

SAN PEDRO SACATEPEQUEZ:  
THE IMPACT OF MEDIUM HOUSING ASSISTANCE

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Physical, Cultural and Economic Background

San Pedro Sacatepequez is a local government district or municipio situated at 2,100 meters above sea level in the Sierra de Chuacus in the northwest corner of the Department of Guatemala. The municipio covers 48 square kilometers and encompasses a municipal town of the same name, together with three villages or aldeas: Chillaní, Buena Vista and Vista Hermosa. There are also eight hamlets or caserios of lesser importance: Aguacate, Cruz de Piedra, Las Limas, San Martín, Los Reyes, Los Ortiz, Laguna Seca and La Prensa. The municipal town lies 22 kilometers to the northwest of Guatemala City along a paved road.

An official census carried out in 1973 recorded 10,896 inhabitants in the municipio of whom approximately 5,400 were men and 5,550 women; but informants in the area revealed that, in order to evade compulsory military service, many families omitted to register the names of their eligible sons. The truer figure might therefore have been about 12,000 inhabitants. The official estimated population in January 1976 was 12,198; but, applying the above factor for hidden males, a greater number is more likely.

The population is predominately indigena. Ninety-six percent of the people are Guatemalan Indian in habit, custom and descent; the remaining four percent are ladino, i.e. mixed Spanish/Mayan Indian descent. The extreme tension, resentment and bitterness, which for centuries has existed in most parts of Guatemala between the indigena and the ladino, were said not to have been a problem in San Pedro Sacatepequez in the last 25 years. Cakchiquel is the principal language in the area. Although Spanish is understood by most residents, the majority do not have a good spoken command. Even the ladinos in the community speak Cakchiquel. Seventy-eight percent of the population is illiterate.

Local economic activities include the cultivation of maize, beans, tomatoes, flowers and a small amount of sugar cane; the keeping of a few head of cattle, pigs and chickens; the weaving of typical cloth; the tailoring of shirts; and the making of candles. There is an assortment of small enterprises in the town: bakeries, butcher shops, laundries, two barbers, several eating houses, a lawyer and a notary, and a medical doctor. By far the most important economic activity is the making of typical shirts. There are approximately seventy-five producers in the town, some turning out up to 100 dozen shirts weekly. These are distributed through outlets in all parts of Guatemala, but large quantities are exported to Mexico and the Central American countries. Frequent sales trips to Mexico have given some of the inhabitants of San Pedro Sacatepequez a level of contact with the outside world which is more than customary among their neighbors.

The town of San Pedro Sacatepequez covers approximately 72 manzanas or blocks, with nine streets and eight avenues, divided into four zones. In the center of the town, there is a small ornamental part and a sports field. Public services include potable water and drainage for a small part of the town only; an electricity supply; a municipal marketplace; a slaughter house; and post and telegraph offices. The one school in town has 600 pupils, but only goes up to the sixth primary grade.

### Level of Community Organization

In the several years preceding the earthquake of 1976, there had been a number of local organizations active in works of civic improvement. The census of 1973 recorded the existence of a committee for the installation and extension of a water supply. Local informants were aware of three committees active more recently: one for the construction of a school; one for the health center; and one designated Acción Católica -- the "Catholic Action" Committee. The pro-school committee was set up in 1966 or thereabouts and collected funds which, with land from the municipality and additional financing from PENEM (a central government agency), put up three classrooms and furnished them.

The pro-health committee was formed on local initiative in the face of a rising consciousness of the health needs of the community. In a tripartite plan similar to that which facilitated the building of the school, this committee worked together with the Municipal Council and the central governmental authorities to put up the health center, furnish it, and obtain the services of a doctor.

The Catholic Action Committee had more purely religious ends. In 1966, it launched into the building of a church which was inaugurated in January, 1975. The initiative for the building of the church was said to have come from the parishioners themselves.

The Mayor and the ten other elected members of the Municipal Corporation had also undertaken works of public improvement, including the repair of streets, the building of a retaining wall, and the construction of a new marketplace. Sad to say, this latter facility was completed only six months before the earthquake struck in February, 1976.

### House Building Patterns Prior to the 1976 Earthquake

The predominant building form prior to the earthquake was a construction of adobe mud block, with sloping clay-tiled roof supported on a timber frame. Wood was also used for doors, windows and lintels. In the better class of house, the mud walls were protected with a mud and/or lime rendering, but most were left without. The floors were of mud. The most common plan was two adjoining rooms, each 4 x 4 meters or 4 x 5 meters, with a single external door. In a few cases, rooms would be a little larger, at 5 x 5 meters. Generally, one would be used for sleeping and the other for all other purposes. This pattern accounted for about 60-70% of the 2,300 housing structures in the municipality. Twenty percent of the dwellings had only one room, however, while less than 10 percent had three rooms or more. A very few of the 1,816 \* houses in the town were built of cement block and reinforced concrete. In the aldeas and caserios, a number of the 1,253 "rural" houses were built of baja-reque, a cane or lath and wattle structure supported on a timber frame.

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\* The figure of 1,816 houses in the town was provided by the town council as being the number revealed in the census of 1973. However, a central government estimate for 1975 shows 1,047 "urban" houses and 1,253 "rural" houses. The difference is probably accounted for by differences in the delineations of enumeration areas.

In 1945, a two-roomed house of the adobe/tile type described above cost between \$250 and \$300. At that time, an artisan builder earned forty cents per day and a laborer fifteen cents per day. A modest adobe house of \$250, therefore, represented approximately two years' income for a skilled artisan and five to six years' income for a general laborer. In 1953, the cost of a similar house had risen to \$400-\$450. However, wage rates also moved ahead -- one dollar per day for the skilled builder and fifty cents for the laborer. At this time, a \$400 house, therefore, represented one year and three months' income for the artisan, and two and a half years' income for the laborer.

By 1970, the equivalent costs were \$550-\$600 for the house, and incomes of \$1.50-\$2.00 and \$1.00-\$1.75 per day for the artisan and laborer respectively. This brought the labor value of the typical house down to between one year and one year nine months. Informants estimated that it was usually possible for people to save up to fifty percent of their income; and, assuming sons who could eke out the family income by working in the fields, it was generally possible to save up the resources necessary for a house in two to three years.

The building of a house was usually left to the initiative of the individual head of the family. The wife and older sons might be consulted, but it was the principal breadwinner who made the important decisions. The head of the family also decided upon the form and size of the house, but he might take the advice of an albañil or local builder. Factors taken into account in the design were: the size of the plot of land available; the number of children; the existing savings; and the income limitations of the family. The actual building work would be undertaken by the owner himself with the help of his sons, or contracted out to the albañil who was usually assisted by two laborers who prepared the mud for the adobe blocks. Albañiles learned their trade from other albañiles by working alongside them. All work on the house, which was not contributed by the members of the family who were to occupy it, was paid for in cash.

On completion of the work, the family invited their relatives and neighbors for a convivo or small celebration. This was customarily preceded by prayers said in the house. The more elaborate house-building ceremonies which are practiced by Indian communities in other parts of the country are not now found in San Pedro Sacatepequez. The local explanation is that this community is more influenced by the life of the outside world and, therefore, being "more advanced", has abandoned the old ways.

#### Response to the Earthquake

The earthquake struck in the early hours of February 4, 1976. Altogether, 720 people perished in San Pedro Sacatepequez, and a further 1,667 lay injured. Naturally, for the first few days, everyone was in a profound state of shock. One hundred percent of the 2,300 houses in the municipality had been rendered uninhabitable. There were 11,478 homeless people out of an officially estimated population of 12,198. Everyone had lost someone or something, and many families were reduced to instant poverty. Small business people found that their life's work had been wiped out overnight, leaving them without work place, materials, sewing machine or capital. Only their debts remained.

Nevertheless, within three days the Mayor called an open town meeting at which people divided themselves into neighborhood block groups for the purpose of rubble clearing. Each neighbor had to work in his block and help others to dig out belongings. A little later, night watch patrols were organized, ten people to each of the four zones in town, with a change of shift at midnight. The Mayor in office at the time was an old man, rather unsuited to the emergency job on hand. In face of this difficulty and on its own initiative, the Municipal Council quickly reorganized itself so that the First Councillor should act in his place. The Council itself was renamed the "Emergency Committee". The various committees of the corporation, however, did not continue to function after the earthquake.

The first help to arrive came two days after the earthquake, on February 6th. Units of the Guatemalan Army moved in and obliged the still stunned townspeople to collect bodies and bury them. The Army then brought in tractors, trucks and bulldozers and began to clear rubble from the streets. Many of the residents saw immediately that the Army engineers were doing more harm than good with their machines, in that they destroyed otherwise salvagable building materials -- mainly adobe blocks and timber -- in the process of bulldozing. The Army did not consult with the municipal officials, and the people generally were too afraid to speak out against what the engineers were doing. The quake had damaged the facade of the church, leaving cracks in the arches. Saying that the structure was unsafe, the Army decided to blow it up, and did so in spite of representations made to them by several members of the Municipal Council.

The Army did, however, provide one service which was appreciated by the local inhabitants. Night guards were mounted to prevent looting and to discourage the many thieves who appeared on the scene at this time. In spite of the fact that the town's officials were not consulted by the Army, it was widely noticed by the inhabitants that another group of helpers, the students, met frequently and discussed problems with the military authorities.

The students from San Carlos University were, by February 12th, some of the first outsiders to appear on the scene. The medical students vaccinated people against tetanus and influenza. They also helped with rubble clearing, as did a group of rescue workers from Venezuela. This latter group stayed in town fifteen days and worked hard in opening streets. On one occasion, they decided to tip the cleared spoil into a ravine, but did so without obtaining the permission of the owner of the land. Upon his return, the landlord was furious about the trespass and had to be restrained and mollified by several townspeople. The Venezuelans also distributed food and clothing. Other aid groups appearing in the early days included Mexicans carrying medicines; the Franciscan Order with a few sheets of lamina (corrugated zinc-plated iron); CARE with piping and a water supply repair service; the Assembly of God Evangelical Church carrying food for their followers; and an assortment of lesser bodies who did not feel inclined to report themselves to the town's authorities.

Only four days after the earthquake, BANDESA (the National Agricultural Development Bank) announced that it would give emergency loans to those who needed them. Appointments were made by the municipal officials for BANDESA credit agents to interview prospective clients. In the rush, many loans were given out to individuals who were not in fact owners of property, but who simply rented accommodations. Some were even given to people who came from

out of town on hearing of the bonanza. Many of these people took their loans and disappeared without trace. BANDESA quickly decided that it should demand official proof of title before granting further loans, which were to be mortgaged against the land and secured by a guarantor. For loans up to \$1,500, a municipal registration certificate was accepted as sufficient proof of title.\*

Two forms of loans were made available by BANDESA: one of up to \$1,000 (later raised to \$1,500) for the construction, reconstruction or repair of dwellings, and one of up to \$500 for the rehabilitation of artisans and small businesses. A client could take advantage of both types of loan if he wished. Interest of 4% per annum was charged with a repayment period of up to twenty years. Most clients preferred shorter repayment periods, however, the most common being between ten and fifteen years. Up to two years' grace period was allowed on the repayment schedule.

By December 31, 1976, BANDESA had granted 758 loans to clients in the Municipality of San Pedro Sacatepequez, including a number in the outlying village areas. The total disbursed was \$487,000. Of this, \$335,000 was destined for the repair or reconstruction of 326 dwellings, the large majority of the loans being for \$1,000. In addition, thirty-three loans were granted to self-employed artisans; 277 loans to small industries employing labor; and 62 loans to small entrepreneurs.

An (unidentified) evangelical church from the United States made available material for one hundred simple houses, each 3.30 meters by 3.30 meters. The untreated timber corner posts and rough-sawn boards for the walls arrived cut to size. Nails and lamina were also provided, each hut needing six or eight sheets of the corrugated, galvanized iron according to the size of the sheets. The material was distributed by students from the Faculty of Architecture at the University of San Carlos, who were working together with some (unidentified) Italian helpers. The students chose not to work through the Municipal Council, believing that if they did, the houses might not reach the most needy. But in trying to allocate the materials themselves, some disorder ensued. The students then selected one local individual as a representative through whom they could work.

At first the materials for a hut were distributed to those needy families which applied for them. The students also helped the beneficiaries to erect their huts. Later, a charge of two güipiles was levied on each family which wanted a hut, and the people were left to put them up themselves. Güipiles are brightly colored hand-woven smocks or blouses which are worn by the Indian women as part of their normal dress, and are much valued as souvenirs by tourists who provide a large additional market. Each güipil is valued at about twelve dollars. The estimated value of the materials supplied for the construction of the hut was sixty dollars. The explanations given to the beneficiaries

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\* For loans in excess of \$1,500, official land registration documents were invariably demanded (as issued by the Land Registry Office in Guatemala City) and a suitable guarantor had to be produced by the credittee. Very few of the people in San Pedro Sacatepequez had such registration documents, as their preparation required the help of a lawyer whose services are well beyond the means of most ordinary people.

for the levying of the charge included the need to repay a loan of \$16,000 with which the materials had originally been purchased; and the need to buy an earth-cement block-making machine which the beneficiaries could use to improve their huts at a later date. No one has since seen a block machine in town -- the students, the Italians, nor the Guatemalan representative of the evangelical church. Two visiting representatives of the donor church in the United States were, however, said to have been surprised on learning of the conditions under which the materials were distributed.

It is possible that the charge of two güipiles was made with the best of intentions, for apparently those who were in need but could not pay were supplied free of charge and, in addition, had their hut erected for them. Both types of aid were given in return for the rendering of a small community service, for example, guarding the unallocated materials in the course of distribution. None of the town's officials nor any of the community's residents who were interviewed could supply any lead which would have enabled the mystery to be clarified. Meanwhile, a number of the townspeople suspect that those who managed the distribution made a handsome profit of some 125 güipiles (the equivalent of \$1,500 in monetary terms).

By far the largest contributor of aid to the Municipality of San Pedro Sacatepequez was the Emergency Committee of the Rotary Clubs of Guatemala City. Between February and October 1976, inclusive, the Rotarians distributed aid valued at \$217,655. Their total effort has been classified by them under four headings:

First Stage: Distribution of food, clothing, medicine, etc.		\$15,622
Second Stage: Clearing and removing rubble		70,617
Third Stage: Distribution of <u>lamina</u> :		
a) Purchased	\$21,823	
b) Donated	<u>\$50,000</u> approx.	
		71,823
Fourth Stage: Constructions and major repairs of public buildings		59,593

According to other figures, also provided by the Rotarians, the total value of food distributed was \$37,913. Most of this was issued before March 28th. The bulk of this food was sent, unsolicited, by Rotary Clubs in other parts of the world, principally in Europe and Mexico. The Guatemalan Club itself purchased beans, rice and maize in Honduras, Mexico and El Salvador -- foods which were more readily accepted by the people in the earthquake-affected area. In addition, \$18,151 were spent on clothing and the purchase of between five and seven thousand simple mattresses, or floor covering suitable for sleeping on, which the people of San Pedro Sacatepequez had requested as being particularly useful. A further \$3,785 were used for the purchase of tools for demolition and rubble clearance.



The major investment on the part of the Rotary Clubs was in the area of rubble clearing, the opening of streets, and in filling and leveling. This operation was finished by June at a total cost of \$70,617. A spokesman for the Rotary Emergency Committee asserted with pride that San Pedro Sacatepequez was the first of the affected towns to be completely cleared by any agency in this way.

Sheets of lamina were distributed to about 800 families. The sheets were of 28- and 30-gauge and came in lengths of 10, 12 and 20 feet. Each family was given either eight sheets of the 10-foot length, six sheets of the 12-foot length, or three sheets of the 20-foot length. Each family, therefore, received approximately 175 effective square feet of sheeting at a value of approximately \$84. For 800 families, this amounted to 150,000 nominal square feet of lamina at a total value of approximately \$72,000. Roughly \$50,000 worth of this material was donated in kind by Rotary Club members and by the Brother's Brother Foundation in the United States and Canada, as was a quantity of corrugated aluminum sheeting in 12, 14, 16 and 20-foot lengths. The Rotary Clubs of Guatemala paid for part of the transportation costs of this material.

The distribution of zinc-plated, corrugated iron sheets was decided upon by the Rotarians because that "seemed to be the obvious need" and because "all the other agencies were doing it". It was also thought to be more easily available than other building materials, especially cement block and wood; it was easy to erect; and it could be used later for more permanent housing.

Although the distribution was made on the basis of a census carried out in each of the four zones of the town by the Rotarian wives, the townspeople complained that there were a lot of mistakes made, with many people being left without if they did not collect their ration on the particular day on which it was being given out. The distributions ended in August. The Rotarians did not consider making a charge for the lamina as did many of the other aid organizations working in the reconstruction.

The Rotary Clubs' Emergency Committee was quick to recognize the advantages of being awarded sole responsibility for the distribution of aid to a specific area. There were many groups all trying to help out, and the Rotarians "did not want to be subject to other people's orders". Accordingly, on February 6th -- only two days after the earthquake -- they approached the National Emergency Committee which suggested that they adopt two towns: San Pedro Sacatepequez and the larger, neighboring town of San Juan Sacatepequez. However, seeing the enormity of the job and knowing something of their own limitations, they decided to accept responsibility only for the smaller of the two towns.

Notwithstanding that there were many foreign organizations interested in helping out in the town, the town council accepted the Rotarians by official resolution because they were Guatemalans and because they expected assistance from this source to be more effective than foreign aid. Subsequent to the passing of the council resolution, the Rotarians had some grave differences of opinion with the university students. They believed that the students were trying to interest the San Pedreños too much in politics. Although the students had been one of the first of the groups to arrive in San Pedro Sacatepequez with help, the Rotarians enforced their officially-approved status by calling on the Governor to order the youngsters out of town. The Mayor

intervened, calling an open town meeting at which the whole issue was discussed. The upshot was that the town decided in the favor of the Rotarians, believing that they were in a better position to help the community.

The Rotarians' original thought was that they should reconstruct the entire town, but they soon realized what an enormous job that would be. They therefore decided to limit themselves to the reconstruction of the public buildings: the market, church, chapel, school, town hall, slaughterhouse, and trades school. Their initial offer obtained wide press publicity and, according to local newspapers, included a promise of \$80,000 for the new municipal building and \$80,000 for a new church. After several months of believing that the Rotarians had committed themselves to an \$80,000 structure for the new town hall, the local inhabitants were dismayed to find that the budget was cut first to \$35,000, and then down to \$16,000. The Rotarians proposed a simple single-storied building of reinforced concrete and brick, listed as grade "B" in the National Municipal Development Institute's three standard specifications for town halls. According to the Institute (INFOM), a town of the size of San Pedro Sacatepequez qualifies only for a grade "C" building, and the Rotarians therefore thought that they were being generous by offering to erect a grade "B" model.

As it happened, before the earthquake, seeing that the town was growing in size, the town council had made plans for the building of a two-story structure. The locals saw the Rotarians' proposed effort as a galera (a "shed" or "barn") and were deeply offended. However, still wanting to take advantage of the Rotarians' offer of help, the council proposed that the Rotarians should either apply the funds allocated for the church to enable a "proper" town hall to be built, or should construct a one-story building, but with foundations sufficient so that the community itself could add the second story later. The Rotarians were not happy with this idea, preferring to leave a finished product behind them and, in any event, considering the people's attitude to be big-headed and unreasonable.

Finally, in August, the people decided in a third town meeting that they were quite capable of building their own town hall through their own efforts, even if this would not be possible straight away. The plan proposed by the Rotarians, on a key spot in the town square, they saw as undignified and insulting to their civic pride. They concluded by asking the Rotarians to abandon the building that they had already started, indicating that they could, if they wished, put it on a less conspicuous site where it might be used as a meeting room or secondary school. The Rotarians lost \$7,445 on this venture, being monies already committed to the contractor for a project which had to be abandoned.

The issue of the unwanted town hall was something of an embarrassment for all concerned, but the Rotarians have completed several other works which are valued by the community. \$827 was spent on repairing the health center; \$5,563 on repairing the primary school and equipping it with kitchen and storeroom; \$20,231 on the building of a new annex to the school (three classrooms, rooms for the director and teachers, reception and sanitary services); \$15,678 on the construction of a new social center; and \$667 on improving the potable water distribution system.

An additional \$286,000 is allocated for the further repair and reconstruction of these public services and a range of others which have not yet been tackled. These include: a further extension of the water supply distribution system (\$50,000); the reconstruction of the principal church (\$70,000) and chapel (\$10,000); a roof for the public washhouse (\$1,200); remodeling of the central park and sportsground (\$8,000); a new library for (\$2,500) and repairs to the walls and roof (\$800) of the school; a public market and crafts market (\$75,000); a municipal slaughterhouse (\$15,000); and the construction of a trades and crafts school (\$53,500).

The rebuilding of this last mentioned school has, in fact, been another bone of contention. The Rotarians were of the opinion that what the town needed was an Instituto de Artes or trades school, arguing that there was already unemployment among qualified secondary schooled people and that "what the country needed most were people with craft and industrial skills". The people of San Pedro Sacatepequez, on the other hand, wanted an Instituto Basico or secondary school which would prepare their children to take the baccalaureate and junior professional (perito) examinations. The people were afraid that without such an education, their sons "were not accepted by (society) in Guatemala City". It was just too expensive to send them for secondary education in the capital. The Rotarians prevailed, and at the time of this study are in the process of financing the building of the trades school.

#### Response in the Outlying Villages

Chillaní is the poorest of the three largest villages in the municipality of San Pedro Sacatepequez. It lies 30 kilometers from the town, half this distance along an unpaved road. Most of its 1,177 inhabitants depend on subsistence agriculture and, prior to the earthquake, built their houses of adobe mud block and clay tiles. Some people used sawn boards in place of the adobe block. Before the earthquake, roughly a quarter of all dwellings were constructed with walls of maize cane and roofs of straw thatch; only two percent of the houses had lamina roofs. The timber needed was usually cut from one's own small plot of land.

Apart from the foodstuffs distributed by the university students (probably the same food as donated by the Rotarians), in weeks one to seven after the earthquake, the people of Chillaní received no outside aid in the emergency phase. They did all the rubble clearing themselves. A local landowner gave trees to any of the villagers who needed timber and who could convert them into corner posts or sawn boards. Lamina sheeting was donated by the Rotarians and distributed in Chillaní in the same rations as applied to the town. Many people also took advantage of the subsidized price of \$25 for 10 sheets of lamina which was available from the U.S. Agency for International Development/Guatemalan Government program through the cooperative society in San Juan Sacatepequez. In addition, five houses of timber and lamina were erected with loans from BANVI (the National Housing Bank), each for \$320 with repayments scheduled at six dollars per month. These loans were said to have been available for all who wanted to apply, but only five did. A dislike for taking on additional debts and a generally low ability to repay loans, even at these rates, kept the rest away. The combined result of these individual contributions in aid is that there are now in Chillaní many more (untreated) wooden houses with lamina roofs than before the earthquake.

In Chillaní, there was no tradition of community cooperation or experience of common improvement projects of a kind found elsewhere. It is said that the people are too poor to be able to afford time away from their fields for community work and that, in any case, they are not accustomed to organizing themselves into action committees. Nevertheless, according to the program requirements, the \$25 charged for the U.S.A.I.D.-sponsored lamina had to be paid into an account at the cooperative which could then be drawn upon for works of community improvement. A local promotor (community development extensionist), who was said to have been employed by the program, called a meeting to discuss what would be done with the monies collected. Very few people turned up at the meeting but, with support from the Mayor, the promotor organized labor to widen the access road serving the village from four to six meters, and arranged for the laborers to be paid from the community fund held at the co-op. The widening of the road necessitated the giving up of some land by those whose properties bordered it. This was bitterly resented by some of those affected, but the Mayor persuaded them that they should cooperate.

In Buena Vista, another village lying only two kilometers from the town of San Pedro Sacatepequez, the houses were principally of adobe mud block and lamina roofing. Clay tiles were little used, and there were very few cane-and-thatch dwellings. In spite of their lighter weight roofs, Buena Vista suffered heavily in the earthquake. Twenty-six people were killed compared with the loss of six in Chillaní. The people have noticed that the houses which resisted were those which were built with timber corner posts and walls of cane or wood board. They now talk of the adobe mud block house as an idea imported from the capital which does not serve them well. Those few who can, therefore, want to rebuild their houses with cement and concrete block; but for the vast majority, timber corner posts with an infill of timber board or maize cane is the solution preferred. This is in spite of the fact that the people know that corner posts of (untreated) pine last only three years. Cypress wood will last twenty to twenty-five years, but it is not readily available.

Vista Hermosa, four kilometers from the town of San Pedro Sacatepequez, is the wealthiest of the three outlying villages studied. Whereas Buena Vista is composed mostly of small farmers with a sprinkling of artisans, petty commercial traders and flower growers, Vista Hermosa is predominately a village of entrepreneurs. Like Buena Vista, however, most of the houses were built of adobe mud block and lamina roof; there were only three or four houses of cement block. The only dwellings to survive the earthquake were the few simple huts with wooden corner posts and maize cane walls. Again, those families which can afford the materials intend to rebuild with cement block and a lamina roof. To date, only six have done so. The majority are again putting up walls of adobe block -- but to one meter or one-and-a-half meters in height -- with timber boards and/or lamina thereafter.

The Rotarians distributed lamina in all three of the principal villages of the municipality. They have also arranged for the repair, reconstruction and extension of the schools and other public buildings. In Chillaní, \$3,536 has been allocated for the school and repair of the village hall; in Buena Vista, \$2,401 is available for the repair and extension of the school; and in

Vista Hermosa a similar project has been assigned \$3,645.

The people of these three village communities recognize that the town has received more aid than they have, both in the initial emergency phase and in the reconstruction operations.\* Unlike the townsfolk, everyone in the rural areas had, for example, to take care of their own rubble clearing unaided. The people of Vista Hermosa see trucks laden with reconstruction supplies on their way to the town and, on this account too, feel some resentment that their community has not been so fortunate as the town. Both they and the people of Buena Vista rationalize the perceived differences in treatment, however, by saying that perhaps they themselves are to blame for not having formed an Emergency Committee. The assumption is, evidently, that an Emergency Committee is a body which acts as a broker for the obtaining of outside resources, and not necessarily an effort to organize a self-reliant community response. The people of Chillaní also feel a little irked at the disproportionate aid which the town has received compared to themselves, but they explain the fact by saying that the extra distance to their village has to be taken into account. Whatever the perceived differences in benefits between townspeople and rural inhabitants, the fact that each village appears to have received more or less equal shares compared with its peers has served to pacify the villagers in any incipient discontent.

#### Effects of the Earthquake and Aid on House Building Patterns

Without exception, the people of San Pedro Sacatepequez have deduced from their experience that it is the traditional materials of construction which have brought them loss and suffering. They saw with their own eyes that the houses with heavy adobe block walls and clay roofing tiles fell down.\*\* The few houses of wood and corrugated iron sheeting, or of reinforced concrete and cement block, on the whole withstood the earthquake. So the few who can afford such a house want one built of concrete, cement blocks and corrugated iron roofing. For a house ten meters by six meters, the currently estimated cost is \$2,000; this price includes labor, but is without internal plastering or ceiling and without external finishing. All the materials have to be trucked in from outside sources, usually from San Juan Sacatepequez or Guatemala City, and this adds considerably to the cost.

For those who can afford such a house, the idea for the style and method of construction comes from observations of concrete and brick houses which have been picked up on commercial travels. Sometimes the advice of a local building contractor will be sought. This is usually an albañil (bricklayer) who has worked on the construction of large buildings in the capital under the supervision of an engineer or architect. The builder charges for his services by the day, or on a fixed price basis; but it is always more expensive than

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\* On the reconstruction of public buildings alone, the aid factor is 1:6.

\*\* What they did not see is that the fault lies in the relationship of design to the materials, rather than in the materials themselves.

the simple albañil who works only in adobe block and timber. One estimate obtained for the services of a builder was six to ten dollars per day. For one month only, an engineer employed by the Rotarians on the planning of the public works projects was able to give advice unofficially to those would-be cement house builders who sought it. On the whole, however, those who would build with these materials feel an acute lack of surety of what it is they have to do and desperately need guidance in their efforts. To date, only about 15-20 of these houses have been erected in the town of San Pedro Sacatepequez.

As indicated earlier, data has been supplied by the townspeople on the usual cost of a house in the years 1945, 1953, 1970 and post-earthquake 1976. Comparing these figures with the typical incomes for artisans and laborers in the same periods, it has been possible to construct a picture of how the typical value of preferred dwellings varied over the thirty-year period as a multiple of gross income. The results are shown in the attached table and graph (see Appendices). The principal conclusion to emerge from taking this perspective is that the newly-preferred cement block houses represent an investment two to four times greater than that which was demanded by the adobe block houses customary before the earthquake. Over the period of 1954-1970, the tendency was for people to spend a declining proportion of their income on housing, whereas the effect of the earthquake has been to shift preference to the more costly materials, demanding a greater sacrifice in income and hence extending the period of savings necessary to acquire one's dwelling.

The vast majority of the new structures going up in town are not of the "cement" type. For most families, \$2,000 is still way beyond their means. These folk must content themselves with temporary wooden shelters. In the neighboring town of San Juan Sacatepequez, they are able to buy untreated timber with which to build a temporary house of four meters by five meters by two meters in height. If they use rough-sawn boards then, for this size of dwelling, the timber costs about \$109. Ten sheets of corrugated, galvanized iron purchased at the reduced price available through the cooperative in San Juan Sacatepequez adds a further \$25 to the cost. A door, hinges, nails and other small items bring the total up to \$150. If planed shiplap board is used instead of rough-sawn, then the cost goes up to \$200. A two-roomed version, each room measuring four meters by five meters, costs \$275 or \$300 in sawn board or planed shiplap respectively.

In all, approximately six hundred houses of this type have been put up by the San Pedreños to date. Most do the work themselves and, therefore, the above prices do not include the cost of labor which runs from three to six dollars per day for a skilled carpenter and from \$1.50 to \$2.00 per day for a laborer. The higher rates are paid to men coming from outside the town; locals get the lesser rates. These self-help, temporary dwellings represent anything from three months' total income of an artisan for a one-roomed version at \$150, to one-and-a-half years' total income for a laborer who prefers a two-roomed version at \$225.

As to the wooden houses which were brought in by the Evangelists, the general opinion is that they were too small to be anything but very temporary

shelters. With the loss of the workshops, many seamstresses now need to be able to work at home with their machine and, with a family housed in a 3.30 x 3.30 meter shack, this is not possible. A number of people refused the offer of the wooden house -- some because it was too small, and others because they could not afford the two güipiles which were being charged by the distributors. However, now in a better position to pay, the opportunity to buy is no longer available. Some interviewees observed that they had no choice in the matter of the design of the house which they were "given" ("sold", if one counts the güipiles). The materials came cut to plan and there was nothing they could do about it.

#### Effects of the Earthquake and Aid on the Life of the Community

Taking all sources of new housing into account -- the 100 "donated" wooden shacks and the self-help efforts of the local population -- approximately 800 dwellings have been re-erected since the earthquake. While no one is actually without a roof over his head, this figure compares with an estimated 1,816 dwellings which existed in town before the earthquake.\* A small part of the apparent deficiency is explained by the fact that, prior to the quake, a few families owned two houses. Also, prior to February 1976, there were approximately 20 to 30 dwellings occupied by tenants who have since left town. Nevertheless, the level of overcrowding is evidently very high. The extended family system has provided a uniquely effective means of sheltering roofless souls. Inquiries made in an attempt to identify any possible ill effects of this overcrowding revealed only an unexpected sense of togetherness in the face of collective difficulty. Most people appear to tolerate the situation with good humor while there is an expectation that their problems will soon be resolved. Even so, it is not at all clear how people will solve their problems, except in time and with hard work and saving.

The economic effect of the earthquake has been to cause the cost of living to rise much more dramatically than it would have ordinarily. This additional hardship has affected everyone. Those of the population of San Pedro Sacatepequez who were dependent upon the manufacture of shirts for their livelihood have generally lost more than the farmers. Some lost their workplace, all their stock, and up to four months' production. On the whole, however, there is a noticeable determination among the population to face the difficulties with steadfastness and hard work. The people are proud of their record of self-advancement through work, and as indigenas compare themselves favorably with the ladino people of the neighboring town of San Juan Sacatepequez who, they say, are not given to hard work. †

One interesting effect of the earthquake in this connection is that the women are said to play a more active part in the struggle for life than they did prior to the quake. A few have had to work alongside the men with their adze in building. Also, because the entire family suffered from the fall of the house, the wife's opinion on design, size and materials is said to be sought more readily by the men who need to rebuild.

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\* The census of 1975 showed 1,047 "urban" homes.

With regard to the aid which has already come in from outside, there are mixed feelings. Many feel very grateful for the help which has been given. Several letters of thanks have been sent to the Rotarians for their efforts on behalf of the town. The most widely expressed opinion is, however, that the community has been left with a bad deal. The people are particularly reminded of their misfortune when they see truck after truck passing through the town on its way to San Juan Sacatepequez, each one laden with cement and house-building supplies. The foreign organizations which have taken responsibility for rebuilding the neighboring towns seem to them to be keeping their promises to put up houses; whereas the local Rotarians, they feel, have let them down. Everyone knows that "the Rotary Clubs are for rich people in the capital and they help the poor"; but the expressed thoughts of the San Pedreños are that, if the Rotarians try, then they should do it properly and not go off half-cocked. The feeling is that if they cannot do things the way the San Pedreños want them done, then it is better that outsiders do nothing at all. Now the people feel cheated and trapped.

A number of organizations have come along recently, offering their help in housing, several having noticed that San Pedro Sacatepequez does not appear to be benefitting from any formal housing program. Yet the Municipal Council feels powerless to accept an offer because it believes itself to be tied by its signed agreement to cooperate exclusively with the Rotarians. Although it is not in fact so tied, it fears that if the town accepts others' aid, the Rotarians may take umbrage and cancel the remainder of the public building reconstruction projects still to be initiated. Their strategy, therefore, is to bide their time and hope that when the Rotarians have fulfilled their promises, another aid organization will come along prepared to reconstruct houses for them. They know that many other towns benefited in this way; and they cannot but expect that, one day, luck must come their way. Information supplied by the National Emergency Committee, Office of National and International Cooperation, indicated that their wish may, indeed, soon be fulfilled.

For the Rotarians' part, they too feel disillusioned. They are at a loss to understand why the people whom they are trying to help appear so ungrateful. The Rotarians complain that they "even had to pay the people to unload the lamina from the trucks!". To the Rotarians, the town council, especially the Mayor, appears as a bunch of pig-headed fools aspiring to a status for the town and for their children beyond their station in life. The Clubs now feel that, perhaps, they should not have distributed so much free food and clothing in the early days of the emergency, for that has only served to "create unrealistic expectations" on the part of the people.

Clearly, the most salient feature emerging from a study of the aid arriving in San Pedro Sacatepequez from all sources is its generally paternalistic nature. The efforts of the Guatemalan Army, for example, were widely cursed by the population. In bulldozing and clearing away the rubble without consideration for the people, the all too enthusiastic mechanized "helpers" destroyed even the few of their possessions which survived the earthquake.

The efforts of the Evangelists working together with the university students in levying a charge of two güipiles for the materials may or may not have been well-intentioned. But, as no one bothered to inform the populace of the true



intentions behind the imposing of conditions, the people both assume the worst and feel that they are being cheated from what is rightfully theirs. Similarly, the local people believe that the Rotarians have reallocated money intended for the rebuilding of the church because either they were ashamed to admit that they had intended to put up a permanent structure which was smaller than the temporary one put up by the local Catholic Action Committee, or because the funds have been misappropriated by the Clubs' administration. They see the fact that the size of the fund for the town hall was so drastically and inexplicably reduced as lending weight to this second conclusion. The filling up of the ravine with bulldozed rubble was another case of the well-intentioned wreaking of private havoc for those who had already suffered considerable loss.

A notable exception to this pattern is the loan scheme operated by BANDESA which allows the individual beneficiaries to choose their own house style, size and materials of construction.

The feeling now prevailing in the community of San Pedro Sacatepequez is that "the Municipal Corporation has lost ground for (the Rotary Clubs and others) have many times acted without their consent". Before the earthquake as since, the majority of the people have looked upon their town council as "their" voicepiece. Even if it did not always work very efficiently; even if one or two of the members were noted for their old age or their heavy drinking; it was "theirs" and any riding rough-shod over it amounted to an insult to the civic pride of all. It remains to be seen what subsequent quarterers of aid will do to reinforce, or modify, this feeling of frustration and hurt pride in local ability.

#### Methodological Note

The bulk of the information presented in this case study was collected by two Guatemalan research assistants who spent most of a two-week period interviewing municipal officials and many local inhabitants in the Cakchiquel language. The research assistants were man and wife, both of indigena descent, the latter speaking fluent Cakchiquel and presenting herself in the native Indian costume. These cultural factors were of considerable help in establishing a close, confident relationship with the local informants.

The research assistants were briefed in detail as to the purpose of the study and the kinds of questions to which answers were required. Precisely whom they should interview in the community and in what order was left to their discretion. The assistants were supervised during the course of the information-collecting and were thoroughly debriefed orally on conclusion. In addition, a complete set of notes was prepared by them in Spanish on each aspect of their findings. In accordance with the mutual understanding fashioned verbally between the assistants and the author of this study, these notes were converted into the present text in English.

To complement the description of events and opinions of the populace collected in the field, the author also interviewed (in Spanish) representatives of the Emergency Committee of the Rotary Clubs of Guatemala City, and an official of BANDESA, the National Agricultural Development Bank. Both agencies also made available written reports on their work. Sundry other data was also culled from two reports by the U.S. Agency for International Development on the overall effects of the earthquake, and from a monograph prepared in 1973 on San Pedro Sacatepequez by students of the American College in Guatemala City.

APPENDIX A

COMPARISON OF COST OF PREFERRED TOWN  
DWELLINGS WITH TYPICAL INCOMES 1945-1976

Year	Cost of Typical Two-Room House		Usual Income per Day (\$)		Value of Preferred House in Terms of 100% of Income (in years)	
	Lowest (\$)	Highest (\$)	Artisan	Laborer		
1945	250	300	0.40	0.15	2.3	6.1
1953	400	450	1.00	0.50	1.4	2.8
1970	550	600	1.75	1.00	1.1	1.9
1976	Cement block house 10m x 6m: \$2,000		3.00	1.50	2.2	4.4
	One-room temporary wooden house 4m x 5m x 2m: \$150				0.25	0.50
	Two-room temporary wooden house 8m x 5m x 2 m: \$225				0.75	1.50

APPENDIX B

VALUE OF PREFERRED HOUSE IN TERMS OF  
100 PER CENT OF INCOME 1945-1976



