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Edited by
Charles H. Savage

TECHNOLOGICAL IMPACT ON A COMMUNITY IN TRANSITION: PERU

by
Eduardo Soler

June 1966

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This series of studies was sponsored by the Inter-American Program in Civil Engineering, Massachusetts Institute of Technology, and supported by the Agency for International Development, U.S. Department of State (DSR 9865), the Carnegie Corporation (DSR 9597) and the Dow Chemical Company (DSR 9651). Dr. Soler is Social Anthropologist with the W. R. Grace Company in Lima, Peru. Dr. Savage is professor of management at Boston College and visiting professor at the Sloan School of Management, M.I.T. A Spanish version of this study is available as Research Report R 65-12, Inter-American Program in Civil Engineering, M.I.T., May 1965.

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(Men)

Ho! Jailli! Ho! Jailli!

Here is the digging stick, here the furrow!

Here the sweat and here the toil!

(Women)

Huzzan, men, huzzah!

- An Old Inca Refrain

This is a study of the interplay between technology and social organization under circumstances of rapid change. The site of the study is the industrial village of Paramonga on the coast of Peru; its focus, a single work group employed in one of Paramonga's factories. Data collected about the group is organized according to its members sentiments, interactions and activities and the concept of "social system" is used to relate these elements. The basic questions raised in treating this material are:

What is the prevalent system of social usages and how is it maintained?

What forces towards systemic revision can be noted?

How do these two sets of forces express themselves in the social organization of a single work group indigenous to the setting?

The village of Paramonga is a crossroads in more ways than one. High above it and 100 miles to the northeast is the Andean valley of Callejon de Hualas in Ancash, a principal Inca center and site of Cornell University's Vicos Project. 100 miles to the south is Lima, "City of the Kings" and Peru's principal metropolis. The road between the two is a principal migration route and Paramonga a tarrying point on this road and a point of encounter between the migrating serranos and the established Costeños. Paramonga's factories convert locally-grown raw materials so that the village incorporates large-scale farming as well as manufacture which puts it in an intriguing agricultural-industrial admixture. Finally, while factory management is largely Peruvian, ownership is North American which lends a bi-national cast to the action.

In collecting and organizing the data a conceptual scheme that relates activities, interactions and sentiments as the primary elements of social behavior was employed.¹ The author observed and charted both the required and informal activities of the workers. He made note of the output which individuals achieved and with whom they interacted both at work and during work breaks. He interviewed all members of the group, their superiors and union leaders. The data so obtained was sifted through a particularistic physical, social, cultural and technological environment and, in the process, the structure of the group derived.

This structure was found to have its own personality and characteristics which were in part determined by managerial logic, but by other factors as well. It took shape within the parameters of the technology, the plant layout and the formal systems which management has imposed. But it also had a thrust that was responsive to other inputs. Management experienced this thrust when it acted unilaterally without making provision for contrary expectations at play, but it had never charted the structure nor explicitly identified the non-technical mechanisms that were operant. The theme of this study is the nature of this thrust and the mechanisms that sustained it together with some speculation about the function that these may be serving.

Peru and Its Contrasts

Peru is both a land of contrasts and, for this reason, an exciting setting for inquiries into the processes of social change. Peruvian diversity

¹George C. Homans, The Human Group; Harcourt, Brace and World, Inc., 1950.

can be noted in its topography, its contrasting cultures, and in its economic arrangements and working conditions. In all of these areas one encounters a wide range of circumstances.

The newcomer is always amazed at the topography of Peru. Seen on a relief map, it sometimes seems that the country is higher than it is wide. This is so because a formidable chain of Andes mountains bisects the country. Bisect may not be the correct word because they lie very close to the Pacific, in some cases dropping directly into that ocean. The mountain mass is of varying width, incorporates many intermountain valleys and plateaus, and is frequently snowcapped. The winds, blowing eastward from the Pacific leave no precipitation on the coast which is arid except where irrigated, sufficient on the mountain valleys and plateaus, and a surfeit on the low jungle stretches to the east. These jungle reaches constitute an important part of the headwaters of the Amazon River, but they are largely wild, impassable and uncolonized.

The dank, wet forest region to the east accounts for 61 per cent of the land, but only 13 per cent of the population. Here live largely indigenous people under primitive conditions. The natural riches of the area are inaccessible. It is a cherished government policy to open this area up by means of new roads. The highland area accounts for 27 per cent of the land and 60 per cent of the population. Most of its inhabitants are Quechua-speaking and descendents of South America's most advanced native civilization, that of the Incas. It is currently the site of inefficient small-scale farming and features few good roads. The narrow, arid coastal plain accounts for 12 per cent of the land, but 27 per cent of the population. A first class



Exhibit 1--The Three Regions
Of Peru - Coast, Highland and Jungle

road, the Pan-American Highway, runs the length of it. One passes alternately through barren desert and richly-irrigated valleys as he follows the highway along the coast. The area is the locale of all organized production. It is also the site of Lima, "Pearl of the Pacific," and economic, cultural and political center of the nation.

Lima offers further evidence of Peru's contrasts. Beside its stately plazas and graceful public buildings that feature French architecture, the well-tailored cosmopolites take their afternoon tea and sweets while an Indian boy walks by directing his barefooted steps to the shanty where he lives on the edge of town. Lima's barriadas are among the most notorious in Latin America. There live hundreds of thousands of people, in makeshift hovels, without electricity or running water, many without roofs to shut out the evening sky. These are the migrants, the Serranos, who have come in increasing numbers since World War II both pushed out of the small mountain villages by lack of local opportunity and pulled to the city in search of a better circumstance. Their shacks ring each city, coastal town and industrial installation.

The Serranos bring with them a tenacious culture, for the Inca world was a cohesive world and its values are not about to easily expire. They have their own language, music, foods, and religious traditions. Their values about hospitality and the community encourage migration and provide a mechanism by which newly-arrived migrants are accommodated. They form associations the perpetuate the old order, but the new is there to be dealt with as well. The Costeños reject the old order and resist its perpetuation. Their effort is to divest themselves of the Quechua language, the highland music

and foods, and to substitute coastal religious practices. The nature of this process we will be able to see more clearly at a later point.

The Peruvian Hacienda System was a Spanish import and it is supported by the deep conditioning of historic tradition much of it currently regressive; but it has its modern counterpart. The traditional hacienda is a product of colonial times when lands and their human complement were assigned the Conquistadors. Throughout Peruvian history, the owners of these haciendas were autonomous in ruling their local baronies. Some of them moved to Lima and extended their conservative and static values to banking, trade and even manufacturing. The power of this group remains a factor in domestic politics. But there are also the new haciendas, highly-mechanized, profit-based and progressive, where one finds employed Taylor's concepts of Scientific Management and different ideas of civic responsibility.

Finally, there is the worker employed under the genus of modern organized labor on one hand and the jungle laborer through whose hands money may never pass on the other. The General Confederation of Peruvian Workers was organized in 1944, sank into obscurity during President Odría's eight year administration, and was revived in 1956. Most unions are associated with this confederation whose membership accounts for some 300,000 workers. The central union typically negotiates the local collective bargaining agreement, with the national Ministry of Labor playing an active role in the process.

Labor legislation is ambitious but in some places unobserved. It calls for a 48 hour week for men, 44 hours for women and children. Sunday is a paid holiday. Provision has been made for social security that covers

sickness and pensions, and there is an obligatory 30 day vacation. Office employees are organized. Yet the weekly wage of a worker in the Amazon area may be one fifth of that received by a costeño.

Thus Peru is a land of contrasts. The world of the jungle and the sierra and the coast have maintained their integrity as the nation has advanced deep into the Twentieth Century. Geography has helped perpetuate this separation together with culture including language and economic circumstance. But the roads are in place and the confluence has started. Within this generation where it took a father eight days to make the trip from the high Sierra to coastal Paramonga, his son now makes the same journey in eight hours. Once there, he finds the old values extant but subjected to comparison with the new. Paramonga is thus a point of encounter, a cross-roads of two worlds that affords an uneasy yet somehow tenable habitat for the work group that is the focus of our study.

Activities, Sentiments and Interactions in the Town of Paramonga

To reach Paramonga one drives northward from Lima following the Pan-American highway along the Pacific coast. The weather is generally cool and one rarely sees the sun because of the coastal mist. The countryside alternates from brown to green and back again to brown. There are the great mountain flanks of windblown sand that level out rapidly into narrow deserts, beaches and the sea. Here the Indians once maintained a well-developed economy and one still comes upon the gutted stretches of sand where pre-Inca burial remains are sought. But there are also the rich green valleys,

nurtured by the rivers that they define, yielding generous crops of cotton and sugar, potatoes and garden vegetables.

100 miles up, the desert yields to another valley. One runs along now between fields of sugar cane and tree-lined roadway. Back over the fields and up the valley, one sees the sketchy outlines of the settlements where the plantation laborers live. All is flat from sea to mountain edge. But a pre-Inca fortress of colossal proportion and of the universal sand color dominates the valley. It is necessary to turn now towards the sea to enter the village proper. Modern schools are passed, a clinic, a stadium and a church. Here is the Serrano market place, nothing more than a cluster of stalls and tents with a truck standing in front. And beyond, the principal market and the shopping center. Here a second building dominates which bespeaks authority in a more recent time. It is the "Plantation House" residence and working headquarters of the Peruvian patron who ran the valley until its purchase by a North American firm. The Plantation House is now used for administrative offices.

Around the plaza and market are the block houses that the Peruvians favor, one-story buildings with a patio to the rear and all dwellings on one block physically joined. Beyond these - on the three sides away from the sea - are the humbler homes, some of them no more than sticks of cane plastered with wattle. A few residents have planted gardens on the outskirts and some of the groups from the Sierra have built chapels in honor of their special saints. On the fourth side - toward the sea - is a complex of factory buildings: a sugar refinery, sometimes called "the Mother," a newer mill where paper is made and which is called "the Beloved Daughter," and several even

newer and smaller buildings where alcohol and distilled spirits are manufactured. Between this manufacturing complex and the sea is a smaller and more gracious community where the managers and professionals have their homes and school. All land and buildings including the outlying sugar plantations and plantation hamlets - sometimes referred to as "The Grandmother" - represent property acquired by the W. R. Grace Company in 1927 from a number of Peruvian owners who had specialized the lands in cotton and sugar-growing and in raising products of primary consumption.

W. R. Grace Company is the parent corporation of a number of companies engaged in a wide variety of undertakings.² While it has some characteristics of a holding company, it is essentially an operating and trading company, with managerial activities extending to all enterprises in which it is interested. Most of its activities are carried on by subsidiary or associated companies.

While W. R. Grace and Company is more widely or more popularly known for ocean shipping and substantial interests in air transport in the Western Hemisphere, its business is principally in export-import trade and industry. When William Russell Grace, in 1854, became a partner in Bryce and Company (Peru), the company was a ship chandler with only a minor interest in foreign trade. Under Grace's energetic management, it went into foreign trading on a large and profitable basis. Later, shipping was added and then

²Much of the material on the next several pages was excerpted from Casa Grace in Peru by Eugene W. Burgess and Frederick H. Harbison, the National Planning Association, Washington, D. C., 1954.

TO THE
NORTH

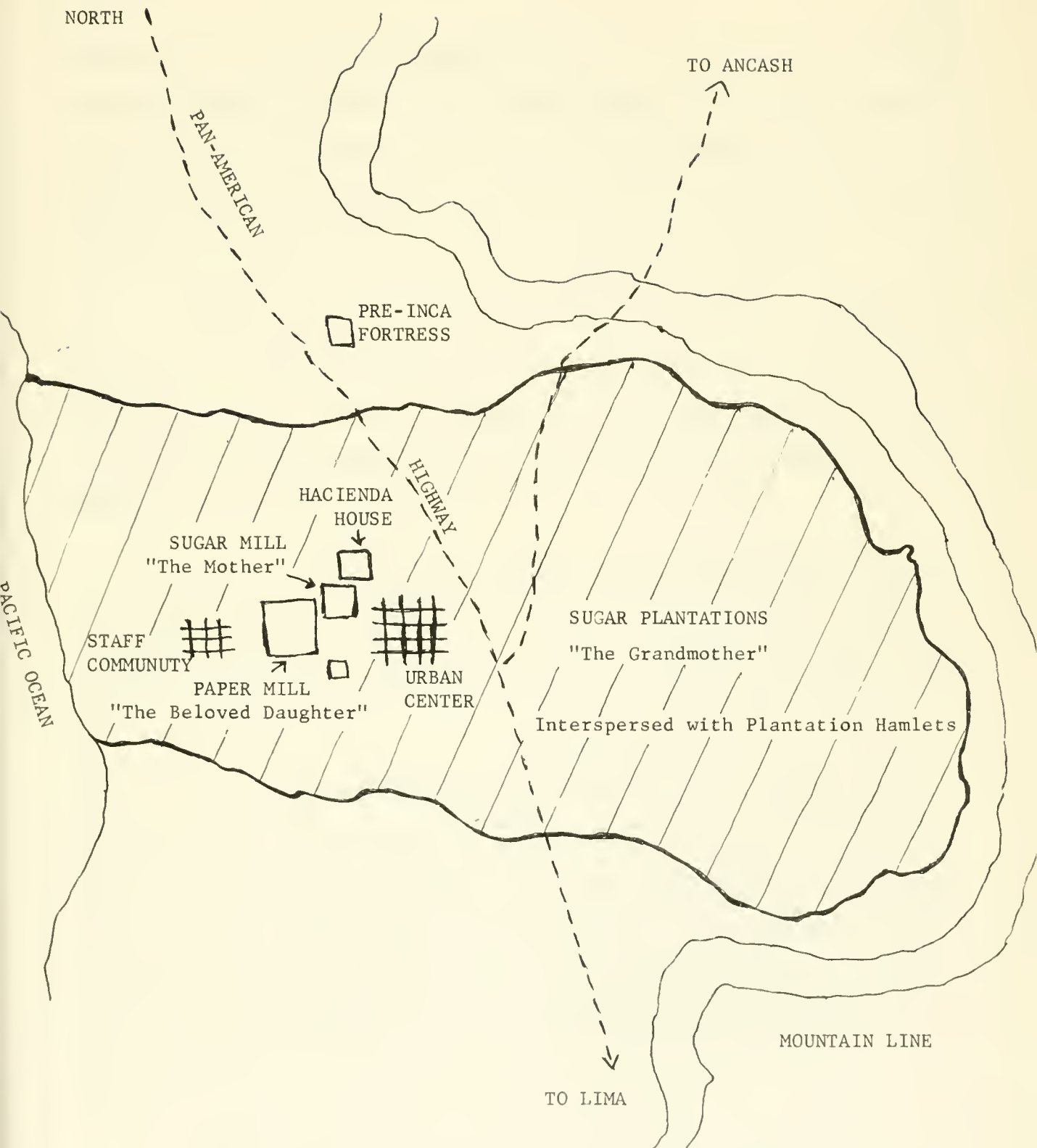


Exhibit 2--Panoramic View of the Municipality of
Paramonga and Adjacent Sugar-growing Plantations.

integrated with trading and industrial enterprises to make Grace the leading commercial house on the West Coast of South America. While ocean shipping and related port and lighterage facilities no longer make up the largest element in the Grace complex of enterprises, they still form the circulatory system for a substantial part of Grace's international business.

Without losing any tempo in its industrial expansion in Latin America, W. R. Grace and Company is rapidly expanding its interests in the United States. It owns the largest outdoor advertising company on the Pacific coast and engages in the mixing and sale of fertilizers in the Southeast and on the Pacific Coast.

In 1915, the Grace National Bank of New York was formed to carry on the various banking activities that had been entrusted to W. R. Grace and Company by its many friends in Latin America. It does not finance any part of Grace's own business.

In Latin America, Grace carries on industrial operations in the fields of mining, cocoa, sugar and coffee production, chemicals including paint manufacturing, flour, chocolate and biscuit manufacturing, fertilizers and insecticides, textiles, paper, distilled spirits, and transportation by air, land and sea. It is also active in the commodity market and serves as a representative of important U.S. and foreign machinery and equipment manufacturers.

Casa Grace, as W. R. Grace and Company is called throughout South America, has been intimately and continuously identified with the economic development of the West Coast of South America and particularly of Peru where it was founded. Casa Grace has become so indigenious that one cannot consider the Peruvian economy and social structure without exploring its relation to them. There is hardly a Peruvian participating in the money economy of the country who does not eat, wear, or use something processed, manufactured, or imported by Casa Grace. If he should travel outside of Peru, whether by steamship or plane, his conveyance might be owned and operated by associated companies, Grace Line or Pan American-Grace Airways, Inc.

Today, the operations of Casa Grace in Peru constitute a business system rather than a single enterprise. Its roots go deep into almost every area or the economy. For diversity of activity, it is not likely to be matched anywhere in the Western Hemisphere. In brief, Casa Grace carries on Peruvian activities in nine general categories: Textiles; Sugar and Rum; Paper, Boxes, and Bags; Industrial Chemicals; Paints; Foods; Distribution; Ores and Ore Concentrates; Transportation.

These myriad activities are directed by the parent company, W. R. Grace and Company, either directly or through subsidiaries chiefly incorporated under Peruvian law. Excluding personnel engaged in the actual operations of the Grace Line and Panagra, Casa Grace is the second largest private employer in Peru, with over 11,000 persons on its payrolls.

The manual workers, or obreros, and all but 115 of the white-collar workers, or empleados, are Peruvians. Less than one percent of the total are

foreigners and only 50, or less than one-half of one percent, are from the United States. The managing director of the entire Peruvian operations, who is also a corporate vice president of the parent company, is a Peruvian-- as are most of the operational and staff department heads.

Except for some technical and administrative positions, the North Americans employed by Casa Grace in Peru are in training for higher responsibilities in the parent company's over-all Latin American operations, and are not competing with Peruvians or blocking their opportunities for advancement. There are no established positions that must be filled by North Americans, and there are no barriers to the advancement of Peruvians to the top posts throughout the organization. Paramonga has a general manager as well as managers for its cane, sugar and paper operations. All are Peruvians.

Paramonga was formerly four small plantations, which were gradually merged during the past half century as relentless pressure from external competition forced sugar cane growing and processing to become more efficient. When Casa Grace purchased Paramonga in 1927, the cane fields were badly run down, the sugar factory was operated only part time, and it was old and in need of many repairs. The land was intensively fertilized and rehabilitated. The irrigation repaired, and rebuilt; and the mill was completely modernized. By 1931, "plantation white" sugar was being made; and six years later, fully refined sugar began to be produced.

There is an abundant water supply from the Fortaleza and Pativilca Rivers. The availability of water has been an all-important factor in Casa Grace's industrialization at Paramonga.

The Paramonga hacienda is a self-contained community situated in a river valley hemmed in by deserts to the north and south, the Andes on the east, with the blue Pacific bordering the west. The total land area is 17,000 acres, of which 10,500 are in sugar cane and about 3,000 in food production - in beans, peas, green vegetables, and in cattle and sheep raising. 18,000 persons live at Paramonga. Of these some 3,500 workers grow sugar cane and work in the industrial plants.

In Peru, the mills and refineries are part of the same enterprise as cultivating the cane, as is the case in the large producing area of the Hawaiian Islands. However, as in Cuba, both Grace plantations grind a certain amount of custom cane for neighboring haciendas. There is another major difference between Peru and other areas - the length of the growing season and processing operations. The growing cycle in Peru is normally eighteen months, the cutting of cane going on around the calendar as does the refinery, with the exception of a planned shut-down of two months a year for maintenance and overhaul of factory and field equipment. The factories operate twenty-four hours a day, six days a week, ten months of the year, providing steady employment to the workers.

Casa Grace has mechanized many of the cane-growing operations. Large tractors hauling special machinery prepare the land for new planting. Planting of the seed cuttings is neither a heavy nor laborious task.

The cane grows in jungle-like denseness, heavy and tall, and is blown or falls from its own weight into a tangled, almost impenetrable mass.

About three months before the cane is fully matured, irrigation is stopped in order to dry out the thick foliage for a "burn-off." This removes the foliage so that the cutter can get to the cane stalks, which must be cut close to the ground for maximum tonnage and to ensure that the new growth is satisfactory. Cane cutting is laborious, back-breaking, and - because of the soot from the burn-off - a dirty job. The workers use a heavy and very sharp machete for cutting, after which they pile and windrow the cane.

A considerable amount of research has been pursued by Grace and many others in the industry to perfect mechanical cane-cutters and planters which would eliminate much of the onerous hand labor involved in this process.

The grinding of sugar cane and the refining of raw sugar is done much the same way everywhere. Yet one cannot help but be fascinated by the enormous trapiche, which, after the cane is cut by whirling knives, crushes and extracts the juice by exerting high pressure on the cane mat passing through batteries of huge rolls. From here the juice moves through the clarification and evaporation stages and ultimately to the large vacuum pans where the sugar crystals are formed. The molasses is removed from the sugar crystals by high-speed centrifugals. The resulting product can either be sold as raw sugar or be purified and bleached to become refined white sugar. A part of the molasses output is further processed by conversion to vodka and gin. This distillery is one part of a series of new enterprises designed to break out of the market limitations of being simply a sugar producer.

The heart of the new enterprises at Paramonga is the papermaking mill. The question arises: "Why should Casa Grace build a paper-making mill on a sugar plantation with no wood pulp available in any of the accessible areas of Peru?"

Traditionally the world over, sugar mills have used bagasse - the cane fiber left over from the milling process - as fuel for the boilers that generate steam power. The only other commercial use was to process it with molasses for a nutritional cattle fodder. With oil from Peru's own fields in the north coastal region offering an alternative source of fuel at reasonable costs, Grace engineers in 1932 started research and experimentation on bagasse. By 1939, its engineers were producing at Paramonga the first commercially successful paper made from bagasse. In the first stages, wood pulp was added in large amounts; but through succeeding years, the amount of wood pulp used in making kraft paper has been gradually reduced until the finished product now contains less than 25 percent.

A papermaking machine is complex, large, and heavy. Its installation took place before the Pan American Highway had reached Paramonga. A 26-ton dryer and a specially built transportation car were brought from Germany to the port of Supe, where they were unloaded on a flat barge and then hauled on to the beach by tractors. Inch by inch, the dryer was hauled over twelve miles of sand on a temporary steel plate road. The journey required 28 days, and construction of a special bridge over the Pativilca River. In this laborious, step-by-step process, Grace built and established Peru's first pulp plant and one of its first paper mills.

The manufacture of paper is a complicated procedure. The bagasse is first baled and stored in outdoor lots for the necessary, carefully-timed aging period, after which it is removed, unbaled, and fed into washers to remove the pithy material. Then it is cooked in digesters with caustic soda and other reagents. Most of the trick in utilizing bagasse for paper lies in closely controlling the digestion process rather than in the use of special machines. Grace engineers have succeeded in making a wide variety of paper by incorporating varying amounts of bagasse to obtain the finish and strength required.

The largest output is draft paper, but sulfite wrapping paper and imitation newsprint are also manufactured, as are many specialty papers for the wrapping of candy, liner paper for cigarette packages, printing papers. Another large item is heavy liner and corrugated paperboard for making boxes and containers. Building boards of laminated paper are being produced on an experimental basis, but the results to date have not been too encouraging.

The principal uses of kraft paper are in the wrapping field and in the manufacture of grocery bags and multiwall sacks that are used in packing cement, sugar, fishmeal, and flour. When Casa Grace had conquered the problems involved in making kraft paper from bagasse, the next step was to process it into bags and boxes. The manufacture of multiwall heavy-duty bags and singleply, light-weight grocery bags is carried on in a plant adjacent to the paper mill at Paramonga. Later on we will have an opportunity to become acquainted with a single group of workers in this plant which converts paper into bags. The paperboard is trucked to Lima where Grace's modern high-speed plant converts it into corrugated containers for use in the food-beverage and dry sundries trades.

Cheaper wrapping papers and grocery bags are doing much to eliminate one of the principal sources of food contamination - the re-use of wood and tin containers, which had been a very prevalent practice throughout Peru. Today, the use of paper and paper boxes has largely supplanted the older type containers, even in the export field. Moreover, wood and tin for the containers also had to be imported.

The availability of multiwall heavy-duty bags has made a great inroads in the use of jute and cotton bags for cement and sugar, and to a lesser extent, for flour. In promoting the use of heavy-duty paper bags from bagasse, Grace is in competition with itself, for paper is rapidly capturing the market for cotton bags, in which its textile mills have a considerable interest. However, this ultimately should present no great problem as the market for both paper and cotton bags has considerable room for growth in Peru. Furthermore, this type of internal competition is the hallmark of a "new look" in Casa Grace, and benefits Peru by reducing imports of wood pulp and paper as well as jute, which require precious foreign exchange.

Paramonga has experienced a remarkable growth in a single generation. The rank and file have noted this growth as indicated by the reference to the cane, sugar and paper operations respectively as "The Grandmother," "The Mother," and "The Beloved Daughter." At the beginning of this era, the general manager who directed the cane field operations from the Plantation House was called "patron." He was both the technical agronomist and the personnel boss of the entire operation. He settled grievances, assigned houses and administered a range of social and technical details.

Almost all land and residences in Paramonga are still owned by the Company although various plans to encourage home ownership are being tried. But the administrative system has undergone far-reaching change. Most of the workers belong to the local affiliate of Peruvian Federation of Sugar Cane Workers which was established in Paramonga in 1933. As the leadership of the union has systematized and trained itself, many of the specialized personnel functions have been transferred to managers with professional training in this area.

There has been a concurrent specialization in the technical functions and it has been proceeding at an accelerated rate. The Grace engineers who tackled the papermaking experiment were not paper experts, but were men who knew sugar cane, Peru, and their own limitations. After six years of toil in a field that had baffled expert technicians, their efforts were rewarded. A very important psychological aspect of this experimentation was that it was carried out in the Peruvian environment, at Paramonga in cooperation with a large group of Peruvian employees, who benefited from the total experience in a very positive way. This was no "foreign" development, but completely Peruvian in setting and character. Although some wood pulp is still used, Grace engineers are convinced that quality kraft paper can be produced completely from bagasse.

Criollo Values and the Outward Look

This spirit of change and innovation, the sentiment that man can by his own resources have an impact on his environment, is becoming a part of the tradition of Costeño Peru, and Paramonga is in large part Consteño. It is a modern community in many ways. There are clinics, schools, moving

picture theaters, athletic fields and social clubs. Some of the workers have television sets and refrigerators. Most have running water and electricity. Children go to school and get medical attention.

But migration strains the accomodative capacity of the village and results in a steady input of the older, mountain values. The flood of migrants down from the mountains continues unabated. Serrano custom requires that a Serrano living in Paramonga open his home to another family from the Sierra. In mountain tradition, the generous are the affluent and the socially esteemed. What starts as a visit continues as a permanent arrangement. It is not uncommon to find two families living under the same roof for ten or fifteen years. Those who arrive without local family, friends or fellow villagers put up crude shacks of cane sticks and wattle and continue living in these over the years. Others move in with them. This circumstance undermines company housing and pay programs. Locked into the "company town" arrangement, it is almost impossible for management to provide for the flood of migrants. And what might otherwise be a fairly generous pay envelope is taxed when it must provide for more than a single family's budget of expenses.

The Criollos - the coastal element in the population - resent this invasion and the traditional ethos that it puts into the community. A generation or more removed from the mountains, they have both an interest and equity in divesting themselves of the old customs. They have abandoned any thought of going back. They have foregone the annual pilgrimage to the Sierra village where the abiding values are reinforced. They do not participate in the provincial activities held in the town. They have substituted other social interactions involving the schools, the labor unions, the political

parties, and organized sports which tend to direct their thoughts to Lima and the larger world community and away from the land-locked valleys of the high Sierra. Their sights are on the capital city, education, and a broader vision of human affairs. Some of them have advanced into skilled or supervisory positions and most of them aspire to such advancement for their children and resent those demands which might divert family resources from these prior objectives. They have taken as their special saint St. Martin of Porras who was a colonial of mixed blood and of some station and education, a man of the cities of culture and of the world. There is more of a bias in their activities towards education, work and the nuclear family.

The Criollos discourage ties with the partisans of the old order and resist the claims that the migrants make on their hospitality. This is strong business where the mountain heritage has linked social prestige with hospitality beyond the immediate family. If the Criollos feel guilt about their manner of behaving, they displace it with hostility towards the partisans of the old order. They refer to the mountain Indians as "Cholitos," "dirty ones," and "stupid ones." They see their presence as an unfortunate restriction to national and personal progress.

Serrano Values and the Backward Look

But time and events have forced the Criollo to coexist with the Serrano and the story of Paramonga and its productive effort is in large part the story of the interplay between these two elements and a third intermediate element which this interplay has spawned. To understand the values of the Serrano we must travel to the Ancash from which the Serrano has recently

arrived, to which he returns regularly and where the old values have yet to be touched by time.

To reach Ancash, one drives east out of the center following a dirt road that leads between fields of sugar cane towards the mountains. En route one passes through small hamlets of more primitive houses where the plantation workers live. Without sanitary facilities, electricity and running water, these hamlets feature a rural school, the large house from which the field boss rides out - sometimes on horseback and in boots and white riding breeches - and a few shops and taverns.

A few miles out, the green fields give way to desert and the gray coastal mist to bright tropical sky. The road starts climbing, circling back and forth, for a seven-hour drive until it passes over a cold mountain pass where Indian women muffle their faces against the biting cold and travelers enter the windowless stone huts to buy fried lake perch served with small loaves of wheat bread. Beyond, the road drops down into the spectacular beauty of the Callejon de Huaylas, a broad valley with a "white range" of snow-covered peaks to the east and a "black range" - just slightly lower in height - towards the sea to the west. The Callejon is the principal center of the Province of Ancash. It was an important farming area of the Incas and of the civilization that preceded them.

Economic organization in the valley is sparse but cohesive. Typically the land is held by hacienda owners who are absent and have rented small plots to tenant farmers who, under local custom, have the right to dictate who inherits the tenancy. The plots are small and modern agricultural methods non-existent, but the arrangement provides a family head something of his own

to manage, an opportunity to control and direct the labor of other family members, and at least a minimum means of subsistence.

The social matrix is also easy to understand. A few Criollos manage the rents for the absent owners. They have their own society which cannot be penetrated by the Serranos. The prestige or social status of the Serrano is a function of the productivity of the land that he works, of fate and the seasons, and not the result of any personal superiority in investing energy and skills. At harvest time, neighbors and relatives are invited to participate in a work bee or minga. At the end of the day, they are wined and dined to a degree that far exceeds the economic value of the labor contributed. The degree to which affluence is shown on these occasions determines and reinforces the social standing of the host. Affluence may also be demonstrated on the occasion of religious and civic festivals. The more affluent will make larger contributions to the refurbishing of the village chapel, to the arrangements for the occasional visit of the priest or to the purchase of fireworks, spirits and costumes for the fiesta honoring the patron saint.

Village activities are almost exclusively managed by the affluent so designated. The hacienda owner is a distant and absent figure; his criollo majordomo has isolated himself and plays a limited social role. The small village shops are in the hands of the more affluent farmers. The priests come into the villages only for the purpose of administering the sacraments. In one Ancash village, we were shown the chapel that the villagers had been rebuilding out of their own resources and on their own terms. They had posted a schedule of the watchers who would participate in a nocturnal

adoration program. At the time of the annual fiesta and on such other occasions as their resources permit they send for the priest to perform baptisms and marriages, to hear confessions and say Mass. They collect the money to pay him for his trip and arrange a chicken dinner to make him feel welcome. They do these things on their own not because of external direction from either priest or patron, but because community tradition tells them that he who contributes of his time and labor and of such excess goods as a benevolent fate has permitted to come his way is the one who is to be recognized and applauded.

The Ancash people are experienced in collective action shaped by their traditions and directed by leaders designated by the system of the affluent demonstrating superior generosity. This style of interaction is supported by local productive activities and reinforced by established local sentiment. One anthropologist makes a point of the consequences of zone farming on these customs.³ Where the slopes are sharp and the plots small, the men who farm the upper reaches will feature potatoes and those who farm the lower, corn. The need to exchange produce sets up bartering interactions with socially-inclusive consequences. These consequences also attach to the working bees or mingas and the munificence of the currently affluent at the time of civic or religious festivals.

Affluence results from the fact that fate has smiled on the particular plot and its tenant, not from any superior activity on the tenant's

³ Described by Solomon Miller in "Proletarianization of Indian Peasants in Northern Peru," Transactions of the New York Academy of Sciences, Ser. II, Vol. 27, No. 7, May 1965.

part. It is proper, therefore, that this unearned surplus be fed back into the community by the mechanism of the tenant's generosity at minga or fiesta time. The repayment that he gets is the only one that circumstances will permit him to capitalize - the prestige accorded him by his fellows in return for his expected acts of generosity and hospitality. The community absorbs the surplus and the producer dispenses himself of it in the only socially-acceptable way, the two acts serving to reinforce the local sense of community and to perpetuate the conventional wisdom of the society.

Conversely, the one on whom fate has not smiled is not subject of criticism. He has worked long hours, in the cold and the rain, never grudging of his time or his energy, stoically in the Serrano tradition.⁴ Since fate and the seasons have not favored him, it is only fitting that the surplus of his affluent neighbor be shared with him. No reciprocity is established or sense of future obligation incurred. The transaction is not between two individuals, but between the individual and the community according to time-honored tradition - a community that has been the only bulwark between the individual whether affluent or not and eventual catastrophe and disaster.

Serrano Sentiments Move to the Coast

However miserable it might appear to the outsider, Ancash society was a cohesive one that had stood the test of centuries. It afforded a rela-

⁴On the coast, to say a man is "muy indio" is to say that he continues to dedicate his full attention and energy to his original purposes regardless of contrary pressures and signals he may be receiving from all sides.

tively stable state of affairs that might have continued had not events been stirring on the coast. At the beginning of the present century, however, Lima was awakening and beginning to relate itself economically to the outside world. The War with Chile had proven economically stimulating. The cotton and sugar that the rich coastal valleys were capable of producing were needed to service factories in Lima, to feed and cloth the capital city's expanding population, and to provide for a modest amount of export. Activity on the coastal plantations quickened. Concurrently, in the high Sierra greater attention was being accorded to matters of public health, to measures devised to reduce infant mortality, and to preventive activities in the field of health and sanitation. By the turn of the century these concurrent trends had created both a surplus of labor in the mountains and a shortage on the coast. As attention was directed, even in a rudimentary way, to problems of public health, the life span was expanded and child mortality reduced. The result was an increase in population which the subsistence agriculture of the sierra could hardly sustain.⁵

But it was an eight-day journey, by foot or by horse, down to the humid, overcast shores where the ocean roared on the beach. One travelled along pre-historic paths with ten or twelve companions to fend off bandits. It was not a pleasant prospect and economic opportunity was not sufficient to cause the Serrano to undertake it. A few did. They returned with money and goods and urged others to follow. A few had had army service and learned to be less unsettled in the coastal world. But it was the Criollo recruiters

⁵Soler, Eduardo, "Fuentes de Migración al Complejo Agrícola-Industrial de Paramonga." Pub. Migración e Integración en el Perú, Monografías Andinas No. 2, Lima, Peru, 1963.

up from the coast, agents of the plantation owners, ready to make advance payments to the families of the recruits, who made the biggest impact. Sometimes a recruiter would enter into an arrangement with the majordomos on a single hacienda for a mass movement to a coastal plantation for service in a single planting or harvesting. All parties understood that the excursion was a temporary one. Prospects seemed brighter under these circumstances.

But the loyalty of the migrant always remained with his Ancash village. He readily abandoned his coastal pursuits when ploughing or harvesting was to be done in the Sierra or when the village has honoring its patron saint or when his nostalgia could no longer be contained. He came back with his goods and his money and his tales of another world, and all of these he placed at the disposal of his village in the Ancash tradition of hospitality and generosity in surplus distribution.

The village in turn accorded him its only reciprocity - esteem and prestige - so that the oscillating migrant became a legitimate type fulfilling a prestigious role which others were impelled to copy, but the process had undermined Serrano social organization. The oscillating migrant competed with the more prosperous tenant in displays of affluence. The family lost control over the sons that had in earlier times been subject to him. The threat of withholding the inheritance of land tenancy had less impact. A son now had other options. The opportunity for coastal employment also provided a means by which a father could escape family responsibility although this meant giving up the all-important village ties. For the bachelor, this was not necessary. He could marry and maintain a family on the coast and

make his periodic pilgrimages above where the contribution of his small surplus earnings had important significance and purchased him important quotas of public esteem and affection the remembrance of which he brought back down with him to his place of labor. The mechanisms were still operant, but the basic matrix had been recast.

On the coast, life in the plantation hamlets was made bearable by the anticipation of the return visit. Roots did not go deep and the sentiments which bound him to his work fed on sources high in the mountain fastnesses. One was a machetero who used the same machete to put down the seed stalk, to trim the weeds around the young cane and to fell it when it matured and put out its lacy top wreath. He and his woman wore the traditional garb, cultivated the same foods, listened to the same music, invoked the aid of the same saints, conversed in the same Quechua tongue, and - when the nostalgia became unbearable - took off for the same villages that were the basis of their sentimental schemes. In the taverns of the plantation hamlets, one found paisanos from the same village identifiable by details of dress and conversational allusions. If the work gave out, one packed up his few belongings and went on to another plantation or back to his village.

The oscillation pattern unsettled both ends of this traditional contract and the Serrano social usages by which it was maintained. Where the father became a party in this seasonal migration, he was either absent or planning to be absent. He was free - if he chose - to make his absence permanent, to take up with a second woman on the coast or at another plantation. The son had moved out from under economic dependency on his father.

Moreover, the maintenance of the contract between the two depended not only upon economic realities but also upon the massive endorsement of an intricate set of social usages, rituals and expectations operant within a small geographical context. Distance, absence, and the lessening of economic equities made these social controls less operant.

The family became mother centered. It was common to find a woman living alone or a man maintaining two households and relating to two women. Many women were abandoned. Children grew up responding to occasional or shifting father figures and a changed concept of authority. The child's basic commitment passed from his father to his mother and his peers. The process compounded itself. One woman reported: "After my husband took off with another woman, I didn't want to stay in my village any longer. I didn't want people to pity me for being an abandoned woman, so I decided to leave. I worked for a while in Huaraz (principal Ancash center) as a cook. Later I came to Paramonga and found work on the plantation. I liked the place and brought my parents to join us. That is life; one never knows in what strange land he will end up."

The oscillation era broke the old mold, but it was an unstable phase that could not long have endured. The Serrano on the coastal plantation had only the promise of eventual return to his village to sustain him in his vicissitudes. With the entire workforce on the coastal plantations in a state of transition, there was little opportunity to

replicate the familial and community controls that he had responded to and benefited from in the Ancash. Criollo society on the coast was not open to him. It was necessary to speak Spanish to move in these circles and he knew only his native Quechua. There were no institutions that provided for social intercourse between Criollos and Serranos. Labor unions, the local school systems, the political parties, the management groups in this transitional era considered the "dirty cholo" to be a degraded and burdensome aspect of national experience.

Increased mechanization and rationalization of plantation procedures in recent years is bringing the oscillation era to a close. Industry on the coast is passing from a period of labor scarcity to labor surplus. With the normal buildup in the migration phenomenon over time and the needs of plantation management to acquire a permanent and more specialized work force, it has come to be the Serrano's interest to settle down as an employee of a single plantation. Economic and social forces have been combining to produce a new equilibrium, but it is an equilibrium based upon personal pain and misgiving and conflict between the social sectors.

The Emergence of an Intermediate Sentimental Posture - The Criolloized

The recent shift from a floating to a stabilized workforce on the coastal plantations has produced a new social type. The Criolloized is no

longer a Serrano. At some point in time, the realization dawned that he would never "go back" to live in the Sierra. One old timer was approaching retirement when this fact became apparent: "I have worked on several plantations, but most of my life at Paramonga. Now that I am to retire, it hurts me to think of leaving. I haven't been able to sleep nights thinking about it."

The younger element in this category seek acceptance in Criollo society, but in this effort it is never completely successful. Perhaps the Criolloized don't expect to be successful, but they vie energetically for place and position in the labor organizations, the political parties, the athletic events, the educational activities. He must school himself in the language and social usages of the Criollo. One episode is typical. While the authors were in a small coffee shop in Paramonga, one of them addressed the young waiter in Quechua. The boy replied in Spanish until a girl sitting at a nearby table had left. Thereupon he resumed his native language. But the strong coastal sentiment against the Sierra culture and the fact that the Criolloized's commitment is conflicted and his allegiance unclear accords him only limited access and intermittent acceptance in Criollo circles.

This bitter, unsuccessful struggle forces the Criolloized back upon the Serrano culture. He comes back for the solace and the nourishment that will help him to continue the battle despite the lack of closure, of final acceptance, of specific achievement. These visits help to sustain him in confronting the daily indignities of life on the coast. But he must pay a price for this sustenance. The price consists in the values he brings to the village at the time of his occasional pilgrimage and in his active

participation in the events by which Serrano culture is reinforced at the coastal location.

The periodic pilgrimage to the Sierra is a vital part of the Criolloized's solution to his difficult social circumstance. He goes there to be married, to attend the annual fiesta, to assist in the rites of passage. Sometimes he just goes there. In keeping with the old tradition of surplus distribution he brings gifts of food, clothing, money, his personal labor. These visits have therapeutic undertones. Frontline supervision in the factory tends to interpret with indulgence absences attributed to sickness sensing that at times cultural as well as physical recuperation is in order. On one occasion the authors stopped by a small village in the Ancash highlands and found no less than eight Paramonga employees spending a few days there. The chapel that they were working on had been under construction for several years and most of the construction funds had been collected from those who had left the village to work on the coast.

Life on the coast is made more bearable by the anticipation of these return visits and many of the social routines that one encounters at the coastal locations have as their function the nourishment of this anticipation. In certain taverns, at certain social events, on the occasion of certain religious feasts, held at chapels that feature the Serrano saints, one finds the traditional garb and music, the familiar food, the old religious allusions spoken in the language of the Sierra. The Company has tried to respond to this need to replicate on the coast the old and still powerful setting. To counter a massive pilgrimage to the Sierra at the time of the fiesta of the Virgin of Mercy, this same Virgin has been named patroness of

the plantation, a statue in her honor has been erected locally and celebration of the fiesta in Paramonga is encouraged.

There are many sites at which this reinforcement of old values takes place. Typical is the Serrano marketplace a few blocks from the Plaza. Paramonga's principal market is located on the Plaza. It is housed in a permanent building. Here one obtains a range of fruits, vegetables, grains and meats, most of them produced on the coast using organized production methods. The Serrano market is away from the Plaza. It has no permanent structure consisting largely of a series of tents and stalls. Goods are merchandized in small quantities. One finds there many of the same products on sale at the main market, but a Serrano will tell you that an egg from the Sierra, costing a little more, is of superior flavor and nutritive value. One also finds a number of herbs, plants and grains not available elsewhere. One shops in Quechua listening to Quechua music. Hot treats of Sierra food brighten the excursion. Out front stands the truck that ferries both passengers and cargo back and forth from the Ancash. From the driver one can pick up news about his village and relatives. The visit to the Serrano market may cost a little more and take a little more time, but it serves other ends than merely the acquisition of household necessities.

The Criolloized's observance of highland values is also evident in his attention to hospitality accorded the new arrival from the mountains - hospitality not for a day or a week, but sometimes extending for months or years - an institution that is even stronger on the coast as an expres-

sion of the mutual support required in "foreign lands." Here he also observes many other of the old ways of life, such as religion and cooperative work. The indigenous traditional religious practice includes certain rituals: chanting and dancing before the images, the symbolic offering of food and beverages. The celebration of these festivities are made by means of a religious organization with offices of majordomo, Captains and Devouts, who spend important amounts of money to sustain the feast of the highland saint (Our Father of Solitude and the Virgin of Mercy). The man from the coast, on the other hand, has his own Creole saint (Our Father of Miracles and San Martin de Porras), whose festivities are celebrated by coastal fraternities. As it can be noticed, the differences between the two worlds also affect the images worshiped and the feelings involved will be reflected in the pomp of these events.

The Criolloized at this point in his history finds it necessary to maintain his credentials in two worlds. He expands from his limited store of personal energy and economic resources in two directions. It is not an easy life and demands special skills and special values. Thus the Criolloized will speak of the value of struggle even without achievement. He will say: "Existence in itself is not important; but to fight for life, that is living..." And, as the Criollo holds him at arm's length by the use of stereotypes and cliches, he maintains the integrity of his own cultural boundaries by means of sentiments such as the following:

These Criollos pretend to be smart but they only have a big mouth. What happens is that they are very astute to disguise their laziness. If we didn't know how to read, we would be easily cheated here... In this world he who knows has a better chance to success in life; that is why I keep on studying even if I am not young anymore and I will do my best for them to be what I could not.

Thus, Paramonga, located halfway between the Ancash of the Incas and the metropolitan center of Lima, houses three sentimental positions. These separate positions are supported by divisive routines that tend to gather the faithful and push aside the contrary minded, routines that draw their significance from time-honored customs in the high mountains on the one hand and in the city on the other, and routines that are sanctified by religious ritual. The fact that they have had to co-exist under conditions of proximate encounter in the narrow confines of the village has only sharpened the disparate values of the adherents and made them more closely held. Stereotypical responses have provided a way of dealing with those who hold other views, an occurrence that has sharpened the boundary that separates the cultural positions.

But Paramonga also houses a modern industry in communication with a national and international market. It houses complex modern machinery and techniques and the management ideology by which this important investment is rationalized and capitalized. The these that we pursue now requires that we enter one of her factories for an even more proximate and detailed view of the resolution that has been achieved between her particularistic cultural posture on the one hand and modern technology including managerial ideology on the other. To accomplish this more detailed view we have selected for intimate study a single work group in the paper factory, known to the workers as the "beloved daughter" of the industrial complex.

Activities, Sentiments and Interactions of a Single Work Group

The worker very often expresses his feelings through symbolization. Thus we were told:

The "grandmother" of the industry is the field with the sugar cane plantations; the sugar factory is the "mother" and the paper factory is the "beloved and spoiled daughter."

Ever since its installation a quarter of a century ago, the paper factory has been modernized year after year both in equipment and technical personnel. It has now five paper machines with a production of more than 200 tons of paper daily. It was the first in the world to use bagasse to manufacture paper at industrial level. After the sugar cane juice is used to produce sugar and alcohol, the fibrous residue that was waste before is now sifted through huge strainers. The fiber chips thus acquired are subjected to several boiling processes, rinses, and chemical agents are added until the bagasse loses its vegetal condition and becomes a chemical pulp. Through production operations the pulp becomes sheet of different thickness, according to the customer's demands, until the time comes to bobbin it to be sent to the market. Sugar cane bagasse serves to manufacture both the delicate tissue papers and the thick, hard material used for cartons.

Eight hundred workers are employed in the factory. Almost all are men. The complexity and rhythm of the production process and the adjustment required of the worker by technological innovation, have created unsettlement between the manager and the workers. Labor conflicts have erupted harmful to production. The required supervisory qualifications, were offered by one of the bosses in the following words:

The Supervisor must be always honest, truthful to himself and to his people. To deceive the workers is an old method outdated, thank goodness, by new techniques for dealing with people. The Supervisor must inspire trust in the workers. We still have a few supervisors of the old school who think that to command is to take a policeman or warden attitude, that being a supervisor you have rights over the worker. In my opinion this isn't so. A man needs good treatment whether he's a costeno or serrano. He wants to be treated as the Supervisor wants to be treated himself.

Many times the Supervisor has got the wrong idea about his function. He feels all powerful because he has been appointed to that position, and uses his authority with good or bad manners, according to the circumstances. To me, this is the old method of the wrong Supervisor: commanding and very powerful. In my concept, it is the worker's opinion what makes a supervisor, not the appointment by management. The latter is accidental and you could even call it a matter of influence. What really counts is that the subordinates consider you a real boss and not a domineering person. The true boss is loved and he can ask anything of his workers. On the other hand, the bad Supervisor will always be hated and the workers will try to cheat him any time they can.

This definition reflects a new trend of management, more oriented to man than machine. This situation raises the question of the professional quality of the supervisor. The answer is given by one of the company executives:

The majority of the engineers graduated from the National School of Engineering come out without any experience of the human side of life. They think only in terms of their technical knowledge, because that's the way they have learned and you cannot blame them. It is the professors who have that purely technical mentality. As long as they can handle figures, calculus, equations, they think they are tops. This tendency is noticeable in their publications where they write only of technical things, something that does not happen in the foreign publications on the same field.

Thus we find in the Paper Factory a variagated foreign technical literature such as: International Management; The World's Paper Trade Review; The Paper Makers Weekly; Container; Paper Trade Journal; Engineering

News Record. To this we may add the training received in Peru and abroad emphasizing what is commonly called "human relations." Nevertheless, labor problems occur. Their causes are a source of perplexity to management, apparently difficult to unfold; in studying a small group which is an atomized segment of the total labor force, we have tried to find the underlying causes of such problems.

Some Workplace Values in Paramonga

The workers at Paramonga make sharp distinctions about what is good or bad, right or wrong. The good man is one who conforms and obeys the social norms of the community; he does not steal or violate the security of his neighbor; he helps the needy, educates his children that "they may not suffer and be exploited as we are." The bad man is the one who does not take care of his family and children; he steals, especially Church property; one who wastes his money in hard drinking or with prostitutes. Within the working environment, the bad worker is one who breaks the group's rules, for instance, one who accuses his fellow worker to the bosses. Significant is the attitude of one of our informants who was telling about one such worker who was disloyal to the group maintaining that he was "...a tale-teller, I can not stand him." A bad worker is also the one who does not help his fellow workers in an emergency. On the other hand, the good worker not only strives for perfect work, but is willing to help his fellow worker, on his own time:

Jacinto is a great person, very good worker. He is always willing to give a helping hand to any fellow worker who may need it.

The highlanders, the Serranos and Criolloized, are supposed to be used to activities requiring strength, dedication and indifference to weariness. They are always ready to help their fellow workers, without expectation of return. As far as the physical work is concerned, the Criollo is supposed to be weak, always looking for a chance to rest, but willing to help, not out of kindness, but to show his superior knowledge and skill.

A second value that manifests itself is the belief in the difference in interest between Company and employee, the patron and the worker. The Company (Compania and Hacienda are used interchangeably by the Sierra-oriented) is conceived of as an abstract entity, formed by wealthy men, capitalists, whose only objective is to earn money at the expense of the worker. To some of them the Company is simply "Peter Grace" who is thought of paradoxically as being both near and far; near through his property, his machinery and the directors appointed by him, and far away because he is never seen, not even in pictures. The "general patron" is viewed as "a good man," a good Catholic who does not differentiate between the highlanders and the coastal saints. It is his subordinates who squeeze the workers to gain the favor of the patron. For some the Company is a "group of imperialist gringos who make big fortunes sweating out the Peruvians." Notwithstanding, the view of the "gringo boss" is usually in terms of greater congeniality in comparison with the Peruvian boss. It is very common to hear that when a Peruvian becomes a supervisor he forgets his fellow countrymen and gets his raise because of his strictness with the workers who become part of his effort to produce more and spend less. In any case, the Company is synonymous with power through money. Apropos of this, a union leader says:

The Company is very powerful. Its power lies in the money that buys lawyers to defend it with all their might. If it were not for the Union we would be lost.

It is believed that the Government takes side with the Company. When strikes break out, the Government ministry sends police to the industrial center to keep peace and to protect the installation, a preventive measure that strengthens the worker's distrust and causes him to comment bitterly:

The officials in the Ministry of Labor, and even the Government itself, are puppets of the Company. As the old saying goes: "for silver the dog dances and for gold, both the dog and his owner."

The workers have offsetting values about "luck" and "fate."

The concept of 'luck' is mostly expressed by the Criollo and has to do both with his future and the role of personal initiative. Initiative must be taken even though achievement will depend in the end on the power of the Almighty. For instance, with luck he may be promoted at work or win a lottery, but in any case he must take some action. To be promoted he has to demonstrate initiative and to have a chance in the lottery he must buy the ticket that will give the prize "if God wishes."

The concept of fate as expressed by the Serranos has a different meaning, that any change in their lives is determined by the will of the Almighty apart from their own action. This independent will may punish or reward the individual apart from his personal behavior. This concept stands out in the autobiography of one of our informants who states: "Today when I think of my destiny, I reach the conclusion that if luck is not on our side, it is useless to struggle." And later: "Fate is sometimes the best one to punish out pride..." The Criolloized, whose life is a permanent

struggle for a better life, adopts neither of these beliefs choosing a value favors personal initiative:

Those who do not what to struggle in life are always thinking in destiny and luck. I do not believe in this nonsense. If a man has diarrhea, they say it was his destiny. If his boss finds him reading the newspaper during working hours, they say it was because of his bad luck. Gosh, if we get sick because it is our destiny, it will be better if doctors stay home and no newspaper were published, to preclude their bad luck.

The Paper Factory is an environment of constant noise and movement. The worker who is a migrant starts without previous experience with this type of atmosphere where everything sounds and turns around. For instance, the peasant newly arrived from his bucolic and peaceful environment, exposed to the crackling of the machine gears, surrounded by noise and movement, at the start is overcome by feelings of terror and depression, an impression that never completely leaves him:

When I came here for the first time, those machines seemed like monsters that wanted to swallow me. That's why I used to crave for closing time and I even remember how the first few nights I used to wake up screaming in the middle of the night because I could see big, fiery animals trying to swallow me.

In this crackling and sounding atmosphere where machines seem to have a mysterious life of their own, the new arrival tries to adjust, to communicate with his fellow workers using mimic language, or shouts or whistles. In conversations after work or during rest periods, he picks up social values that tell him that his industry, his company, his factory, and his work group are better than that which is adjacent or that to which they were previously exposed.

In the Paper Factory there are better people, cleaner people more Criolloized people. In the Sugar Factory you see dirty, greasy people. The factory itself is dirty and the machines are old. In Paper, on the other hand, the machines are more modern, we produce more, and people here make more money than in Sugar. That is why we feel Paper to be most important in the Hacienda, because of greater productivity, which means more money for the Company.

This pride of belonging to the "beloved and spoiled daughter" extends to the supervisors and managers who put special emphasis on the line of production that is "saving the company." One will add:

Sugar is now low. Were it not for Paper, with which to defend ourselves, our industry in Paramonga would have died. The Paper Factory is the one that is saving the industry.

There is also a hint of the legitimacy of an emphasis on production in this comment by a union leader:

In the factories more than in the field, there are still bosses and supervisors who need a better preparation on how to treat people instead of thinking only in the production... It is understandable to think in production since this is part of their business, but they shouldn't forget that machines alone can't work. They will always need people to make them work and these people have necessities as much as the owners. We fight that these necessities will be satisfied with justice... and to avoid having the workers work as slaves under those who think only in production.

The manufacturing buildings at Paramonga house expensive machines and men who are committed to their efficient operation. Their sounding confines also house a set of values to which the workers subscribe and, perhaps more important, a distribution of values according to the worker's social affiliation within the village including his source of origin. It is a more precise statement of the interplay between modern technology and established societal arrangement that we seek. This can best be achieved by a more detailed examination of how this encounter expresses itself in the experience of a single work group that we have selected for consideration.

The Formal Activities or Technological Organization of a Work Group
in the Conversion Section of the Paper Factory

The reader will recall (Exhibit 2, Page 10) that miniature steam engines cart the cut cane in from the fields to the sugar mill. The cane waste with its juices withdrawn exits at the other side of the mill in a substance called bagasse. The bagasse is stored and then fed into mixing tanks at one side of the paper factory. Here it is washed and chemically treated so that it flows as a fluid pulp into the main paper-producing part of the factory. (See Exhibit 3.) This section features massive, expensive machinery, not heavily manned, which converts the pulp into massive rolls or bobbins of finished paper. The bobbins are then delivered to the ultimate consumer or to the adjacent conversion room where they are "converted" into boxes, cartons, bags and heavy sacks.

The group selected for proximate study consists of 22 skilled and unskilled workers employed in the Sacks and Bags Section of the Conversion Department. Its mission is to manufacture all kinds and sizes of sacks and bags for the packing of cements, sugar, fertilizer and other commercial products including the locally significant fish flour.

As indicated in Exhibit 4, The Conversion Department occupies three large rooms devoted to manufacture, a suite of administrative offices and a shipping area. The first room is the area where office papers are processed. The other major areas are the Sacks and Bags room and the Warehouse. The Sacks and Bags Room is divided into two sub-sections named according to the type of machines housed. The sack-forming machine shapes

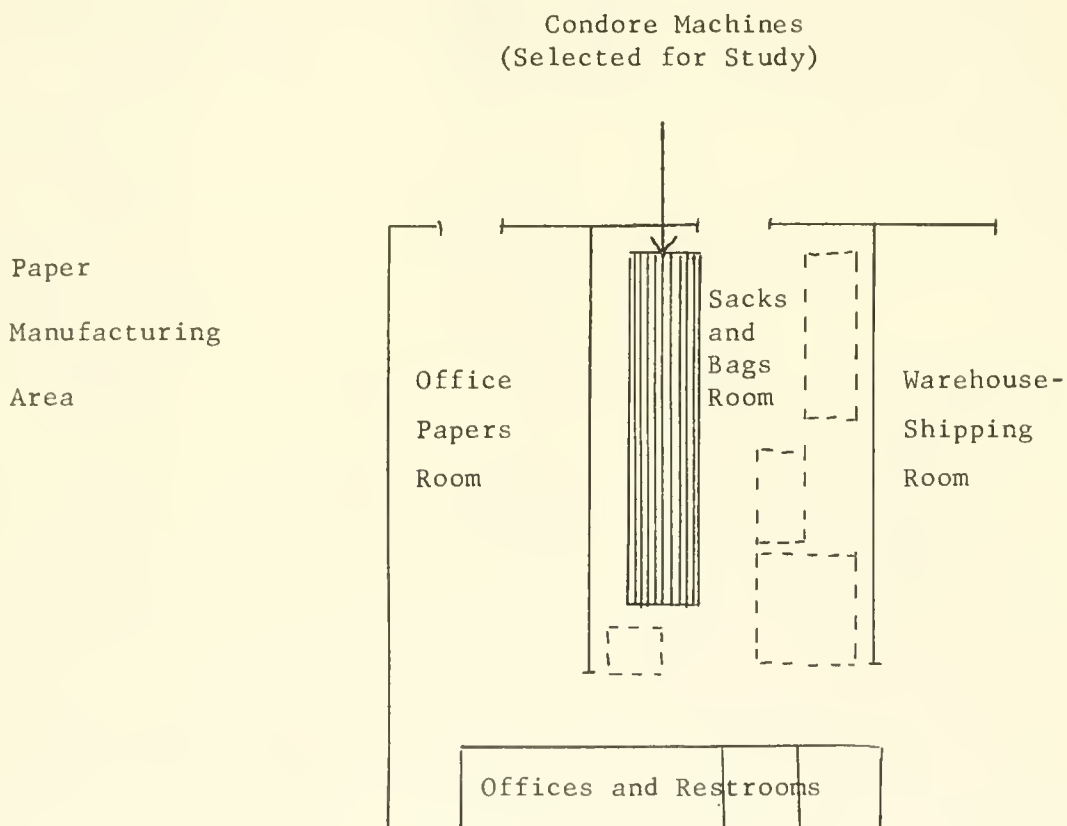


EXHIBIT 3

Layout of the Paper Factory. The group selected for study was located in the Conversion Department as indicated in the diagram.

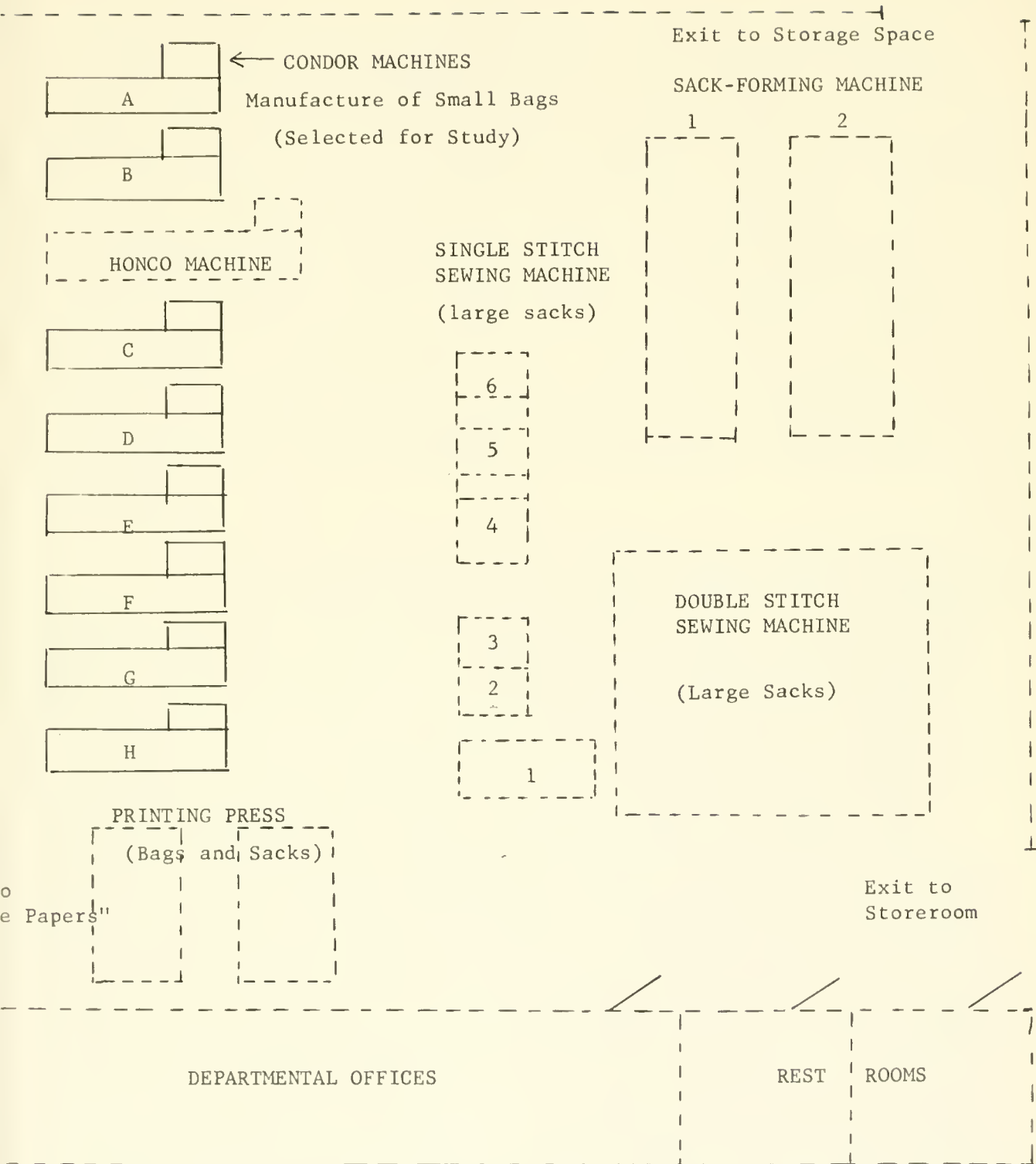


Exhibit 4

Map of the Bags and Sacks Room of the Conversion Department. The work group that mans the 8 Condor Machines in the upper left hand corner was the one selected for study.

the different kind and size of sacks and bags. In the single and double sewing machines area the shaped sacks are sewn and inspected. In the printing press area all the markings and labels put on the bags are printed. The Condor machines are used solely for small bag manufacturing. The group of single stitch sewing machines occupy the central part of the room which constitute the only place where women are employed. Condor is the brand name of the bags manufactured in the section called Condor Machines. The spaces between machines are narrow. Each machine has a protective screen to avoid accidents, but visibility all around is not precluded.

The field study was done in the Condor machine area. The personnel working in this area consist of two mechanics who repair and maintain the machines, eight Operators (for the eight machines) who keep the machines producing and keep count of the bags manufactured, and eight assistant operators called Bundlers whose work is to tie up the bags into small bundles and, finally, four helpers (called "volantes" or "flyers") who replace any of the operators who might be absent and perform auxiliary work such as placing rolls of paper or bobbins on the machines, providing other materials such as glue, cleaning the work area and taking out the waste or "broke" of the spoiled bags. Several years ago there was one more operator per machine who had charge of selecting and counting the bags. When the system of piece-work was started, this task was taken up by the machinist. The change in the work system from day-work to piece-work had implications for the social conformation of the group as we shall see later.

Technological Organization of the Condor Group

The eight machines in the Condor group were installed ten years before this study, except for machines A and F, brought in a few years later. The newer machines had a higher productivity rating. The names of the workers, disguised for purposes of anonymity, are shown in Exhibit 5.

The production process is uniform for all eight machines: (1) the volante places the paper roller bobbin in the machine, (2) the operator threads the paper into the machine (3) as the machine starts, a guillotine cuts the paper tube giving it the size required for the type of bags that the Planning Office has programmed, (4) the paper, now cut, is transported mechanically, shaped, glued, and automatically expelled from the machine onto a table in front of the operator, (5) the operator counts the bags into package size, discarding poorly made ones, (6) the bundler ties up the packages then places them on a pallet, (7) the volante takes the pallet, normally containing 120,000 bags, to the printing press where the bags are labeled, organized into bigger packages and delivered to the shipping room.

This technological layout gives an idea of the potential interaction processes among the members of the working group. The interactions respond to other factors, however, that are beyond the technological arrangement of the workshop, including place of origin of the members, age, education, psychological needs, common values, etc. These, in turn, together with other elements, contribute the dynamic inner organization of the work group.

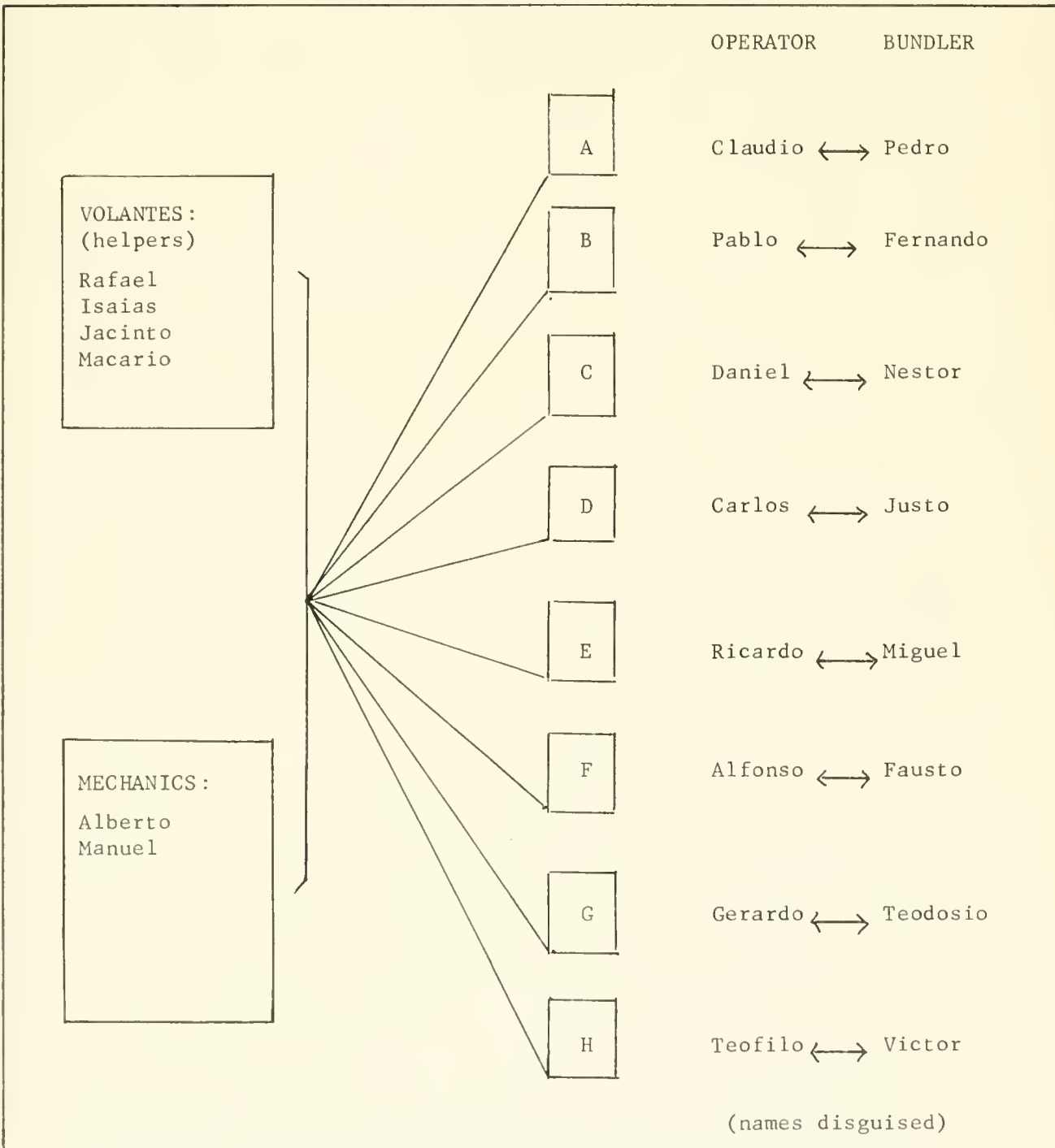


Exhibit 5

Work Stations of Personnel Employed
 In the Condor Section of the Bags and Sacks Room

In most of the sections of the Paper Factory both skilled and unskilled workers are paid by day-work. Until four years ago this payment system was also common in the Conversion Department, even though they sporadically worked on piece-rate in some sections. Under these circumstances, the departmental manager would select the workers to fill the piece-rate jobs, a selection sometimes based on personal preferences or as a reward to the initiative and compliance shown by the worker. "Piece-work" was coveted by the workers because of its economic advantages, and some were willing to do anything to please the Boss. Thus the selection of the personnel for piece-rate and the assignment of work became a tool for handling the aspirations and feelings of the worker. For instance, when some of the workers would not comply with a supervisor's instructions or when he would make persistent claims for himself or his fellow workers, he would simply lose the opportunity to be selected; or if, on the other hand, the worker strove to produce more, to prolong the working hours, to avoid conflicting situations, he would be selected for piece-work. This behavior however, was reflected in worker sentiments. A worker who would conform was called "toady" and his companions would withdraw their trust and even their friendship. The "toady" was thus ostracized by his fellow workers for having violated the group's code. Disloyalty to the group has a high price and it must be paid for by isolation.

Sometimes your fellow workers are difficult. It is a maddening experience when they refuse to speak to you. If you talk to them, they pretend they do not hear or just turn around as if nobody were there. I have seen them do that to a fellow worker.

This reference to a third person is an attempt to save a reputation already re-established among his companions (to offset his earlier exclusion) by contradicting whatever his Boss would ask of him. Because of his earlier

behavior he was being punished according to the established rules, but he was usually happy to accept this sanction since he was paying in this way the price asked for his disloyalty and he was earning merits towards his acceptance again in the group.

For the executives, however, the artificially created conflict was justified. They thought of it as the best way to achieve "competition" among the workers. They were unaware of the negative feelings that resulted. One of the functions of such conflicts is to strengthen the worker's adherence as a means of safeguarding the group's frontiers. Where the interests and expectations of the group are altered, creating conflicting situations among its members, the motivation exists to join hands and defend the group's integrity; thus, the action of the group in punishing the disloyal member with ostracism; thus, also, the uneasy situation for the boss faced with strikes or grievances, for causes sometimes insignificant or even contradictory. Several years ago the union delegate appeared to ask for the elimination of Sunday work on the Condor machines. even though this meant losing the double payment granted on that day. The petition was granted. However, nine days later, the same delegate came to protest for the "unjust suppression of Sunday work."

The selective piece-rate could not continue as production demands increased and workers protested the administrative policy of preference. Four years ago the piece-rate system was applied generally throughout the Conversion Department. It was preceded by a time study. Those who installed the system thought in terms of higher production and talked also about giving importance to dignity of the individual:

With the piece-rate system we are simply giving true value and importance to the dignity of the individual, giving opportunity to people to earn by their efforts, more than is commonly earned in this Country. This is very important to an underdeveloped country where a majority of the people have lost the notion of an individual's value as a man. I know that in our people there exists great human capability, readiness to do great work; but when you do not give them the opportunity, the people become embittered and they do not produce enough.

The time and motion study was carried out by stopwatch. The technicians in charge of the study established a rate for each machine based on the machine's production potential. The following comment is typical of supervisory reaction to this study:

When they conducted the study of the worker's production, they were there by the worker, clock in hand, to see how much they could do every day. Naturally, the man who would normally produce 1,000 bags a day, slowed down to 500 bags when he saw himself being measured, and knowing that his production was going as the base for the new tariffs. People are not fools. They maintained this rate until the tariff was established. Once this was agreed upon, they automatically raised production to earn more piece-rate.

However, it had a different connotation for the worker. To them, increase in production is a matter of experience as well as greater effort:

If, after the tariffs were established, we increased production, it was because of the experience we had gained over the years, and, besides, to earn on piece-work you have to kill yourself working.

Because of their high earnings, the piece-workers of the Conversion Department became famous, not only at their work place but also in the community where they were considered the land "bolicheros," a name that comes from the fishermen called "bolicheros" who make a great amount of money supplying fish to the new fish flour factories. The ironic reference to "land bolicheros" responded to more profound feelings. The workers in other sections, paid by the traditional daywork system, soon discovered that

the piece-workers were making twice as much as they and sometimes even more. They called the system unjust even though the kind of work they performed - maintenance work and other auxiliary tasks - did not allow the application of the piece-rate system in their sections. The feelings expressed by the so-called "jornaleros" (day-workers) can be noted in the following comments:

The people in Conversion must have a fairy Godfather. There is nothing to do. They earn lots of money. They push us really hard and still they say that they work harder. False. It is rather we who work harder. For instance, the one who works in iron (smithy) wears himself out physically with heavy and dirty work. But the others are always clean, come out clean and work seated...and that's why there exists a division among the workers and when they have a problem, the other sections have refused to support them.

The implementation of the piece-work system provided the increase in production expected by the administrative level and an increase in the worker's earnings. However, the Condor workers were not pleased with the tariffs. They presented new claims to the administration, asking a new evaluation of their tariffs. At the administrative level these claims were refused as being absurd. The refusal of their petitions was answered by the threat of strikes, some of which actually came about. The administrative personnel, including the plant supervisors, were amazed and even indignant at the worker's behavior, which was considered "ungrateful" in view of the opportunities offered to them to receive bigger earnings. This atmosphere of restlessness and anxiety that lasted many months caused one supervisor to say:

These people are perverted. They start trouble out of some natural instinct, out of ambition for more money. They earn more money than any other worker in this country; however, it seems that the money makes them dream of more money.

As a result of these tensions at a critical juncture in the production system, management made concessions, including an increase in the established tariffs. The bigger danger was that the fish flour factories that use paper bags to pack their product were on the brink of using jute bags because of the irregularity in bag production in Paramonga of paper bags. Had this happened, not only the production would have stopped completely in that section, but also the day-work system would have had to have been re-established.

Yet the workers' petitions were not exclusively based on economics. Once their demands were satisfied, they presented new claims of mistreatment of the workers or unfair treatment of one of their number. One supervisor reported:

The Company believes that paying these people generously is going to keep them happy and satisfied. This belief is absurd. You can not buy people with money. Treatment is very important in production. I think that manners and salary should go side by side.

Conflict appeared most frequently in the Conversion Department; in the other sections, only sporadically. One result of these conflicts was a change in administrative personnel. But the problems continued, causing one manager to reflect:

The piece-work system in the Conversion Plant has permitted these workers to earn the highest salaries in the country. The profit is earned by working teams, it is not an individual incentive but is applied to the team in charge of each machine and the earnings are distributed by percentages in accordance with the responsibility of each operator. Many well intentioned managers have passed through Conversion and almost all have failed with the exception of a fellow there now, but he's not happy either working in that section. That's why I think that the problem is not the men who direct the work but the system itself.

To understand what was going on in the department, the reaction to the new system, it is necessary for us to plot the structure of the group and to identify the values which this structure supported.

Formal Hierarchy of the Group and Working Norms

Let us first look at the formal hierarchy among the personnel, the job classification and working status based upon knowledge, experience, and responsibility asked of the workers. The highest rank is accorded the mechanic, considered a skilled worker with technical specialization. The semi-skilled operators, without special training, rank second. The operator works in partnership with the bundler, who is considered his assistant, and therefore of lower rank. The volantes or helpers occupy the lowest rank in the formal hierarchy, and serve as replacements for the semi-skilled workers. They are available to replace the operators but not the mechanics.

The mechanics receive a basic salary of 71.00 (Peruvian soles or U.S. \$2.66). Their participation in piece-work is indirect, consisting of a small percentage or bonus based on the total production of the Condor machines. Basic salary and bonus amounts to a daily average of 102.59 soles. Operators and Bundlers are paid the same daily salary, when there is no piece-work to do (when machines are being repaired, or demand is low). On the other hand, their piece-work earnings are not uniform, but vary according to the skill of the team, machine conditions, and other factors. The lowest team receiving an average of 81.40 soles and the highest 107.05 soles. Average earnings per team are listed in Exhibit 7 page 59. The basic salary of the volantes is 39.00 soles with the average piece-work earnings at 76.91 soles. Their piece-work earnings are figured by dividing the production of all machines by the number of operators.

NAME	Daily Earnings (6 Week Average)	Seniority	Age	Education*	Social Ident.**	Civil*** State	Residence in Lima
<u>Mechanics</u> (Basic Rate - 71.)							
Alberto	102.59	19	44	PC	CR(N)		X
Manuel	102.59	16	41	PC	CR		X
<u>Operators</u> (Basic Rate - 46.)							
Claudio	90.35	8	39	PI	CR(N)	M2	(X)****
Pablo	98.44	6	24	PI	CRD	M	
Daniel	87.40	6	25	PI	CRD	(M)	(X)
Carlos	96.10	9	38	PC	CR(N)	M	X
Ricardo	93.93	4	25	PC	CRD	M	
Affonso	107.05	6	27	PI	CR	M2	
Gerardo	81.40	9	27	PC	CR	M	
Teofilo	82.23	6	26	PI	CR	UM	X
<u>Bundlers</u> (Basic Rate - 46.)							
Pedro	90.35	5	23	PI	CRD	UM	
Fernando	98.44	4	26	PI	CRD	(M)	
Nestor	87.40	4	24	PC	CRD	(M)	
Justo	96.10	3	25	PI	CRD	M	
Miguel	93.92	6	25	PI	CRD	M	(X)
Fausto	107.05	4	35	PI	CRD	M	
Teodosio	81.40	11	40	PI	CRD	UM	
Victor	82.23	3	27	PI	CR	M	
<u>Volantes</u> (Basic Rate - 39.)							
Rafael	76.91	35	54	PI	SRO	(M)2	
Isaias	76.91	15	31	PI	CRD	(M)	
Jacinto	76.91	11	30	PI	CRD	M	
Macario	76.91	13	32	PI	CRD	M	

*Primary School Completed=PC; Not Completed = PI

**CR = Criollo; CR(N) = Criollo, Northern Coast; CRD = Criolloized; SRO = Serrano.

***M = Married; (M) = Free Union; M2 = Remarried; UM = unmarried bachelor

** (X) = Lima Residence for Purposes of Military Service.

Exhibit 6

STATUS FACTORS OF MEMBERS OF THE CONDOR GROUP

Several factors influence the regularity of machine operation.

Sometimes the demand for certain types of bags is saturated and machines must stop momentarily. In this case the operators will receive only their basic salary. A mechanic will be affected by such stoppage, but to a lesser degree. Sometimes productivity decreases because of the amount of wasted bags due to poor paper quality. This problem creates dissatisfaction and criticism in the personnel. Such as the following:

The paper they send us now is very dry; it is not workable. What happens is that the chemists are only concerned with weight, the amount of tons they should produce. They do not give a damn for quality... Before, when an Italian papermaker supplied us with paper, quality used to be first rate; but now the chemists make bad mixtures so the papers come out wrinkled, with lines, stuck with glue; that's why we have so much waste. As I said before, their only interest is to produce more paper regardless of the quality, and we pay for that. This seems incredible, belonging as we do to the same factory and the same company.

A chemical engineer sees the problem differently:

The people who work in Conversion are a privileged group. They earn a lot of money and do not appreciate it. You know that for the reputation of the factory we have to produce the best paper there is. The paper is checked daily at the laboratory, but they will always find something to complain about. What we need here is to make the worker aware of his position, his responsibility, his duty to the company that provides work for all of us.

Mechanical failures affect production and the earnings based on it. The operators urge the mechanics to repair their machines immediately. It may happen that, at the moment a mechanic's services are requested, he might be busy repairing another machine or just examining it. If the relations with the team are good, the mechanic hurries to repair the machine. If not, perhaps if his services are requested with "bad manners," he will delay fixing the machine until he feels like it. This increases tensions:

I cannot stand that mechanic. He is very whimsical. He comes to fix our machine only when he feels like it. When he get the Indian in him, he won't return our salutation. When we see him like that, we comment that some bug must have bitten him; or perhaps he had a bad night with his wife.

This situation may rise to violent moments with unexpected climaxes. The informant above, who is the biggest producer of all the teams, would say: "I am fed up with that mechanic. One of these days I am going to hit him, even with my fists." The mechanics view the situation in a different way. They do not understand why the operators, who are designated by the Spanish word 'machinista,' get that title when they "do not know anything about machines, or else why do they call the mechanics for small things."

They are nothing more than machine operators, but ever since they were called 'machinists' they believe themselves more important than us. The truth is that the majority of them are very lazy. They don't do anything on their own. They just call us, and they do that with bad manners. We stand it because of our good will toward the company, even though it doesn't pay us enough...

The cause of this conflict could be interpreted in many ways. The administration has installed piece-work as an incentive towards bigger production. It is assumed that the machine operators will strive to give their best to reach maximum production, since the profit distribution will be equal to both members of the team. For this reason a majority of the machines, by a voluntary agreement/^{of}the team members, are operated alternately, morning and afternoon, by the operators and bundlers. This fact has a second and social meaning. The bundlers are considered by the machinists to be helpers, but see themselves at the same level as the operators because of the midday shift of positions. This arrangement was worked out without supervisory intervention at the time of the installation of the piece-work system and when the third member of the team was transferred to another section.

The operator-bundler Condor teams are aware of their importance as compared with the mechanics or volantes. The amount the others get will be subject to the production of the machines they operate. This self-elevating attitude provoked a mechanic to comment:

Operators and bundlers say that only they and the machines produce and that we earn our bread at their expense. That is false. We are the ones responsible for production. If the machines could not work because of mechanical failures, there would not be any production, would there?

The mechanics participate in the piece-work system only indirectly through a bonus based on the amount of bags produced. Thus they claim to earn less than the other workers. Exhibit 6, page 54a, shows, however, that their average earnings were greater than all except one operator team. Even this fact is unacceptable to them granted their status as skilled workers. To them it is inconceivable that unskilled and semi-skilled workers earn more even though their earnings result from the piece-work system.

These attitudes are reflected in their relations with other workers, attitudes that reflect other causes than purely economic ones. For instance, the operators complain often that the mechanics do not teach them how to fix the machines: "The mechanics are Lords and Kings. They never teach what they know. They are very selfish." The mechanics reply:

These kids hardly out of the cradle do not know how to do a man's work yet. If they fiddle with the machines, trying to fix them, they leave them in a worse condition....We have years of experience working with these same machines and you know that years learning the hard way help you to be skillful.

The age average for operators and bundlers is of 28 and their service on the same machines is just short of 6 years. On the other hand, the mechanics age runs between 40 and 45 years old while the time spent

working the machines is more than 15 years. These factors of age and years of services add to the background of the conflict we are describing. A factor of equal importance is locale of origin. Both mechanics are Criollos and their relations with the Serranos and Criolloized are more tense:

The cholitos (Serranos) who come down from the Andes very soon quicken up and become very troublesome and spoiled. On top of that they are very stubborn. When they say "manan" (no in Quechua), there is nothing in the world that would make them understand."

On the other hand, they show more understanding working with machine teams from the "coast" expressed in the rapid attention the other Criollos get from the mechanics. In the case of the norteños (the Criollos from the northern coast) this is explained because one of the mechanics is also from the north while the other one comes from the central coast. We will see now how this identification factor by reasons of origin, together with the other elements of the working and social status, are of importance in the informal interaction processes of the group at work.

Informal Hierarchy of the Group and its Social Behavior

In the preceding pages we have shown the technological organization of the workshop including a team piece-work system. We explained that spatial arrangements in the workshop and the division of labor of the production sequence demand a certain interaction among the group members so that every operator must perform a determined activity formally required by managerial policy. We pointed out that the installation of the piece-work system achieved an increase in the production and earnings. Nevertheless, production was not uniform and earnings were uneven, and tension continued including conflict between mechanics and operators due to a sensed dis-

<u>Team</u>	<u>Operators</u>	<u>Man-hours Worked</u>	<u>Output</u>	<u>Style of Bags Produced</u>	<u>Earnings Incl. Bonus</u>
A	Claudio Pedro	9.52	145,000	2	90.35
B	Pablo Fernando	9.44	80,416	1/2, 1	98.44
C	Daniel Néstor	9.47	57,335	12, 10, 25	87.40
D	Carlos Justo	9.52	91,708	3, 2	96.10
E	Ricardo Miguel	9.52	70,138	6	93.92
F	Alfonso Fausto	9.50	149,944	2	107.05
G	Gerardo Teodosio	9.52	81,944	4, 5	82.23
Volantes	Rafael Isaías Jacinto Macario	9.50			76.91
Mecánicos	Alberto Manuel	9.50			102.59

Exhibit 7

AVERAGE DAILY EARNINGS (INCLUDING PRODUCTION INCENTIVE BONUS)

DURING A SIX WEEK PERIOD

(Condor Group)

crepancy between pay and self-image. This tension leads us to an examination of the internal organization of the work group in terms of the informal system of its components, and the social behavior of its members.

With any work group the external working arrangements fixed by the formal regulation of the company are obvious. Less perceptible at first sight is the rich and complex informal world of the group's members. This world acquires its physiognomy and functional meaning only when observed in terms of the interrelation of its activities, interactions and sentiments. It is this trilogy of elements of behavior which determines in great measure the production fluctuation and satisfaction level of the workers, and which are present in any working group, as we will see in this particular group that we are examining.

The self-identification of group members by origin is a three-way one. The Criollos are those born on the coast. They further subdivide themselves into the "Nortenos," those who come from the northern part of the coast, and the "Costenos," those from the central and southern coast, including Lima. The Serranos who sometimes call themselves "paisanos" (countrymen) come from the Sierra (Ancash). The Criolloized are the sons of migrants from the Ancash, either born on the coast or arriving at the coast at an early age. The composition of the 22 members of the group, by their social autoidentification, stands at eight Criollos including three from the northern part of the coast, thirteen Criolloized and one Serrano. Both mechanics are Criollos. Among the operators we find five Criollos and three Criolloized. All but one of the bundlers are Criolloized, as are three of the Volantes. The single Serrano is a volante. The distribution of work locations according to social identification is shown on Exhibit 8. The teams were

formed arbitrarily without taking into account the preferences of the workers in choosing their work partners. Where the teams consisted of workers of the same orientation, their relations were smoother and within a frame of mutual understanding and trust; when they are formed of people with different origin, their relations were more formal and were expressed in the work per se rather than in terms of a shared prior orientation.

Notwithstanding the cultural differences among the members of the group, a transactional harmony was established among them on certain issues such as petitions to management. Yet the interactions of the community within groups of the same origin are reflected in the working center with definite relations among people of similar origin. The preference is to share work place location with people of the same origin in order to have more opportunity of exchanging allusions common to their pattern of life. Each faction created stereotypes to express their feelings and to define their own allegiance. For instance, for the Serrano, the best man will always be from the Andean region, "a better worker and more sincere." For the Criollo, the man born on the coast is "more clever and can understand things better."

Operators	CR(N)	CRD	(CRD)*	CR(N)	(CRD)*	CR	CR	CR
	<input type="checkbox"/> A	<input type="checkbox"/> B	<input type="checkbox"/> C	<input type="checkbox"/> D	<input type="checkbox"/> E	<input type="checkbox"/> F	<input type="checkbox"/> G	<input type="checkbox"/> H
Bundlers	CRD	CRD	CRD	CRD	CRD	CRD	CRD	CR

*visits Sierra regularly

Exhibit 8

WORK LOCATION ACCORDING TO SOCIAL IDENTIFICATION

The Criolloized prefer a Serrano who is "not quarrelsome like the Criollos." At the same time they will appreciate the Criollo because "you can learn a great deal from him including the Spanish language" used at the work center. Thus the Criolloized , according to one supervisor, is a man who wants to be "on good terms with God and with the Devil;" a compromise which may be due simply to his eagerness for social mobility in an emerging group. The Criolloized has great adjustment capability, both attempting to make skillfull use of the Criollos and organizing strongly against them. If a Criolloized wants some service from a Criollo he will exploit his vanity, calling him "boss," but when the Criollo wants to secure compliance from the Criolloized he will encounter the most categoric of negatives, and will conclude: "The Serrano is ignorant and proud. When he says no, nobody can make him change his mind." The Serrano and the Criolloized explain their resistance in other terms: "The Criollo is weak and bossy. He always wants to be the boss."

Let us see how these stereotypes express themselves between members of the operating teams. The operator depends in great measure on the work of the bundler, yet he is assumed to be the most skilled of the two and controls the speed of the machine. In actual practice, the two interchange jobs, evening and morning, based on the assumption that the efforts must be shared equally since the profit is also equally distributed. This arrangement evolved spontaneously in six out of eight working teams a few months after the piece-work system was established. Teams A and G are the exceptions. In both cases the operators question the abilities of their helpers, reporting that they still lack the experience required to be able to replace them. One reported:

The responsibility of handling the machine is mine. As an operator you must have a better ear, a better eye so that the machine does not run into trouble. My bundler still lacks the necessary experience to substitute for me.

His bundler, of course, resents this attitude.

The truth is that the operator is very selfish, perhaps he is afraid that I may replace him when I learn how to work the machine.

The operators are thinking of their higher working status when they refer to their working partners as "my bundler" or "he is my helper." Nonetheless, only a few of the bundlers accept their operator as a more important member of the team; most claim equivalent importance based on the interchange of stations plus equivalent pay. From these attitudes we can see that the rank hierarchy tends to level off. In the team E, for instance, the bundler refused to change places with the operator in protest for being considered of lesser rank. "Since he liked to be called an operator, I did not see why I should do his work." Later he accepted the change only on the condition that he be considered the same rank as the operator.

The spatial mobility of these who operate the machines is much more limited than the volantes. The volantes have great flexibility of movement, because the machine operators depend on them for temporary replacement during rest periods. The volante, on the other hand, can visit with whom he wishes. If he is a volante with tenure he is qualified to replace any of the operators, a fact of importance in establishing the working hierarchy:

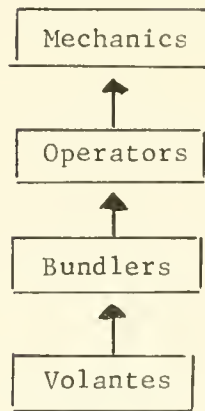
We necessarily have to know everything the operator and bundler do to be able to replace them. Our job is very important, perhaps even more so than the operator and bundler, because we can do everything they can and more.

Such an attitude does not have to be publicly expressed. The volantes are accepted by the operators and bundlers at an equal level of hierarchy. One reason is that the volantes have become key elements in the social interaction of the group, granted their ease of mobility from one team to the next, offering help or simply acting as conveyors of the opinions and feelings of the stationary personnel. For this reason, to the formal hierarchy of the job must be added an informal one. Both are shown in Figure 9. It will be noted that the mechanics occupy the top position in both hierarchies, their rank recognized by all the workers. The operators, bundlers and volantes share the same informal level granted their mutual dependence and social relations.

In previous paragraphs we have pointed out the greater flexibility of movements of the volantes. Of these, Jacinto is the most visible, maintaining strong relations with all of the operating teams. He does this by frequent teasing and offering help in a spontaneous way. A fellow worker reports: "He never refuses to lend a helping hand to any fellow worker who may ask him."

Jacinto's opinions get special attention and his influence affects the decisions of the others. Rafael, the oldest volante, who might have been expected to have had the most influence in the group, does not receive the same affectionate response accorded Jacinto and is respected but "because of his age." Rafael was elected on three occasions the union delegate. Nevertheless, during our observation period, Rafael was suddenly replaced by Nestor, Team C bundler, who is a younger man. There were many reasons why this happened. One worker said: "The man is already too old to fight the

Formal Hierarchy of the Group



Informal Hierarchy of the Group

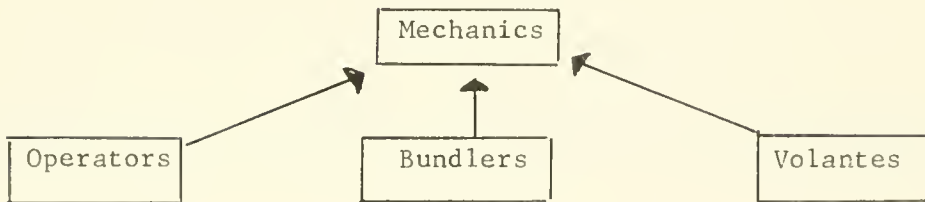


Exhibit 9

FORMAL AND INFORMAL HIERARCHIES OF THE CONDOR GROUP

Company for his fellow-workers." Perhaps the key factor was that Rafael suggested reducing the numbers of volantes to three because in the last few months only five of the eight machines were working, thus reducing the bonus which the volantes divided. The volantes accepted a weekly rotation. Three of them went on with the routine incentive pay system while the fourth earned by daywork for the week in question. Rafael claimed he should be always among the three piece-work workers and not be included in the rotation system. This attitude gained him the following remark: "This devilish little old man wants us to apply the funnel law to him; the widest part for him, the narrowest for us." Rafael was replaced as delegate and forced to accept the rotation plan they had devised. A petition for his dismissal as delegate appeared mysteriously. A paper started circulating, announcing his dismissal and suggesting other names as candidates. Rafael reacted:

"These ignoramuses don't want to be shown up. To keep them going I always had to be pushing them because, I will tell you frankly, they are very lazy and spoiled."

The members of the group use certain physical elements to manifest their status and prestige. The symbol might be a wrist-watch, as in the case of the operators and bundlers; the eye glasses of the Criollo operator who wears them because they are becoming to him, or the safety helmet worn by the older volante who certainly does not need such protection. Another of the prestige symbols was a tool box owned by the operator of Team A, and kept carefully locked after an earlier one he had acquired had been ransacked. This operator boasts that he acquired his "own tools so as not to be bothering the mechanic." While the other teams must wait for the mechanic to fix their machines, this operator usually fixes his own. He calls the mechanic only in exceptional cases, when the repair work requires

the skill and knowledge of a technician. He does not lend his tools, nor do his fellow-workers go to him, a fact that indicates his social isolation. Nor do the mechanics lend their tools to the operators on the grounds that the operators are not prepared to repair the machines:

The operators, instead of fixing the machines, make them worse, when they don't know what they are doing. They shouldn't try to do a bigger job than they are prepared to do. That's what we are for.

We have now described part of the informal structure of the working group, based on social differentiation according to origin and other status factors. We pointed out the hierarchy occupied by members of the group granted an informal consensus. We also saw that our study group, as any other, has methods of punishing and rewarding its members where their behavior affects its internal structure. It also employs symbols of status and prestige. This informal world has other facets that shape and give personality to its social organization. We now turn to the existence of sub-groups developed in terms of the common interests of certain members.

SUB-GROUP STRUCTURE AND FUNCTION

In the preceding section we noted several levels of interaction among the members of the group. In this one we will attempt a deeper insight into the group's motivational forces in terms of a number of well-defined sub-groups, uniting members with common interests: (1) the "bookies" who bet on horse races, (2) the "readers," (3) the "conversationalists," and (4) the "religious." The denominations are ours, typified by the activities that the members pursue.

The Bookies

Bookies are the operator, Teofilo, the bundler, Victor, and the mechanic, Alberto. Jacinto the volante is an occasional member. The members of this group get together regularly during the week to make book at the table of Team H, (collect betting slips and money). Teofilo is the central person in the sub-group. He buys the "tip sheet" containing predictions on the races and carefully plans the bets of the group. Alberto does the same. "Book" can be made individually by any of the members of the group but, in this case, the fraternity demands the exchange of predictions. When book is made for all members, each contributes his ideas and knowledge on horses, as well as contributing his share of the fund with which Teofilo will buy the betting slips.

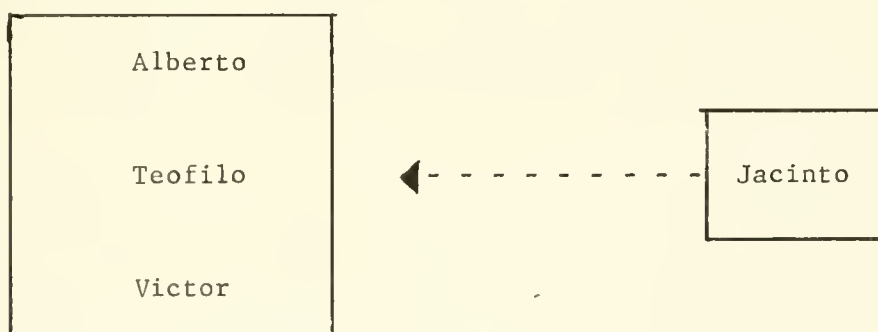


Exhibit 10

MEMBERSHIP OF THE "BOOKIES" SUB-GROUP

As to social identification the sub-group includes three Criollos and one Criolloized; the latter is not an active participant, and intervenes only rarely as an "amateur." Jacinto has been accepted as a member of the fraternity because he is "such a likable person." Alberto is the member with the highest status granted his position as mechanic, however it is the operator Teofilo who keeps the group together and the one in charge of the details of deciding the bets and buying the racing slips.

On two occasions, the author participated in the betting. On both occasions the selections were good, but not good enough to win. Teofilo expressed his regret saying that luck was not on their side. Among members of this group, luck is extremely important, with luck depending in great measure on the Divine Will as well as individual initiative. If one continues to pursue fortune, he may "be lucky, sooner or later, if God wills it." Should this happen, one's winnings must be well used, otherwise the same Divine Power that made possible the winnings, might take them away, leaving the individual, as punishment, poorer than before. Teofilo used to talk about the man from the neighboring village of Supe, who had obtained a "fat prize" with only one ticket. In less than a month, he wasted his gains on prostitutes, gambling and drink:

At the time, the man had many friends; but now he is miserable, not even his friends know him any more.

The luck comes to be a future possibility in the life of the individual. It requires initiative on the part of the individual, but its successful culmination will depend at the end on a Supreme Being. The person must possess certain qualities such as being "good person" to merit divine support; "The selfish and bad people almost never get the prize." The operator who made this comment is always forcing his machine to gain high percentages. As often as not he is unsuccessful because reference to "luck" is largely a subjective explanation of unsatisfied aspirations. This is reflected in his comment about his work:

If I continue here I will be an operator always and if I leave, what I have learned as an operator will be of no avail to me unless I could find another job where I can work on the same type of machine.

Nevertheless, Teofilo's greatest unsatisfied aspiration relates to his early history. When he was a boy his mother left him in charge of an aunt. He has

not seen her for eighteen years but has heard that she might be living in a certain area. He is eagerly looking for her using, even, radio announcements. His search for his missing mother is a basic motivation in his life.

It was impossible to know who started the book-making game, but this is only of secondary interest. The relevant fact is the satisfaction of the social relations that the members find spontaneously pursuing informal activities like gambling.

The Readers

The members of the readers sub-group are: Daniel, Pablo, Ricardo, Claudio and Teofilo, all operators; Miguel, Fernando, Nestor, and Justo, bundlers; and the volante Jacinto. Eight are Criolloized and two Criollos. Claudio is a solitary reader and Teofilo an occasional reader.

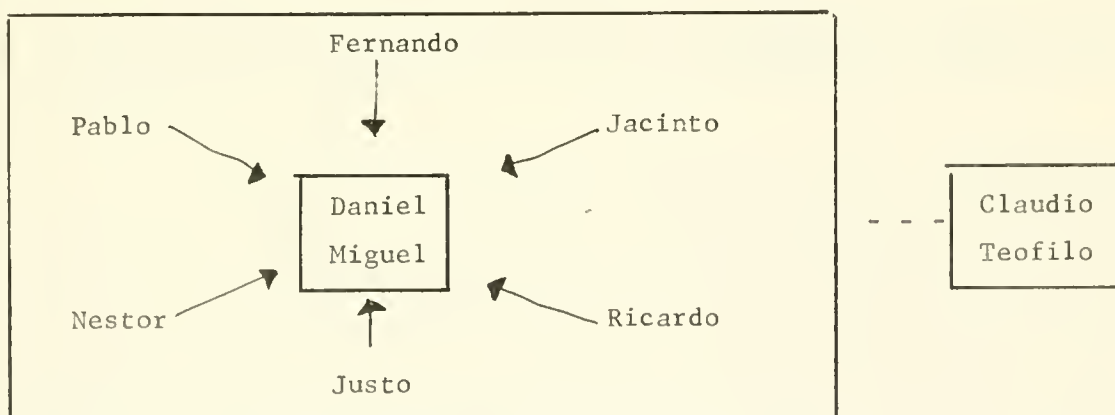


Exhibit 11

MEMBERSHIP IN THE "READERS" SUB-GROUP

Any one in the sub-group buys a newspaper or illustrated adventure book which is circulated to all members. Occasionally an item may be read by two or more individuals together, sometimes before starting their activities but mostly while their machines are being repaired. News is

commented upon and cartoons laughed at. Daniel and Miguel are the ones with greatest influence in the group: both were drafted into the Army and know the wider world, a fact which gives them special authority in judging national as well as international news. The rest accord them the status of having had experience with a world they have not lived in. Only the former soldiers buy newspapers, a fact that underscores their special status. Newspapers and stories are carefully stored under the work tables.

What can be made out of this second sub-group? Its members say that they have always read "to keep themselves up to date." This is a relative statement if we observe them carefully. Eight of the group have only incomplete primary education and only two have completed the elementary grades. The majority of the sub-group are Criolloized who resort to reading as a means of social mobility. Daniel said:

I would like to be able to talk like the Criollo's do. They are really smooth-talkers. That's why it is worthwhile to spend a few cents buying newspapers.

Daniel is 25 years old. He left his native village when he was 17 because "I wanted to learn more." He worked in other sections before coming to the Conversion Plant. In his spare time he learned to drive a car and got a license to work as a driver. Presently he studies in evening school trying to complete primary school. In one of the visits that Daniel paid the author to borrow books he said: "I think in terms of my future. While I am young I can still get ahead, learn something so that I can avoid being tied to the Hacienda." This eagerness for betterment is universally found among the Criolloized, a driving impulse they have to satisfy, even at the expense of the company safety rules. The exchange of opinions and circulation of the reading material also allows them another satisfaction

having to do with social interrelation. This interrelation is freely expressed, even among members of different work status.

Claudio and Teofilo have a special condition of membership in this group. The first is a solitary reader and the second an occasional reader. Both are Criollos. Claudio, from the north, lives in a three room house with his family of 5 children, his wife by a second marriage, and a sister-in-law. Before coming to Paramonga, he was in the Army. Returning home he discovered the infidelity of his first wife:

I found my wife with child and she was not the same. A chauffeur had fathered the child ... I have a principle, if a woman lets you down, it's better to send her away because a hen that eats eggs will always eat them.

Besides the failure of his marriage Claudio encountered a great deal of frustration trying to find an adequate job. Even his health failed and he was sick for many months. Only in the last few years, with a secure job at Paramonga, is he achieving a satisfactory adjustment to life. Yet he remains isolated, as if he distrusts his neighbors. If he buys a newspaper, he reads it alone, not sharing it and gaining the designation of the "solitary reader." Apparently Claudio wishes to satisfy his curiosity about police news and sports, he seeks always to be busy, working at his machine, with the result that he is the second top producer in the group. The sorrows of his life haunt him and push him into activity as compensation.

Teofilo, on the other hand, buys the newspaper occasionally as part of his preparation for "making book." The newspapers give him the list of horses that will run on the following week-end and the prediction. This fact gives him a fragile linkage with the regular readers and makes him an "occasional reader."

Administrative rules forbid reading during working hours as a safety precaution and in the interest of avoiding accidents. This rule is also intended to keep the worker's attention on his duties. The readers evade this prohibition skillfully, finding a way to read during working hours and to escape managerial reprimand. This effort manifests a fraternity of the members. Any one of them will whistle to let the others know that a manager is approaching. They call the one who gives this alarm mechanism "the bell." It is used to protect the members and to perpetuate their informal activities. Their signaling rule is obeyed by all members of the fraternity. Any one who will not comply will receive sanctioning by the group as indicated in the following anecdote:

Once Mr. Torton found me reading and yelled at me in front of everybody that we came here to work not to read. I didn't realize he was coming. Nobody warned me. We were all angry with the campana, (the one who should have given the signal).

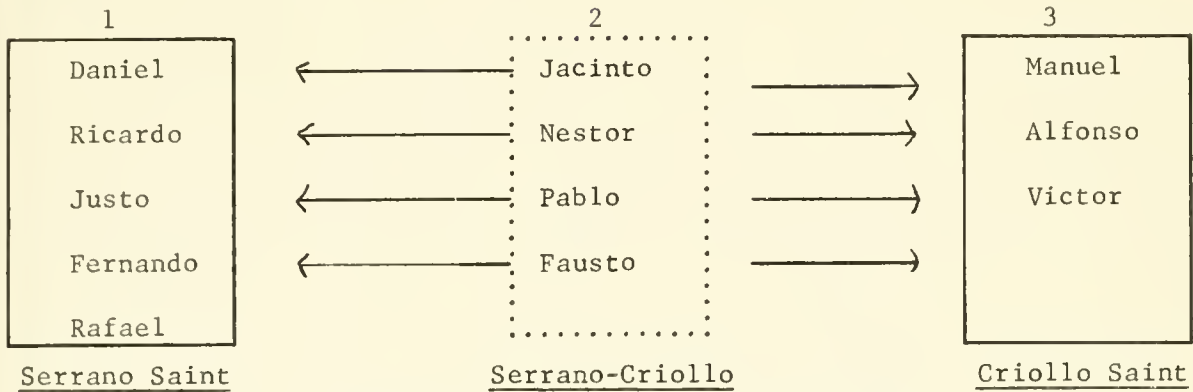
The campana was isolated from the sub-group for some time. Only after having taken the social punishment of the group was he reaccepted.

Religious

The religious value is dominant among the workers. The patronal saint of the factory is the "Lord of Miracles" whose feast day is celebrated in the community in October, under the auspices of the religious group called "Hermandad del Senor de Los Milagros" (Fraternity of the Lord of Miracles). Manuel, the mechanic, is president of this fraternity. Its members belong to different sections. Most of them are Criollos or Criolloized.

The members of the Religious sub-group are those "devotos" (devoted ones) belonging to some religious group or simply those who have made a "promise of faith" to the Divine Being in a favored manifestation in order to

achieve some favor that is humanly impossible for them to obtain. Taking the "favored manifestation" factor into account, three different segments of this sub-group can be noted.



MEMBERSHIP IN THE RELIGIOUS SUB-GROUP

Exhibit 12

The members of Segments 1 and 2 are Criolloized with the exception of Rafael, a Serrano. Segment 3 are Criollos. The saints most favored in Paramonga are Serrano saints such as Our Lady of Mercy and Our Father of Solitude or coastal saints such as Our Father of Miracles and Saint Martin de Porras. The members of Segment 1 worship the highland saints and the members of Segment 3 worship the coastal saints while the Criolloized in Segment 2 worship both. In Segment 2 is best captured in the struggle of the Criolloized to enrich his world of values, to achieve a better position in life. A member in any segment will also have his personal reasons for seeking the support of a particular saint. Daniel is a devoto of a Serrano saint. These are his words:

In the hope that the Virgin might cure my father, I became one of her devoto's, that is to say, I promised the Virgin to dance each of five years in her celebration in September ... Even when I was in the Army I got permission from the Major to come to Paramonga as I had promised. My father has improved but not enough... Maybe this is her wish or maybe this is my father's fate to go on sick.

Daniel wanted to buy his father's health by being a devoto of Our Lady of Mercy. The Criollo Alfonso, had a different reason; he became a devoto of the

coastal saint when his domestic situation was threatened. His wife "was going with another man" causing him a great deal of suffering because she even refused to let him have his children whom she used to get a monthly allowance from the government. Alfonso became a devoto of Our Father of Miracles in hopes of punishing his wife's infamy. A devoto may hope to achieve something related to his personal welfare, security in his job or the satisfaction of a specific petition. At the work place this devotion is expressed by means of certain symbols and informal activities. It is common to find holy cards pasted on the partitions between working tables, sometimes together with family photographs, newspaper clippings, and pin-up girls. As a holy day approaches, members of the religious sub-group become busy planning their participation in the celebration and ceremonies: how novenas will be organized, how the saint's statue will be carried in the procession, how funds will be collected for the offering.

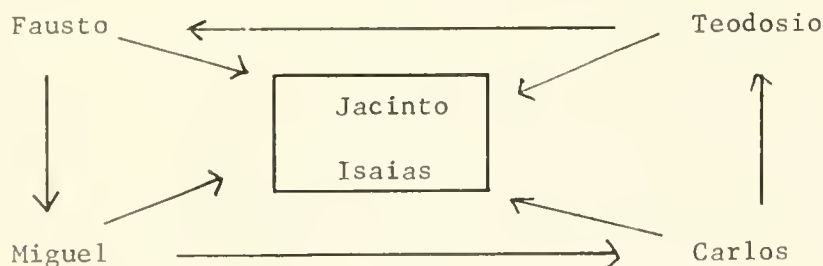
The Religious have a different concept of "luck" than the Bookies. The factor of "fate" prevails. Fate has a different meaning than luck, even though at times they are interchangeable. Fate requires no initiative on the part of the individual. It is assumed that everything is predetermined, written by the Almighty Will, in punishing or rewarding man's actions. The Divine Ire, however, can be soothed through certain religious routines: prayers, offerings and participation in religious festivities. The symbolism surrounding the Serrano saint has to do with acceptance of fate and Divine Ire avoidance: that surrounding the coastal saints with the facilitation of luck and Divine Favor acquisition. The Criolloized respond to both sets of motives in their religious and Serrano saints in order to gain the support of both sets of heavenly advocates.

Over and above purely religious consideration, the existence of this sub-group has a social meaning. The members of the three segments tend to help each other in their work as well as outside. This help is spontaneous, a phenomenon of the social organization of the group. For example, when Ricardo's machine broke down and the mechanic was unavailable, Daniel left his machine and worked with Ricardo repairing it. Nestor and Pablo exchange loans and there are other cases of mutual support among the Religious sub-group.

Conversation

The Conversation sub-group is formed by four bundlers and two Volantes, all Criolloized. Jacinto participates actively in this group as he does in all the others. He is accepted by all workers of whatever social identification. The main reason is his availability to help any fellow worker. This attitude is reflected in his words:

In eleven years that I have been working here, I have never had a problem with anyone, bosses or fellow workers. On the contrary, if someone asks for help, I help because to me, all fellow workers are the same. And if I had to help with money, I do it gladly when I have the money.



CONVERSATION SUB-GROUP

Jacinto at 30, the average age of all members of the group, projects himself as an informal leader. Although a volante, he has experience operating the machines. He operated a machine for several years until a supervisor fired him for having been absent from work.

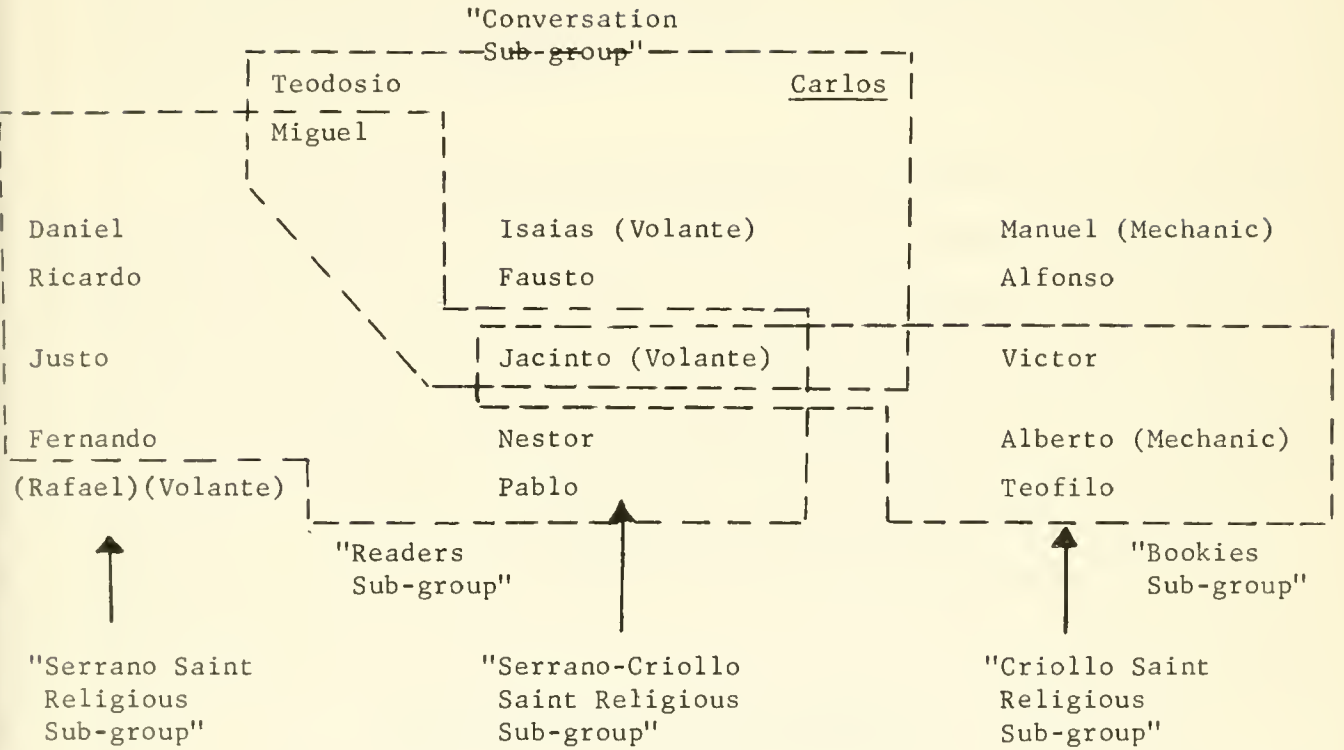
Isaias is the other central member of the Conversation sub-group. With a volante's flexibility of movement, a congenial nature, he provides an interaction center, as does Jacinto for the members of the sub-group.

The six members of this sub-group meet often in the workshop, sometimes upon arrival or after finishing their work, for the day, but mostly while the machines are being repaired. Other workers move into and out of these meetings, but their membership lacks continuity. The conversation themes are variagated: working incidents, comments about women, movies they have liked, parties in which they have made a conquest, but especially arguments they have had with Criollos. Such incidents are analyzed and internalized by the Conversation sub-group. They scatter when a supervisor arrives. Their most intensive interactions, however, take place in the relative privacy of the washroom at the edge of the working area. The cleaner maintains a watch to let the men know of the presence of bosses or unknown visitors. During the first days of the study, the author always found conversations going on in the washroom only to have them disperse as soon as his presence was noticed. During this period the author was presumed to be an engineer transferred from Lima.

When the work day starts, the sub-group members go automatically to the washroom, where they exchange greetings, plan their individual grievances and petitions, form judgments about the behavior of individual workers, and comment on happenings of common interest. The importance of such privacy for the group's

Macario (Volante)
Pedro

Claudio
Gerardo



- Notes: 1. The Criollos are underlined: Rafael, the Serrano, is in parenthesis. Daniel and Ricardo are frequent visitors to their Sierra villages.
2. Macario, Pedro, Claudio and Gerardo have no routine social interactions

Exhibit 14

CONFIGURATION OF ALL ROUTINE SOCIAL CONNECTIONS NOTED IN THE CONDOR GROUP

purposes can be seen in this comment:

You cannot talk freely in this place because you are always apt to be caught and reprimanded by the bosses. It is only when we go to the washroom that we can talk, at least for a little while, without being afraid, even though once in a while the supervisors stick their noses in there too.

The four sub-groups we have described are fashioned out of a series of common interests shared by sub-sectors. Out of their informal interactions emerges the qualities of mutual support and social satisfaction that define the structure. While this structure sets the group apart and channels the behavior of its members, it does not guarantee "social peace." On the contrary, the data that we have been reviewing suggests that conflict rather than peace is the mode, and it is to this phenomenon that we turn our attention in the concluding section.

The Functions of Social Conflict

The material that we have been analyzing suggests a series of disparate elements in dynamic encounter. The result of this encounter has been apparent conflict; but it is a conflict that makes a positive contribution begetting an expenditure of energy in the offsetting elements that results in activity towards change, towards modification, towards improvement.

We spoke first about the geography of Peru and its contrasts, the high standard of living in Lima and in the coastal area contrasted with village life high in the Sierra where the impact of modernization has yet to be felt. Yet communication and transport are putting these two worlds into contact and this contact is creating tensions in the less-favored sectors as aspirations are generated and the desire for improvement in conditions of life. These tensions may be viewed as the fuel which moves these sectors ahead towards economic develop-

ment, and the interregional conflict that results when they collide head on with established and resistant sentiments in the coastal world may be viewed as functional in that it results in the mutual modifications that move both parties towards an improved circumstance.

In the industrial town of Paramonga we had the opportunity to gain a more proximate view of the manner in which this encounter expresses itself. Here the encounter is between the Serranos and the Criollos, an encounter which spins off an intermediate group, the Criolloized. This newly emerged group is in a sense a synthesis of those which preexisted and provides for a bridging of the separate cultures. Yet it develops an independent and positive ethic of its own which makes it possible for one of its partisans to say: "Existence itself is not important; but the struggle to live, that is what is important." The Serranos and the Criollos have the traditional devices by which groups maintain their frontiers: separate languages, religious saints, gathering places, food and music; but the Criolloized tries to maintain his credentials in both worlds and, in the process, develops the capacity for greater breadth, greater social finesse, expanded personal output both social and substantive. This is what we mean by the functionality of social conflict and, in this sense, Paramonga may be considered an index of the transition process which is working itself out on a national scale.

The very nature of the industrial process complicates the mix of elements which are in conflict and which tend towards resolution. The logic of management is return on investment and efficient operation. It assumes that the increased earning capacity made possible by an incentive pay system will result in satisfaction and "social peace." But the work force has its own "logic" which the union in part espouses. This second logic has to do with

security for oneself and one's family against an uncertain future and the capacity to bind oneself with one's fellows as a means of assuring this security. As the one logic moves towards greater productivity, the second seeks to assure its control over the procedures by which this greater productivity will be achieved, seeks to reexpress its unity and capacity to deal with an external circumstance including the moves that management chooses to initiate. Again the result is apparent conflict, but also the maintenance of the transactional machinery which insures the well-being of both the production processes and the human community by which they are maintained.

Even in the case of the interpersonal network of the single workplace which is, in a sense, beyond the immediate control of either management or the union, we again find compartmentalization into offsetting sectors and the "conflict" by which this compartmentalization is maintained. Again the social identification provided by the Criollo and Criolloized categories come into play around certain influential individuals and common interests that make possible interaction and the capacity to applaud the sentiments which unify the groups and provide for its survival in a difficult circumstance as well as to punish those sentiments which are divisive and disintegrative. Yet Criollos cooperate with Criolloized as team members on most of the machines, and in all but two cases have developed an arrangement for shifting work positions, a move which dilutes the status differential and permits broader interpersonal reciprocity. It may be meaningful that three of the four teams which are manned by individuals of different social identification and which practice work position shifting are the highest producers.

A final workplace conflict is to be noted in the relations between the mechanics and the operators. The former represent a hierarchy of age, knowledge

and skill, the latter two elements being coastal or "modernizing" values and, as such, require the status maintenance which superior pay would provide. The incentive pay system, required in the interest of the production system, unsettles this status by making it possible for the semi-skilled operators to take home equivalent pay even though they be migrants from the Sierra with little relevant technical background. An incongruity is set up and a conflict which we might expect to interfere with the production process; but just the reverse happens. Seeking to maintain their compromised superior status, the mechanics strive even harder in attending to the machines - a display of competency which permits them to direct some sarcasm at the operators - and, in the process, serve the purposes of both maintaining the integrity of the social structure and keeping production going. Thus, a latent hostility which would be viewed as conflict provides the motivation for activity which is functional in terms of the goals of the enterprise and of the workplace community.

Conflict may be not only an inevitable companion of a society in transition towards an improved, modern circumstance, but also the vital ingredient which provides that society's motive force. As Cooley has noted: "Conflict, in a way, is the life of society and progress comes from the struggle in which the individual, the class or the institution attempts to achieve its idea of the good."⁶

Conclusions

It might well seem to the practicing manager that the facts we have assembled and the manner in which we have ordered them have only tangential

⁶ Cooley, Charles H., Social Organization, Scribner's Sons, New York, 1909.

relevance to his industrial mission; and in part he is correct. The task of maintaining the health of an industrial complex in any setting is an extremely difficult one. In a setting such as we have been describing, where a society is in the full flood of transition, the difficulty of the task compounds itself. Yet we have chosen to move into the world of the worker, to collect and report his perceptions unadorned, leaving the task of understanding them in the managerial context for the last.

The fundamentals of the industrial practice which the manager acquires in his university training and which are nurtured and forwarded in actual practice are not complete ones if they do not make provision for worker perceptions and the social structures by which they are reinforced. Yet the conventional wisdom of management - intent upon technical, mechanical, and numerical systems - has not always come to terms with these social systems.

The Condor Section in the Conversion Plant at Paramonga affords an insight into one such system. It expressed itself in a set of activities which, at first glance, appear to be extraneous to the productive purposes of the enterprise. Certainly the tensions, hostilities, enthusiasms, and pastimes found to exist in the work group seem unrelated to getting on with the job; they may even seem to be negatively related.

Yet this small society is faced with many issues which it must order if its integrity and its dedication to its productive mission is to be maintained. It houses a variegated set of individual and social identifications, stratifications, personal histories, age differentials, aspirations, enthusiasms and antagonisms which - if not dealt with - would divest it of its ability to work cooperatively and productively at its industrial mission. Its supervisors and managers, human

beings too with the limited perceptions and personal preoccupations which are the common lot of mankind, can be of only restricted serviceability to the group in achieving a workable resolution of these issues. Thus the group must invest and preside over its own mechanisms for reducing tension, moderating contrary personal objectives and providing the support and mediatory service which social existence requires. The social system of the Condor Section did, in fact, achieve this end. Working with an authority that was beyond the capacity and knowledgeability of its supervisors, it did create the required capacity for housing and accomodating the range of human inputs which events had cast together and, simultaneously, the capacity for getting on with the job.

If these human processes are inevitable, what is the role of formal leadership in such circumstances? The answer is that although all human groups attempt to come to terms with their environment, no matter how trying this environment may be, not all succeed. An important function of the supervisor is to understand the nature of the social processes which constitute the normal habitat in terms of which he must ply his trade, to recognize that hostility, tension, and conflict may not always be an indication that something is wrong or that he has somehow been inadequate or failed. On the contrary, these elements - and this is the vital point - contain motive power which can be brought to bear on achieving his ultimate purposes. His role then is to harmonize these forces with his production mandate where he can and, where he cannot, to take his stand against them but with a broader understanding of what it is that he does and why he must do it.

A P P E N D I X

PERSONAL HISTORY VIGNETTES

Alberto - A Mechanic

"I am a Trujillano (Trujillo is the third largest city of Peru) of the north, but I have spent most of my life in Lima going from job to job until I came to work in the Boxes Factory. There I worked together with my friend, Manuel, the other mechanic, at these same 'Condor' machines before they were put here. We were sent here shortly after because we knew the machines the best. At that time, 1953-54, we were paid a good wage compared to that of the operators and bundlers. In the last few years, however, due to the piece-rate system, they are making more and our wages have increased only a little.

"We, as mechanics, are professionals and have many years of experience when compared to those boys. The firm has not promoted us to 'empleados' and as a result our morale is low - fallen. It is not fair that the people who know nothing and who are not professionals are paid more than we are."

Manuel - A Mechanic

"I have been in Paramonga for many years and I am used to living in this 'Hacienda.' When I was sent from Lima, I was single and was therefore given a single room. I was married two years ago and have a child, but we are all still living in the same room. We have our things piled up all over and the room has to serve as a kitchen, livingroom, diningroom, and bedroom. They promised me a larger house - I hope that it is true, I do not know - until then we must wait.

"The machines would run better if it weren't for the paper. Lately, we have been receiving bad paper - too dry - and it does not run well. Much is wasted. We use steam to increase the paper's moisture.

"In general the boys are good. Of course, some are more careful than others, they take better care of the machines and are always cleaning them. The rest always expect that we - the mechanics - should fix any malfunction. That is why I always advise them to learn for their own benefit. You know, they are young and should be counseled.

"What we dislike is that they are better paid than we are. Our years of experience, our profession, etc., are not valued by our bosses. If I were still single, I would go to another place where one gets more consideration, where the bosses would remember us, and where I would get a bigger house if I had a family."

Isaias - A Volante and Criolloized

"I have spent almost half of my life in Paramonga. But that does not mean that I have forgotten my land - La Sierra - I always go back there to pay a visit during my vacation. My wife also comes from La Sierra. We were engaged two years ago and we now have a son. We hope to have the official marriage ceremony in Huaraz because there the family is going to help us with the expense. When you get married you need a lot of money because you must receive visitors on that day - friends, family. You must be a good host; feed them and offer them drinks (liquor). The music depends on the good will of the 'Padrino' (Godfather). Today La Sierra is not like it used to be. Everything must be bought outside and everything is expensive. It is hard to believe that many of the products from La Sierra cost less on the coast.

"We live in a shack house that we built ourselves, and hope that the firm will provide us someday with a house with water and electricity as it does the other workers.

"I get along fine with all the boys (work mates) and have never had any trouble."

Jacinto - A Volante and Criolloized

"I worked for five years as an operator of the Condor F, C and H, but they treated me unfairly and now I am a volante.

"I'll tell you how it happened: I had a strong devotion to the Patron Saint, Virgin of the Mercedes, and I had promised her to dance every year during her feast in September. In 1959, I asked my boss for permission to dance for three days as I used to do every year. I danced all three days and nights and I ended up with an aching body. So, on the fourth day, instead of going back to work I stayed home to rest. I let the Supervisor know through my brother but the boss was furious and he did not wait for any excuses - he transferred me. At that time, the bosses were more authoritarian than they are today, particularly the one that transferred me from operator to bundler. A man named Saturno went to him and told him that he was a father and asked for my post, and, since he was a protege of the boss, he got the job. Thank goodness that man doesn't work here any more. God is great, he always punishes evil.

"When the piece-rate system was imposed in 1960, another boss transferred me to a volante, promising me that as a volante I was going to earn more than the piece-rate workers. It was nothing but a lie. I am not a

trouble-maker and I patiently wait for the boss to realize the value of my work. In the eleven years that I have spent here, I never had any trouble with anybody - neither the bosses nor my work-mates. On the contrary, if they ask me for help, I gladly give it. For me, all are the same. If an operator is missing, the 'maestros' (mechanics) consider me first if the bundler is not available.

"We cannot be equal to the machines. The machines must earn more."

(He refers to the team operating the Condor machines who are piece-rate workers.)

Daniel - An Operator and Criolloized

"I have always wanted to improve myself and that is why I left my land - I wanted to study in Paramonga. When I got to my aunt's house, I asked her for a few cents to buy some books to study and she did not oppose the idea. I started working first in the country and later in the 'Bazar' (company store). The money which I was earning for the first time in my life became more and more attractive, and I preferred to stay at my job rather than to study. I asked for a transfer here, and worked as a bundler and 'anadrador' before I went into the military service. Soon after I came back from the army, I was promoted, because of my experience, to operator.

"I am one of eight brothers, five of us have been in the army. We 'peasants' get taken in very easily while the sons of the rich men never serve their country. I'll tell you, though, the army makes you a man, a disciplined man. When the corporal or sergeant shouted at me, I would think about the Lord of Loneliness, Patron of Huaraz, and believe it or not anger would disappear from the faces of those men. Since then I have had a great devotion

for the Lord of Loneliness.

"We, the Serranos (mountaineers) are smart and are hard workers. The 'costenos' (people from the coast) are lazy and talk too much. They are at their best when they insult somebody. Sometimes we clash because they call me Serrano (expression accepted to mean ignorant or dirty) and I tell them 'the Serranos better serve the army than you.'

"The mechanics are the only professionals here. If we had to leave this place we would not work as machinists unless we went to work in another Condor. That is why I have studied to be a chauffeur. I have my driver's license. I hope to study mechanics too. So, I will be able to work anywhere as either a mechanic or a chauffeur.

"I wish I could talk as fancy as some of the Criollos. They convince you with their talking. I would like to borrow a book that will help me to talk better."

Rafael - A Volante and Serrano

"I am a 'conviviente' (a person living with another). I am a widower, and I have three sons from my first wife, all of whom are married. Then I got engaged to another woman who now lives with me.

"I also could have been an operator or a bundler as the others, but it is the previous bosses fault that I am only a volante. He was not a good man. As an old worker I knew the operations of the plant well and I used to defend my friends when the old boss acted unfairly. He became angry with me and left me as a volante. God knows what he does now, he is gone and I am here.

"I have worked 35 years with this firm and I am only 54 years old. According to the new law passed by Congress, you must be 60 to retire. Imagine that! Although you have killed yourself working all your life, you must keep working until you're 60. Those men in the government are bastards. Please excuse the expression, but they anger me."

Miguel - A Bundler and Criolloized

"I left my land when I was a boy. I was eight years old and ran away to Chimbote with a friend who had been hired to work in San Jacinto's 'hacienda.' At that age I started working as a cotton picker but I stayed there for only a short period. I left because the food was bad and the rations were small. Then I went from job to job in Chimbote and Huacho, until at fifteen I finally decided to come to Paramonga. Here I had a brother working in the sugar mill. He did not want me to work, but I did not like the idea of depending on my brother so I found a job without his knowing it. I started in saneamiento (sweeping) and a few months after I asked to be transferred to the garage, because I wanted to earn more. While at the garage I learned that I could earn even more in the Boxes Factory, so I asked for another transfer.

"Later, I went into the army. I left my things and my room with a friend but when I came back, my things had disappeared and my room was occupied by somebody else. After complaining for a long time, I finally was given another room when they realized I had my wife with me.

"Since I left home, I have never gone back. My parents are dead now and I have nothing to return for. All my brothers and sisters are married. I remember little of my town.

"I did not have the opportunity to study because my parents died when I was very young and I had to work to support myself. Now, taking advantage of night school, I have started to study and will struggle ahead as much as I can."

