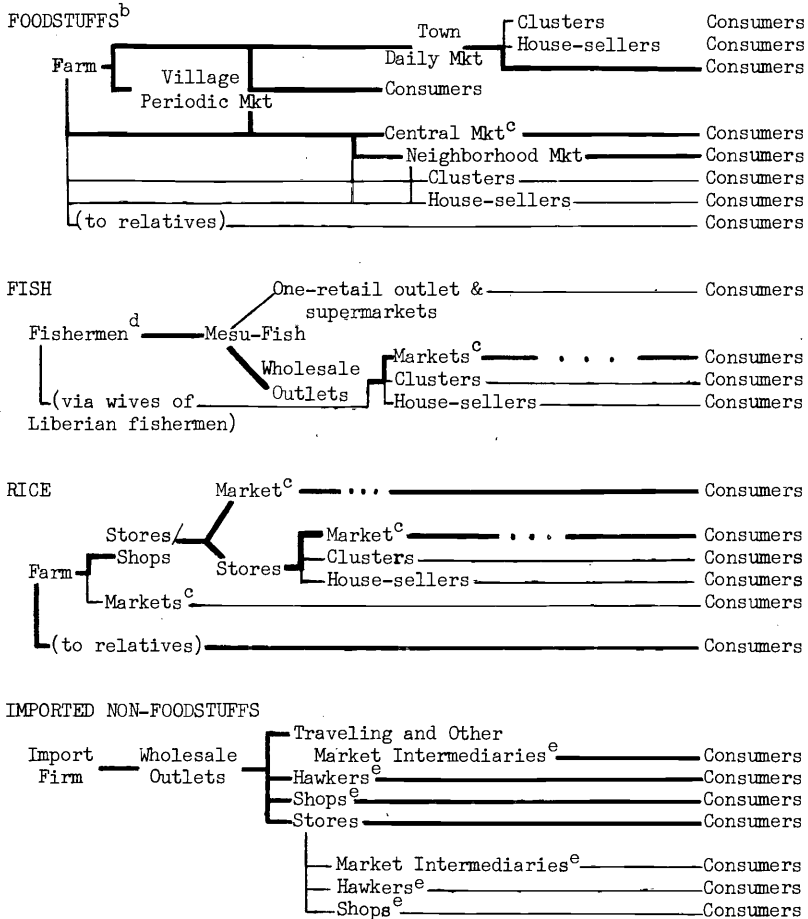
EXPLANATION OF ENTREPRENEURSHIP AMONG MONROVIA MARKET SELLERS

A study of entrepreneurship commonly is thought to consist either of a study of firms and their operation, or the personal attributes of the individual entrepreneur, or both. The underlying issue, however, is explaining why entrepreneurs exist at all and why not everyone is an entrepreneur. In addressing ourselves to this aspect of the question of the supply of entrepreneurs we are asking (1) why some people initiate a firm and why other people do not, and (2) why some entrepreneurs remain in trade and why others withdraw. As indicated above, however, assessment of a group of entrepreneurs presupposes an understanding of where one's entrepreneurs fit into the national marketing structure. The questions posed above will be discussed with reference to Monrovia market sellers, and some indication of the relation of the Liberian market system to the other aspects of the national marketing structure has already been given. Market sellers in Monrovia, however, are involved in only one aspect of the national market system, and the nature of the firms of these people themselves has some bearing on our answers to the questions posed here. As background to further comment, first the Liberian market system, and second the firms of Monrovia market sellers will be described.

THE LIBERIAN MARKET SYSTEM

Produce and imported foodstuffs, cloth and household articles flow to the final consumer through a variety of channels, personnel and exchange sites. Although imported goods are sold in some market places by market sellers, and in others by hawkers who wander through as they walk around the town, most purchases of imported cloth, pots and pans, cooking utensils and so forth are made at stores. Shops carry an assortment of tinned and otherwise preserved foodstuffs, beverages and sundries. More than one-half the total sales of country rice, all sales of imported rice and perhaps one-quarter to one-third the sales of palm oil flow through shops or stores or both at some point from producer to consumer. Although most sales of foodstuffs--both imported tomato paste, onions, bouillon cubes, and locally produced greens, palm oil and rice--are made in market places, markets are only one type of

of site at which food changes hands. Foodstuffs are sold by single traders (operating from the doorsteps of their own house, vending in neighboring villages, labor camps, mission stations or at the houses of resident anthropologists or Peace Corps Volunteers, or from stands along the roads) and by clusters of traders (in front of stores, schools and at road intersections) outside of market places. Furthermore, there are several different types of market places. Foodstuffs arrive at market places, and leave in the hands of selling producers (dealing wholesale, retail or both), bulk-ing intermediaries (dealing wholesale, retail or both) as well as in the hands of re-tailing bulk breakers (who may also sell wholesale) who sell in, as well as, outside of market places, and consumers.

FIGURE 1.--Channels of Distribution in Liberia, 1970^a^aMajor channels indicated by thick lines.^bOther than rice and fish.^cAll foodstuffs, including rice and fish, follow similar channels once they reach markets.^dBoth Liberian and foreign companies.^eOccasionally, Hawkers, Shops, and Traveling or Other Market Intermediaries are combined in the same firm.

These elements are not arranged haphazardly, however, (see Figure 1). Market places themselves are the primary channel for foodstuffs in Liberia, and the differentiated series of marketing sites emerged as a responsive flow of foodstuffs (and imported merchandise, where appropriate) to the differential demands of consumers, both selling producers and non-food producers. Produce has been carried to enlarging "crowded" areas both by selling producers, and by bulking intermediaries looking for supplies that were otherwise unavailable in urban centers. Partially to avoid the costs in money and time, and partially to avoid the competition in central areas, women in outlying settlements (both within and outside of urban areas) have turned to selling closer to their homes. Selling producers have been and continue to be instrumental in establishing periodic markets at which they have been able both to sell and buy, and daily market places have been created in central areas within urban centers, and in sub-central areas in outlying districts, as growing numbers of traders, supported by growing urban populations, have sought (both from landowners and from government agencies) places from which they could sell. Clusters of sellers and single house-sellers trading outside of market places cater to still different types of demand, respectively, for snacks or (in front of supermarkets) for fresh fruit, and for items to be added to soups at the last minute.

The uniformity in channels and types of markets is also connected to uniform patterns of production and consumption. Liberia exhibits a physical environment which is largely undifferentiated, and this lack of differentiation carries over to both production and consumption.¹⁸ Except for the expatriate community, perhaps 7 percent of the Liberian population, and some regional variation, the dietary patterns throughout Liberia are much the same. Rice and cassava form the staples and are eaten with soups consisting of a variety of items, notably including palm oil, fish, bouillon cubes and vegetables in various combinations. Likewise, most foodstuffs--at least the principal foods--are found in almost every particular locality. The principal variation in the foods eaten results from the peculiarities of taste, local production upcountry (in villages a function of what is grown, in towns a function of what is attracted from its hinterland), and the limitations imposed on urban households with especially low incomes. Usually, foods are purchased in unprocessed form, and the activities moving foodstuffs from upcountry farms to urban areas are largely restricted to purchasing and reselling. Farm technologies themselves are characterized by production of a diversity of both cash and food crops, on small plots, and in small amounts. The sales of food crops tends to be viewed as a supplement to the larger incomes receivable from cash crops which, however, are available only during a part of the year. The sale of food crops is the responsibility and prerogative of women. Decisions to sell these crops usually are made within the context of balancing household demands for cash not met by men with household demands for

18. Cf. Handwerker, "The Liberian Market System," 161-218.

food. Because of considerations of household subsistence, food is sold throughout the year, and individual farm households make sales only infrequently, in small quantities and without usually specializing in any one foodstuff.

Hence, farm technologies produce a situation in which urban areas must be supplied from relatively extensive areas, and by many farm households. Although food may be transferred to urban locations directly to relatives (who may be either consumers) principally in two ways.¹⁹ Where selling producers live only a short distance from a town or city (within c. 30 miles and a \$1-1.50 trip to Monrovia, and within c. 10-15 miles and a 50¢ trip to an upcountry town), they tend to carry their produce directly to either the one Town Daily Market in such towns as Gbarnga, Saniquellie, Zorzor or Plibo, or to the Central Daily Markets (Waterside and BTC in Monrovia, or Harbel market at Harbel) in cities. Sales may be made directly to consumers, or to people who distribute food in either Neighborhood Markets (all other markets in Monrovia) or singly or in clusters in outlying areas; or sales may be made to market retailers who themselves may sell both to customers or to people distributing food in outlying areas. However, most of the food supplied to urban areas appears to derive from beyond these limits, and is channeled to urban areas through Village Periodic Markets and bulking intermediaries. In turn, these intermediaries channel the produce purchased upcountry through the alternative series of steps described above. Imported foodstuffs such as bouillon cubes, tomato paste and rice reach markets via stores, and fish are distributed to consumers by market intermediaries whose purchases were made from outlets of the Mesurado Fish and Cold Stores Company either directly or from trucks traveling to markets situated in towns in which there is no outlet of this firm. Market retailers dealing in imported hard goods and cloth are found almost exclusively in Village Periodic Markets and in Central Daily Markets. In Village Periodic Markets, such goods are involved in the initial movement of foodstuffs into market channels as people sell to purchase these items; in Central Daily Markets, sellers of these commodities are able to take advantage of three demand crowds additional to those who come to purchase their daily food: (1) the large number of selling producers and bulking intermediaries who transport into cities (Monrovia), (2) the large number of sellers from Neighborhood Markets who come to purchase their stocks, and (3) the large number of people who, at least on Saturdays, come to the central markets to purchase fresher stocks, in larger quantities and, perhaps, at lower prices.

In 1970, food was channeled to Monrovia consumers through two Central Daily Markets (Waterside, or General Market, and BTC or Merry-go-Round or Old Baker

19. Cf. Handwerker, "The Liberian Market System," 161-218, and *idem*, "Viability, Location and Timing of Liberian Periodic Markets," in Internal Exchange Systems in Africa, Asia and Latin America, edited by Robert H. T. Smith (Melbourne, in press).

Market) and nine Neighborhood markets (e.g., Jongbetown, Old Road, New Krutown and Logantown markets). All Monrovia markets were open daily, from about 6:00-7:00 A.M. to about 4:30-5:30 P.M., Monday through Saturday (except holidays). The market day begins at the central markets as retailers from all of the Monrovia markets, and from houses and clusters, gather to purchase fresh produce.²⁰ Trucks which arrived late the evening before and stayed the night are joined by others sporadically throughout the day. Fish sellers commonly meet at one of the two distributing outlets, one in Vaitown, the other in Logantown, on the main road through Bushrod Island. Parcels of fish usually are purchased in amounts calculated to last only through the one day. However, at least two market women trading in fish purchased large lots which were broken down into smaller units to be sold by people to whom these parcels were credited; and some ocean fish finds its way into Monrovia market places through the selling wives of fishermen. Imported, and a large proportion of country, rice finds its way into the Monrovia market places primarily through two stores, outlets of the same firm, one located at the Waterside Market, the other located on Camp Johnson Road within 5-10 minutes walk from the BTC market. However, a considerable portion of the imported rice sold in Neighborhoods Markets finds its way into retailing sites through adjacent stores. Markets tend to be busiest on Monday and Saturdays as people purchase large stocks for the weekend and fresh stocks at the beginning of the week. Households that purchase their daily food at a Neighborhood market often visit either the BTC or the Waterside markets on Saturday. Corresponding to the receipt of wages and salaries, markets tend to be busiest every other week. In Monrovia, the dry season tends to be the busiest period of the year, corresponding to the visits of relatives, but holidays--particularly at Christmas and Independence Day in late July--bring forth a rash of purchasing and increased supplies of produce from upcountry. There is only one market (Baker, or Small Baker) that is allowed to open on Sundays. This market is open only from about 8:30-10:00 A.M., and seems to cater mainly to people who retail food from their houses during Sunday afternoons and evenings.

20. Although the BTC and Waterside markets are the main unloading points for produce carried into Monrovia by trucks, produce is broken down for redistribution to retailing sites also at a location adjacent to the New Krutown market on the main highway, at the Freeport juncture connecting the Monrovia-Gbarnga highway with the highway into western Montserrat County, and at Jongbetown market in Sinkor. Some trucks find themselves as far out as the Old Road Market when stocks are not readily sold at the Central markets. In addition, Mandingos who collect produce and deliver it to Monrovia do so through shops at the Waterside market.

ENTREPRENEURS IN THE LIBERIAN MARKET SYSTEM

In Katsin's terms (see footnote 7), and including market sellers generally, the intermediaries²¹ comprising the market place population in Monrovia are independent managers who carry the risk, and claim the gains, of enterprises with the objective of obtaining money.

On the one hand, firms are run by single managing entrepreneurs largely independently of one another. Despite being a part of a matrix²² of relationships with a host of traders and non-traders, the most common description market sellers give of their businesses is that "We are all on our own." Neither partnerships nor the organized cartels reported for other West African countries²³ are found in Liberia. Collusion in price-making is largely absent, and 90 percent of the Monrovia market sellers sampled purchased all of their commodities from a variety of independent sources. Although 9 percent of the sampled market sellers themselves produced some or all of the stocks sold, only 1 percent reported having contracted with a single supplier (kin or non-kin) for the stocks sold. Similarly, less than 1 percent of the sample reported ever running a business jointly with another trader--either purchasing together and selling separately, or purchasing separately and selling together, or both--and there was no instance in which these activities took place on a regular basis. For the most part, traders themselves constitute one man/woman firms. Only about 23 percent of traders in Monrovia market places reported having any employees at all, and about 92 percent of those who did engaged only family members for no remuneration. Outside of Monrovia bulking intermediaries may hire boys to search out possible sellers of commodities in bush villages adjacent to periodic market towns (e.g., at 10¢ per 5 U.S. gallon tin of palm oil found), and selling producers occasionally hire boys and young men to climb trees to collect fruit and carry bags of produce onto the roads or to the markets. In Monrovia, and among intermediaries working in daily markets elsewhere, the responsibilities of helpers are restricted to carrying loads of goods to and from marketing sites, watching over the market in the absence of the manager, fetching water, occasionally purchasing fresh stocks, and the daily food for

21. Variations in market sellers and activities will be discussed in another study.

22. Data on price-making and transactional activity will be presented in another study.

23. Marvin Miracle, "Market Structure in Commodity Trade and Capital Accumulation in West Africa," in Markets and Marketing in Developing Economies, edited by Reed Moyer and Stanley C. Hollander (Homewood, Illinois, 1968).

the household, and only occasionally making sales. Helpers still more rarely are assigned the task of carrying goods to different marketing sites and conducting business in a relatively independent manner. Most of the individuals engaged in the operation of an extension of a firm are hired for the purpose. Only 8 percent of the sampled entrepreneurs hired anyone at all, and only 6 percent relied exclusively on hired help. Hired employees receive either a daily wage, or more commonly, are permitted to keep any receipts over an assigned minimum "report" to the managing entrepreneur. For instance, all of the fresh meat sellers in Monrovia operate as extensions of managing entrepreneurs who supply the capital and goods for sale, rarely visit the market place (although they may conduct sales from stores located elsewhere) and except a minimum report of \$0.50 on every pound of meat sold. These market sellers obtain their own profits by charging \$0.60 per pound. The result of these practices is that the social organization of marketing sites assumes a cellular structure. Each trader assumes responsibilities for paying market fees, providing their own equipment, cleaning up the area immediately adjacent to their selling spots, buying stocks, arranging the terms of sales and credit, and absorbing losses and using profits by themselves.

On the other hand, firms are created, persist, changed and dissolved largely due to considerations of money. Traders aim to make money, either as their sole support or as a supplement to otherwise deficient incomes. Capital is required to create a firm and changes in the firm usually imply either that sufficient capital is available or that the change was precipitated by a lack of capital. Before a trader has a choice whether or not to quit, he or she must have operating capital with which to reinvest and continue the process of buying and selling which defines the firm, and these transactions must yield receipts over and above inputs to allow the trader to meet his or her subsistence wants. Money is both a precondition and a motivation for the creation, persistence, change and dissolution of the one-person trading firms operating in Monrovia market places.

However central monetary considerations are to these entrepreneurs, such considerations enter into decisions to start firms or dissolve them only in the context of other variables. It is in discussion of these other variables that we can explain entrepreneurship in the Liberian market system.

ENTREPRENEURSHIP

Explanation for Monrovia market sellers entering trade and withdrawing from its centers on the position these people have in the national economy and, additionally for withdrawal, on management ability.

As I discuss elsewhere²⁴ the Liberian market system of 1970 emerged from a matrix of economic, political, geographical and social variables (see Figure 2). Most basic, market places of various kinds were created (and are still being created) largely as a political response to the demands and activities of de facto market sellers.

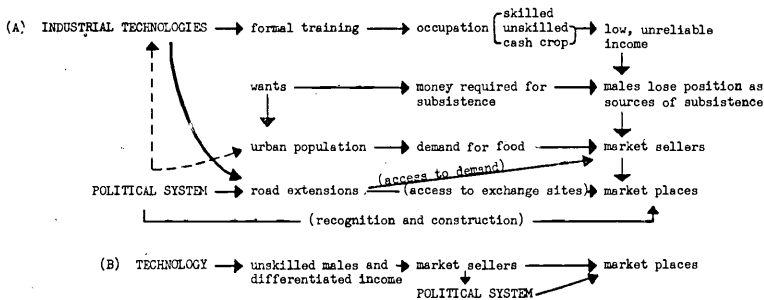


FIGURE 2.--Intertwined changes in technology and social structure in Liberia, c. 1950-1970.

The creation of market sellers themselves presupposed a demand for money on the part of potential traders and, equally important, a demand for food (the growth of urban centers) and access to that demand (a system of roads). However, beyond a consideration of the necessary political and economic infra-structure, Liberian market sellers generally, as well as in Monrovia, emerged most directly from a changing household organization. By an emphasis (amount of money earned) on formal schooling and technical skills, the industrial technologies and bureaucratic work organization introduced into Liberia largely since 1950 created significantly different

4. W. Penn Handwerker, "Changing Household Organization in the Origins of Market Places In Liberia," *Economic Development and Cultural Change*, XXXII, (1974) 229-248; *idem.*, "The Liberian Market System," 36-160.

subsistence levels and a backwash of men employable (if at all) only in the lowest echelons who could not provide their families (or potential families) with an adequate livelihood. Men turned to trade generally, as well as to market selling in Monrovia, largely because they had no other profession with which to earn money, but wanted to remain in the city (see Table 2). This is the background of the men sitting along the sidewalks of Waterside in Montovia waiting to be hired to carry some small thing a short distance, the peddlers with their "tables" of assorted candies, gums, biscuits, cigarettes and matches, the "Yannah boys" traveling around Monrovia with stacks of brightly colored "Fanti" cloth (imports from France, Japan and the Netherlands), and most of the market sellers in Monrovia who deal in imported cloth, household wares and such.²⁵ Young boys peddling newspapers, water, ice cubes, frozen cool-aid,

TABLE 2.--Motivation for entering trade reported by 595 Monrovia market sellers, by sex of trader (in percentages), 1970

Motivation	Males	Females
To meet family expenses ^a	10	10
To meet household expenses ^b	--	85
Had no other profession ^c	81	4
Other ^d	9	1
	100 (n=108)	100 (n=487)

^aIncludes items such as school fees, sickness.

^bIncludes items such as unreliable support, absence of support, and to help spouse.

^cIncludes: could not find a job, was out of work, unreliable support from other people (males only).

^dIncludes: to be my own boss, to follow family profession, to get money (females only), "I want to be rich" (only one female).

5. The bulk of market sellers in these goods upcountry are Mandingos who are trading because it is their family profession. Other Liberian tribesmen recently have joined the Mandingos in upcountry markets, but it is more common for these people to have entered trade after having been raised by a merchant of one sort or another and to have taken trading to be their profession.

eggs, and so forth, and the girls peddling bread and bakery goods are in much the same situation. They are drawn largely from the population of school aged children who either have to earn their own school fees, or have had to drop out of school for lack of money and are trying to earn some money to buy some small thing and to help their parents. Women, the principal participants in the market system,²⁶ turned to trade largely to assume responsibility for household subsistence (see Table 2), either wholly or in part, inadequately handled by husbands with no job or with jobs yielding only low and unstable incomes, or by no husbands and ineffective claims to the support of their brothers or other kinsmen arising out of the absence of education or technical skills and low incomes among these people also.

The variables explaining the origins of market sellers and market places also largely explain the persistence of market sellers and market places in Monrovia. There has been no shift over the years in the motivations leading people into trade.²⁷ Also, by implication, these variables explain why other people do not become traders. The technical skills and schooling making available "skilled" jobs, paying relatively high and stable wages produce a situation in which men do not have to trade, husbands can support their families more adequately, and fathers, brothers and other kinsmen (sometimes including the brother of a deceased spouse) have the resources to support in one household women (occasionally with children) who otherwise would have no support and turn, possibly, to market selling to obtain a livelihood.

Market selling is not a prestigious occupation. When asked, people indicate a general preference to do other work. In fact, shops are the only trading firms having

26. Neither men nor children are major participants in the market system. In most cases, children simply do not have the capital (and have no way of getting the capital) to make an extensive market. Except for shops, trading has not been a particularly desirable occupation for men unless few or no alternative employments exist, and there is limited demand in market places for the wares they distribute. Although male market sellers are important insofar as their distribution of imported cloth and household wares has been linked to the initial movement of foodstuffs into market channels, they made up about 15 percent of the traders in market places in 1970 and were not distributed evenly among the various types of market place. In Central Daily Markets and Village Periodic Markets men might constitute up to 20 percent of the sellers; in Neighborhood Markets and Town Daily Markets, men constitute from 5-10 percent of the sellers. Most important, market places originated from the foodstuff trade and it is exceptional (only 10 percent of the male market sellers in Monrovia sold foodstuffs exclusively, and only 15 percent sold any foodstuffs at all) for men to trade in foodstuffs.

27. Handwerker, "Changing Household Organization".

general appeal. When Monrovia consumers²⁸ were asked if they would become traders, about 60 percent indicated that they themselves would or might become traders, but less than 30 percent indicated that they thought it was an appropriate occupation for either their sons or daughters. In part these attitudes derive from a fear that marital discord will follow, or because trading is beneath their dignity ("they are ashamed"); in part these attitudes derive from the arduous physical labor entailed in operating firms in market places ("they do not like the inconveniences involved"). As one woman retailer described her tasks,

In selling things like cassavas, palm nuts and greens you have to get up from bed about 5:00 A.M. to cook your breakfast and leave the house by 6:00 A.M. to be at your market. Then you sit at the market and wait for trucks that will bring cassavas. Not only you need cassavas, there are many other women. So you have to struggle hard to get a bag of cassavas. When you get the bag you have to sit on it until the truck driver or the seller comes to you for the money before you leave with it. Leaving, you have to ask some people to help you carry the bag. If you went to Waterside BTC market [but sell at one of the Neighborhood markets] you will then need to pay a taxi or car to carry you and the bag to your selling area.

Fish sellers have to arise still earlier, travel further, and contend with a smelly, messy product. Headloading goods to market is generally troublesome, and all sellers contend with people who complain about the high cost of food, with rogues who steal food, rats, children and others who eat food, people who come to buy without the money with which to pay, neighboring sellers who do not clean up their selling spots well, and noisy, congested working conditions. Sellers of goods that can be preserved to some extent (e.g., peppers, fish) must also spend time and money outside market places in preserving unsold stocks if they are to avoid losses. Dealers in unpreservable foodstuffs must either absorb occasional losses or seek out places to sell in the evenings when they have unsold stocks. It is chores such as these that make traders complain about the "hard work" involved, and non-traders feel that "it is undignified." It is only the shop that brings a measure of prestige and a lessening of innumerable menial chores.

28. These data come from a sample (N=293) of Monrovia consumers not selected according to procedures assuring a representative selection of units, but widely distributed over Monrovia to cover most (excluding West Point, New Krutown and Claratown) sections of the city. As with the other surveys, background data were gathered by the author and the interviews were conducted by Liberian research assistants, vide Handwerker, "The Liberian Market System," 23-24.

Although there are many specific ways of phrasing why people avoid trade, and prefer that their children work elsewhere, nearly all of them presuppose that either the people themselves, or their children, did or would have the schooling or technical training to avoid having to trade. Even the reasons adults cite for possibly entering trade in the future revolved around obtaining money to help themselves either because their level of education precluded confidence in their future ("who knows what the future will bring"; "I have no education") or because trading could provide a secondary income and a source of security at a future time. Underlying this point is that the most frequently cited reason people give in informal conversation for not entering trade is that, if they are men, they already have a good job, or if they are women, their husbands have a good job and take good care of them. Conversely, the attraction of trade is that it offers a reasonably reliable, albeit small income to people who otherwise cannot find money. As one woman pointed out, "I saw that traders always have money." Consequently, as with non-trading adults themselves, reasons cited for favoring trade as an occupation for sons or daughters centered on the belief that even without schooling or technical training a person could earn some money, either to support their families or to help their husbands.

These attitudes also are reflected by the sellers in Monrovia market places. Eighty-two percent of the sampled market sellers preferred trading to alternative employments, or unemployment, mainly because of the money they do make, either because they would not be able to earn money otherwise, or because they make more money trading than they would be able to earn in other occupations for which they would qualify. People indicating a preference for an alternative employment generally were either men--who, relative to women have a far greater chance of finding employment outside of a market place--or were those who disliked the hard work involved in trading but remained in trade because they liked other properties of the job, for instance, meeting people, and "being my own boss."

In sum, the entrepreneurs in the market places in Monrovia, as well as throughout the Liberian market system, enter trade because it is the only or the most profitable income-earning option they have.²⁹ It is a trivial truth that marketing systems presuppose demand and transportation facilities. The connection between the national economic structure and the supply of entrepreneurs is less obvious. Yet Liberian entrepreneurs in the market system have come from the group of under-skilled people created by the introduction of industrial technologies emphasizing

29. Although people occasionally mention that aspiring traders do not find the capital to initiate a firm, the small amounts of money (\$0.50-15.00) requisite for entering the foodstuff trade suggest that capital is not a significant barrier to entrance. The larger amounts of money (\$15.00-50.00) used to enter the trade in cloth and household wares may be more generally important, but it is possible to enter this trade with as little as \$1.00 capital.

formal schooling and technical training. On the one hand, men entered trade because a lack of formal schooling and/or technical skills precluded obtaining jobs on a regular basis, or none at all. On the other hand, women entered trade either because the jobs of their spouses yielded incomes insufficient to meet household subsistence wants, their husbands could find no work, or work only occasionally and at low wages, or because, without husbands, they could not make effective claims to the support of kinsmen because these people also had low, unstable incomes. Conversely, it is in the presence of formal schooling or technical skills and the consequent availability of jobs paying relatively high, stable wages that people do not enter trade.

Explanation for withdrawals from trade appears less precise than explanation for entrance to trade. The data summarized above indicate that most traders prefer to remain in trade but may leave (1) if they can find a job paying wages or salary, or (2) if the husbands, brothers, fathers or other kinsmen of female traders become able to support a household by themselves, or a larger household, thereby dissolving the need for income from market selling activities. Moreover, besides pointing out that people do not need the money, or can find better money elsewhere, traders emphasize that many people do not trade in market places because they do not have the necessary managerial skills or do not utilize the skills they have. Not only is there a concern for competition, it is generally recognized that traders easily can drive themselves out of business with their own improvidence. Keeping an account of expenditures is considered very important in the survival of such firms. Although literate market sellers are rare, and even those who report themselves to be literate often do not keep written records, a constant accounting of expenditure is attempted. The advice given to new traders is "do not eat the money." Traders who go dancing, to parties, drinking or spend their money on girl-or boy-friends do so at their own risk. Above all, a trader's market will surely spoil when he spends money foolishly on himself, as "when you see your friend in decent cloth and right away you take some of the market to buy some for yourself."

Monetary considerations themselves, however, appear to enter into the dissolution of firms less frequently than they do into any other aspect of trading. Not only is it necessary to consider both voluntary and involuntary withdrawals from trade, but voluntary withdrawals may be made for considerations not tied directly to the availability of money elsewhere or a lessening need for it from the trading firm, and involuntary withdrawals may be made for considerations not tied directly to mismanagement of firms. Firms are not only isomorphic with the individual entrepreneur, firms are isomorphic with the capital the managing entrepreneur brings to the tasks involved in market selling. If a trader's time, attentions or capital are directed elsewhere--to making funeral preparations, visiting relatives or building a house--the firm almost always dissolves, at least temporarily. In only exceptional circumstances are there subordinates who have the competence and trust of the seller to direct the business in their absence. Sixteen percent of the sampled Monrovia market sellers reported leaving trade temporarily at least once, and the variety of explanations given for these withdrawals illustrates these points: (1) some traders

reported leaving for several months to a year because their husband died and they had to spend time and money making funeral preparations, visiting relatives and mourning, (2) some traders reported leaving for two or three months while they gave birth and cared for an infant during its first few months, (3) some traders reported leaving for a few weeks to several months to visit relatives, to help plant or cut rice, or both, (4) some traders reported leaving for varying lengths of time because they were sick, (5) and some traders reported leaving for various lengths of time either because they could not find the commodities they sold or because the prices for those goods rose above the level of their capital reserves. Similarly, 10 percent of the existing traders were considering leaving trade for an equivalent variety of reasons: (1) some traders indicated that they had become too old to undertake the activities involved in trading, or had become tired of the hard work, (2) some traders indicated that they were following their husbands, or were themselves moving upcountry to make farm, (3) some traders (mainly men) indicated that they had found someone to teach them a technical skill (e.g., driving, tailoring) or had found a job paying a wage or salary, (4) some traders indicated that they were going to be, or had become, married, and either that they had no time to trade, that their husband did not want them to trade, or that their husband would not take care of them, (5) some traders indicated that they were pregnant and were planning to stop trade to care for the infant, (6) some traders indicated that they were planning to go to school, and (7) still other traders indicated that they could not make money in trade.

Although the issue of withdrawals is complex, its explanation is not imprecise. Data gathered from market sellers in Monrovia who had withdrawn from trade indicate that involuntary withdrawals from trade occur more frequently than do voluntary withdrawals, and emphasize the importance of effective management in preventing business failures (see Table 3).

These points might be expected from the data reviewed above. On the one hand, it was pointed out that people both turn to trade and want to remain in trade because they have few or no employment alternatives. Market sellers are reliant for income on their firms. Hence, most withdrawals will be involuntary. Similarly, since it is men who are most likely to have a technical skill or have been to school, they are the ones who most likely can find employment outside market places, and it is they who are drawn out of trade voluntarily because they do find other employment (see Table 4).

On the other hand, it was pointed out that the viability of firms was reliant principally on the activities and abilities of market sellers themselves. Hence, involuntary withdrawals among both men and women reflect a selection not by kinship or other variables, but by traders' own management inadequacies (see Table 4). Despite the wide variety of involuntary factors that exist, the most important single cause of involuntary withdrawals from market selling, accounting for 50 percent of

TABLE 3.--Specified causes of trade withdrawals reported by 43 Liberian market sellers (Monrovia) who had withdrawn from trade, 1970*

Nature of Withdrawal Cause of Withdrawal	Frequency			Percent	
	Male	Female	Total	Sub-Total	Total
Involuntary					
Mismanagement ^a	2	3	5	17	12
Mismanagement ^b	3	0	3	10	7
Mismanagement ^c	7	0	7	23	16
Other ^d	8	7	15	50	35
Sub-Total	20	10	30	100	70
Voluntary					
Found another job	9	0	9	69	21
Other ^e	0	4	4	31	9
Sub-Total	9	4	13	100	30
Total	29	14	43		100

*A binomial test of the distribution of voluntary and involuntary withdrawals from market selling yields a $z=2.44$ and $P=.0073$.

^aCapital reserves insufficient to meet rising costs. This problem is fairly common among foodstuff sellers, susceptible both to seasonal shortages and non-seasonal shortages for imported rice. This problem is resolved either by switching commodities, withdrawing from trade during the period by scarcity, or withdrawing permanently.

^bIn some cases contributing to insufficient capital, but referring specifically to capital insufficiencies or total loss when people neglect account for their expenditures or report having spent money foolishly.

^cImplicit references to the management problems above, but also including over-extension of credit, inability to sell fast and spoilage of commodities, and making heavy investments without accurate information on a commodity's going price and/or demand.

^dChance factors: sickness, old age, pregnancy, marriage, one case in which a man left his capital with a friend while attending his father's funeral and the friend ate the money, product losses from various sources (both theft and police), and one woman whose market was spent on her daughter in the gre-gre bush.

^eChance factors: want to go home, tired of selling, going to visit relatives.

the cases, is mismanagement.³⁰

TABLE 4.--Causes of trade withdrawals by sex, controlled by whether or not withdrawal was voluntary, 43 Liberian market sellers (Monrovia) who had withdrawn from trade, 1970

Nature of Withdrawal Cause of Withdrawal	Sex	
	Female	Male
Involuntary ^a		
Mismanagement	3	12
Other	7	8
	10	20
Voluntary ^b		
Found another job	0	9
Other	4	0
	4	9
	14	29

^aFisher's Exact Test (1-tail), $P = .2174$

^bFisher's Exact Test (1-tail), $P = .0014$

30. There may be a question whether capital shortages (Mismanagement^a in Table 3) were brought about by kinsmen who either deplete existing supplies or inhibit capital accumulation. The available evidence suggests this is not the case, and as Isaac observes:

Except under certain circumstances, such as a period of market slump or the period in which a new business has not established a clientele, to say that a business failed because of "inadequacy of capital" would be to say relatively little. Certainly, every businessman could remain in trade indefinitely if his ... capital ... were inexhaustible. But sources of capital ... are everywhere limited. Regardless of the size of a businessman's initial capital or credit, he must manage his business resources properly if he is to safeguard his original investment and protect his credit. Isaac, "Business Failure," 293-294; his italics.

CONCLUSION

This paper has attempted to review briefly the question of entrepreneurship in Liberia. Although some background data were presented in a review of a recent report on Liberian entrepreneurs, this paper focused on the Liberian food marketing system, particularly on entrepreneurs working in market places in Monrovia. The data presented in this paper were intended to clarify some of the issues presupposed in a study of entrepreneurship and to examine a few aspects of entrepreneurship among Monrovia market sellers.

The importance of marketing structures in "developing" nations only recently has been appreciated and given systematic attention. Yet a consideration of marketing systems touches issues central to the question of economic well-being. The dual problem of producing "low" consumer costs and "high" production incomes is at the heart of economic development. Rising incomes and/or incomes that purchase more goods and services almost defines rising standards of living. Although the national economy of any nation is largely a function of its relation to the international political economy,³¹ the setting of consumer costs and production incomes within the framework of the national economy is a function of its internal marketing systems. How efficiently they operate by some profit-loss criterion has serious implications with regard to the creation and perpetuation of rising or locally defined adequate standards of living. As Abbott³² has amply demonstrated, inefficient marketing systems inhibit the ability to any country to make the most of what competitive advantages it may wrest from the international system.

Developmental implications perhaps are most marked with respect to the trade in foodstuffs. As elsewhere in tropical Africa, Liberia has experienced unprecedented shifts of population out of food production into employment for wages and salaries. Although Liberia's population is small, and not growing as rapidly as other countries with a growth rate estimated to be only about 1.6 percent,³³ population growth tends to be characterized by high birth and death rates. Comparable to other countries in

31. See Roger Walke, "Who Controls Liberian Development?," Humboldt Journal of Social Relations, I (1974), 114-126.

32. J. C. Abbott, "Marketing Issues in Africultural Development Planning," in Markets and Marketing, Moyer and Hollander, eds.

33. Economic Survey, 45-49.

tropical Africa,³⁴ the population is young and exhibits a dependency ration of 81. A reduction of the food producing population together with an increased number of relatively unproductive persons making up a significant percentage of urban populations as they migrate for schooling raises questions as to the ability of the remaining farm population to feed the increasing number of non-food producers as well as to the ability of urban households to enjoy rising standards of living working for wages and salaries. This question is compounded where--as in Liberia--food producers themselves live in a world in which money is wanted in increasing amounts by an increasing number of people to meet subsistence wants. The fact that up to 1970 these wants have been met largely by the production of such non-food ("cash") crops as cocoa and coffee irrespective of world prices raises questions as to whether or not demand from urban populations has been transmitted effectively to farmers.

While most of the issues pertinent to an evaluation of the food marketing system in producing high production incomes and low consumer costs will be left to other papers, here it is intended to emphasize the importance of the small-scale private enterprises which constitute the Liberian food market system and enter significantly in the marketing of other goods. As Isaac³⁵ has pointed out, the importance of such entrepreneurs is often overlooked despite the fact that, throughout tropical Africa as well as in Liberia, they form the basis for the food marketing systems. Not only do such entrepreneurs perform services such as the marketing of produce for which other types of firms (e. g. stores) are not suited (given low total volume obtained from sparsely distributed, non-specialized units with low productivities making sales infrequently), they are instrumental in producing rising standards of living in other ways, notably by redistributing part of the proceeds to kinsmen who are less well off, and by being employed--self-employed--where otherwise they might not be.

Perhaps most important, market sellers in particular appear to form the largest concentrated pool of talent and energy in Liberia. In commenting on marketing systems generally, Jones points out that

Participants in the market not only transmit throughout the system the effects of changes that may occur in any part of the economy, but they themselves initiate changes. The very nature of exchange requires that buyers and sellers ... seek out new sources of supply, new customers,

34. Vide, H. W. Singer, "Demographic Factors in Sub-Saharan Economic Development," in Herskovits and Harwitz, *Economic Transition*, 241-262; William Brass et al., *The Demography of Tropical Africa* (Princeton, 1968).

35. Barry L. Isaac, "Traders in Pendembu, Sierra Leone: a case-study in Entrepreneurship," Ph.D. dissertation, University of Oregon, 1969.

and new products. The participants themselves, and particularly the merchants (middlemen), become agents of change, responding ... to new opportunities and frequently creating them.³⁶

In large part these conclusions may be transferred to the Liberian case. Except for the necessary economic and political infrastructure, the Liberian market system itself largely is a creation of market sellers.

Irrespective of what combination of bargained and administrated exchange is chosen to coordinate markets for food in the future, effective market coordination presupposes skilled and energetic managers. Developmental planners should take cognizance of the existing pool of talent and energy. Although market sellers lack such elementary skills as accounting, there are a number of often highly skilled managers. Even in the absence of many managerial skills one often finds an atypical energy to carry out managerial tasks.

As Riley et al.³⁷ note, even a small lowering of marketing costs may be expected to significantly raise standards of living among both farmers and consumers and lead, possibly, to further, internally generated changes in food production and marketing. Given the technological framework within which traders now must work, the existing market system appears to be working reasonably well. But attempts are being made to introduce new technologies into food producing sectors of the national economy. Eventually, higher productivity will require changes in the food marketing system. Evidence on the sources of entrepreneurial talent raises a question as to whether people trained in schools will be attracted to the marketing of foodstuffs. From a standpoint of efficiency, the logical successors to the existing system are people trained in that system. There are a variety of ways that the existing food market system might be improved. The one to be emphasized here is the provision of literacy training in conjunction with business skills such as accounting. A number of firms now operating in the market system are not growing principally because the entrepreneur feels that, at least as yet, she does not have the necessary skills. And as apparent in the data on business failures, Monrovia market sellers--as with entrepreneurs the world over--fail at business principally because of a lack of business skills. Not only does it seem that one of the most valuable forms of developmental assistance would be the provision of training in managerial skills directed specifically

36. William O. Jones, "Measuring the Effectiveness of Agricultural Marketing in Contributing to Economic Development," Food Research Institute Studies, IX (1971), 175-176.

37. Harold Riley et al., Market Coordination in the Development of the Cauca Valley Region -- Columbia (Research Report No. V, Latin American Study Center, Michigan State University, 1970), 3-6.

to market sellers,³⁸ but provision of these skills is likely to be one of the cheapest forms of developmental assistance. Together with provision of other services (to be discussed in another paper), these skills may be expected to contribute directly to the efficiency of the existing market system, contribute significantly to the ease with which technological changes in food production are accepted because of higher production incomes, and contribute to the change of the food marketing system itself as these entrepreneurs would have both the experience and the skills to respond to technological changes they themselves may foster.

In closing, it is appropriate to suggest a direction for future research on entrepreneurship in Liberia. Perhaps the most obvious of all lines of research is a study of the personality attributes of these people. As implicit in this paper, however, research along these lines cannot be assessed properly in the absence of an understanding of the position of particular entrepreneurs within the national marketing structure as well as their position within the market channels in which they participate. In any event it is likely that the personality attributes themselves are a function either of the variables that cause entrepreneurs in the first place, or were acquired after a person became an entrepreneur. Hence, despite the indefinite number of questions that might be asked, the most important immediate task is to outline the remaining areas in which Liberian entrepreneurs participate--shops, stores, produce wholesaling, hawking, craftsmen and so forth. Minimal considerations in such research include (1) the organization and operation of individual firms in comparison with others of the same type, (2) the history and future plans of individual entrepreneurs, (3) the locations at which the firm purchases and sells together with problems of demand, clientele, transportation, exchange practices as well as the considerations entering into decisions to purchase and sell at one location rather than another, (4) the commodities dealt in and the entrepreneur's position in the channel of these goods, (5) problems of capital, savings and credit, and (6) risks entailed in operating a business of any given type and the mechanisms used to minimize or avoid risk as formulas of success and failure.

38. Isaac, "Business Failure."

A NOTE ON THE FERTILITY OF LIBERIAN MOTHERS AND THE SURVIVAL
RATE OF THEIR CHILDREN AS REFLECTED IN THE RECORDS OF
FOUR LIBERIAN HOSPITALS

Edwin Charlé¹

INTRODUCTION

In January and February 1974 my wife and I visited a number of hospitals in the Republic of Liberia and were permitted to examine the delivery books and general hospital records. Our purpose was to extract from these records information as to the fertility of Liberian mothers and the rate of survival of their children.

It is customary for a doctor or nurse to ask a prospective mother admitted to a hospital for delivery how many prior full term pregnancies she has had, how many premature births, how many abortions and the number of her living children. When the patient's hospital record contained these facts we recorded them, together with the mother's age (often an estimate), tribal identification and--at one hospital--her religion.

We set forth a summary of our findings and some commentary in the following pages in the hope that they will be of interest to those concerned with African demographic experience and demonstrate the usefulness of hospital records as a source of such information.

Only a small fraction of Liberian children are born in hospitals. Thus, no claim can be made that the trends reflected in the hospital maternity records describe Liberian mothers in general. However, the usefulness of the data to describe demographic experience beyond the sample itself is suggested by three factors. First, the measures of central tendency and the trends in evidence have an internal consistency which suggest more than just random results. Second, a government study of fertility undertaken in 1971 is available and comparison can be made between the hospital findings and that study. Third, in the future hospital

1. The assistance of the personnel at various Liberian hospitals is gratefully acknowledged. Drs. Paul Getty, Edwin Jallah and James Stull at Ganta, Firestone and Phebe Hospitals, respectively, and Professor John Gay at Cuttington College were especially helpful. My wife, Jean, participated with me in every phase of the data gathering, summarization and verbalization of results and deserves equal credit (or blame) for the consequences.

care will become increasingly available to African mothers so that the experience of hospital maternity patients, if atypical now, may become increasingly common with the passage of time.

Records from the following hospitals were examined: the Methodist Mission Hospital in Ganta (for the years 1956-62 and 1970-73), the Firestone Medical Center at Harbel (July 1962 through August 1963, and 1973), Phebe Mission Hospital near Gbarnga (July 1965 through 1967 and 1972-1973), and the John F. Kennedy Maternity Center in Monrovia (1973). Phebe Hospital is located about seven miles from the town of Gbarnga, the Methodist Mission Hospital is on the edge of the town of Ganta. Both serve primarily rural areas. The Firestone Medical Center serves almost exclusively the employees and employee families at the huge Harbel rubber plantation. The Kennedy Maternity Center is a government hospital serving the residents of the city of Monrovia. Phebe provided a new hospital for the area it began to serve in 1965. The other three hospitals had been in existence for a substantial period of time prior to the date of the earliest records available to us in 1974.

At Ganta, Harbel and Phebe we selected for analysis the earliest and the most recent of the existent records. The oldest records we obtained were from 1956 and most went back only to the 1960's. Unfortunately the case load at some hospitals in Liberia forces the regular destruction of old records to make place for the new. For the time periods selected we included data from every record which contained the information which we sought. The tribal groups represented in sufficient numbers for analysis in the time periods covered were: at Ganta, Mano and Mandingo; at Harbel, Kpelle and Bassa; and at Phebe, Kpelle and Mandingo. At the Kennedy Maternity Center we selected at random 1396 records from the 1973 case load; records available for earlier years did not contain the data we were looking for. The Kennedy records included no tribal identification but could be divided according to the mother's stated religion.

The greatest obstacle to obtaining information regarding fertility from hospital maternity records is the frequent omission from the patient's record of a statement or estimate of her age. Several of the hospitals which we visited in Liberia made no attempt to estimate ages and in others there were frequent gaps in age data and therefore their records (though otherwise accurate and complete) could not be utilized for an analysis of conception rates. For many African mothers exact age is unknown. Any investigation of fertility experience must confront this fact -- whether it is based on hospital records, census enumeration or sample survey. But the doctor or nurse questioning a prospective maternity patient would seem to have an unusually good opportunity to estimate her age and a consistent series of such estimates might constitute the best available evidence of mothers' ages for use in fertility histories.

Moreover, the maternity patient confronting her doctor or nurse prior to delivery might have an especially strong incentive to make honest and thorough statements regarding various phases of her personal history. Factors in this history would appear of importance in respect to her own physical well-being and that of her prospective child. Information regarding the number of her previous

pregnancies, difficulties encountered in those pregnancies, causes of infant death, etc., might all be divulged with greater candor than when an informant is questioned under different circumstances.

THE NUMBER OF REPORTED CONCEPTIONS

Statements of the mean number of reported conceptions must refer to mothers by age categories. Since older women tend to have had larger numbers of conceptions than younger, the age distribution of mothers in a given group directly influences the group's conception mean. Appendix Table A provides a summary of the incidence of prior conceptions and number of living children for mothers giving birth at Ganta, Harbel and Phebe divided according to conventional five-year age intervals. For most of the present analysis we used a longer age interval: 14-20, 21-30, 31-40, and over 40, as in Appendix Tables B and C. This was the interval used at the Kennedy Maternity Center for estimating ages (as explained below) and thus comparison was facilitated when we stated data for the other hospitals in these intervals as well. Ordinarily we did not have enough mothers reported as "over 40" to enable us to make comparisons of their records.

In the following paragraphs the number of conceptions refers to the total full term pregnancies, premature births and abortions reported by each mother as having occurred prior to the current pregnancy which brought her to the hospital. The statistical significance of differences in the calculated means is indicated where this seemed appropriate, based on computed t-values.

The hospital records suggest the following general conclusions in respect to conception means: First, except for the younger women there was consistent evidence of an increase in the mean number of conceptions reported per mother when information on corresponding but time-separated groups was obtained. Second, there was frequently a decline evidenced over time in the mean number of abortions and premature births reported, which indicated a rise in the number of full term pregnancies per mother somewhat greater than the increase in the rate of total conceptions. Third, the conception rates appeared lower at the Kennedy Maternity Center in Monrovia in 1973 than for any of the contemporaneous groups at the other hospitals (except for the Mandingo) suggesting an identifiable urban-rural fertility differential. Fourth, significant differences were evidenced at the Kennedy Maternity Center when mothers were grouped according to their religion with Christian mothers evidencing highest fertility and those indicating no religion with the lowest fertility.

Table I gives three presentations of differences over time for the conception rates of mothers in identical tribe, age and hospital groupings. The interval between "period I" and "period II" is approximately 12 years at Ganta, 11 years at Harbel and 6 1/2 years at Phebe. Table IA shows differences in the mean number of prior conceptions and indicates which of the differences are statistically most significant. *** indicates a probability of over 99% that the two groups are drawn

TABLE I
FERTILITY EXPERIENCE, COMPARISONS OVER TIME,
THREE PRESENTATIONS

	<u>1956-62</u>	<u>1970-3</u>	<u>1962-3</u>	<u>1973</u>	<u>1965-7</u>	<u>1972-3</u>
A. <u>Average Number of Prior Conceptions per Mother</u>						
	Ganta-Mano		Harbel-Kpelle		Phebe-Kpelle	
14-20	.62 - .61		1.06 - .68*		.61 - .60	
21-30	2.25 - 4.09***		3.36 - 4.23***		3.17 - 3.94**	
31-40	4.41 - 7.14***		4.90 - 7.75***		6.61 - 6.95	
	Ganta-Mandingo		Harbel-Bassa		Phebe-Mandingo	
14-20	.27 - .62*		1.05 - .73		.56 - 1.11***	
21-30	1.91 - 3.01*		3.04 - 3.96***		2.61 - 2.74	
31-40	4.10 - 6.08***		6.35 - 6.88		4.82 - 4.35	
B. <u>Conceptions per Year</u>						
	Ganta-Mano		Harbel-Kpelle		Phebe-Kpelle	
14-20	.54 - .54		.69 - .56		.54 - .53	
21-30	.30 - .46		.40 - .48		.38 - .45	
31-40	.26 - .39		.28 - .42		.36 - .38	
	Ganta-Mandingo		Harbel-Bassa		Phebe-Mandingo	
14-20	.42 - .54		.68 - .58		.52 - .70	
21-30	.26 - .36		.37 - .45		.33 - .34	
31-40	.24 - .34		.35 - .38		.28 - .25	
C. <u>Interval Between Conceptions (in months)</u>						
	Ganta-Mano		Harbel-Kpelle		Phebe-Kpelle	
14-20	22 - 22		17 - 21		22 - 22	
21-30	41 - 26		30 - 25		32 - 27	
31-40	47 - 31		43 - 29		33 - 32	
	Ganta-Mandingo		Harbel-Bassa		Phebe-Mandingo	
14-20	28 - 22		18 - 21		23 - 17	
21-30	45 - 33		33 - 27		37 - 35	
31-40	49 - 36		34 - 32		43 - 47	

Source: Appendix Tables B & C.

*** indicates that the difference between the means in the two time periods is significant at the 99 % probability level; ** indicates significance at the 95% probability level; * indicates significance at the 90% probability level.

from populations with different means. ** indicates a 95% probability, * indicates a 90% probability of this. Table IB restates the same information as fertility rates. Each mean was increased by one (to reflect the pregnancy which brought the mother into the hospital at the date of her record) and that number was divided by an estimate of the average number of years that the mothers were fertile. (A mean fertility period of three years was assumed for the 14-20 year old mothers; 11 years for the 21-30 year old mothers, and 21 years for the 31-40 year old mothers.) Table IC presents the data in a third form--as the average interval between conceptions. Here the mean number of pregnancies (again, prior conceptions plus one) is divided into an estimate of the average number of months which the mothers were assumed to be fertile (36, 132, 252 months, respectively, for the three age groups).

Thirteen of the 18 pairs of data reflect fertility increases over time; five of the 18 pairs reflect decreases. Of the five indicated decreases, four were in the 14-20 age group. Only one of the decreases (Harbel, Kpelle, 14-20) was statistically significant (at 90%).

For the 14-20 year old mothers the decline in the average number of conceptions evidenced at Harbel may indicate an incipient decline in the general fertility the full significance of which may be seen in older age groups in future years. It does not appear to reflect a rising age of first conception, for a calculation of the average age of the zero parity mothers indicates that their recorded age of first conception dropped at Harbel, for the Kpelle from 21 to 19 and for the Bassa from 21 to 20. Thus there is suggested a declining fertility for the youngest group--a widening of the interval between conceptions--and echos of this change may be reflected by the relative constancy of fertility rates over time for the non-Mandingo mothers in this age group at Ganta and Phebe.

For the older women, however, the direction of change seems unequivocally upward with the possible exception of the Phebe Mandingo. The 21-30 year olds were reporting close to four prior conceptions per mother in 1972-73 compared with two to three a decade earlier. The indicated fertility rate seems to have risen from less than .35 to over .40 per year with the typical interval between conceptions decreasing from about three years to less than 30 months. The average 31-40 year old mother reported well over six prior conceptions in 1972-3 as compared with about five in earlier periods. The conception rate seems to have risen from about .30 to about .35 per year; the typical interval between conceptions decreased from over 40 months to less than 35.

Inter-tribal differences in conception rates were especially clear cut at Phebe where the fertility of Mandingo mothers was below that of Kpelle. The Mandingo mothers also appeared to be less fertile than the Mano mothers at Ganta. Inter-tribal differences were less apparent at Harbel (between Kpelle and Bassa) where they clearly diminished between 1962 and 1973. Fertility differentials associated with differences in place and circumstances between Kpelle mothers at Phebe and Kpelle mothers at Harbel in 1972-3--appeared to be of less statistical significance than the inter-tribal differences at Phebe noted between the Kpelle and Mandingo.

In the investigation of hospital records it was clear that the enumeration of abortions and premature births was less accurate--more subject to guess and to faulty memory--than the reports of full term pregnancies and the number of living children. The records themselves often admitted uncertainty regarding these events and the lines of division between abortions and premature births and between premature births and full term pregnancies were not always consistently defined.

Table II shows the mean number of previous abortions reported by the maternity patients. The data seem to warrant the following observations: (1) The Ganta figures--especially for the younger women--are so low that their accuracy seems doubtful. (2) Much of the rural data could be fairly represented by abortion rates of .20-.40-.60 for the three age categories, respectively. (3) Comparing corresponding groups separated in time, decreases in abortion rates outnumber increases. When a rising incidence of conception is accompanied by a falling incidence of abortions (and premature births) it indicates, of course, that the incidence of full term pregnancies is rising more rapidly than the increase in conceptions.

Table III sets forth the conception rate at the Kennedy Maternity Center in 1973, categorizing the mothers by stated religion. When the mean conception rate of the Protestant and Catholic mothers combined is compared with the conception rate of the mothers stating no religious affiliation, the former is shown to be significantly higher than the latter for both the 21-30 and the 31-40 age groups.

At the Kennedy Maternity Center there was a dual method of recording ages. Either the mother's ages would be designated in years, or a code would be utilized: "4" meaning ages 14-20, "5" indicating 21-30, "6" indicating 31-40, etc. The codes were used when the patient did not know her age instead of an estimate of a specific number of years. This system provided an unexpected indication of a patient's knowledge of her chronological age--and hence a possible indicator of her ability to quantify specific time intervals and thus her literacy. The percentage reporting by age or by code for each religious group was as follows:

	<u>By Age</u>	<u>By Code</u>
Catholic	77%	23%
Protestant	63	37.
Pentecostal	58	42
Moslem	38	62
No Religion	31	69

If code designation correlates negatively with literacy and if non-literacy is an indicator of closeness to traditional culture, then within the urban population the persistence of traditional culture seems negatively correlated with fertility. This might be attributable to several factors. A tabu against sexual intercourse by nursing mothers occurs frequently in traditional Liberian societies, and where observed, may depress fertility. As traditional patterns give way to new forms, such tabus are likely to weaken in their power to influence behavior. It also seems likely that observance of such a lactation tabu is facilitated in polygynous family

TABLE II
MEAN NUMBER OF ABORTIONS REPORTED PER MOTHER

	<u>1956-62</u>	<u>1970-3</u>	<u>1962-3</u>	<u>1973</u>	<u>1965-7</u>	<u>1972-3</u>
	Ganta-Mano		Harbel-Kpelle		Phebe-Kpelle	
14-20	.10	-.03	.20	-.16	.10	-.12
21-30	.25	-.18	.42	-.42	.32	-.46
31-40	.53	-.58	.71	-.67	.87	-.60
	Ganta-Mandingo		Harbel-Bassa		Phebe-Mandingo	
14-20	.09	-.08	.23	-.24	.15	-.21
21-30	.16	-.13	.44	-.46	.46	-.28
31-40	.20	-.54	.59	-.53	.58	-.50

John F. Kennedy Maternity Center - 1973

	Pentecostal	Protestant	Moslem	No Religion
14-20	.27	.15	.07	.15
21-30	.40	.41	.41	.34
31-40	.42	.54	.62	.45

Source: Appendix Tables B and C.

TABLE III

Mean Number of Conceptions Reported Per Mother at the Kennedy Maternity Center, 1973, by Religion

	14 - 20	21 - 30	31 - 40
Pentecostal	.86	3.43	5.52
Protestant	.76	3.28	6.13
Not Included Elsewhere	.90	3.26	5.00
Catholic	.59	3.15	5.50
Moslem	.65	2.84	4.69
No Religion Stated	.77	2.74	4.21

Source: Appendix Tables B & C.

units and polygyny also seems more likely to occur among the more traditional sectors of the urban community. The low fertility rate of the Moslem mothers--a group among whom polygyny may be relatively high--would seem to support such a hypothesis.

Table IV presents evidence for a rural-urban comparison. It shows the mean number of conceptions for Protestant and Catholic mothers combined at the Kennedy Maternity Center, this being a relatively high fertility component of the 1973 urban sample. The table then presents conception means for the nearly contemporary samples of Mano, Bassa and Kpelle at Ganta, Harbel and Phebe. For the two older age groups, the fertility of the Monrovia mothers is shown to be consistently lower than for the designated tribal groups at the three other hospitals. Once again the evidence for the 14-20 year olds is not substantiating nor are the differences in the means for this group sufficiently diverse to be statistically significant.

Table IV also indicates that the Mandingo mothers at both Ganta and Phebe do not follow the pattern of higher fertility outside Monrovia. The Mandingo, who are predominantly Moslem, evidence a generally lower fertility than other tribal groups, but offer no clear cut evidence of a differential between urban and rural experience.

TABLE IV.

A COMPARISON OF URBAN AND RURAL CONCEPTION MEANS

	14-20	21-30	31-40
JFK Protestant and Catholic (73)	.72	3.25	6.06
Ganta Mano (72-3)	.61	4.09***	7.14
Harbel Kpelle (73)	.68	4.23***	7.75***
Harbel Bassa (73)	.73	3.96***	6.88
Phebe Kpelle (72-3)	.60	3.94**	6.95
JFK Moslem (73)	.65	2.84	4.69
Ganta Mandingo (72-3)	.62	3.01	6.08
Phebe Mandingo (72-3)	1.11	2.74	4.35

Note: *** (**) indicates that the difference between the urban and rural means is significant at the 99% (95%) probability level.

Source: Tables B & C.

SURVIVAL RATES

The survival rate of Liberian children is a social statistic of fundamental national importance and a subject of continuous interest and speculation. The hospital records seem to provide directly relevant information. In general, they indicate that during the last 10-15 years there was a dramatic improvement in the Liberian mothers' ability to keep their children alive. Further, the hospital records suggest relatively little difference between urban and rural survival rates but indicate that the survival rate of children of 14-20 year old mothers was less than that of children of older women. Finally the records show that for both 21-30 and 31-40 year old mothers the average number of living children per mother has increased substantially during the period of observation suggesting a rapid natural increase in Liberia's population.

It must be borne in mind that all of the mothers in this survey had access to modern medical care as evidenced by their coming to a hospital for the delivery of a child. Thus they may constitute a segment of Liberia's total population especially advantaged in respect to health care and the survival rate of their children may, for this reason, be atypically high.

At Ganta and Harbel in 1972-3 (combining the data for the two hospitals) the maternity patients reported 56 living children for each 100 prior conceptions--up from 48 eleven to twelve years earlier. At Phebe the number of living children per 100 prior conceptions rose from 42 to 56 in a somewhat shorter interval. When the number of living children was compared with the number of prior full term pregnancies the survival rate per 100 full term pregnancies rose from 55 to 61 at Ganta and Harbel and at Phebe from 51 to 64.

Comparing urban and rural survival rates, there was relatively little difference evident between the experience reflected at the three rural hospitals and that at the Kennedy Maternity Center in Monrovia. In 1973 the Monrovia mothers reported 58 living children per 100 prior conceptions (with a range from 52 for Catholic mothers to 60 for Protestants and mothers indicating no religion) while corresponding figures for 1972-3 for mothers at Harbel, Phebe and Ganta were 54, 56, and 60. The Monrovia mothers reported 67 living children per each 100 prior full term pregnancies (with a range from 61 for Catholic to 69 for Protestants and those indicating no religion) while for Harbel, Phebe, and Ganta the corresponding ratios were 60, 64, and 64.

A comparison of the experience of younger and older women indicated a lower survival rate for children of 14-20 year old mothers than for mothers in older age categories. Thus at Kennedy Maternity Center the survival rate of children of 14-20 year old mothers was .48 per conception while for the two older groups it was .59 and .61. For each religious sub-category the 14-20 year olds evidenced the lowest survival rate. At Ganta, Harbel, and Phebe this pattern tended generally to be repeated with the children of the youngest women evidencing a lower survival rate than those of either older group in eight cases out of 12 and a higher survival rate than both groups of older mothers in only one case. The survival rate of the

14-20 year olds rose over time (as did that of the older mothers) in four cases out of six.

At Harbel the survival rates of the Kpelle and Bassa were nearly identical. At Ganta and Phebe the children of Mano and Kpelle mothers tended to survive better than the children of Mandingo mothers. The survival rates at Harbel were shown to be somewhat lower than elsewhere. This was true despite the fact that the Harbel maternity patients were associated with the Firestone Plantation and could avail themselves of improved health services, sanitation facilities and water supply.

The records made possible a calculation of the mean number of living children per mother. They revealed an increase in the number of living children per mother for each group of 21-30 and 31-40 year olds for whom time separated data were available. Thus increases were shown for each tribal group at Ganta, Harbel and Phebe and often these increases were very large. For the 14-20 year old mothers there were increases evidenced in the mean number of living children in three of six cases, and decreases in three of six.

For the 14-20 year olds the generally higher survival rates were accompanied sometimes by an increase, sometimes by a decrease in fertility. For the two older age groups higher survival rates and higher fertility tended to be mutually reinforcing. Thus for the 21-30 year old mothers at Ganta and Harbel the number of living children per mother in 1972-3 was about 2.3, up from about 1.2 for the same age group a decade or so earlier. At Phebe there was a rise indicated from about 1.1 to about 2.0 over a somewhat shorter interval. For the 31-40 year olds, at Ganta and Harbel the mean number of living children rose from 2.5 to about 4.2, at Phebe from 2.7 to 3.2.

COMPARISON WITH OFFICIAL FERTILITY ESTIMATES

The Minister of Planning and Economic Affairs of the Republic of Liberia published in October 1972 a pamphlet entitled Natality Profiles². This publication described fertility characteristics of Liberians based on a sample survey of both urban and rural areas conducted in 1971. Table 4 of that publication presented numbers of living births by birth order and mothers' age--for women giving birth in 1971.

Adapting these data to 14-20, 21-30 and 31-40 age categories, they can be used to express mean numbers of "prior" births per mother and can then be compared (approximately) with the hospital derived means of prior full term pregnancies

2. Publication Number L.P.G.S., N-2, part of the Demographic Annual of the Population Growth Survey (Monrovia, 1971).

reported per maternity patient. The Survey results are expressed in the first column of Table V, the other columns show the results from the hospital records.

TABLE V
A COMPARISON OF OFFICIAL FERTILITY ESTIMATES WITH
HOSPITAL RECORDS DATA

Age of Mother	OFFICIAL SURVEY-1971 (Previous Births)	HOSPITAL DATA-1972-3 (Prior Full Term Pregnancies)		
		<u>JFK Maternity Center-1973</u>		
	<u>Urban</u>	<u>All</u>	<u>No Religion</u>	<u>Protestant</u>
14-20	.54	.60	.62	.61
21-30	2.38	2.65	2.39	2.87
31-40	4.63	4.55	3.76	5.56
	<u>Rural</u>	<u>Ganta '72-3</u>	<u>Harbel '73</u>	<u>Phebe '72-3</u>
14-20	.45	.57	.52	.58
21-30	2.29	3.61	3.74	2.95
31-40	4.50	6.32	6.96	5.24

Source: Appendix Tables B and C and Nativity Profiles (Monrovia, 1972) Table 4, p. 21. Data in that Table were adjusted to fit the above age intervals when the calculations were made. In that adjustment the average number of previous births was estimated for the data in the Table as follows, for 20-year old, 30-year old, and 40-year old mothers, respectively: urban: 1.0, 3.9, 5.25; rural: 0.8, 3.6, 4.85. Data for Ganta includes only Mano and Mandingo, Harbel includes Kpelle and Bassa, Phebe includes Kpelle and Mandingo.

The comparison shows the official 1971 urban averages quite close to the 1973 results obtained at the Kennedy Maternity Center. The official rural sample, however, indicates a consistently lower fertility than was evidenced from the records of the three rural hospitals. Surprisingly, such calculations from the Survey data (of the number of prior births per mother giving birth in 1971) show the average rural mothers below the average for urban mothers. This seems to conflict with evidence in the Survey itself which indicates rural fertility (in 1971, at least) higher than urban. Thus it is not clear whether the indicated differences between the rural Survey results and the rural hospital records reflects the special character of the hospital patients' experiences or merely an anomaly in the Survey results.

APPENDIX TABLE A

Aggregated Fertility Histories of Maternity Patients at Three Liberian Hospitals

	(1) N	(2) FTP	(3) PREM	(4) ABOR	(5) LIVE		(1) N	(2) FTP	(3) PREM	(4) ABOR	(5) LIVE
Ganta (Mano) 1956-62						Ganta (Mano) 1970-73					
15-19	58	20	2	4	7	149	68	0	3	40	
20-24	64	70	3	13	41	64	112	0	12	72	
25-29	101	195	1	26	109	72	274	0	12	178	
30-34	55	179	1	23	102	61	354	0	16	231	
35-39	23	74	4	7	57	19	128	0	14	88	
40+	15	81	1	15	39	4	29	0	1	19	
Ganta (Mandingo) 1956-62						Ganta (Mandingo) 1970-73					
15-19	15	2	0	1	0	37	23	0	3	17	
20-24	35	20	0	6	15	29	34	0	4	21	
25-29	43	78	2	6	35	30	87	0	3	49	
30-34	13	34	0	1	18	23	103	0	7	65	
35-39	5	24	0	0	13	4	30	0	2	19	
40+	2	3	0	2	0	0	0	0	0	0	
Harbel (Kpelle) July 62-Aug. 63						Harbel (Kpelle) 1973					
15-19	81	42	0	16	23	95	21	0	7	11	
20-24	164	302	0	48	162	182	322	0	53	218	
25-29	201	654	0	90	358	181	760	1	89	444	
30-34	74	273	0	33	147	126	833	0	65	493	
35-39	23	110	0	24	70	37	271	0	33	168	
40+	2	12	0	2	5	3	23	0	2	10	
Harbel (Bassa) July 62-Aug. 63						Harbel (Bassa) 1973					
15-19	50	28	0	12	19	24	8	0	3	6	
20-24	84	137	1	25	75	76	186	0	31	120	
25-29	94	254	0	47	133	23	111	0	16	64	
30-34	22	120	3	11	74	26	156	0	13	90	
35-39	10	49	0	6	25	4	20	0	2	10	
40+	0	0	0	0	0	5	23	0	4	14	

APPENDIX TABLE A (CONTINUED)

Aggregated Fertility Histories of Maternity Patients at Three Liberian Hospitals

	(1) N	(2) FTP	(3) PREM	(4) ABOR	(5) LIVE		(1) N	(2) FTP	(3) PREM	(4) ABOR	(5) LIVE
Phebe (Kpelle) 1965-67						Phebe (Kpelle) 1972-73					
15-19	48	24	3	3	16	87	31	5	10	20	
20-24	56	66	1	10	40	69	136	0	23	93	
25-29	48	125	4	20	68	53	196	3	26	143	
30-34	25	123	8	12	68	56	296	5	29	187	
35-39	30	185	3	21	112	24	174	1	18	102	
40+	7	45	0	12	32	8	77	0	5	44	
Phebe (Mandingo) 1965-67						Phebe (Mandingo) 1972-73					
15-19	45	8	5	5	3	43	23	3	10	10	
20-24	59	76	8	20	34	69	90	1	10	56	
25-29	97	193	10	42	87	48	161	6	23	100	
30-34	41	118	7	23	47	40	136	6	17	91	
35-39	26	131	1	16	53	12	50	3	4	29	
40+	3	11	0	4	5	2	8	0	0	8	

(1) N = The number of maternity patients for whom records were available for the period.

(2) FTP = The number of previous full term pregnancies reported by these patients.

(3) PREM = The number of previous premature births reported.

(4) ABOR = The number of previous abortions reported.

(5) LIVE = The number of children reported to be living (surviving from prior conceptions).

Source: Delivery book entries and general hospital records at Phebe Hospital near Gbarnga, Firestone Medical Center at Harbel, and the Methodist Mission Hospital at Ganta.

APPENDIX TABLE B 1

Aggregated Fertility Histories of Maternity Patients at Three Liberian Hospitals (Ten Year Intervals)

	(1) N	(2) FTP	(3) PREM	(4) ABOR	(5) LIVE		(1) N	(2) FTP	(3) PREM	(4) ABOR	(5) LIVE
Ganta (Mano) 1956-62						Ganta (Mano) 1970-73					
14-20	95	47	2	10	19	177	102	0	6	63	
21-30	166	327	5	41	190	146	572	0	26	371	
31-40	53	202	4	28	132	43	282	0	25	182	
40+	7	43	1	10	14	2	18	0	1	13	
Ganta (Mandingo) 1956-62						Ganta (Mandingo) 1970-73					
14-20	33	6	0	3	3	48	26	0	4	19	
21-30	70	121	2	11	61	62	179	0	8	104	
31-40	10	39	0	2	17	13	72	0	7	48	
40+	0	0	0	0	0	0	0	0	0	0	
Harbel (Kpelle) Jul 62-Aug 63						Harbel (Kpelle) 1973					
14-20	133	115	0	26	67	147	77	0	23	48	
21-30	364	1073	0	152	580	387	1473	1	162	891	
31-40	48	201	0	34	116	95	672	0	64	405	
40+	1	4	0	2	2	1	12	0	1	3	
Harbel (Bassa) Jul 62-Aug 63						Harbel (Bassa) 1973					
14-20	81	66	0	19	46	37	18	0	9	14	
21-30	164	427	0	72	226	103	361	0	47	219	
31-40	17	95	3	10	54	17	108	0	9	60	
40+	0	0	0	0	0	5	23	0	4	14	
Phebe (Kpelle) 1965-67						Phebe (Kpelle) 1972-73					
14-20	70	33	3	7	22	105	45	5	13	26	
21-30	96	261	12	31	143	127	436	6	58	304	
31-40	46	260	4	40	164	60	378	3	36	227	
40+	2	14	0	0	7	5	51	0	4	32	
Phebe (Mandingo) 1965-67						Phebe (Mandingo) 1972-73					
14-20	59	15	9	9	6	63	53	4	13	25	
21-30	171	347	21	78	150	109	261	7	31	164	
31-40	40	169	1	23	71	40	146	8	20	97	
40+	1	6	0	0	2	2	8	0	0	8	

- (1) N = The number of maternity patients for whom records were available for the period.
 (2) FTP = The number of previous full term pregnancies reported by these patients.
 (3) PREM = The number of previous premature births reported.
 (4) ABOR = The number of previous abortions reported.
 (5) LIVE = The number of children reported to be living (surviving from prior conceptions).

Source: Delivery book entries and general hospital records at Phebe Hospital near Gbanga, Firestone Medical Center at Harbel, & the Methodist Mission Hospital, Ganta.

APPENDIX TABLE B 2

Aggregated Fertility Histories of Maternity Patients at John F. Kennedy
Maternity Center, Monrovia-1973 (Ten Year Intervals)

	(1) N	(2) FTP	(3) PREM	(4) ABOR	(5) LIVE
Pentecostal 1973					
14-20	67	39	1	18	24
21-30	80	243	0	32	162
31-40	19	95	2	8	64
40+	3	19	0	0	11
Protestant 1973					
14-20	163	99	0	25	66
21-30	188	539	0	77	372
31-40	46	256	1	25	175
40+	5	42	0	8	29
Catholic 1973					
14-20	49	27	0	2	14
21-30	47	120	1	27	75
31-40	6	33	0	0	18
40+	1	6	0	1	6
Moslem 1973					
14-20	43	25	0	3	15
21-30	63	153	0	26	105
31-40	13	53	0	8	34
40+	5	27	0	5	16
No Religion State 1973					
14-20	179	112	0	26	67
21-30	249	596	0	86	422
31-40	71	267	0	32	182
40+	14	79	0	9	52
Total JFK 1973					
14-20	531	320	1	83	195
21-30	673	1782	1	267	1217
31-40	163	742	3	75	499
40+	29	178	0	23	118

(1) N = The number of maternity patients for whom records were available for the period.

(2) FTP = The number of previous full term pregnancies reported by these patients.

(3) PREM = The number of previous premature births reported.

(4) ABOR = The number of previous abortions reported.

(5) LIVE = The number of children reported to be living (surviving from prior conceptions).

Source: "Protestant" includes Baptist, Episcopal, Lutheran, Methodist & Presbyterian.

"Pentecostal" includes Apostolic, Assembly of God, Church of Christ, Church of God.

"Total" includes in addition to the above categories a small number of mothers where specified religion could not be included elsewhere.

APPENDIX TABLE C 1

Fertility and Survival Ratios for Maternity Patients at Three Liberian Hospitals

	(1) N	(2) FTP/N	(3) C/N	(4) L/C	(5) L/N	(6) s ²		(1) N	(2) FTP/N	(3) C/N	(4) L/C	(5) L/N	(6) s ²
Ganta (Mano) 1956-62							Ganta (Mano) 1970-73						
14-20	95	.49	.62	.32	.20	.972	177	.57	.61	.58	.35	1.097	
21-30	166	1.97	2.25	.51	1.14	3.809	146	3.91	4.09	.62	2.54	8.513	
31-40	53	3.81	4.41	.56	2.49	8.287	43	6.56	7.14	.59	4.21	9.422	
40+	7	6.14	7.71	.26	2.00	-	2	9.00	9.50	.68	6.50	-	
Ganta (Mandingo) 1956-62							Ganta (Mandingo) 1970-73						
14-20	33	.18	.27	.33	.09	.501	48	.54	.62	.63	.39	.943	
21-30	70	1.73	1.91	.45	.87	2.821	62	2.89	3.01	.56	1.68	4.435	
31-40	10	3.90	4.10	.41	1.70	4.89	13	5.54	6.08	.61	3.69	8.225	
40+	0	0	0	0	0	-	0	0	0	0	0	-	
Harbel (Kpelle) Jul 62-Aug 63							Harbel (Kpelle) 1973						
14-20	133	.86	1.06	.47	.50	2.005	147	.52	.68	.48	.33	1.700	
21-30	364	2.95	3.36	.47	1.59	5.759	387	3.80	4.23	.54	2.30	10.227	
31-40	48	4.19	4.90	.49	2.42	10.343	95	7.07	7.75	.55	4.26	6.736	
40+	1	4.00	6.00	.33	2.00	-	1	12.00	13.00	.23	3.00	-	
Harbel (Bassa) Jul 62-Aug 63							Harbel (Bassa) 1973						
14-20	81	.81	1.05	.54	.57	1.887	37	.47	.73	.52	.38	2.305	
21-30	164	2.60	3.04	.45	1.38	6.308	103	3.50	3.96	.54	2.12	10.055	
31-40	17	5.59	6.35	.50	3.18	6.817	17	6.35	6.88	.51	3.53	7.751	
40+	0	0	0	0	0	-	5	4.60	5.40	.52	2.80	-	
Phebe (Kpelle) 1965-67							Phebe (Kpelle) 1972-73						
14-20	70	.47	.61	.51	.31	1.037	105	.43	.60	.41	.25	.830	
21-30	96	2.71	3.17	.47	1.48	8.410	127	3.43	3.94	.61	2.39	7.193	
31-40	46	5.65	6.61	.54	3.56	9.416	60	6.30	6.95	.54	3.78	11.696	
40+	2	7.00	7.00	.50	3.50	-	5	10.20	11.00	.58	6.40	-	

APPENDIX TABLE C 1

Phebe (Mandingo) 1965-67							Phebe (Mandingo) 1972-73						
14-20	59	.25	.56	.18	.10	.823	63	.84	1.11	.36	.40	2.130	
21-30	171	2.03	2.61	.34	.88	4.437	109	2.39	2.74	.55	1.50	4.246	
31-40	40	4.22	4.82	.37	1.77	5.844	40	3.65	4.35	.56	2.42	4.477	
40+	1	6.00	6.00	.33	2.00	-	2.	4.00	4.00	1.00	4.00	-	

- (1) N = The number of maternity patients for whom records were available for the period.
 (2) FTP/N = The number of prior reported full term pregnancies divided by the number of mothers.
 (3) C/N = The number of prior reported conceptions (including full term pregnancies, premature births and abortions) divided by the number of mothers.
 (4) L/C = The number of living children divided by the number of prior conceptions.
 (5) L/N = The number of living children divided by the number of mothers.
 (6) s^2 = Calculated variance in the number of conceptions per mother around C/N.

Source: Delivery book entries and general hospital records at Phebe Hospital near Gbarnga, Firestone Medical Center at Harbel, and the Methodist Mission Hospital at Ganta.

APPENDIX TABLE C 2

Fertility and Survival Ratios for Maternity Patients
at John F. Kennedy Maternity Center, Monrovia - 1973

	(1) N	(2) FTP/N	(3) C/N	(4) L/C	(5) L/N	(6) s ²
Pentecostal 1973						
14-20	67	.58	.86	.41	.35	-
21-30	80	3.03	3.43	.58	2.02	-
31-40	19	5.00	5.52	.60	3.36	-
40+	3	6.33	6.33	.57	3.66	-
Protestant 1973						
14-20	163	.61	.76	.53	.40	See Note
21-30	188	2.87	3.87	3.28	.60	"
31-40	46	5.56	6.13	.62	3.80	"
40+	5	8.40	10.00	.58	5.80	-
Catholic 1973						
14-20	49	.55	.59	.48	.28	See Note
21-30	47	2.55	3.15	.51	1.59	"
31-40	6	5.50	5.50	.54	3.00	"
40+	1	6.00	7.00	.85	6.00	-
Moslem 1973						
14-20	43	.58	.65	.53	.35	.832
21-30	63	2.43	2.84	.59	1.67	4.768
31-40	13	4.08	4.69	.56	2.61	8.828
40+	5	5.40	6.40	.50	3.20	-
No Religion Stated 1973						
14-20	179	.62	.77	.48	.37	1.553
21-30	249	2.39	2.74	.62	1.69	5.088
31-40	71	3.76	4.21	.61	2.56	8.316
40+	14	5.64	6.28	.59	3.71	-
Total JFK 1973						
14-20	531	.60	.76	.48	.37	-
21-30	673	2.65	3.05	.59	1.81	-
31-40	163	4.55	5.03	.61	3.06	-
40+	29	6.14	6.93	.59	4.07	-

- (1) N = The number of maternity patients for whom records were available for the period.
 (2) FTP/N = The number of prior reported full term pregnancies divided by the number of mothers.
 (3) C/N = The number of prior reported conceptions (including full term pregnancies, premature births and abortions) divided by the number of mothers.
 (4) L/C = The number of living children divided by the number of prior conceptions.
 (5) L/N = The number of living children divided by the number of mothers.
 (6) s² = Calculated variance in the number of conceptions per mother around C/N.
 Note: s² calculated for Protestants and Catholics combined: (14-20) 1,402, (21-30) 6,646, (31-40) 15,170.

John Gay, *RED DUST ON THE GREEN LEAVES*. Thompson, Conn.: InterCulture Associates, Ind., 1973. 240 Pp. \$2.95

John Gay's excellent book represents a paradox: on the one hand it is a good intermediate level, intercultural story portraying the culture of the Kpelle of Liberia and, and through the Kpelle, all of rural Africa. On the other hand, John Gay has written the most complete picture of Kpelle society available to any scholar. The duality that this represents to the sophisticated reader makes the book difficult to evaluate.

The fundamental thrust of *Red Dust on the Green Leaves* is the simple telling of the story of two boys, twins, growing up in a Kpelle society being torn asunder by the transition from "isolated" culture to participant in the process of nation formation in Liberia. As such, it is a story well told, with a poignant message for the non-African reader (presumably the pre-adolescent-adolescent age group primarily). It is full of descriptions of Kpelle daily life, Kpelle human relationship patterns, and Kpelle cultural parameters. In short, it falls into that small body of fictionalized "real life" literature on Africa that is aimed at producing a fundamental understanding of traditional African culture through the guise of the storyteller. Africans, of course, do this best, but they often miss detail that attracts the non-African (e.g. American) curiosity and imagination. Gay fills in much of this detail and soothes some of our curiosity and stimulates our imagination.

In point of fact, it is in this detail that the scholar, or the mature reader with more serious interests in the transitional process of African cultural and political evolution, finds himself engrossed in Gay's slow development of a full and surprisingly clear picture of the Kpelle experience. It is worthy of the information found in the best of the cultural anthropologist's "case study." A close reading gives subtle insight into the Kpelle political inter-relationships, built, as they are, on the accumulation of debtors (and thus "clients") and the production of community prestige based on wit and and manipulation of resources.

John-Gay is especially able to illuminate the fundamental character of Kpelle community intercourse by his emphasis upon the allegory as the crucial skill in Kpelle communications. Indirectness has been the mechanism used by most Africans as a means of maintaining community harmony and thereby avoiding, in adversary situations, direct confrontations that might produce overt splits or even violence in the compact community.

As the book unfolds with the intricacy of a painting by Seurat, or more prosaically, like a paint-by-number set, a picture of Kpelle life in all of its specificity, and yet with a wholeness, projects itself upon the careful reader.

The paradox, then, is not in a mixture of subjects, but in the combination of high levels of scholarly usefulness and information within the intermediate level factual/fiction format. Lest we go too far overboard in praise of the book, however, we must realize that the paradox of which we speak also brings with it problems.

The story of Gay's Kpelle twins, from birth to burgeoning adulthood, flows well

within a perhaps too obvious framework of tradition-bound twin versus the outward reaching, kwii (modern) twin. Paths diverge and life patterns are affected in basic ways by the propensity of one to engulf himself in the process of becoming an effective Kpelle zoe (priest-medicine man) and blacksmith -- a traditional village leader. The second, of course, strives to quench his natural curiosity by adoption of kwii ways; leading to attendance at the white man's mission school and the inevitable half-way-house lifestyle this creates. He can never be fully Kpelle, nor, it is implied, kwii -- the classic transitional African. The point is clear, we find in Red Dust a chronicle of Kpelle society pulled by tradition and attracted by modernization, a transitional society. Because of the more or less predictable development of the plot, then, much tension is taken away from the story. We know the divergence is the key point of the story, so that the specifics of the plot alone must be depended upon to keep the reader's attention. I think Gay is able to use the story's specifics well enough, but in the end the story must take a back seat to the exposition of the Kpelle way of dealing with the inevitable conflicts. Can the process hold the reader where the basic story fails? I suppose it depends upon the reader.

I find a second weakness in the story arising out of one of the strengths of the book: the Kpelle culture becomes the book's major character. This leaves the real characters of the story looking rather superficial as characters by contrast. We really never seem to be able to cross that threshold of character empathy, to get into the minds and hearts of the twins. The narration provides us with a basic set of circumstances and a rich environment, but the characters of the story do not breach the gap. The Kpelle culture demands too much of the storyteller leaving too little left for the personalities to breakthrough. Yet, the "strength of character" of the Kpelle culture, in another light, enriches the book. The paradox that works in one way, weakens in another.

On the academic side of the paradox, I find a couple of holes in the presentation of Kpelle culture. Every time we get close to some real understanding of the pragmatic role of the secret society, Poro, in Kpelle society, the subject is dropped. Gay treads gingerly around this subject. It is not surprising; the Kpelle are sensitive about this area and it is logical that a man who has spent fourteen years amongst the Kpelle, and probably knows them as well as any non-African, would feel morally constrained to stick with the superficial. I understand. Yet, the question haunts me, how do we learn of this vital element of Kpelle society if those who have insights feel compelled not to discuss them?

At the end of the book Koli (the kwii twin) leaves his village for more schooling. There is a tender scene exploring his relationship with and feelings toward his father, but little is said of his mother. It struck me that throughout the story the women (mother, sisters, etc.) had been secondary characters at best. In fact, Red Dust portrays the Kpelle as a very masculine-centered society. Has John Gay underplayed the role of women? This is an interesting question, but impossible to answer. I, myself, have been criticised for ignoring the importance of Kpelle women in my writing. Yet nearly all of the written material on the Kpelle has done so as well.

Are women expected to defer in Kpelle society? Are they secondary in the decision making process? Is their influence solely of the subtle variety illustrated by Gay in the scene where the twins' mother let their father know her feelings on a subject by preparing a sparse, cold meal? It would be interesting to ask John Gay his views on this.

My closing advice to anyone interested in Liberia, the Kpelle, or any aspect of the problems of transition confronting African societies today is to read this book. Even more so, buy it for your children. It is appalling how little our children know about Africa, let alone how little they understand about its people. Red Dust is not perfect, but it is still a gem. I noted earlier that it seems to be written primarily for adolescents -- it might be well to remember that most of us are adolescent in our approaches to and understanding of Africa. There is much we can learn from the African. Many of us are still like Koli, who desperately wanted modern or kwii things, but

Koli knew he wanted the kwii things, even though they did not last as well, even though he felt unsatisfied when he used them. (p. 209)

Kwii things have a tendency to do that to all of us, sometimes.

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NOTE: It should be noted that InterCulture Associates has put together a package that they call "Changing Africa: A Village Study Unit" that is a study unit based upon the Kpelle village of Balama. Red Dust is the primary written material for this unit. The kits contain filmstrips and cassettes, study prints of village life, selected artifacts, and copies of Red Dust. There are two series, one for elementary use and a second for secondary level use (defined as grades 6-12). There is also a Kpelle musical instrument set available. The existence of these materials should be noted. Full details can be obtained from InterCulture Associates, Box 277, Thompson, Connecticut 06277.

- "Anti-Colonialism in Liberian Foreign Policy: A Case Study," by D. Elwood Dunn, 47.
- "British Reaction to the Firestone Investment in Liberia," by J. Pal Chaudhuri, 25.
- Brooks, George E., Jr., The Kru Mariner in the Nineteenth Century: An Historical Compendium, reviewed by Thomas E. Hayden, 85.
- Charlé, Edwin, article: "A Note on the Fertility of Liberian Mothers and the Survival Rate of their Children as Reflected in the Records of Four Liberian Hospitals," 149.
- Chaudhuri, J. Pal, article: "British Reaction to the Firestone Investment in Liberia," 25.
- Cole, Michael et al., The Cultural Context of Learning and Thinking: An Exploration in Experimental Anthropology, reviewed by Richard A. Mendosa, 77.
- The Cultural Context of Learning and Thinking: An Exploration in Experimental Anthropology by Michael Cole et al., reviewed by Richard A. Mendosa, 77.
- Currens, Gerald E., review of The Gbandes: A People of the Liberian Hinterland, by Benjamin C. Dennis, 81.
- Dunn, D. Elwood, article: "Anti-Colonialism in Liberian Foreign Policy: A Case Study," 47.
- d'Azevedo, Warren L., article: "Honorable S. Jangaba M. Johnson: Liberian Ethnographer," 1.
- Dennis, Benjamin C., The Gbandes: A People of the Liberian Hinterland, reviewed by Gerald E. Currens, 81.
- "Entrepreneurship in Liberia," by W. Penn Handwerker, 113.
- Fulton, Richard M., review of Red Dust on the Green Leaves, by John Gay, 167.
- Gabel, Creighton et al., article: "Preliminary Report on an Archaeological Survey of Liberia," 87.
- Gay, John, Red Dust on the Green Leaves, reviewed by Richard M. Fulton, 167.
- The Gbandes: A People of the Liberian Hinterland, by Benjamin C. Dennis, reviewed by Gerald E. Currens, 81.
- Handwerker, W. Penn, article: "Entrepreneurship in Liberia," 113.
- Hayden, Thomas E., review of The Kru Mariner in the Nineteenth Century: An Historical Compendium, by George E. Brooks, Jr., 85.
- "Honorable S. Jangaba M. Johnson: Liberian Ethnographer," by Warren L. d'Azevedo, 1.
- Ingemann, Frances & Thompson, Richard, article: "A Kuwaa (Belle) Wordlist," 17.
- The Kru Mariner in the Nineteenth Century: An Historical Compendium, by George E. Brooks, Jr., reviewed by Thomas E. Hayden, 85.
- "A Kuwaa (Belle) Wordlist," by Frances Intemann & Richard Thompson, 17.
- "Liberian Gunpowder," by Percy Tham, 107.
- Mendosa, Richard A., review of The Cultural Context of Learning and Thinking: An Exploration in Experimental Anthropology, by Michael Cole et al., 77.
- "Note on the Fertility of Liberian Mothers and the Survival Rate of their Children as Reflected in the Records of Four Liberian Hospitals," by Edwin Charlé, 149.
- "Photogrammetry in Archaeology," by Percy Tham, 7.
- "Preliminary Report on an Archaeological Survey of Liberia," by Creighton Gabel et al., 87.
- "Preliminary Study of Medical Practices in Two Kpelle Transitional Communities," by Timothy T. Ross, 67.
- Red Dust on the Green Leaves by John Gay, reviewed by Richard M. Fulton, 167.
- Ross, Timothy T., article: "A Preliminary Study of Medical Practices in Two Kpelle Transitional Communities," 67.
- Tham, Percy, article: "Liberian Gunpowder," 107.
- Tham, Percy, article: "Photogrammetry in Archaeology," 7.
- Thompson, Richard & Ingemann, Frances, article: "A Kuwaa (Belle) Wordlist," 17.

