

LIBRARY  
OF THE  
MASSACHUSETTS INSTITUTE  
OF TECHNOLOGY





028  
414  
147-65

WORKING PAPER  
ALFRED P. SLOAN SCHOOL OF MANAGEMENT

VILLAGE WAYS AND FACTORY WAYS:  
A Study of the Interplay between Technology and  
Social Structure in a Traditional Andean Village

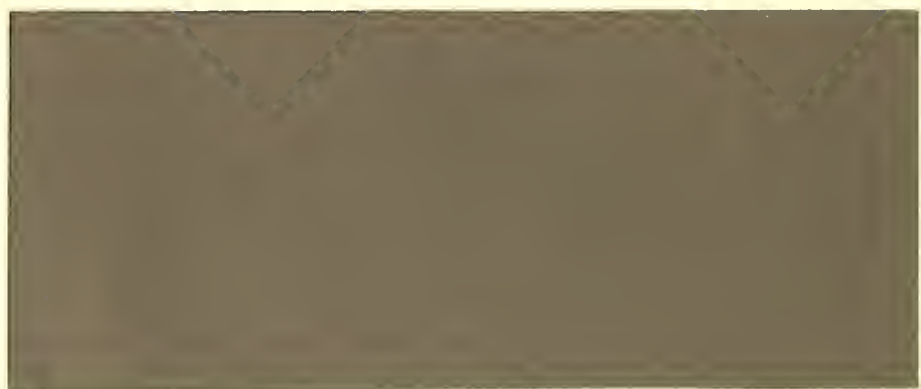
October 1965

147-65

Charles H. Savage, Jr.

MASS. INST. TECH.  
MAR 16 1966

MASSACHUSETTS  
INSTITUTE OF TECHNOLOGY  
50 MEMORIAL DRIVE  
CAMBRIDGE, MASSACHUSETTS 02139



OCT 21 1965  
DUMEX

VILLAGE WAYS AND FACTORY WAYS:  
A Study of the Interplay between Technology and  
Social Structure in a Traditional Andean Village

October 1965

147-65

Charles H. Savage, Jr.

MASS. INST. TECH.  
MAR 16 1966

This study was sponsored by the Inter-American Program in Civil Engineering at M.I.T. 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). The author is a member of the faculty at Boston College and currently a visiting professor at the Sloan School of Management.





This is the story of an industrial village located in the mountains of central Colombia (South America), a factory in that village, and a group of men at work in the factory. The data reported was collected in connection with a larger survey of work groups located in contrasting settings for the purpose of understanding the manner in which factory social organization evolves during the various stages of the industrialization process in developing countries. The stages that have been established are traditional village, transitional village and urban. The questions raised at each setting are:

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

What forces towards systematic 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?

Field work on all of these stages has now been completed. Reports of studies made in two transitional villages have been published.<sup>1</sup> The field work done at two urban sites has yet to be reported. This report provides a description and interpretation of village, factory and work group organization in a traditional setting.

#### Site Selection and Study Method

Colombia provides an attractive and manageable site for inquiries directed at understanding the processes of economic development. It offers strong cultural and geographical inputs which are easily identified and by

---

<sup>1</sup>

Savage, Charels H., Jr. Social Reorganization in a Factory in the Andes, Monograph No. 7, The Society for Applied Anthropology, Ithaca, New York, 1964.

Soler, Eduardo, Impacto Tecnológico en una Comunidad en Transición (Perú) Research Report R65-12, Inter-American Program in Civil Engineering, M.I.T., Cambridge, Mass., 1964 (now being translated).



their nature balanced so that the one does not obliterate the other. The Chibcha Indian nation was more numerous than the Inca and Maya cultures with which its territory was coterminous, but had achieved a somewhat lesser degree of cultural advancement. Cartagena on the Colombia coast was the historical center of Spanish activity on the South American continent. The nation straddles the equator, but elevation gives it a range of climates from cold to tropical. Most of its inhabitants live in the temperate interior. The country is split vertically by three massive ranges of the Andes mountains that cradle two important river systems emptying into the Caribbean. Until the arrival of the airplane travel around the country was almost impossible. Land travel between the three major cities - Bogotá, Medellín and Cali in the central mountain masses form a triangle with sides roughly one hundred and fifty miles long- is still a matter of two days by highways that at times peter out into a single lane dirt road.

This very isolation and the inability of the central government to enforce its will provided an opportunity for several important regional deviations to take root. The most important of these was the unexpected industrial take-off which occurred in the Medellín area at the turn of the century. Even before roads had been opened into the high, narrow Medellín valley gangs of men and mules hauled textile machinery over the high mountains to establish a textile industry, which now employs some 27,000 workers. The industry was instituted without foreign impetus or capitalization. Today on the verge of achieving a population of 1,000,000, Medellín is the traditional industrial center of the republic, and its leaders are moving confidently into new lines of manufacture with little, if any, external ownership or direction. Colombia's gross national product exceeds or matches that of its neighbors although it has no great export commodity other than coffee. This fact is



explained in part by the strength of its cultural traditions, the industry of its common folk - particularly those who reside in the cool interior - and the calibre of its domestic entrepreneurs. Despite frightful violence and banditry in the backlands, which is only now beginning to abate, Colombia has enjoyed sustained economic growth and relative stability in its governmental arrangements.

The village which provides the setting for this study lies in a remote corner of a high plateau above the city of Medellin. The city itself sits in a high, green inter-mountain valley with sharp mountains rising in all directions. To reach El Sanctuario, one winds up the eastern wall of the valley from the city and through a cool pass. Beyond, the plateau stretches across to another range of mountains to the east. The village is cradled in the foothills of this further range that works its way over towards the Magdalena River through country that is wild and uninhabited, marked by sharp canyons and tumbling streams and an occasional mule trail or countryman's hut. El Sanctuario has been, since the turn of the century, the center of Colombia's ceramics industry. Fourteen small potteries, employing from 20 to 100 workers, produce a medium to low quality plateware, using adjacent mountain streams as the source of power to run machinery which was in large part locally designed and fabricated.

This writer first heard of the village and its industry while he was doing a study in another factory located outside of Medellin. He travelled to the village, inspected several of the potteries, and became acquainted with some of the factory owners. In the next four years he made at least two short visits annually, extending from one day to several weeks in length. Fairly strong relationships were established with a number of the local owner and worker families during this period. The major portion of the data was



collected, however, during two extended visits in the past year during which attention focused on a single factory. Each morning the investigator rode out of the village on the truck that brought the workers to the factory, returning with them in the evening. Each night he had conversations with them at the plaza or in his room. Over the years a total of four months time was devoted to collecting the information that is here reported. All members of a single work group were formally interviewed on at least one occasion. The group was repeatedly observed in its routine operations. All available data on individual output, work assignments, and personal background factors were recorded. The purpose of assembling this information was to become familiar with the technology and formal work arrangements and to identify the structure of social relationships that existed among the workers in the single work group and between them and the plant officials.

The data collected is organized and interpreted in such a way as to give the reader a look first at the elements of village life and then at the manner in which these elements express themselves in the behavior of a single work group, including that aspect of behavior which we call worker productivity. To accomplish this purpose a conceptual scheme that has been used in studies of United States work groups will be employed.<sup>2</sup> The classification of the elements of social behavior into interactions, activities and sentiments is that of George Homans,<sup>3</sup> and the idea of "social system" employed is that of A. R. Radcliffe-Brown.<sup>4</sup> In carrying out the study and in reporting it, the author chose to forego precision and depth in the interest of making available a relatively brief and comprehensive account of a little known phase of economic

---

<sup>2</sup> Lawrence, Paul and others. Organizational Behavior and Administration, Homewood, Illinois, Dorsey Press, 1961, pp. 213-223.

<sup>3</sup> Homans, George. The Human Group, New York, Harcourt, Brace, 1950.

<sup>4</sup> Radcliffe-Brown, A. R. A Natural Science of Society, Glencoe, Ill., Free Press, 1957.





development. The reader's attention will first be directed at the social interactions, routine activities, and sentiments of the village as a whole and at how these separate elements may be conceived of as combining to constitute a social system related to the survival of the community as a viable social and economic entity. Contrasting values and social usages poised on the frontier of the village's experience will also be noted together with the mechanisms by which the abiding order comes to terms with them. Next, the focus will shift to a single industrial work group where the conceptual exercise will be repeated.

#### Interactions, Activities and Sentiments In the Village

Intercourse between El Sanctuario and its neighbors is kept at a minimum by both social and physical arrangements. Listening to its leaders, one comes to believe that they have created a fortress which has as its purpose the fending off of a deteriorated and inferior external circumstance. Rio Negro, the next town on the road to Medellin, is central to this conjecture. "As a village with its own integrity, Rio Negro is through," they say. "Its best people no longer take part in civic affairs. The town council is made up of taxicab drivers." The ramparts of the fortress are maintained by keeping excursions on the part of Sanctuarianos and incursions by outsiders at a minimum.

#### Interaction With the Outside World

El Sanctuario and its satellite settlements claim a population of upwards to 20,000 inhabitants, but the village remains an isolated location, difficult to enter and difficult to leave. A single dirt road, and this in poor repair, winds from Rio Negro across the hilly plateau to where the village sits cradled by mountains. The potteries lie beyond and just above the village in order to take advantage of the mountain streams which are the source of mechanical power. Transport in and out is sporadic and depends upon trucks which carry both



cargo and passengers. Occasionally a seat may be obtained in a car which has come in, but that only if the driver is not having lunch, changing a tire, or visiting with friends. There is no travel after dark.

It is difficult for the Sanctuarianos to make trips out of the village. Since they are not home from work until six o'clock on Saturdays, a Sunday or feast day provides the only opportunity for an excursion. Men with family responsibilities earn little more than a dollar a day and do not have the financial means to make a trip even if they wished to do so. Only the younger workers make occasional forays to Rio Negro or Medellin. Once there, they are unsettled by the noise, by the prospect of being cheated or robbed. Only the most venturesome of the younger workers will say, "Medellin is expensive, dangerous and noisy, but very nice!" (Medellin es costoso, peligroso, y ruidoso, pero muy sabroso!) There are stories of visitors getting lost and wandering for days. There are even stories of human vampires. Once each year the unmarried workers leave in factory trucks for a three-day religious retreat in a seminary beyond Rio Negro, but the villagers take no part in the soccer leagues and other activities that would put them into contact with their neighbors. Local sentiments justify this segregation. As El Sanctuario is a friendly and secure place, the outside world is a hostile and dangerous place. "Here you are safe," they would tell me, "but Medellin, whuffff!" Women stand even less chance of venturing abroad. Prevailing custom prescribes even their local mobility. They are rarely seen in the streets except en route to the church for morning Mass or evening recitation of the rosary. Men and boys do the marketing. Social dancing is forbidden by the pastor. Courtship takes place at the entrance to the girl's home. Rio Negro has a barrio where those inclined may consort with prostitutes. El Sanctuario has none.

Nor does the village encourage immigration or tourism within its



precincts. Unsponsored visitors pose a threat to the established routines. One of the leading Sanctuarianos told me: "It's like maintaining the purity of a herd on a hacienda. If a stray wanders in, you drive him off. It's not just a biological matter. It has to do with moral and spiritual integrity as well." There are a few who have immigrated to the village, but everyone knows exactly the circumstances under which the migration took place. Emilio came back to marry a local girl. Hugo's mother was born in El Sanctuario and returned with her sons after her husband died. Family connections provide a device by which the compliance of the newcomer may be assured.

Both Rio Negro and El Sanctuario are close enough to the city and have abundant natural beauty and the cool climate that would attract visitors and vacationers. The commercial establishments in Rio Negro, in fact, seek to attract the tourist trade. They provide the kinds of food and music that the visitors demand and the opportunity to dance in a public place. The visitor finds none of this in nearby El Sanctuario. The girls up from the city in their treads and pants and the boys in their open shirts, tight trousers and jewelry - invaders who are subtly changing the value scheme of the youngsters in Rio Negro - find little welcome in the neighboring village. Women, in fact, are permitted to enter only one establishment which is labeled "social club", because it has a single ping-pong table. The few visitors who venture into El Sanctuario unsponsored face a subtle web of hostilities, resentments and derision. They represent powerful external forces against the admission of which the village has mounted a rear-guard delaying action.

#### Interaction Within the Village Itself

Granted the paucity of external interaction, the social character of El Sanctuario's local gathering places takes on special significance. There is only one center for social activity, the plaza. The men rarely enter another's



home except for funerals, weddings or christenings. Javier, a popular young factory assistant, had been away from the factory for ten days because of illness. None of the other young men visited him. When I went around to salute families that I knew upon my return to the village, the workers who accompanied me hung back from the doors. The housewife is not prepared for such visits. Frequently, it is necessary to sit on beds in the front room. Coffee must be sent for in order to prepare something for the visitor. The home is the sanctuary of the family and of the women, with the men meeting elsewhere. The symbolism of this rigid demarcation is underscored by the precise arrangements during courtship which constitutes an encounter between these segregated elements. The girl stands within the doorway to her home usually elevated one step. The boy stands just below, but on the sidewalk in front of the door.

Social interaction among males takes place only in the plaza. There is no other place. Each one has his favorite tavern. Beer and aguardiente sell for 10 cents a serving. Coca Cola and soft drinks sell for four cents; coffee, for one. Any one of these assures the buyer a table in a tavern or on the sidewalk out front as long as he wants to use it. If one is penniless, he can still circulate around the plaza where he is sure to meet any one that he wants to see during the appointed hours. Plaza frontage becomes increasingly prestigious with the passage of the years. There are located, in addition to the taverns, the church with its rectory and social meeting halls, the Government offices, the moving picture theatre, and the houses of the most important patrons or employers. It is very elegant to be seen standing on one of the second story plaza balconies during a fiesta or while the Sunday morning market is in full swing.

Sundays and early evenings are the appointed time for plaza interactions. The village church is well staffed and competently operated. There are





four priests. The outsider gains the impression that priestly activity is greater and the sacramental life richer in El Santuario than in Rio Negro. Morning masses start at 5:30 and are invariably thronged by all elements of the population. During these Masses matrimones take place, confessions are heard; the distribution of communion starts after the priest starts his prayers and continues until after the Mass has finished. The priests are involved in credit unions, youth activities, including teaching the labor union, and other affairs, the meetings of which they inevitably dominate. They can always be found circulating in the plaza or having a cup of coffee in one of the canteens. The patrons or factory owners use the plaza for recruiting new employees, counseling their workers, hearing grievances and receiving petitions. On Sunday afternoons the two senior patrons wait in the rectory parlor to escort the pastor on a symbolic stroll around the plaza at the height of the week's social activity. Thus the plaza provides a device by which all interaction takes place under conditions that permit public scrutiny. It also provides a mechanism by which unsponsored visitors and unaccustomed modes of behavior may be screened out, spotlighted and dealt with almost instantaneously.

The rabble of urchins at the little park in the center of the plaza serves as the tripping device of an interesting automatic control system by which the tenor of local usages is maintained. Odd bits of drama, even the appearance of some one from out of town, are such rare events as to command their immediate attention. A group of them coalesce on a minute's notice around the intruding element. If this coalescence holds for more than a minute, the attention of the strollers and canteen-sitters is attracted. A crowd of several hundred can gather in a few minutes. The attention of the authority figures is then commanded, the guardia standing inside the Government building, or the priest or patron watching from behind the curtains at the door of his second-



story balcony.

The prior topic of conversation during my last visit was the emergency landing made by a helicopter. Hundreds of villagers gathered in the first few minutes, evidently frightening the U. S. pilot who was unable to speak a word of Spanish. The school principal was sent for and arrived, dictionary in hand, to converse with this outsider in "pure English" to the delight of the townspeople. After a mechanic had been secured from the city and the craft safely dispatched, the story gained currency that the pilot subsequently lost his life landing at the city airport. Whether this story is true or not, the frequency with which it was repeated indicates that it served some unspecified psychological need of the tellers.

#### Style of Interaction Among the Sanctuarianos

The overwhelming impact of a stay in El Sanctuario is the complete absence of privacy afforded individuals. The Sanctuariano is always on a stage, at work and during his hours of recreation. The patron at whose factory I visited had a death in the family while I was with him. Even when the priest arrived to escort the casket to the church, the family was not afforded a moment of privacy. The house was inundated with relatives, villagers, and small fry who jostled for position as the procession left the house. During the ceremonies in the church the family was accorded no privileged position. The following Sunday I went to bid goodbye to the bereaved family before leaving for the States. The front door of their home was open to any visitor as it must always be except when they are eating or sleeping. While I was there in the parlor, a campesino arrived to discuss with the patron his inability to dispose of his chickens in the Sunday market. The patron's response was what it always had been, to demonstrate interest and attention and to give gratuitous advice. He was acting in terms of a social compact, well understood and abandoned only at the greatest



peril.

These village ways impose special burdens on the visiting social investigator. The simple act of lighting a pipe in the plaza guaranteed me an audience of 15 to 20. I gave up trying to talk confidentially with individual workers at a canteen table and retreated to my room in Sanctuario's single small hotel. At first the workers hesitated to enter the building which for all appearances was simply another home. Then they mentally reclassified it as another plaza meeting place with the result that personal conversation was impossible. The room was constantly full, with individuals arriving and leaving. The mayor was a young bachelor who served more as an agent of the State Government than a member of the local power structure. He also resided in the hotel and sent word to me through the owner that, unless this turbulence abated, a public denunciation would be issued. The absence of privacy unsettled my own personal requirements. Towards the end of my visit I was crossing the plaza to visit a family that had had a bereavement. As usual, a dozen or so small fry were trailing along. I spoke to them harshly with the result that one of the workers gently reprimanded me. "They are only showing interest," he counseled.

#### Productive Activities

El Sanctuario's ceramic industry got started when small groups of local merchants and farmers set up small potteries along the mountain streams above the village to produce chinaware for regional and eventually national distribution. There are clay deposits nearby and coal for the kilns. None of the factory owners has more than a primary school education, yet each designed and engineered his own factory with the help of certain indigenous artisans - kiln masons, carpenters and mechanics - who are products of the village's historical self-sufficiency. "I've never had an engineer in the plant," one of the older patrons told me. "Necessity is the mother of industry." The most expensive piece of



equipment in the factory is the truck that carts clay from the mines and brings the finished ware to the city. It also brings the workers up from the plaza to the workplace. Unless he is getting along, the patron serves as the driver.

Electric power arrived in the village while this study was being made, but only one factory makes any use of it. The others continue to use their ancient wooden water wheels as the source of power to turn the mixing vats and the molding or potting wheels. Despite their mechanical limitations, the fourteen small potteries together service the lower-priced half of the Colombian market, with some ware finding its way over the Venezuelan and Ecuadorian borders. The other half of the market is serviced by a larger, more modern plant in the environs of Medellin.

El Santuario's industry is such that dependence on external specialists has not been required. The heart of the factory is the giant water wheel onto which water is sluiced. A series of homemade gears communicates the power so generated to mixing barrels and open vats where the clay is mixed. After the clay is mixed, pounded and pressed by handpower and crude machinery, it is sliced to plate or bowl size and shaped on a turning mold or potter's wheel. The molder is the key operator. He must be familiar with the consistency of the clay and produce a plate of the required thickness with a crude turning wheel and lever which he himself calibrates. He is assisted by two boys, one of whom puts the slice of clay onto the mold and the second removes the shaped piece. The semi-dried piece then goes to a polisher who, using a second wheel, smooths the edge of the cup, bowl or plate. The polisher is a younger man. He also has as assistant, a boy who gives the piece a final going over with a wet sponge. Factory employment in El Santuario starts at the age of 12 or 13, when a boy finishes primary school and his father or some other relative speaks to the patron on his behalf. After shaping, the ware is baked three or more times in large kilns.





Between bakings it is decorated and treated with a liquid that gives it gloss. The decoration and treating are done by girls who work in a separate part of the factory. The kiln loaders are older men. Their work location provides a buffer between the girls and the younger men, which is consistent with village usages. The girls would never think of entering the mixing and molding areas. "They wouldn't let us," say the girls. "They are afraid they might lose their virginity if they did," say the younger men. The production stages, then, are mixing, shaping, baking, and decoration, with the mixing capacity adjacent to the water wheel determining and restricting the size of the subsequent operations. Until the arrival of electric power, the technology was such that it could be designed and manned exclusively by resources which the village provided.

Nor does Sanctuariano technological arrangement contribute to cooperation among the several factories. Each factory is managed separately by the family that owns it. The capacity of a plant and work force that it employs is limited by the power the water wheel can produce. The average size is about 50 employees, although one has 20, and the only one that employs electric power has passed 100. Functional cooperation among the potteries is further hindered by the fact that the ware in process is fragile and difficult to transport. No two factories are in sight of each other. They hug the depressions in the mountain folds where water can be found. They are low, one-story buildings with tile roofs. Typically, they have no walls. Thus planks loaded with plateware can be carried out into the sun to dry. Boys enter, carrying their fathers' lunch pails or with milk or cheese to sell. Some bring the cup handles or other small items that their mothers or sisters have been pouring and molding at home under a "putting out" system. Others come to bring sacks of ashes home for the family hearth or to search for good pieces of china among the refuse heaps. Each factory has its own satellite social connections but, except where a single



family owns two or three factories, no cooperation or integration with the other potteries is practiced.

### Cooperative Activity In the Field of Production

Don Jose is the patron of the largest of the factories and the one that we will enter shortly in order to examine the social organization of a single work group. In his mid-thirties, he is easily the most successful and progressive entrepreneur in the village. His grandfather was one of the founders of the village's ceramic industry. His father and uncle operate two other small potteries, but Jose's stands out from all the others. It is the only one that is enclosed and that provides a single entry. This move is symbolic of his effort to establish systematic rules, "reglamentos" in his own words, having to do with working hours and pay. He has recently constructed a second, even more modern building. His current over-capitalization troubles some of the older workers. They say, "This time Don Jose has bitten off more than he can chew and will come to grief," but Jose remains optimistic.

Jose's plant is the only one that is making use of the newly-arrived electric energy. He has substituted oil burners for coal in heating the kilns. He has also installed an expensive electric oven for the final heat treatment and a motor which turns the potting wheels; (the latter can be converted back to water power during the frequent power interruptions.) To tend these machines, Jose has had to hire two young mechanics from outside the village. These mechanics bring with them new points of view. One tried unsuccessfully to organize a soccer team to compete with teams in neighboring villages. At the front line of technical innovation, they are also alert to the social disruption that their activities cause. One of them said to me: "All progress is made at some one's personal loss. Changes always hurt some one. For instance, the workers liked to



take home sacks of coal ash. With the new heaters this is no longer possible. Previously we needed 36 hours to heat the kilns. Now we do it in 18. Time is the key and we gain time; but somebody else loses." With additional floor space the custom of "putting out" small jobs to be done in the homes has also been curtailed. For his own reasons Don Jose relishes the role of innovator.

Jose is also an advocate of more cooperative activity among the several potteries. A few years ago he promoted a marketing agreement so that prices might be maintained when sales were down by means of restricted production. The bishop in the city nominated a respected civic figure from outside the village to preside over the meetings at which this agreement was framed. But at the time of the first cutback some of the owners tried to bootleg goods out of the village at night to sell below the agreed upon minimum. This broke the agreement. More recently he promoted even a broader cooperative plan, involving joint purchasing and distribution together with some specialization in production functions. This arrangement would have permitted the purchase of special purpose machinery. Costs were to be prorated according to volume and Jose offered to surrender up the management of his plant and coordinate the activities of the cooperative from an office in the city. The plan was rejected. Some of the others believed that Jose was serving his own ends. Don Jose's reaction was one of watchful waiting. "Now I compete with them, but from a distance. It is impossible to do business with some of the owners who are currently in charge. We must wait for another generation to take over."

Don Jose is a lonely man with an expectant view of the future. He coordinates some with his father's and uncle's factories in matters ancillary to production operation. For instance, he shares with them the use of a new lathe that he has set up in his new building. He has little to do with the other factory owners. Once a week he travels to the city where we share a



favorite restaurant but, whenever I meet him, he is lunching alone. His loneliness was especially apparent at the time of the death of his child. Inundated with people with whom his relationship was of a special and restricted character, he gave the impression of being always and primarily alone, without effective peer relationship. In the plant he may relax and chat a bit with some of the long-tenure female employees. With the men his relationship remained specialized and formal. Each respects and depends upon the other with a certitude based upon a carefully-contrived tradition of rights, obligations and customary social usages. This certitude is so time-tested as to obviate any attempt to expand it or reinforce it during occasional work-place and plaza interactions. Contacts between worker and patron thus strike the observer as being devoid of warmth or effective interchange. This set of extra-familial interaction is compensated for by the intensity of relations with the patron's own family and that of his father. Without this compensation, it would be impossible to persevere in the larger context.

#### The Sentiments That Bind

Interactions between people and the activities that they pursue can be observed. Sentiments must be derived by other means, and I proceeded in this manner. By 10 o'clock each night the plaza was shut down and deserted, with the factory trucks lined up along one side, the door of the hotel had been secured for the night, and the town slept. This was the time I chose to make a log of all that had been told me during the day, both in work-place and plaza conversations. Within a few weeks certain words began to stand out because of the frequency with which they were used. For instance, the workers told me over and over again that they were "poor" and "cold" and "bored", perhaps out of the habit of reminding all who had the external marks of the reward-distributing and benefit-according authority system that there existed





reciprocities which it was their continuing obligation to disperse. But the word that was used most of all was destino, with the result that I came to pick it up and feed it back into conversations with villagers in order to see what use they made of it.

It seems that every soul in El Sanctuario has a destiny to which he is born and which he attempts to eschew only at great personal peril. This destiny specifies the appropriate comportment granted one's family status, one's social and economic heritage, even the temperamental and psychological circumstances of the family into which one happens to have been born. It also determines one's job classification, group membership, and level of productivity, as we shall see when we come to examine a work group in Don Jose's factory. The little children in El Sanctuario, for instance, don't do household chores; they do destinito's, or little destinies, a usage that is not encountered in other parts of Antioquia. "Nuestro destino es ser pobre," say the workers, ("Our destiny is to be poor.") Since this destiny is externally imposed, there is no point in struggling against it. Similarly, Jose's destiny is to be a patron. If he provides a service to me or to my family, he merits no special thanks for such service. He is simply doing the thing which his destiny requires that he do.

Many societies make some use of a fixed-destiny concept. It is the persuasiveness of the idea in El Sanctuario - supported by the excluding and scrutinizing spatial arrangements discussed earlier - that makes it such an important explanation of the village's particular style of social organization. For instance, Don Jose, who does his own hiring, told me that his task is facilitated by his intimate knowledge of all the local families. "Each family has its particular characteristics, and these are widely known. For example, I wouldn't have a Gomez in the plant. They are known trouble-makers. The Cardonas are serious and dependable. They make good supervisors. The Gonzales



are good-natured and hard-working, good people to have around. The Sanchez are heavy drinkers."

The widespread ascription of a fixed destiny has a way of perpetuating itself from generation to generation even when it is the temperamental quality of a family that is under consideration. A heartrending case is that of young Marco Antonio Sanchez, the heir apparent to the title of heavy drinker. At fifteen and with a year's service in the factory, Marco Antonio is a wholly virtuous youth, who contributes to the support of his family, loves and respects the father whose drinking has reduced the family to the direst of straits, attends Mass regularly and the recitation of the rosary. His only recreation is playing chess with a crippled neighbor. His ambitions are modest, but appealing. He yearns to be the "No. 1 Molder" in the factory and suffers intensely when temporarily transferred from his post as assistant molder. Yet Antonio is chained to the family reputation that the Sanchez are hard drinkers. His father's indulgence on this score is such that the only items in the home, which houses two laborers among a family of eight, are one double bed and a machine for grinding corn. He and his sisters are undernourished and sickly. The general attitude of his associates and supervisors is, "Yes, Antonio is doing well at the moment, but after all he is a Sanchez, and we will have to wait and see if the family traits don't eventually make themselves evident." These firm expectations, plus the pressures arising out of a stunted family life, may well overwhelm Antonio's current contrary dispositions.

The destiny concept specifies to all parties where the initiative for action resides and absolves those not so charged from all concern about responsibility on their part. Thus, the patrons will ask the bishop to preside over the matter of a cooperative marketing agreement. When I asked a 20-year old worker who had been suspended from his job if he were going to speak to his patron, he replied, "No, that's my father's job." I queried the shoeshine boy



in the plaza as to whether he preferred to shine shoes or to work in the factory. He replied that he preferred the latter. "When are you going to seek factory work?" "When they send for me," was his answer. The destiny concept also affects factory practice, as we shall see. When I made note of the fact that a worker had replaced another molder who had been assigned to physically-tiring work, obviously against his wishes, the replacement replied, "It wasn't my idea; they sent me."

Sentiments Towards Authority Figures and Those Who  
Challenge Established Traditions

Don Jose's initiating role in the factory is permeated with a paternal undertone. The doorkeeper told me, "We call Don Jose 'Papa', oh, not to his face, but, when we see him coming, we say, 'Here comes Papa!'" Jose once told his factory supervisors: "We must think of the factory as the mother who nourishes us! We must see that she is protected at all times!" To this one of the supervisors replied, "If the factory is our mother, you must be our father!" The integrity of the vertically-oriented, action-initiating bias is underscored by a second worker sentiment, hay que respetar, (one must show respect.) It proceeds from the work place to the plaza and back again. On one occasion Jose's principal supervisor was accosted by an inebriated worker, a Sanchez, in the plaza. The latter was seeking a loan and, when the supervisor, with an eye to his condition, refused him, the worker became abusive. The next morning the supervisor called the worker aside and told him in no uncertain terms that he was in command "both here and in the plaza!" The worker readily accepted the injunction. In this connection, it is illustrative that the young adolescents in the plaza, those between school years and work, whose fathers have not been able to completely fulfill the paternal stereotype, firmly believe in the existence of masked supermen who battle for justice, employing supernatural powers. They reported to me that such individuals could be found in Medellin



and even, at times, in nearby Rio Negro. As is usually the case, these fantasies have as their source the communication media with their cartoon characters and accounts of professional wrestlers. They may also be transitory stages by which the younger generation is preparing to divest itself of the overwhelming vertical bias in issue resolution to which it is historically heir.

So pervasive is the destiny concept that it is difficult for the Sanctuarianos, even the younger ones who have traveled to the city, to conceive of any deviation from the destiny which life imposes. One young worker from a small pottery, who came to visit me, had worked in the city. He had returned to the village because it was the only way that he could obtain the \$100. he needed to gain exemption from military service. In return for the patron's loan, he indentured himself to work in the factory until his debt could be repaid. He also brought back from the city a full-blown Marxist concept of human misery and those who fed on it, a theory which he easily verbalized. When I asked him why he didn't take over one of the smaller factories and run it, the "Saturn", for instance, a small pottery that could be run by 10 or 20 employees and was currently vacant - he looked unbelieving at first, as though he had not understood my question. When I repeated it, he replied: "You don't understand. My destiny is that of the poor. No one would lend me money to buy a pottery and, if I did manage to acquire one, no one would work for me." Even in the case of an articulate and traveled youngster, the capacity for empathy and projection has atrophied from disuse or, better still, had never taken root for lack of nutriment. Empathy and projection could unsettle established social arrangements by suggesting different manners of comportment at odds with those which local social tradition prescribes, different routes which may be traveled.

Alberto Bermudez is one villager who has chosen to travel a different route. As a young man, he traveled throughout Antioquia, working as a railroad





hand. His father was a carpenter with a home and shop on the Plaza. When his father passed away many years ago, Alberto returned to El Sanctuario to take charge of the family property, but the damage had already been done. In his travels Alberto had picked up strange ideas at odds with the local value system, and these he refused to discard upon his return. He sent his sons out of the village for schooling the few years that he could afford to do so. Dress is important in El Sanctuario. It is cool enough in the mornings and early evenings to require a woolen poncho or ruana. At Mass the men wear them over their suit jackets, but not the patrons. They keep one for comfort while in their homes, but never wear them in public. Alberto wears neither ruana nor suit jacket, having purchased instead a short military-style jacket, which probably cost him more than the other garments in return for less warmth. The family is poor and the sons have only one set of clothing, but they always wear suit jackets and shoes, threadbare though they may be and at odds with the apparel of their companions. Men in the village who have attained Alberto's years, at least those who do not manifest strong Indian features, are referred to as "Don", a traditional Spanish title that in other years meant De Origen Noble. Alberto resists this designation. "Let them keep their titles," he says, "I'll take the money instead."

For traveling this alternate route, Alberto pays a price which serves as a visible reminder to others who might be so inclined that the village does not look kindly upon deviation from its traditional ways. In recent years he has known nothing but the psychological torment of fighting a losing battle against impossible odds. His carpentry business has remained static while the village has grown. Others owning plaza property have progressed with this growth. He lives in a few back rooms of his big plaza house which is in a state of great disrepair. To move means surrendering the last vestige of being a principal village family, of being seen on the plaza balcony during fiesta time.



Yet he is in danger of losing his house and no one is interested in helping him save it. "He has to accept reality on this score," one of the village leaders told me. Another said, "You know how it is, there are some people who are difficult to manage and Alberto is one of them."

Even the common folk, in their own devious ways, have a way of explaining the punishment that Alberto is suffering for his condition of being apart. They do it by repeating a story. I have no way of knowing whether this story is true or not. Its importance resides in its repetition as a folk myth which has adhesive and educational qualities for the society which propagates it. The story is that Alberto used to be a duende, or male witch. In his traveling days he learned how to practice black magic and brought back with him the implements to use the art in healing the sick that his friends in El Santuario brought to him. One day, goes the story, his young son was terribly ill, and his magic was of no avail. He went to the priest who said to him, "You kneel before the Virgin and repeat three Hail Mary's with the same fervor that you apply to your black arts." Alberto did this after telling the priest that, if his request was not granted, neither he nor any member of his family would enter the church again. When he returned to his house across the plaza, he found his son cured. Since then, according to the account, he never again practiced witchery.

The main penalty for moving outside traditional ways, however, is to be found in Alberto's fate of being always and inconsolably alone. I heard his story through a chance circumstance and he told it to me in his candlelit cave-like back room, crowded with the family's beds, while his eldest son kept watch outside the door against eavesdroppers and his wife retired to the other room in order to escape the unpleasantness of the telling. Alberto believes that the family must live with its secret, that he must always present a cheerful countenance in his strolls across the plaza. The payback on such intense suffering



if there is to be one, will be in the activities of his four young sons when they reach manhood. Already they are commanding attention for their performance in school. Their immersion in the family's secret suffering may be equipping them with empathic skills which may be found to be in short supply in the village's repertoire of aptitudes as it moves towards the changed circumstance which the future has in store for it. These Alberto may have bought for them at the price of his own and his family's peace of mind in contesting current social realities in the village of El Sanctuario.

#### The Systemic Nature of the Village's Interactions, Activities and Sentiments

If El Sanctuario at this stage in its history is a fortress, as its leaders see it to be, what is it defending? What is the nature of the defense offered? And how is the battle going?

In reviewing the characteristics of the village as a human society, we find a system of values and beliefs, a traditional social order firmly entrenched in strong village institutions and protocols and deeply internalized and subscribed to by the mass of villagers. This traditional order is cherished by the villagers. It has after all brought them this far. In terms of it the families of El Sanctuario have been able to feed, clothe and educate themselves and contain normal expansion of the village population as they have moved deep into the twentieth century. Note well that this is not a matter of the rustic life versus the industrial. Rio Negro has less industry than El Sanctuario and is more given to agrarian pursuits. It is also less enamored of the older, traditional order. Industry has given El Sanctuario the wherewithal to make so determined a fight. It has been able to purchase the perpetuation of a cherished past with the fruit of its industrial activity. Contrary to general understanding, there is a point in the evolution of human affairs at which industry and the traditional order support one another, at which industrialization and modernization - for the moment at least - are tending in opposite directions.



1) What is being defended?

The keystone of the traditional order in El Sanctuario is the concept of fixed destiny. One is a patron, or a member of the poor class, or a drunkard, not because it is in his power to will otherwise, but because it is in the nature of things that he be so. It is his destiny. There are afoot well defined stereotypes about what a patron is and how he should act, what the poor are and how they should act, what a member of the Sanchez family is and how he should act.

The responsibility for action initiation attaches to certain of these stereotypes under specified conditions. Within the family, the padre de familia initiates for the son, as the patron initiates for the padres de familia. Where members of the patronal group require action to be initiated, they turn to the religious padre. All three of the action-initiating stereotypes share the same Latin root in the title by which they are designated, the rest of the label merely specifying the locale and conditions in terms of which they are charged as part of their destiny with the task of initiating action.

Since projective abilities are not cultivated in the young, the typical Sanctuario will give little thought to moving outside of or beyond his prescribed destiny. Should he try to do so, he will be psychically conflicted and will have to bear this conflict without the empathic support which his peers under different circumstances might be in a position to accord him. This is rough on the individual, but the social order - which has carried itself forward to this point on such a logic - requires it.

As the Sanctuario moves out of the family circle and into the sphere of productive activity or purely social congregation, he goes equipped with this set of stereotypes which define the style of interaction. In such interchanges he deals unblushingly in these stereotypes. He trades in essences not perform-





ances, roles not the personal characteristics of the incumbent, appearances not reality, and being rather than doing or becoming.

## 2) The Nature of the Defense Offered

The maintenance of such sentiments in a setting where surrounding communities have already cut loose from their moorings requires certain pre-conditions. As a minimum, such sentiments must not block the carrying out of the productive enterprise which gains for the community its livelihood. In El Sanctuario's case these sentiments not only do not block but carry forward the purposes of the village's manufacturing as well as its trade and agricultural enterprises. They do not block these purposes because historically there has never been any pressure for specialization as to function or cooperative activity among the separate village potteries. They carry them forward by providing a well practiced organizational model which admirably serves the needs of small scale industry. Productive activities in the village, therefore, have benefited from the existence of these sentiments as well as providing the wherewithal for their perpetuation.

The perpetuation of these sentiments has been achieved by physical and social arrangements that permit high internal discipline and strict control over external invasion. These arrangements El Sanctuario has in ample supply. The lack of personal privacy and the swift sanctioning of deviant behavior have already been noted. Almost all social interactions take place within the narrow confines of the plaza where they are subject to general scrutiny. The function of the plaza as an automatic control mechanism for spotlighting deviant behavior has been described. On this small stage dress separates the patron from the worker even as custom prescribes the separation of the sexes and the well-understood signals and cues which dictate the circumstances and manner of interpersonal conversation. Deviant behavior, even the arrival of an outsider, is



quickly spotlighted by the plaza phenomenon with the tripping mechanism being the attention of the curious urchins. The general sentiment is reinforced by the interchanges that take place in the taverns that circle the square and sanctified by the religious rites in the church to which all subscribe. Here in the plaza take place all the rituals that note the passage of the years and the bindings and exclusions by which the condition of membership of the principal parties is underscored.

Equally strong are the devices by which external contact is controlled. The first is the raw fact of geography, which sets the village in a cradle of mountains at one end of an empty plateau. Only a single dirt road, and that poorly kept, conducts the few travelers into or out of the village. The lack of transport, the low wages, the size of the family and the family budget, the long working hours, all conspire to make contact with the outside difficult if not impossible. The nature of the technology, including the difficulty of transporting ware in process, the absence of electric power, and plant limitation resulting from water power use, keep the work unit small, manageable by a single patron with the kind of educational background that the village is able to provide, and independent of external technical resources. Migration and tourism, either into or out of the village is minimal, a fact that keeps the demonstration effect of external influence at manageable proportions. Any attempt to empathize, to project oneself mentally into different circumstances, is as unnecessary as it is unencouraged by village customs. By these means does the village offset strong internal institutions with minimum contact with external ones that might inject contrary orientations.

### 3) What Is Being Fended Off?

The contrasting value system which is being held at arm's length is there for all to see in the neighboring village of Rio Negro and in the city beyond. It is the converse of the El Santuario orientation in all of its parts



as illustrated in Figure 1. It involves a de-emphasis of the idea of fixed destiny in favor of a more fluid evaluation based upon individual performance. It promotes a weakening of the prevailing authority or vertical relational model of action taking and issue resolution in favor of one that features a collateral or horizontal bias. It encourages social mobility and role change, which is the converse of fixed destiny, by both providing the empathic and projective support which those undergoing these processes require and according them the privacy which reduced public scrutiny makes possible. The decrease in the intensity of internal interaction is accompanied by an increase in external contact which, in turn, increases the rate of the social system's exposure to change and the chance that more changes will be adopted. Had this contrasting value system taken hold, there would have been less communal equity in chaining young Marco Antonio Sanchez to his family's unfortunate temperamental history, or in punishing Alberto Bermudez for his contrary inclinations. But these flexibilities would have been gained only at the price of the weakening of a stable and cohesive social order which, whatever the damage it inflicts on individuals, has given the system the historical stability which industrialization requires.

#### 4) Internal Forces Tending Towards Change

Despite the success of the El Sanctuarian social system in maintaining its traditional integrity and holding off external forces to this point, the harbingers of a changed circumstance - some of them results of the system's own historical success - are already at work. One of these has to do with the problem of sheer size. Patronal relations with a work force exceeding 100 are of a different quality than those where 20 or thirty employees, perhaps belonging to no more than 10 or 12 families, are involved. Moreover, the population of the village continues to expand despite the provisions against immigration and, as their potential clientele expands, new taverns are springing up along the



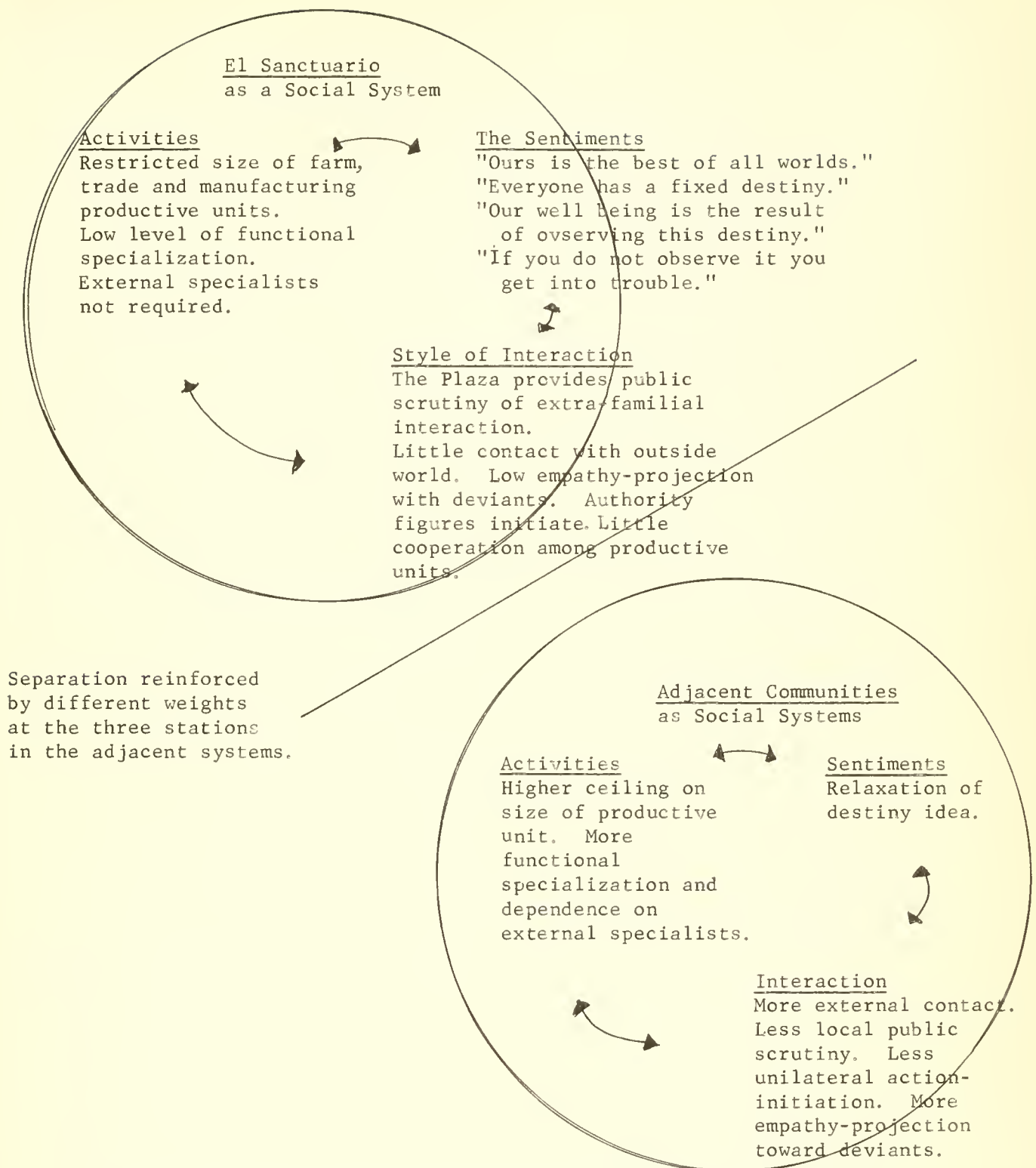


Figure 1--Elements in the Social System of El Sanctuario Contrasted  
Same Elements in Social Systems of Adjacent Communities.





roadways that lead to the plaza, but beyond the range of the vigilance of the authority figures earlier described.

But the prior tendencies towards change are being housed in the manufacturing establishments which the village has set up on its periphery. Here are being experienced the subtle out-of-jointednesses which the established routines and usages have proved incapable of accommodating. Here the new forms are being hammered out, forms which will eventually communicate themselves back to the plaza. These recent emergences are so complexly rooted in both the social and technical orders that it is fruitless to attempt to assign a priority. For instance, it might be argued that the arrival of electric energy was clearly a technical overture which prompted a secondary and subordinate response in the social order; but it is not quite that simple. There is the matter of the social interplay which resulted in energy being brought to the village in the first place. There is also the interesting fact that only one of the many patrons has taken advantage of its arrival. At least until we have examined more closely the working out of these processes in a single factory and in a single work group, it seems best to abide by our conceptual model which holds these two forces to exist in a condition of reciprocal interdependence. With these thoughts, we now turn to an examination of the special character of the interactions, activities, and sentiments that were found to exist in Don José's factory.



PART IIDon Jose's Factory As a Social System

If El Sanctuario is at odds with the villages that surround it, Don Jose's plant is at odds with El Sanctuario, but in a different direction. By current definition of the word "modern" the village's deviation is towards the old, while Jose's is towards the new. The variant tendencies in the village have already been discussed; those in the plant are to be noted in the activities, interactions and sentiments that can be observed and listened to in a visit to Jose's factory. Modifications have been introduced in the plant's productive activities. Size, new kinds of personnel and changed work-force routines have undermined the old styles of interaction and nurtured subtle sentimental revision which is beginning to express itself in the productive routines. These modified activities, interactions and sentiments combine into a social system that reflects the modifications taking place in the component parts. In this section we identify this social system through its component parts and attempt some explanation of the distinctive function which it seems to be serving. Once the social organization of the factory has been established, the reader will be introduced to a single work group where the evolutionary processes under way can be examined more proximately.

Recent Modifications In La Nueva's Productive Activities

Jose's factory is officially known as "Ceramica Nueva, S.A.", but to the workers and villagers, simply as "La Nueva." To reach it, one drives out of the village towards the mountain wall to the east. It is a three-mile trip. En route, two small residential settlements are passed and various farms where corn and beans are being grown and cows are seen in the pastures. There is a small school where farm children can attend the first two grades. There are also numerous potteries hugging the depressions in the landscape where the water needed to turn their wheels is to be found. Some of the factories are visible only by the coal smoke rising from their baking kilns. There are no automotive vehicles on the road save



the factory trucks. Jose picks up pedestrians except at the beginning and end of the day, when he would be transporting another patron's workers. Farther out small clusters of them wait for his truck to pass. La Nueva has two trucks, a dump truck driven by a young relative of Jose and a pickup which Jose himself drives.

After a gradual, two-mile climb, but just short of the mountainside proper, the road turns to the left, surmounts a mountain flank, and drops rapidly into a final extension of the valley floor before the river narrows into a gorge that works its way back up into the mountains. Two very small potteries, one of them not operating, lie up the road, but below sit the two factory buildings and the farm with its vacation house that constitute Don Jose's principal world. The driveway to the plant drops down abruptly to river level passing, as it does, several modest farm buildings to which Jose brings his family during school vacations. To the left, under the mountain flank, is a cultivated field between the farm buildings and the river. Jose takes special pleasure leading visitors through his stables and fields, hefting a handful of dirt as he explains his plans for increasing their productivity. Before he returns with the workers to the plaza at night, he always pulls the truck up to the farm buildings to allow his major domo to load on milk and vegetables for his family's use.

The driveway passes between the two factory buildings and ends at the river's edge. On the other side stretch the small farms that are typical of the region. The arrangement of the factory buildings is that illustrated in Figure 2. The older building to the right of the entrance driveway is of the one-story, tile roof construction typical of the village potteries, but enclosed by an adobe wall and entered by a single gate, an arrangement not encountered elsewhere and typical of Jose's effort to establish systematic work rules, reglamentos in his words, as a counter to the easy informality observable elsewhere. A young doorman has an office next to the entrance, and one of his duties is to screen and route visitors to the plant. The new building was put into service five months before this study was made and is less traditional in design and construction.



The production sequence at La Nueva is basically that encountered in other factories. Clay is mixed, molded into shape, baked, and decorated. The process starts at the far end of the old building where river water is sluiced upon a giant wooden water wheel. Power generated by the wheel is communicated by a series of gears to the Mixing Department, where a thumping stone crusher powders quartz and other additives. The power also turns a number of metal barrels in which the additives are mixed and rotates crude paddles in a series of concrete tanks where the clay and additives are sloshed in water. These mixing tanks are at graduated levels so that the aggregate finds its way by means of gravity to a final tank set over a coal fire which serves to dehydrate the mixture. When the desired consistency has been achieved, chunks of the pasta are placed in series in a large press to eliminate the small holes or bubbles that would mar the appearance of the final product. As a final step in the preparation routine, several husky workers slam huge hunks of the pressed clay on stone tables to further refine its consistency. It is now ready for the shaping or molding process.

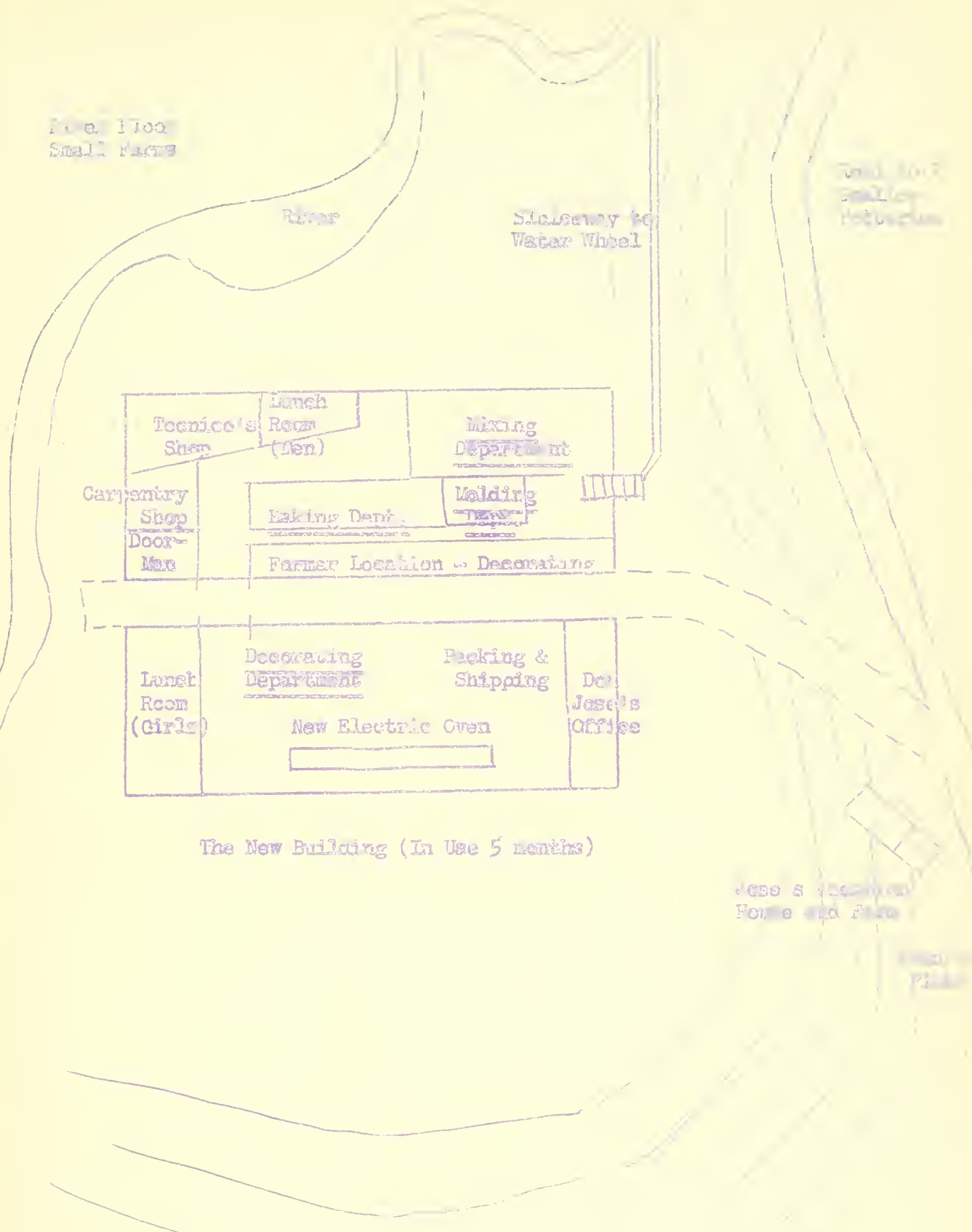
In the Molding Department the molder is the key operator. An assistant will have rolled the mass of clay into a cylinder and sliced it, as one would slice a loaf of bread, with a wire. The diameter of the cylinder depends upon whether his molder is making plates, saucers or soup dishes. A slice of clay is then slapped onto a plaster mold, which the molder places upon a turning wheel. By bringing a lever with a metal edge to bear against the rotating mold caked with its slice of clay, he gives the piece its final shape. A molder will shape five to ten thousand pieces a day, depending upon the item worked. The boy who serves as his assistant next removes the mold to a rack, where the shaped piece dries for 24 hours before being moved to the other side of the Molding Department, where a polisher trims the edge of the piece, which is now ready for baking.

The Baking Department consists of a series of roof-high kilns surrounded by racks of ware and piles of the rough ceramic containers in which the ware is placed for baking. The departmental workers stack the partly dried or "green"





File 1100  
Small Farms



The New Building (In Use 5 months)

Dr. Jose's Office  
Home and Farm

Figure 2 - Old and New Buildings at Cerro Nueva and Work Area



pieces in these containers and carry them to the ovens to be piled on top of one another. When the oven has been completely filled, the door is sealed by a mason and the firing is commenced. Chinaware is baked several times. Between two of the bakings it is dipped in a reddish liquid which gives it its final gloss. After the oven is cooled, the containers are carried out and the ware is given a spot visual check to make sure that it is ready to be decorated.

In the Decorating Department a girl places the baked piece on a disk rotated by foot power and runs a paint brush around the upper edge. On occasion she adds a hand-painted floral design. The decorated piece is now placed on a ceramic tray which is mounted on a metal cart that moves along a track through the newly-installed electric oven. Once the painted design is baked into place, the ware passes to an inspection area where several girls test each piece by listening to the tone it makes when struck by a small metal bar. Unsuitable pieces are rejected and those that pass are divided into three categories according to quality. The finished chinaware is then wrapped in wood shavings and crated in wooden boxes to be shipped to the city.

Through some mechanization and utilization of the newly-arrived electric energy, Jose has managed to increase the productive capacity of the basic four steps. He has added a gasoline engine to rotate the molders' wheels, but with the alternative of changing back to water power during occasional power failures. His basic new advantage is to be found in the baking procedures. By substituting oil burners for coal, he has been able to double the capacity of the kilns by cutting firing time from 36 to 18 hours. The use of the new electric oven for glazing after decoration has also expanded the capacity of the old kilns. The full force of the new mechanization has been felt in the Baking Department with expanded capacity at this stage making possible higher activity in the other three and putting pressure on them for higher output. Other than these changes and some rationalization of work flow, there has been no departure from standard Sanctuarian potting procedure, although Jose has further moves in mind. There is no



conveyorization or even carting except through the electric oven. The "green" ware is transported on planks and the baked ware, in crates. Even the passage of the metal carts through the electric oven is accomplished by a hand-powered winch.

But the advantage gained by means of some mechanization of the baking procedures has made it possible for La Nueva to double the size of its work force in relation to that of its nearest competitor. Forty men and boys are employed in the Molding Department, the heaviest congregation of productive workers to be found anywhere in the village. The other departments require 15 to 20 workers each, bringing total employment to 110. Since Jose took over management of La Nueva 10 years ago, sales have quadrupled to their present level of \$200,000.

Doubled capacity, an enlarged work force in several departments, and the transfer of the decorators to the new building have had a second effect. These changes have increased the concentration of workers at strategic points throughout the plant, and these strategic and more populous centers have become physically segregated from the others by the racks of work in process, now doubled in number. These racks effectively screen from one another, for instance, the Mixing, Molding and Baking Departments. The new mechanical installations introduced to achieve this expansion have also changed traditional work arrangements in the Baking Department. With no fires to be banked or cleaned, the filling of the ovens can be done by older men without the help of their young sons, who used to work with them. They have also required that new kinds of specialists be hired and accommodated within the plant's managerial force.

#### Effect of Modifications on Plant Interactions

To service his new machines and provide for his expanded operation, Don Jose has had to recruit from outside special skills which the village did not provide. An older tecnico and two young mecanicos had been hired and brought to El Santuario within recent months. The tecnico is a ceramist who is concerned



with matters of product design and quality. He works in a little shop separated from the production processes and has very little to do with the workers. In his work he relates almost exclusively to Don Jose. He moved his family from the capital city of Bogota, but has established very little social relationship with the leading people at the plaza. On at least one occasion he incurred the wrath of the villagers by expressing ideas about divorce that ran counter to local codes. El Sanctuario's response to the tecnico with his disturbing ideas has been to isolate him both in the plaza and in the plant. He takes his mid-morning chocolate alone and goes with Jose to the plaza to take lunch at home. Jose ferries the girls back and forth to the plaza in the pickup truck. The superintendent and tecnico ride the cab with him.

Two young mecanicos are more in touch with the workers and not so easily isolated. One has charge of the Decorating Department, composed almost entirely of girls, and the important electric oven which it houses. He is a bachelor, and the girls say that he is muy querido. He is courting a village girl, an affair that is the basis of a good deal of light-hearted joking, but with important undertones. He sought unsuccessfully to organize the young men into a soccer team that would have put them in contact with players from other villages and from the city on a routine basis. He is also active in the Saint Vincent de Paul Society, the principal village charity strongly supported by the established patronal group, including Don Jose. Jose values him because of the skills he represents and because of his demonstrated ability to proceed moderately in installing the new techniques and in dealing with such sentimental backlash as the installation generates.

The second young mecanico has charge of the oil burners that fire the kilns and is directly implicated in the disruption that mechanical innovation is creating in the Baking Department. The old-line production superintendent told me, "The workers are cowards when it comes to machines." The workers in the Baking Department are against the new burners. They say, "This time Don Jose is





really going under." The young mecanico in charge of the oil burners sees it this way: "All progress is made at someone's personal loss. Changes always hurt someone. For instance, the workers like to take home sacks of coal ash to use in their kitchens. With the new heaters this is no longer possible. Previously we needed 36 hours to heat the kilns. Now we do it in 18. Time is the key and we gain time; but someone else loses." The workers are also disadvantaged in that, as additional plant space becomes available, it is no longer practicable for their women to mold handles at home under the traditional "putting out" system. The mecanico in Baking left his wife and family in the city and travels to visit them week ends. His absence on Sundays, the principal plaza day, precludes the establishment of any important village relationships. His participation in the task of sentimental restructuring, while sympathetically advanced, as indicated above, is kept somewhat in bounds by the fact that his duties put him into contact only with the older, less plastic workers in the Baking Department. Even here the direct supervisory responsibility has been retained by the production superintendent.

The two mecanicos, together with the truck driver and a young man who guards the door and figures the pay, constitute a distinct sub-group which represents the first social compartmentalization that has emerged in the management structure of any of the village potteries. The doorman-bookkeeper, son of a factory worker, managed to get a few years commercial training outside the village. He does not relate strongly either to Don Jose or to the workers. In place of activity in the Saint Vincent de Paul Society, the charity of the older patrons, he is director of a parochial savings and loan association established recently by one of the priests. He makes a point of saying that he has never entered the production areas of the plant. The truck driver is a young relative of Jose. He has traveled the country for several years as an assistant to a trucker before returning to the village to settle down. Using the dump truck, he delivers finished product to city outlets, carts in clay, and transports

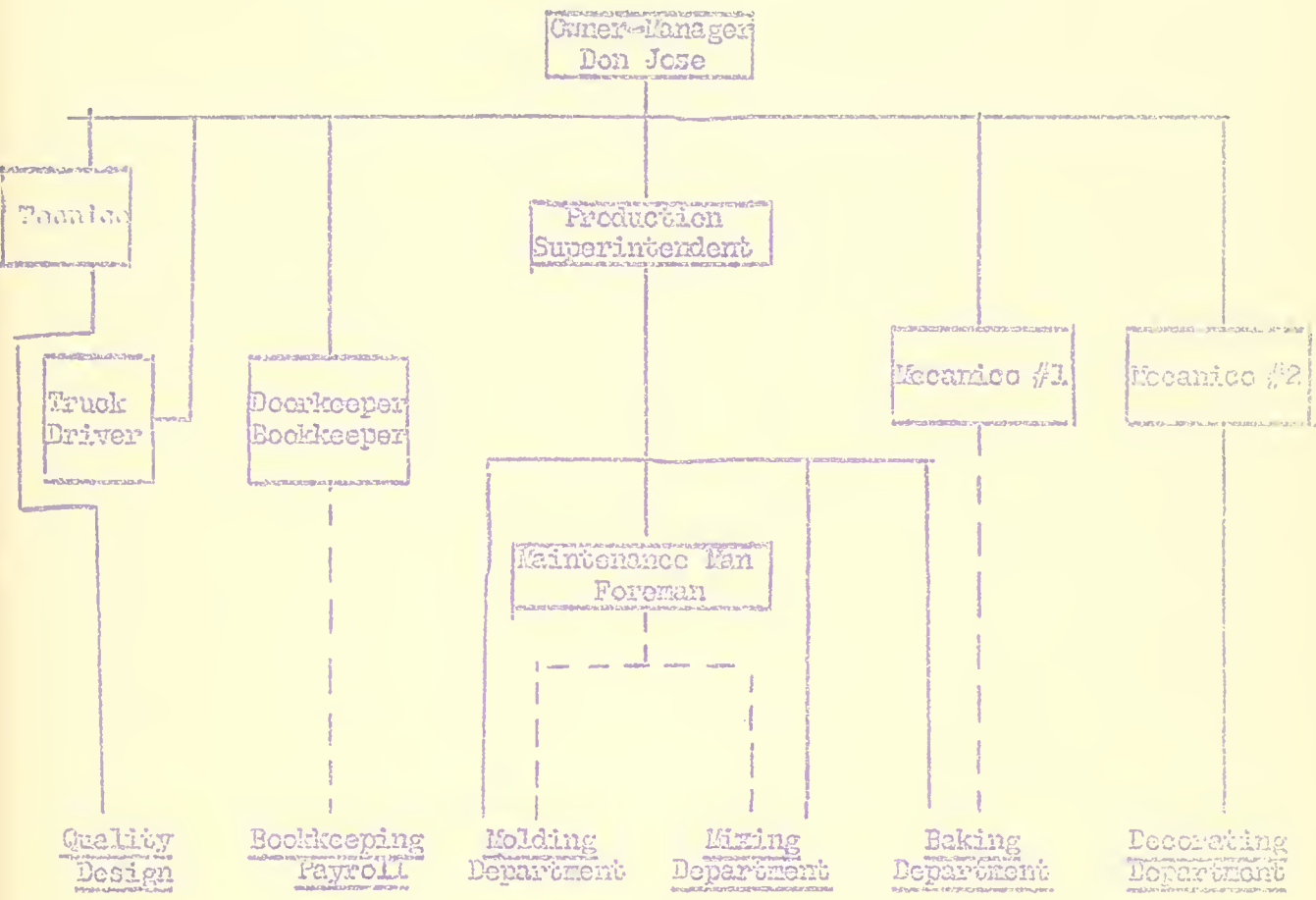


male workers to and from the plaza. The doorman and two mecanicos ride the cab with him. The four take their mid-morning "breakfast" break in the doorman's office next to the single entry to the plant. They also prepare lunch there. The sub-system which they represent may be a key vehicle by which change-oriented sentiments are nurtured and psychic support provided to offset any misgivings that one of them might have as the result of his participation in the socially-disrupting mechanization activities under way in the plant.

Designing an organization chart that met the requirements of all parties proved to be an impossible undertaking. Obviously, La Nueva's organizational realities were in a state of flux and there was sensitivity about giving them explicit statement. Figure 3 is offered, therefore, as the author's view of the work relationships which he observed. The production superintendent is a long-service employee of Jose's own age. His family owns another pottery. In the patron's absence he is the unquestioned authority. He says: "When any of the others have a problem, they come to me. If I can't solve the problem, I go to Don Jose. He is the supreme court." He operates in Jose's social circle in the village. When there was a death in Jose's family, he marched to the cemetery next to his patron. By some unstated compact between the two Jose spends more time and his assistant, less in the Baking and Decorating Departments, where the impact of recent mechanization is most noticeable.

The social structuring within the managerial component of La Nueva, delicate because of the change being experienced, tended to restrict the mobility of the visiting investigator. This structuring was particularly reflected in eating and travel arrangements. The mid-morning breakfast break provided me an opportunity to chat with workers enjoying their leisure with selected associates. All parties made it clear to me that it was appropriate that I take my refreshment in the superintendent's office. The superintendent had chocolate prepared for me and sent to his office. He brought special bread and meat from home. Whenever I sought to return to the plaza in the larger truck, he courteously





Unbroken Line ↔ Supervisory Relationship  
 Dotted Line ↔ Technical Relationship

Figure 3 - Researcher's Impression of Organizational Relationships at C. Ramica La Nuova.



insisted that I move to the one driven by Jose. While the superintendent took the lead in underscoring such protocol, his wishes were underscored by the signals I was receiving from both the subordinate supervisors and the workers themselves.

But the power of the established arrangements to maintain some sort of consistent integrity was felt even more by a young worker who had recently been upgraded. Eighteen, Orlando is the oldest son of a respected factory family. He has worked for five years as an assistant and, later, as a polisher in the Molding Department. He is attractive, articulate and responsible; but, with no more than two years of formal education, he had to ask me to write for a correspondence course in motors that he wished to take. As he grew older, Orlando came to admire the young truck driver and would seek out his company at his canteen on the plaza. There is a rigid protocol by which position in the truck is maintained en route to the factory. Supervisors sit in the cab; the older workers stand in the front part of the elevated body; and the boys sit at the rear, their bare feet hanging over the tailgate. About a year ago Orlando started riding the lefthand running board where he could chat with his friend, the driver. Since he was by now the leader of the younger element in the Molding Department, both socially and in terms of productivity, nobody saw fit to challenge his move.

During the period of this study Don Jose decided to convert Orlando into a spare driver who could take his place in the pickup when he would be away on business. He transferred him from the Molding Department into the tecnico's little shop, from which he could absent himself more readily for driving duty. Orlando was now ready to move into new plant social circles, but the shift was not easily accomplished. He felt drawn back to the Molding Department during the breakfast break. One morning, when I stopped by the shop where he was working, he asked if I were going to have coffee later in the doorman's office. At the appointed hour Orlando appeared at the office, but was given a cup of





coffee only after severe humiliation on the part of the others which, it seemed to me, had more serious undertones than the joking commentary in which it was couched.

The net effect of the introduction of new machines and new kinds of people to tend them has been a highly-specialized, delicately intricate plan for incorporating them. The older tecnico has been effectively isolated from any genuine engagement. His only real relationship is with Don Jose, and that only on technical matters. One of the young mecanicos is involved only with the older men in the Baking Department and has not been given direct supervisory responsibility. Since he returns to the city week ends, he poses no threat to established values on the plaza. The second young man does have supervision authority, but only over the girls in the Decorating Department; the girls, as we will see later, are at this stage less sensitive to the change processes. This second mecanico enters into engagement with the world of the plaza, but under Jose's close supervision and sponsorship, as indicated by his participation in the Saint Vincent de Paul Society. His courtship of a village girl gives further promise that his capacity for effective deviance will be under stronger control in the future. Finally, a new sub-group, including in its number the traveled truck driver and the specially educated doorman-bookkeeper, has emerged to provide for incorporation and systematic expression of the new values of its members.

#### Interactions Between Workers and Superiors

On the basis of size alone, manager-worker relationships at La Nueva are of a slightly different character than those encountered in other village potteries. Don Jose states it this way: "We have a different ambiente here. The workers that leave here are never satisfied elsewhere and those that come from other factories need time to adjust." The workers in the other potteries are directly supervised by their patron or plant owner, with only a major domo



to assist him at times in matters of maintenance and materials supply. Some area and functional specialization is beginning to emerge at La Nueva. It has been noted that mechanization has been introduced in the sections of the plant manned by the less plastic, more resistant worker elements - the old men in Baking and the girls in Decorating. It is also interesting that Jose has assumed direct supervision of these areas, leaving day-to-day control of the remaining departments in the hands of his principal assistant, the production superintendent. The latter has one foreman working under him, a former molder, who restricts himself largely to matters of maintenance and materials supply in the Mixing and Molding Departments. Jose, on the other hand, has given the more viable of the young mecanicos broad supervisory control over the Decorating Department.

The production superintendent believes that a superior (patron) cannot be too familiar with people without losing their respect. He cites the case of Sanchez, the alcoholic, who accosted him for a loan in the plaza. When, with an eye to the man's condition, the request was refused, Sanchez became abusive. The next morning the superintendent called the worker into his office and told him: "I am in command, both here and in the plaza!" The superintendent, with intermediate supervisors set up in all the departments, now likes to conceive of himself as an expert in matters of personnel administration and personal issue resolution. He expresses it as follows: "I understand the workers better than the others. You have to be firm, but have respect for individual differences. You have to deal with the individual por genio. Some you shout at; others you coax. The people we have here are good, but sometimes they have trouble with their wives or girl friends or just get bored (aburrido). They speak disrespectfully to their supervisors. Usually they come back within a few minutes to apologize. 'I was bored,' they will tell me. I forgive them. If they don't come to apologize, I have to send them home. They must show respect (hay que respetar.)"



The relationship between the production superintendent, foreman and work force is typical of the patron-major-domo-worker interaction to be found in other village potteries. Hector, a quiet, middle-aged individual, is the foreman of the Molding and Mixing Departments. He returned to La Nueva to fill this newly-created post about six months before this study was undertaken. Until that time he had served as a molder in another plant. Speaking of his foreman, the superintendent says: "Some men are too dry in dealing with the workers to serve as desirable foremen, and some are too familiar. If a foreman is too dry, he loses the confidence of his people; if he's too familiar, they take advantage of him. Hector is the dry type. He can't deal with the workers' problems. If they want anything, they come to me." Those among the workers who think about such things see Hector as a further restriction on their self-determination and self-activation. The molder who is now union president says: "Before Hector came, we used to do more things for ourselves. I was the one who used to go for parts for the (potters') wheels or helped fix the ones we have." With little support from either direction for undertaking a broader role, he busies himself with matters of machine maintenance, materials flow, and the adjudication of occasional differences between a molder and a polisher in regard to the quality of the pieces that pass between them. Otherwise, Hector is a lonely figure. He may be seen taking his morning chocolate in an out-of-the-way corner or working alone on one of the machines during the lunch break. Some say that he is a heavy drinker, but that he does this away from the plaza and with friends who are not attached to La Nueva.

Jose faultlessly fulfills the old role which the village traditions impose upon the patron, but more is required of him because of the distinctiveness of his plant. La Nueva is the only plant with a sizeable complement of female workers. Many have none. It is the only one that has two vehicles to bring the workers up to the plant. Jose drives the pickup truck that transports the girls. At seven o'clock it leaves the plaza, stopping en route to permit



neighborhood groups to enter. For a reason not clear to me all of La Nueva's workers live on the east side of the plaza. Driving to the plant, Jose refers constantly to his watch and keeps an eye on his rear-view mirror to make sure that his passengers are on board. No greetings are exchanged. Little conversation takes place in the cab.

The patron's day starts with a quick inspection of the mixing apparatus. He passes through the Molding Department, but does not stop or offer any salutation. He checks the ovens in the Baking Department, tapping pieces of chinaware to hear if the tone indicates an acceptable quality. He spends considerable time with the two mecanicos, reviewing new installations, using arm and body motions to underscore his points. With the driver he reviews the truck's schedule, which may include picking up feed for his cattle or fertilizer for his gardens. After stopping to go over paper work with his doorman-bookkeeper, he enters the Decorating Department where he sits at the table to pass the time of day with some of the senior girls. Except with the girls and a few of the very old men, he never initiates conversation. When approached, he adopts the stance of the intent and interested listener. Listening is what Jose does best. His morning tour done, the patron enters his private office above the Decorating Department floor. Here he studies his financial records, disposes of correspondence, including orders, and receives such visitors as make their way up to the plant. The latter may include his parttime accountant, a cousin who lives in the city, one of the parish priests, or a government official. Sometimes he tries to translate English-language trade periodicals to which he subscribes. He receives numerous requests for charity and for help in civic undertakings.

Alone among the village patrons, Jose is reaching for new ways of relating with his work force. The pay system in the Molding Department has switched on several occasions from a basic day rate to a simple piece-rate incentive program. The method in use seems to be determined by the need to build







(1)



(2)



(3)



(4)

(Clockwise) Don José, Plaza and the church from a distance, Don José's factory and the water wheel in an older pottery.



up inventory at the year-end, Christmas-buying season approached. The piece-rate system is generally acceptable to all parties. The patrons assume that the workers value the opportunity to earn more money, generally a correct assumption, since the high market demand coincides with the workers' time of heavy purchases. Jose's father says: "Jose would like to use the piece-rate system at all times, but the workers get sloppy about quality. When this happens, he has to go back to a day rate in order to discipline them." Only the boys who serve as assistants to the molders voice any opposition to the plan. They are unhappy to lose their play and recreation time when their molders decide to work through the breakfast break or cut short the lunch break. They also resent the additional pressure from the men working on a piece rate. "There was a time when some of the men used to beat us with their hands or with sticks," one of them told me, "but they don't do this any more. But there's never any time to rest or relax with friends."

During the period of this study Jose decided that the time had come to switch from day rates to piece rates. The matter of establishing rates for the molding and polishing operations and for items produced (cups, bowls, plates, etc.) came up. Jose called all the men and boys to his office and explained what he was going to do and why. He suggested that the workers get together and organize a committee (junta) to work with him in resolving the matter. The struggles of the molders to organize such a junta provided a wealth of data on the social organization of the group, which we shall ~~examine~~ examine more closely at a later point. The efforts failed, however, as the workers were not able to organize themselves to negotiate the rates. "We're very poorly prepared for such matters," said the molder who is president of the union. To which Don Jose replied, "Too much individualism, too much egoism." Although this gambit did not succeed, the fact that Don Jose attempted it and the fact that it was not rejected out-of-hand by all elements in the worker component is further evidence that there are things afoot in Ceramica La Nueva which are beyond the historical tradition of the village.



### Interactions Among the Workers Themselves

The production sequences at La Nueva are those of the other potteries in El Santuario; yet a distinctive tenor in terms of which people congregate to man them is readily apparent. In the smaller potteries, where as few as 20 workers may be employed, the plaza is the table around which the molders and polishers gather. Sometimes one person performs both of these operations. The mixing, baking, and decorating functions are usually performed within sight of this plaza, where general scrutiny is possible and there exists the opportunity to sanction distinctive manners of comportment. Thus, boys, young men and old, fathers and sons, and girls, if the plant employs any, are thrown into fairly immediate spatial interaction.

At La Nueva the same production sequences have been stretched out over a greater area and isolated by the increased number of racks of goods in process. This eventuality - plus the social complication of the managerial component - has provided the spatial and organizational cover which is important in that it makes possible the sentimental compartmentalization which, as we shall see, is already coming into play.

The stretch-out of production sequences at La Nueva has created four distinct worker units, each with its own special flavor and work-force composition. As indicated in Figure 4, the Mixing Department is the habitat of the strong young men. When pressed, they cite a preference for employment in the Molding Department, but add that this is impossible because "no es mi arte, no es my destino." The Molding Department numbers 40 men and boys, the largest productive congregation of workers in the village's history. This is the site of the piece-rate incentive that makes possible individual evaluation and interpersonal comparison in a manner hitherto unknown. It is also the place where the young men desire to be employed, although they frequently refer to it as being "cold" even when the midday sun is high in the sky. Two instances of molders being transferred out of the Molding Department brought about severe



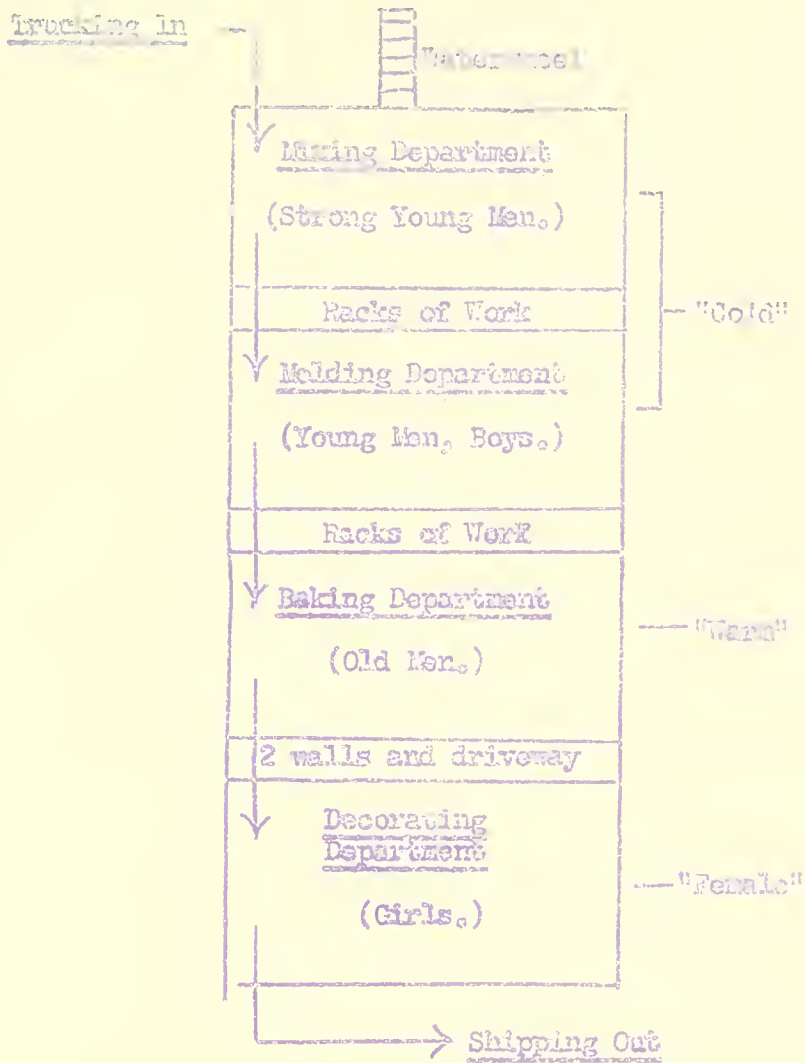


Figure 4 - Spatial and Emotional Identification of La Nueva's Four Production Departments.





personal grief. One of the transferred molders expressed it as follows: "I tried to do everything. I helped the younger workers. I always cooperated. Now this happens to me. I couldn't sleep last night." The Baking Department is where the older men work. Formerly, although less frequently now, they had their sons as assistants. The ovens provide warmth against the morning chill. One middle-aged worker who was moved there from the Mixing Department told me that he liked it better because it was warmer. The Decorating Department is the habitat of the girls.

It has been noted already that the location of the older men serves as a buffer between the girls and the young men, thus providing for the separation of the sexes, an important custom in village lore. The girls sometimes pass through the Baking Department, but would never think of entering the Molding Department. "They wouldn't let us; they would yell at us," say the girls. "They are afraid they might lose their virginity if they did," say the younger men.

On my last day in the plant I presented the molders with a simulated oil painting of John Kennedy as a memento of my visit. I suggested that they invite the girls in for the presentation ceremony. The molders, however, would have none of that idea. If a girl wished to speak to me during my hours in the plant, which I spent largely in the Molding Department, she would send a boy to summon me. A personal impression that has received massive confirmation in my years spent in the underdeveloped world is that women are the last and final defense of the old order. Such retardation the men in the Molding Department apparently have no appetite to entertain.

The new arrangement has also sundered workplace collaboration between the generations and exposed the son to other influences than those emanating from his father. "It is better for a son to work with his father. In that way the father can know what he's doing," the oldest of the molders told me. But



this man's own two sons, who at the beginning of the study had served as his assistants, had become "bored" and left the employ of the company even though it meant months of waiting before they secured a place in another pottery. "Boys will be boys," said the father.

The last remnant of the father-son relationship is tied in with eating arrangements. For the mid-morning breakfast break the father brings hot chocolate, cornbread, and sometimes eggs and meat. These he heats next to one of the kilns before his son comes over to join him for the meal. Temporarily there is a group of fathers and sons squatting on wooden crates next to a warm oven. But the sons gulp down their food and hurry back to be with their work companions in the molding room. Recently Jose set up a lunch room with tables and benches and a hearth, where food may be heated. No other pottery has such an area. Here the family groups disintegrate rapidly as the boys run off to eat or play with their peers or a sympathetic molder whom they serve as assistant.

In a setting where a father has been all-important to his son, the shift of a youngster's affection to a factory worker who displays a contrasting style of relationship, contrasting genio, takes on special significance. I remember the first time that young Marco Antonio Sanchez, who labors under the "heavy drinker" stereotype, brought his father to meet me in my hotel room. It was all-important to the boy that I should like this man whose alcoholic excesses had reduced the family to the direst of straits. "When I got bored with studying in the third grade, my father spoke to the patron and found me a place in the factory," said Marco Antonio in order to establish his father's credentials.

One segment of workers in the Molding Department continues to manifest the paternal traits. The boys describe these men as bravo (strict). The men eat alone, ride to and from the plant without conversation, and keep the distance which the production superintendent claims to be the basis of respect



and a healthy workplace relationship. But this element is under strong pressure because others are testing a new role. The youngsters classify the molders who constitute this second element as "simpatico" or "de buen genio." These men circulate easily, loan money, and exchange jokes. A few of them have worked or traveled in the outside world. Evidence will be introduced in the concluding section to indicate that this classification, which the assistants in the Molding Department themselves introduced, is an important cue to a division in worker sentiment that is an important explanation of changes in the social organization of the plant that is already well advanced.

#### Sentimental Revision Within the Social System

Don Jose's temperament and inclinations are such that, with an eye to the future, he keeps both feet planted in the reality of the present. The arrival of electric energy just before the start of this study made some mechanization possible, but Jose was the only one of the patrons to undertake such a course. He realized that cooperative activity and some specialization among the pottery owners would make mechanization economical. When his efforts in this direction were resisted, he undertook limited mechanization on his own even though it meant temporary over-capitalization for La Nueva.

But the rejection of his overture by the older generation of patrons had a second and perhaps more important effect on La Nueva's owner-manager. It isolated him from routine interaction with the other patrons and incited him to even further experimentation, to further emphasis on the differences which gave his operation its distinctive character. "I plan no more approaches to them," he told me. "I prefer to stay out of their affairs and to deal with them from a distance. It's the next generation that will do the things that have to be done." Rebuffed externally, Jose turned inwardly to the operation of his own plant. He brought in machines and mechanics to take care of them. Later he will introduce engineers, first as visiting consultants, then as residents.



These mechanics and engineers will attend first to the machines. Next they will turn their attention to worker routines and to matters of work-force organization and motivation. While the old order, in terms of which El Sanctuario has flourished, receives massive confirmation in the social arrangements within La Nueva, it has proved inadequate to the new routines under way. Its edges are beginning to fray. The battle is already joined and, far from resisting the new influences at work, Jose is positively encouraging them.

Delegating the established routines to the attention of his production superintendent, Jose is giving personal leadership in matters of technical innovation. This separation of function has resulted in a compartmentalization within the managerial complement, an eventuality which has reinforced the disparate sentiments and spawned a social structure adequate to their maintenance. With full knowledge of La Nueva's patron or not, he has contributed to the perpetuation of the new division. The young mecanico whose involvement put him into direct engagement with social forces, both in the plant and at the plaza, was for this reason most vulnerable in the matter of his personal survival. Jose assured this survival by personally sponsoring the newcomer's membership in the Saint Vincent de Paul Society, thus according him a greater measure of security in undertaking his unsettling work of technical revision. This involvement, plus membership in a new sub-system with the three other young men currently under less social pressure, gives the recent arrival adequate psychic support to persevere.

Meanwhile the technical upgrading of the Baking Department, plus the addition of a new building, has increased La Nueva's productive capacity and the size of its work force. As production stretched throughout the doubled floor capacity and the open spaces between production stages filled up with work in process, the four production departments gained spatial or geographic isolation and a stronger departmental identity. Important sentiments having to do with separation of the sexes and separation of generations became attached to these





discreet identities as evidenced by the fact that movement between them has become a more difficult emotional experience. The old routines, such as the carrying of food from home to be shared in the plant by the father and his sons, were weakened. A worker oriented to another generation might continue in a department whose identity was tied up with another one, but he experienced pressure in doing so, as witness the simpatico-bravo division within the Molding Department.

Jose encourages this process, as with his provocative invitation to the members of the Molding Department to organize a junta to negotiate a new pay system with him. The gambit fails. But it results in new stirrings within this department which, because of its heavy congregation of younger workers spatially segregated from the rest of the plant and with means of interpersonal productive evaluation, is the scene of the first change processes that are finding expression.

Thus we may consider La Nueva to be El Sanctuario's principal aberration, an enclosed arena within which are being played out certain processes which will, in time, feed back upon and upend a cherished and deeply-entrenched social order. These processes had their start in the arrival of electric energy that made further mechanization possible and in the rejection by the older generation of patrons of Don Jose's proposal by which such mechanization might have been undertaken. Disassociating himself from this generation, he has set afoot in his own plant activities of both a technical and social nature. These activities have provided for complication of both the managerial and worker components and sparked a dynamic interplay between the newly-fashioned entities - an interplay which Jose himself encourages. By means of such interplay the purposes of technical innovation and social reconstitution are advanced.

In the final section of our study we will become acquainted with one work group, that of the Molding Department, which is at the forefront of this



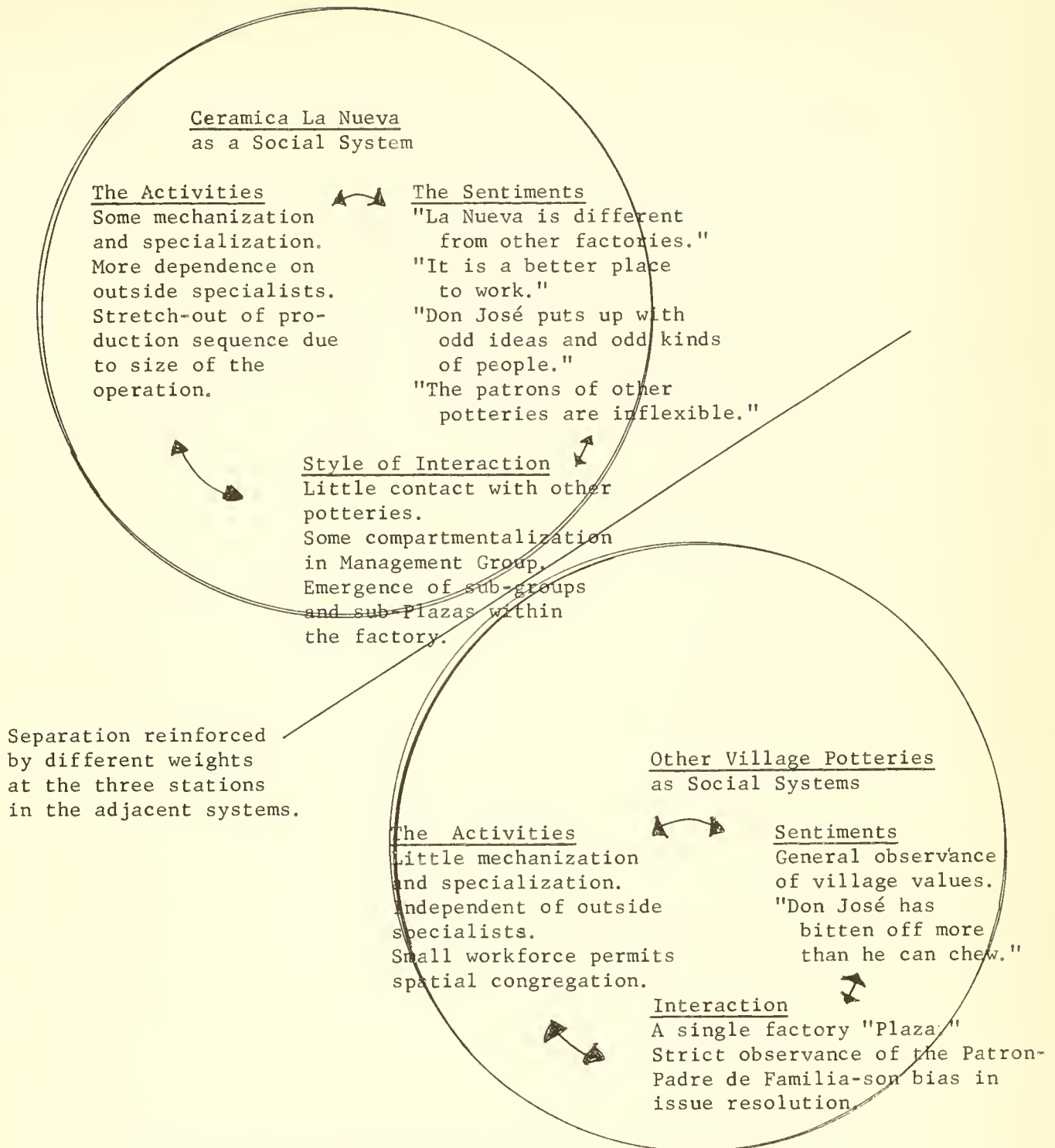


Figure 5--Elements in the Social System of Ceramica La Nueva  
Contrasted with Same Elements in Other Village Potteries.



development. We will establish the structure of this work group and make some statement about the system of influences and opinions by which the processes which give it its dynamic quality are working out. When this has been accomplished, the reader will have a complete picture of one instance of the encounter between technology and social tradition and will have had the opportunity to see how these two elements play back one upon the other with consequences that eventually find their way back to the plaza and the larger Sanctuarian society.



## Part III

The Molding Department in Don José's Factory as a Social System

We are now ready to take the final reading in our exercise, to plot the structure of a single work group in José's factory and to match it up against what we already know about the expression that the systemic elements have taken in the village as a whole.

Structure is used here to mean the stance that the systemic elements had taken at the time that the reading was made. To define its contours, we must sort through such group activities, sentiments and interactions as we have at our disposal. For activities, we can organize the data we have about workplace furniture, installations, work in process, the pathways and blockages which give the group its productive capacity and impose on it physical parameters within which the human nexus must emerge. We can also say something about the range of sentiments that the group was able to incorporate and how these sentiments expressed themselves in relationships both within the department and externally with other elements in the factory. An inventory of sentiments on so small a stage will lead us to consideration of specific individuals on a scale not heretofore possible. Whereas earlier we used personal anecdotes to illustrate general traits, in this section we will need to get better acquainted with those individuals who are the repositories of the contrasting sentiments which together combine to give the system its particular bias. We shall also have the opportunity to see how this systemic bias or structure expresses itself in substantive plant issues including the matter of individual worker productivity.





Finally, we will want to match the structure so derived against the structure of the larger entity. The work group is both a sub-system of the village system and an entity with its own geometrical definition. What incongruencies between the two will be found to exist? What is the role of these incongruencies in the processes of industrialization and economic growth? A safe bet is that the rate of change (systemic revision) is greater in this particular sub-system than in the totality. If this is so we have located the place where occur the early accommodations that eventually well up and upend the larger system. We speak here not of primary causes, because these systemic accommodations are in part a response to other inputs. But the other inputs are more easily identified and already well known. What needs better understanding are the social processes by which they are accommodated and assured of survival.

#### How Was the Department for Follow-up Study Selected

Don José's plant was selected for detailed study because of the investigator's hunch that something special was going on there. From the point of view of anthropological curiosity, the older factories were more inviting. They had a color and a charm about them that José's lacked. They represented vanishing sociological curiosities that pleaded for documentation, but they did not house the critical change processes central to our inquiry. José's Cerámica Nueva was the one that was at odds with a relatively static local tradition. Here we could find out something about how these processes occurred.



The Molding Room was attractive for follow-up study again on the basis of the imprecise dynamics of the investigator's intuition. Something special was going on here as well! Entré to one of the other departments would have been more easily accomplished. The girls in the Decorating Department vied for the investigator's attention as they did for that of the patron. The older men in the Baking Department were charming and garrulous. The handful of strong young men that constituted the Mixing Department were isolated and lonesome. They welcomed visitors. It was in these settings that the Patron exchanged salutations and passed the time of day. One dealt with employees in these areas as individuals. Important innovation could be undertaken in the Baking Department, for instance, in the sure knowledge that the old timers would internalize their misgivings and go along with the change. External intervention in the other departments was as easily accomplished, but not in the one that we selected for study.

There was something about the contingent in the Molding Room that made its response to external overtures less predictable. It had established the integrity of its boundaries and specified the conditions under which they might be penetrated. The girls never entered the room; the old timers only occasionally. Don José passed through the room without making salutations. He left its supervision to his superintendent who worked out an intricate pattern of dealing with the Molders "por genio." When José was forced to interact with the Molders, as in the case of the change to incentive pay, his behavior became gingerly, over-stylized. He called all of them to his office and invited them to form a junta to help him establish the rates.



The newcomer did not establish instant rapport with the men in the Molding Room. The first reception was restrained and tentative. Only after the due process of certain internal workings had ground their way through did the welcome mat go out and individuals relax. I remember the deep impression that it made on me when one of the centrally-involved Polishers, who had been reserved up until this time, informed me that all of the men in the department appreciated my friendship, that I would always be welcome there. This came only after the beginning of my second extended visit. It was a short statement but practically the only one that this individual had made to me up to this point.

It was much later that the hunch proved out. If José's plant was at odds with the village ways, among la nueva's departments, the Molding Room was most at odds. The nature of its task, its technological centrality in the production sequence and its geographical centrality in the plant, the sheer size of the complement there employed and the kinds of people attracted to this employment - all of these factors combined to make it the place where the critical social innovations were being spun off. To understand why this was so we must undertake a more detailed scrutiny of the activities, sentiments and interactions found in this department.

#### Layout and Activities in the Molding Department

The men and boys in the Molding Room work around a single large table fitted on two sides with potters wheels and polishing disks. Below the table are a number of crude belts that communicate power by means of gears and axles from an electric motor or - when the power is interrupted - from the giant water wheel at the rear of the plant. The symmetry of the table is broken on



one side (see Exhibit 6) by an opening that houses the belt which is the principal link to the plantwide power systems. The Molders work at adjacent stations, on both sides of the table but in the direction towards the Mixing Room which is the source of the raw material employed. The Polishers fill in the remaining work stations. Each man has a boy to help him. This boy works behind and slightly to one side of the man that he helps. On all four sides of the table with its human complement are barricades of racks of ware in process. These racks segregate the Molders from the rest of the plant and give them some privacy. One enters the working area through an aisle between banks of racks.

The first impression that one receives upon entering the Molding area is one of grayness and, especially in the morning, of coldness. The task of the Polishers is to plane down the rough edge of the half-dried piece using a metal tool that resembles a single-edge safety razor. This operation raises a dust which settles over the machines, the table, the men and their clothing. The workers wear cotton shirts and trousers. Some wear aprons, a few shoes, most caps. The floor takes on the gray color of the broken pieces of ware that have been trampled into it over the years. Some of the shorter men and smaller boys have equipped themselves with low platforms to keep themselves at a convenient working level. These also have taken on the predominant gray tinge. The grayness may accentuate the cold, but the men constantly complain of being chilled, especially in the morning. Nowhere in the Molding Room is found the brilliant glow of oven, the touch of bright dress pattern or paint or white enamel, the splash of tropical sun on patio that one encounters elsewhere in the factory. Grayness is the predominant and unrelieved theme.





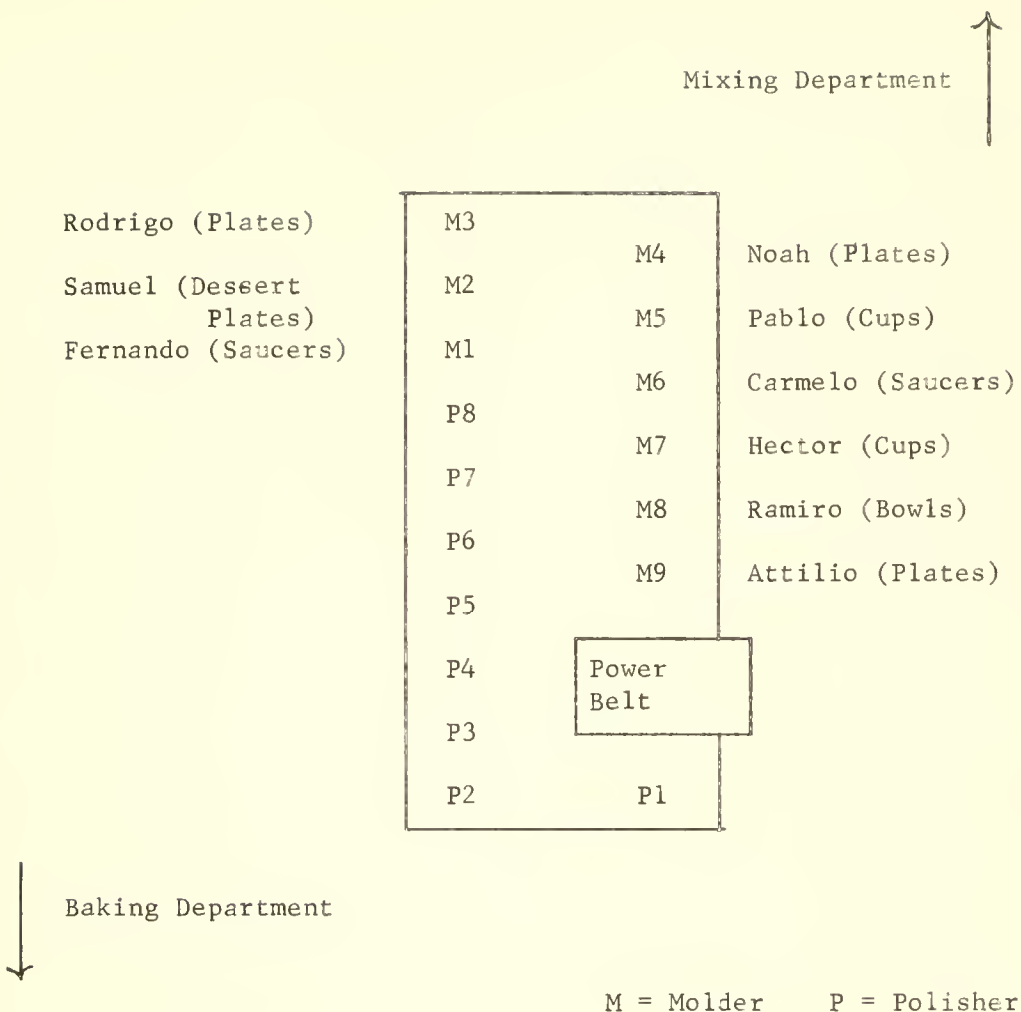


Exhibit 6--Work Locations of the Molders and the  
Item that Each Produced.



The strong young men in the Mixing Department bring in huge chunks of pounded clay. These are set down in front of the boys who serve as the Molders assistants. A boy then rolls the clay into cylinders, the diameter of which is determined by the item - cups, bowls, plates - that his Molder is working. The boy then slices the cylinder in half-inch slices using a wire. He then places a slice of clay on a plaster mold and slides the mold to his Molder who places it on a rotating disk onto which he lowers a caliber. The metal edge of the caliber presses down the clay and trims off excess quantities leaving an inverted piece of ware on the mold. This his assistant retrieves and, always on the run, places it on a plank that serves as a shelf on one of the racks in the banks behind. Then he repeats the process.

There are several spare boys to move the racks of molded pieces to the Polishers side of the room. The boys who work with each Polisher remove a pile of pieces from the molds and place them next to their Polisher's work station. The ware have now had twenty-four hours to dry. The Polisher places a piece on the rotating disk in front of him and smooths its edge with his small metal tool. His assistant retrieves the piece and vigorously polishes both sides with a wet sponge, his whole body including his head vigorously shaking as he does so. The piles of polished pieces are then returned to a plank to be carried by one of the spare boys to the Baking Department.

#### Status Factors Among the Workers in the Molding Department

There are three groups of workers in the Molding Department - the Molders, Polishers and Boys. In terms of age, marital status and pay the Molders are the highest ranked. This ranking is also evident in the



comments that I received both from managers and workers. The distinctiveness of the three groups is expressed in the type of headgear which workers wear, although there are several interesting exceptions which deserve special comment later.

The average age of the Molders is 36 compared to 26 for the Polishers and just under 17 for the boys. Seven of the nine Molders are married, only four of the Polishers, none of the Boys. The Molders have more years of service and more children. One of them is a home owner, all of the other men in the department either rent their home or live with parents.

The Molders also earn the most money. There are three basic daily pay rates - 11 pesos and twenty centavos (the Colombian peso at the time was ten to the dollar), 12.80 and 13.20. As indicated in Exhibit 7a, most of the Molders receive the highest rate while most of the Polishers receive the medium. All of the Boys receive the lowest rate. When Don José changed the pay system to piece-rate incentive, the Molders increased their output more than the Polishers. It was possible to transfer one Polisher to other work. This meant that the Polishers were processing as much work as the Molders. In spite of this the Molders rate per hundred pieces was set at a higher level again underscoring the general belief that the Molders work was more highly valued.

The men make little effort at visible differentiation. One has fashioned a crude cross out sticks. Several have tally sheets to record their output. Headgear was an exception. Here differentiation was in evidence. The Molders favored baseball style caps (see Exhibit 7b); the Polishers,



Position	No.	Average Age	Number Married	Rate of Pay		
				Highest	Medium	Lowest
Molders	9	36	7	6	2	1
Polishers	8	26	4	2	5	1
Boys	17	16+	-	-	-	17

Exhibit 7a--Age, Marital Status and Pay of  
Molding Department Workers.

Position	No.	Caps	Straws	Berets	Other
Molders	9	5	-	2	1
Polishers	8	-	4	-	3
Boys	17	2	4	7	1

Exhibit 7b--Type of Headgear Worn by Workers in  
The Molding Department.





modern straws with narrow brims and colored ribbons; the Boys, berets. A few men wore military style caps; two, old style felts such as those used by the local farmers; several used no hats at all. On a typical day three Molders, three Polishers and nine Boys were not wearing shoes.

Some social byplay is involved in the Polishers preference for straw hats. No Polisher wears the type of hat favored by the Molders and the Boys. The eight straw hats in the room are worn by the four youngest Polishers and the four oldest Boys. The eight constitute a social group. None of them express interest in being Molders. Nor does any of the centrally-involved Molders express a preference for polishing. The older Polishers want to be Molders and a few of the socially-excluded Molders express a preference for polishing. Some of these preferences are expressed in very low key preceded by the proviso that "One does what life gives one to do!" or "Polishing is not my destiny and one has to follow one's destiny!"

For purposes of economy, only the detailed data about the Molders will be presented. The Boys are for the most part an audience to events in the room, but an active audience whose responses contribute to the shape of events. An interesting dynamic is found in the ranks of the Polishers. They had formed into two subgroups according to age. Each group had a leading member. The critical divisions, however, are found among the Molders. Here one finds the sharpest contrasts of sentiment and behavior, at least rudimentary role division, and the mechanisms by which most departmental affairs are processed. In the pages that follow we will identify some of these sentiments, roles and mechanisms and offer an opinion as to what function they serve.



During the study, it was possible to become acquainted with all of the Molders - their sentiments, typical styles of behavior, and modes of association one with another. The information obtained can best be presented in terms of the individual's degree of deviation from village standards. In establishing such a scale, we remain true to the data that was collected. All of the comments and observations indicated that the workers make some such differentiation, even in their own terms. Noah, the oldest of the workers, works at Station 4, and is generally viewed as the most stable and most respected worker. He is the repository of respect and tradition, the king of the Molders. Attilio who works at Station 9 is at the other end of the scale. When I was first introduced to him somebody quipped "That's Fidel! Fidel Castro!" The others slot in between these two extremes.

#### Social Classification of the Molders--The Traditionalists

##### Don Noah

Don Noah is a reserved man, but genial, who has worked at La Nueva for nine years. He is of medium stature, slight and light complexioned. His father was a farm laborer near the village when Noah started work as an assistant Molder in another pottery. He was fourteen at the time. Nine years ago he came to work for Don José taking the station at the corner of the table nearest the Mixing Department where he makes plates. He has successfully resisted any relocation or shift of assignment. A few years ago the Molders and Polishers were segregated and relocated, but Noah came out with his same work station. He will not make saucers, bowls or cups even temporarily. "No es mi destino," he says. Noah's inflexibility in this regard receives unfavorable comment from Attilio and one of his friends.



Noah's sons have served as his assistants up until very recently, one for three years, another for four. As they approached twenty years of age they became "bored" and sought work in another pottery. "There is much inquietud among the young today," says Noah. "It is better for a boy to work alongside his father. That way the father can know what the son is doing, but boys will be boys!" Noah is the only man in the room who owns his own home. He and his sons have been completing it in their spare time.

Noah is widely respected. All of the others use the honorary Spanish prefix "Don" when they address him. "It wouldn't sound right not to use it," said one of the Boys. "Furthermore, Don Noah would wonder why I had suddenly stopped using it." The Boys consider him to be gruff at times. He rarely circulates or passes the time of day with his neighbors. He eats alone at a little stand facing the work table. He wears a beret rather than the cap favored by most of the Molders. There are two men in the room who are not members of the union. Don Noah is one of them. Don José and his Production Superintendent consider Noah to be the most influential of the workers in the Molding Department.

#### Don Pablo and Carmelo

Don Pablo makes cups. He is always busy with his work, but not too busy to carry on a running conversation with anyone who stops by. He does not look up from his work while he is talking. All conversation he turns to the single theme that interests him - poverty and its consequences. One morning, using the local idiom, I asked him how he had "woken up."



Always bad, Doctor! In our poverty one always wakes up poorly! We are terribly poor! We are lost! Here I am working all these years and what do I have to show for it? We are dead but not yet buried! I should leave now and start planting corn, but I don't have the money to get started. It's warmer working in the fields. Here it's always cold. We don't eat enough to keep warm! We don't have money to buy the proper clothing!

Even on the day of José's child's funeral, he responded to one of the Patron's relatives passing through in this vein. This is his conditioned response to all authority figures. Only once late at night when we were drinking at the Plaza did his thoughts turn to his youth and his earlier escapades. He recalled coming back from the next village on foot at dawn.

The others smile when Pablo starts talking, but they don't interrupt him! It may be that he is their spokesman for a theme that concerns them but which they find difficult to pursue. He was the only one of the traditionalists that spoke up at Don José's rate-fixing session. The other workers and the Boys appreciate Don Pablo. They call him "little Pablito" but not to his face. He goes off to another part of the plant to eat. He is considered gruff on work-related matters, but friendly enough - if somewhat eccentric - on other issues.

Pablo is a large man and fair. He wears old-style, bellbottom trousers and usually goes barefoot. One of his brothers is the key figure among the older Polishers. Another was a Polisher until very recently. When they were young, they worked with their father on the family farm. Fourteen years ago, Pablo came to La Nueva from another pottery. As is the case with his neighbor at the next station, Noah, he considers making cups to be his destiny and resists efforts to get him to shift temporarily to another item.







(1)



(2)



(3)



(4)

(Clockwise) Father, a Baker, and Son who is an Assistant Polisher; brother, a young Polisher and sister who works in the Decorating Department; two brothers who are Assistant Polishers; Don Pablo and his brother, a key Polisher.



Carmelo, the youngest of the Molders, is Pablo's protégé. The oldest of twelve children reared on a farm above the pottery, he used to make the forty-five minute trip by foot to attend the village school. After three years of schooling, he came to work as Pablo's assistant. Pablo taught him to mold.

At twenty-six, Carmelo is a shy, friendly man well liked by his associates. Only the younger boys call him "Don Carmelo." The others sometimes refer to him as "lover boy." Usually he makes saucers, but sometimes he shifts to bowls and cups. He and Pablo both wear the standard headgear of the Molders. He eats his meals at a little table, hidden by racks, that he and a friend from the Baking Department have set up.

#### Social Classification of the Molders--The Fidelistas

##### Attilio

Attilio who works at the other end of the table from Noah is a small, lithe, wizened man of a slightly darker complexion than the others. He was born in the small settlement adjacent to El Sanctuario that, years ago, constituted an Indian pueblo under the special protection of the Church.

Attilio is one of the few workers with no relatives in the factory. Family relationships are common both in La Neuva and its village. Few families have moved into the village and few have left, and the people joke about the fact that almost everyone is related. Colombians use two last names, their father's and their mother's. Thus, among the 39 workers in the Molding room a total of 78 names are possible. Yet there are only 33 which means that almost everybody has at least one immediate relative working nearby. Attilio is an exception.



Attilio has had exposure to the nearby city of Medellin and other parts of Colombia. As a young man, he worked for awhile in a chinaware factory in Medellin. He returned to the village a restless alert individual with no focus for his energies. He took up with the shiftless elements in the village, drinking, carousing, even flirting with marijuana. The successful conclusion of a long, covert courtship with the daughter of one of the "better" families in the village was to give Attilio's life its operational principle:

You wouldn't believe it, but we carried on a courtship for four years in this village without anyone knowing what was going on. Then she declared her love for me. I told her that any permanent relationship was impossible, that we were of different social classes. When I left to look for work in the city, she begged me to take her with me.

When I returned, her feelings had not changed. Such love should not go unrequited! I sought her father's permission to marry her. The father's response was twofold. He had a relative beat me up outside of a tavern and he sent the girl to Bogotá to learn to be a seamstress.

A year later she returned. She found me in a tavern, bare-foot, unshaven, drunk. Her feelings had not changed. I told her to pack her suitcase and wait for me. I left her with the Mother Superior at the girl's school and went to the rectory to arrange the marriage. The Pastor said my baptismal record was too old. I went to the settlement where I was born for a newer copy. When I got back, the Mother Superior told me that my girl wanted neither to see me nor to talk with me. I went to the tavern to develop a plan. I was sure that her father had paid the nun and the Pastor. Later I went to the convent and drove a knife into the door. I told the Mother Superior that I had not brought my girl friend there to be a prisoner. She sent for the mayor who convinced me that she was no longer in the convent, that she had again been sent out of the village.

I went to the city. A friend who owns a taxi loaned me two thousand pesos. For months I searched for her in every conceivable location. Finally, I found myself in the streets of the city. I was broke, ragged, dirty and tired. Worse than everything, I was discouraged. I thought of the Virgin of El Sanctiario to whom I have always had great devotion. I prayed to her and something told me that the answer to my prayers was right at



hand. I looked around and saw a nun. I told my story to the nun who said: "I am of the same order as the Mother Superior. I personally can't help you but the Provincial of our order can." It happened that we were standing right in front of the building where the Provincial maintained her headquarters.

I told my story to the Provincial. She said: "I want to help you." She made a call to the phone in the village and we waited while they sent for the Mother Superior. In the conversation that followed, I overheard two things: "That man is out of his head" and the name of a local village "Titiribi." The Provincial hung up the phone and told me to come back tomorrow.

I looked up my friend the taxicab driver. In four hours we were in Titiribi. The local tavern keeper told us where the religious house was located. The girls were in chapel when we arrived. I spotted my friend. She blessed herself, genuflected and, turning around, recognized me. We were in each others arms. "Take me away" she pleaded.

I put her in a hotel in the city. The next morning I went to the Archbishop with my story. "I'm going to help you," he said. He gave me a letter to the Pastor instructing him to grant me permission to be married.

I travelled to El Santuario and requested the marriage permit from the Pastor. The Pastor asked me where I had the girl. I told him in a hotel in Medellin. He said that he would not give the permit. Then I showed him the Archbishop's letter. He gave me the permit, but not until he had sent word to the father who again heaped abuse on me. We were married. Relationships with her family are still strained.

Attilio had challenged the local fixed-destiny concept and had gotten away with it! But the matter hadn't ended there. He had found that with success had come a need to invest time and energy in demonstrating over and over again the relevance of the special point of view which he had come to represent.

Attilio became the most articulate, gregarious and empathic member of the group. "Someone has to speak up!" is his motto. Don Pablo and he had





most to say at the incentive rate meeting held in José's office. He circulates easily during work breaks and takes a leading part in the conversation of groups that he enters. It is easy for the newcomer to establish rapport with him. He became one of my best informants. He was particularly anxious that I meet his wife and brought her to our first interview in my room at the Plaza.

Attilio's manner is accorded a mixed reception by the men in the department. The younger Polishers and especially the Boys value his style of comportment. At times a Polisher has to signal his Molder that the plates he is producing are not of polishable quality. Many of the Molders resent these signals, but not Attilio. He cheerfully dispatches his assistant to locate the nature of the problem. It is he who condemns the Molders who will not accept temporary shifts to other lines of production. He loans money and jokes with his neighbors. At times he turns his machine over to his assistant so that the boy can practice molding. None of the Boys refer to him as "Don." The production superintendent censures Attilio in this regard. "If a Molder is too familiar, he loses respect and production suffers," he commented. Many of the Molders have doubts about Attilio's way of behaving. When I asked one of the old timers why he had not nominated Attilio for the rate-fixing junta, he told me that Attilio was not always predictable and responsible.

#### Rodrigo

Rodrigo, who was born in the same nearby settlement, is Attilio's best friend. Sometimes the two would come together to visit me at the Plaza. They are of the same complexion and stature. Neither is addressed with the



title "Don." Both share the same strong feelings against Molders who resist temporary shifts of work. Each accepts such shifts although Rodrigo is shifted more than Attilio. Noah, Attilio, and Rodrigo are the three plate makers in the department.

However, Rodrigo is not another Attilio. He has had no city exposure and his father was a farmer. While his manner with the Boys and his neighbors is similar, he tends to follow Attilio's lead. This permits him to operate at a lower level of visibility. He wears the baseball cap favored by most of the Molders. Although he was interested and eager to see the junta requested by Don José succeed, he was not one of those nominated to serve on it. In general he shares Attilio's views and approves of his comportment.

#### Social Classification of the Molders--Isolates

##### Samuel and Fernando

Samuel, with 16 years service in the plant, is the senior Molder. A short stocky bachelor, he keeps to himself and seldom initiates conversation. He is the lowest producer. His father owns cattle and is a roofer, and Samuel mixes into these activities as time permits. One gets the impression that his outside activities limit the interest that he shows in factory affairs. He has the reputation of being gruff with the Boys. He is generally addressed using his last name alone. He is the first one to start work in the morning since he eschews preliminary conversation. He cuts short his meal break to get back to work and tries to set up for the morning before leaving his work station at night. He wears a cap similar to that worn by most of the Molders. Attilio says "Samuel has money and should speak up more, but he's afraid of losing his job."



Fernando's father was a farmer and Fernando says that he would go back to farming if he had the money. He is a small wizened man about the size and appearance of Attilio and Rodrigo, but more unkempt. Through his wife, he is related to the Production Superintendent. The Boys are fond of him and refer to him as "Little Fernando." Appealing little Marco Antonio, the son of the alcoholic, was Fernando's assistant and there was a special bond between the two.

After the incentive plan was installed and the Molders increased their output, production was out of balance and one Molder had to go. Fernando made no protest when he was sent to the Mixing Room, but that night he didn't sleep. "I always tried to be helpful as Our Father in heaven directs," he told me. "I tried to teach everything that I know to the Boys. I respected my assistant because I wanted to merit his respect, and now they have sent me off. I don't know for how long. Why have they done this to me? It must be because of my small size." Marco Antonio, who was put at other temporary work, went to Fernando and told him that he wanted to go to the Mixing Department with him. Attilio shook his head sadly when queried about the transfer, "Poor Fernando, he's just not up to it." Rodrigo took over Fernando's work station for a day. He was embarrassed when I asked him what he was doing there. "It wasn't my idea! It wasn't my idea!" he repeated. "They put me here!" Fernando wears a baseball hat as do most of the other Molders.

#### Social Classification of Molders--The Moderates

Ramiro





(1)



(4)



(3)



(2)

(Clockwise) Marco Antonio Sanchez at right with some local boys during lunch break, young Polisher and his Assistant, Attilio with his Assistant, girls from Decorating Department with friends from Molding Room.





Ramiro is the tallest and fairest of the Molders. His father was a factory worker. At twenty, Ramiro - having already worked in another village pottery - decided to get out into the world. He went to Bogota, the capital city, where he worked in a chinaware factory. Later he was employed for several years in a similar factory in the nearby city of Medellin. When this failed, he returned to El Sanctuario, married and settled down to village life. "You make sacrifices to come back, but you gain tranquility," he says. Two years ago, Ramiro came to work in the Baking Department at La Nueva, six months ago moving to the Molding Room. Shortly before taking up molding again, he was made president of the village labor union. "We are terribly backward here," he says, "and we suffer from excessive individualism. Only Attilio will speak up. Attilio is the most influential of the Molders! There's a great deal to be done. No one has confidence in his associates." Don José sees Ramiro as a "quiet, serious type, easy to manage."

The other Molders find Ramiro difficult to assess. The Boys call him "Don" but see him as difficult to get to know. He is not considered gruff, yet a person to be treated with respect. Since he is the only man in the department who makes bowls, he is out of the interplay around items produced that arises among the several plate-, cup-, and saucer-makers, and there is never any talk of shifting him to another production item. He is the only Molder who wears no headgear at all. During work breaks, he moves out of the room to visit with several Bakers who are active union leaders. When I asked why he was not nominated to the rate-fixing junta, I received several devious answers until one man told me that the men didn't feel that they really knew Ramiro. Attilio says, "Ramiro will speak up, but not for his (immediate) companions!"



### Hector

While Ramiro responded generously and intelligently to my approaches, Hector took the initiative in seeking me out. Several times he came by my room to offer to buy me a drink; once with a friend who was visiting from the city. In terms of service in the plant, Hector is the junior among the Molders. His father was a factory worker. He is Samuel's brother-in-law and they live in the same house with Samuel's parents. - Hector with his wife and eight children.

In his relations with the other Molders, one gets the impression that Hector values, even seeks, membership and leadership. He is gruff but not overly so. The Boys call him "Don." He wears tinted glasses and the same kind of beret that Don Noah wears. The most influential of the older Polishers runs a little biscuit business for his neighbors on the polishing side of the table during work breaks. Hector has a similar business on his side. This keeps him busy during breaks. When he has time, he circulates freely although not being accorded a leading role in the conversation.

Hector used the term hombre completo in referring to several of his neighbors. In factory parlance, an hombre completo is a man that can do a range of tasks. One Polisher told me that he could both farm and do factory work, that he was an hombre completo. The term is also used when a man has fulfilled his family responsibilities and arranged his domestic affairs so that they don't interfere with his Plaza visits. It is also used to designate a son who, while continuing to live with his parents, is paying his own way with his earnings. In Hector's terms Don Noah, Attilio and Rodrigo -





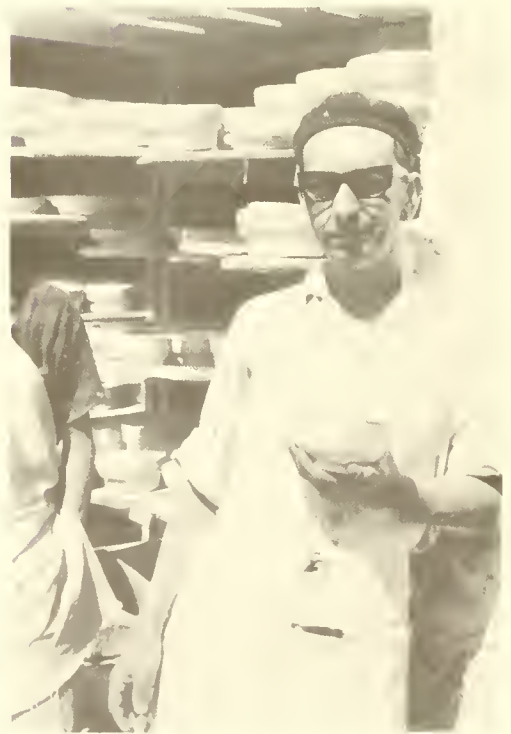
Ramiro - A Moderate



Attilio - Fidelista



Don Noah - A Traditionalist



Hector - A Moderate



the three men who can make all types of dishes - are hombres completos while Ramiro and he who are strictly bowl- and cup-makers respectively are not.

#### Social Classification and Change Orientation

It is possible to extract from these personal histories certain status factors that shed further light on an individual's pre-disposition towards change and his manifestation of traits that appear to be change oriented. This has been done in Exhibit 8 and a "change-orientation" score derived. As might be expected, Attilio scores highest and Noah lowest on the schedule.

The formal factors are self evident. Some men grew up on farms and worked the fields with their fathers, others grew up in the village. The second category are assumed to have more of a pre-disposition towards change. Similarly, some men have lived awhile in the city, and a few have chosen not to join the union. Attilio and Rodrigo are the only ones who were not born in the village or on nearby farms. They are in that sense immigrants in a village that has known little immigration.

The informal status factors provide a report about certain personal traits that the workers emphasized during our conversations. The use of the Spanish title "Don" in addressing certain of the men has already been mentioned. Attilio and Rodrigo, and the union leaders, made a great deal of the reticence of certain established Molders - those who had the ability and the background to do so - to "speak up" in the presence of superiors. The Boys and some of the men classified the Molders as to whether they were





<u>Molder</u>	<u>Formal Status Factors</u>				<u>Informal Status Factors</u>				<u>Totals</u>
	<u>Father Non-farm</u>	<u>City Exposure</u>	<u>Member Union</u>	<u>Born Away</u>	<u>Not a "Don"</u>	<u>"Speaks up"</u>	<u>"Simpa- tico"</u>	<u>Accepts Transfer</u>	
Attilio	X	X	X	X	X	X	X	X	8
Rodrigo	X		X	X	X	X	X	X	7
Ramiro	X	X	X		(X)	(X)	( )	( )	5
Hector	X		X		(X)	(X)	(X)		5
Fernando			X		X		X		3
Samuel	X				X				2
Carmelo			X		( )		X		2
Pablo			X		X				2
Noah									0

( ) = Ambiguous responses

Exhibit 8--Change-Orientation Score of Molders in Terms  
Of Certain Formal and Informal Status Factors.



simpatico (easy to get along with) or bravo (gruff) in resolving work-related problems. They preferred the former, although the Production Superintendent suspected that Molders who were too simpatico might be sacrificing productivity.

The factor "accepts transfer" is more difficult to define. Rodrigo stressed it as having great importance to him and something along these lines is obviously at work in the protocols of the department. Some of the Molders have a narrow range of competencies. Carmelo and Samuel, for instance, can make only saucers and dessert plates. They don't know how to polish. Fernando also has a limited repertoire of competencies. Other men have a broad range of competencies. They can do plates, bowls and cups, and they can polish. In this sense they are hombres completos. Attilio and Rodrigo, who are hombres completos are willing to apply this competency to other than plate-making when required. Noah is not. On that basis he scores negative on the "accepts transfer" factor.

There is some sentiment against those who refuse to accept transfer. Rodrigo said: "Nobody likes to be transferred to somebody else's work, but we all have to earn a living!" In one six week period, Rodrigo and Carmelo worked at three tasks, Attilio, Samuel and Hector at two, and Noah, Pablo and Ramiro at only one. Noah is obviously an hombre completo resisting transfer. It is also suspected that Pablo and Ramiro fit into this category, although the idea of shifting Pablo is unthinkable and Ramiro's work background is not well known to the others.

It proved difficult to classify the men on several of the informal status factor counts, and this difficulty was experienced by the respondents themselves. When I asked the Boys if Hector was simpatico or bravo, they



puzzled for awhile until one used the Spanish diminutive to describe him as bravocito or a little gruff. They also agreed that Carmelo should be called "Don Carmelo." One of them whispered "show respect" to another who brought up Carmelo's nickname, but they agreed that Carmelo has not quite arrived at the point where he should be called "Don." It is interesting that most of the ambiguous reports center around the two individuals who have been socially classified as Obscure Moderates.

### The Social Structure of the Molding Group

Our focus now shifts from individuals to the group. We know something about the Molders as individuals. We need to know something about them as a group. This can be done by weaving the discrete knowledges that we have about individuals into a kind of nexus which will help us to visualize and understand the larger human entity.

Technological advance had brought the group into existence and with more going on than met the eye. The expansion in José's manufacturing operations had thrust into shoulder to shoulder propinquity a group which for sheer size and number of hours spent together exceeded anything in El Santuario's history. This propinquity both created new problems and put the spotlight on old ones. Noah refused to do other lines of work and Attilio resented this fact. Fernando felt that he had been pushed out of the room because of his small stature. Don José stirred up a storm by asking the men to create a junta to negotiate the incentive rates. Was it the group's province to respond to these issues? Who should respond to them and how? What should the response be?



Some men felt that the old problem-solving devices of the conventional village wisdom were adequate - the patron-father-son mechanisms - but the application of these mechanisms in the expanding work setting met with mixed success. When a father worked alone with his son, or with several other fathers and sons, he could pretty well specify the manner of their relationship. Later on, in the small village potteries, a Patron was always at hand.

Things were more difficult in the Molding Room. There was a wider audience to the father's attempts to dictate his son's manner of behaving. Others in this audience provided distinctive behavioral models. Several of the Polishers were important in this process, but the key positions were taken by the more strongly established and prestigious Molders. The social structure of the Molders charts relates these contrasting positions and puts into relationship the distinctive social and personal activity which they inspired. Again we must search out the relevant sentiments that the Molders hold and the interactions and activities that they support. We will also want to be alert for any external trappings or status symbols which serve to give external evidence to conditions of membership.

It is apparent that Don Noah and Attilio slot in at opposite ends of the sentimental spectrum. Don Noah is restrained, slow to respond and hesitant to initiate. He tends to be serious in his handling of work-related issues. These traits are manifestations of his closely-held views at odds with Noah's that state that new styles of relationship are required if the business is to thrive and the individuals employed there achieve their personal ends. In his personal life, he has invested heavily in establishing





the validity of this position and he is evangelical in urging its adoption. Rodrigo fits into Attilio's sentimental orbit although he is by no means a replica of Attilio.

Samuel and Fernando take no position on this issue - Samuel because he chooses not to and Fernando because he is unable to muster the personal force to make himself a factor. They are isolated from the task of shaping a response to the issues that intrude and constitute little more than an audience to the group's attempts to resolve them.

Ramiro and Hector play less visible roles which may yet prove to be the decisive ones. Newly arrived in the room, of a retiring nature yet - as president of the village labor union - a powerful figure, Ramiro presents an enigmatic figure which the others find difficulty in assessing and responding to. How this combination of traits equips him to be especially serviceable to the group will be seen in a subsequent scrutiny of the rate-setting episode. Hector is less enigmatic yet equally unassimilated. The next most junior among the Molders, his anxiety to work himself into the group makes him more flexible in getting involved and more willing to take the risks which will establish his serviceability to his neighbors.

Change orientation or degree of deviation from the conventional village wisdom constitutes the critical bias in the Molding Room social structure diagrammed in Exhibit 9. The Traditionalists prize the old wisdom, abide by it in responding to the issues that present themselves, and resist solutions that require that incongruent positions be taken. The Fidelistas are committed to new forms of issue resolution, they employ these forms in responding to workplace issues and challenge those who seek to reinforce the



old wisdom. The Obscure Moderates take neither a strong offensive or defensive position. The two men in this category do not even team up to create an established sub group. Their intervention tends to be occasional and delayed. We will have more to say about it later. The Isolates are not centrally involved in the group structure, although Samuel is Hector's brother-in-law and they live in the same house.

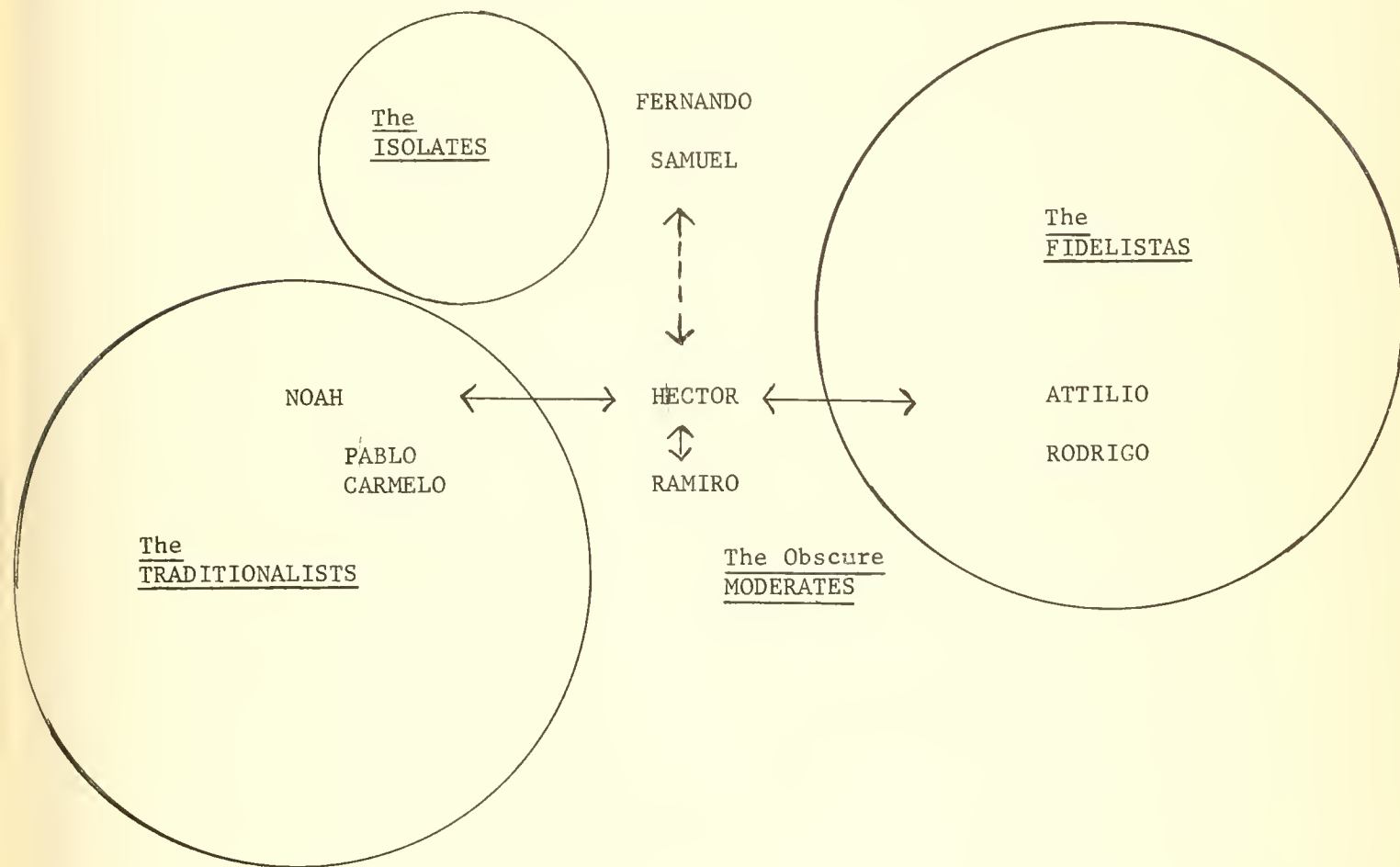


Exhibit 9--Social Structure of the Molding Group



Spatial location of each Molder's work station underscores the social structure in the manner that is more than haphazard. As indicated in Exhibit 6, Noah and Attilio are at opposite extremes spatially as well as sentimentally. They are both plate makers, but they are employed at opposite ends of the work table. Rodrigo, the third plate maker, also has a corner station. They are the three men that Hector refers to as Hombres completos.

What are we to make of this patterning of spatial arrangement and job assignment? In a setting where any attempt at personal differentiation is suspect, the men resisted my probing into the matter. "We all work where we are sent to work" was their reply. Only Noah admitted a preference for a corner. "Being at the end gives me more elbow room," was his comment. It was Noah who successfully resisted reassignment during the reorganization of the work stations so that he remained at his original position. He also successfully maintains his position that his destiny is to make plates, nothing else. The supervisors claim that workplace location is an expression of managerial intent, nothing more. But it is obvious that there is a deeper dynamic at work.<sup>1</sup>

If the Molding Room needs a non-technical hierarchical system, it has few visible symbols with which to designate its princes. It has in fact only three: location of work station, item worked, and headgear. Plate making requires no more skill than cup or bowl making, perhaps less. But the critical individuals are all plate makers. Corner work stations may be a matter of chance, but the critical individuals all have them. And the four men who wear non-standard headgear were Don Noah and Hector (berets), Attilio (military cap), and Ramiro who wears no hat at all.



### The Social Structure and Individual Output

Individual productivity might be expected to reflect an individual's position in the social structure. Let's see how this relationship expressed itself. Fortunately, there was an important change in the pay system during the course of the study. Don José decided to put the Molders on an individual incentive pay plan. After this plan had been put into effect, productivity of the Molders as a group increased almost fifty per cent, but individual Molders achieved various individual rates of increase.

Under the old day rate pay system, Molders, Polishers and Boys all received one of three basic daily wages assigned them largely on the basis of age and performance. Thus Carmelo received the lowest rate in the room, 11.20 pesos per day or 67.20 for a six-day week. Samuel and Fernando received the middle rate of 76.80 per week, and all of the other Molders received the top rate of 79.20 per week. Records of individual productivity were kept, but strictly for informational purposes. The approximate level of individual output during a six-week period shortly before the conversion to incentive pay is shown in Exhibit 10. These figures must be considered approximate because they were loosely kept and rounded off. Moreover, when the Production Superintendent transferred a Molder temporarily or sent him off on an errand, he added in a total which was his estimate of the work that the man would have completed had he stayed at the job. In order to be able to compare these earlier figures with a comparable six-week period after the establishment of incentives, they have been converted to the pesos per hundred pieces rate schedule issued during the incentive period.





<u>Fidelistas</u>	<u>Previous Rate</u>	<u>Before Incentives Rate</u>	<u>Incentives Standing</u>	<u>After Incentives Rate</u>	<u>Incentives Standing</u>	<u>Increase</u>
Attilio	79.20	72	6	108	4	37
Rodrigo	79.20	--	--	103	6	--
<u>Moderates</u>						
Ramiro	79.20	80	4	97	7	17
Hector	79.20	77	5	105	5	28
<u>Isolates</u>						
Fernando	76.80	67	7	--	--	--
Samuel	76.80	60	8	84	8	24
<u>Traditionalists</u>						
Carmelo	67.20	87	3	125	1	38
Pablo	79.20	89	1	119	2	30
Noah	79.20	88	2	112	3	24

Exhibit 10--Individual Output According to Social Classification  
During a Six-week Period Before and a Six-week Period After  
The Change to Incentive Pay



During the incentive pay period, bookkeeping became more precise. A record was kept of the polishable pieces that each Molder produced. To compute a Molder's pay, his output was converted into pesos using an established table of rates that ascended from 1.10 per 100 pieces for saucers and dessert plates to 2.00 per 100 pieces for the dinner plates that Noah, Attilio and Rodrigo manufactured. Individual levels of output for a six-week period shortly after the installation of the incentive program are also recorded in Exhibit 10. Rodrigo figures in this period but not the earlier one because of absences from the department before incentives were established with the result that data on his output is incomplete. Fernando was moved to the Mixing Department shortly after the plan was put into effect and thus does not figure in the second period.

Molders at the outer edge of the group's sentimental spectrum were generally the highest producers and responded most positively to the incentive pay system. The top three producers both before and after the change were the three Traditionalists. The Isolates were lowest at both points with the Moderates and Fidelistas fitting in towards the middle. The Traditionalists and Attilio responded most vigorously to the incentive system with increases in productivity of almost fifty per cent.

All parties were unanimous in their report that there existed no social restriction on output. This is supported by the fact that Carmelo, the youngest of the Molders, shot up to first place and held this position after the installation of the incentive program. On the other hand one of the younger Polishers who was socially responsive showed a phenomenally high increase immediately after the system was established. He was uneasy when



note was made of this fact and shortly thereafter dropped back to a more congruous level of output.

### The Social Structure and the Rate-setting Episode

The manner in which José chose to inaugurate the new incentive system shed further light on the social structure of the Molders and on the group's capacity to activate itself. La Nueva's owner threw the men into confusion by requesting that they establish a junta to negotiate the rates with him. What he suggested was not within the historic competency of the men, although some thought that it should be. They encountered difficulty in organizing a response. Eventually the junta idea broke down, but not before a series of significant interactions had occurred.

The meeting at which José announced his plan took place while I was on a three-week return visit to the United States so that I had to depend on second-hand reports to find out what happened, but what people recalled of the episode was perhaps even more significant than what actually took place. José called all members of the Department - Molders and Polishers, men and boys - into his office. He explained that increased output was necessary to build up inventory for end-of-the-year sales. He invited the men to set up a junta to help him fix equitable rates of pay for the various items.

There were differing reports about who actually served on the junta, how they were nominated, and what the junta accomplished. Evidently, the oldest Polisher nominated Noah, Pablo and Hector, but his slate was not acted upon. Don Noah claimed that he and his assistant nominated Attilio,



Pablo, Hector and two Polishers. I asked if this was done at a meeting. "Not at a big meeting," he replied, "at a lot of little meetings." Ramiro recalled that Noah and Pablo did not want to serve on the junta. Don José told me that Noah and Attilio came to his home on Sunday morning to tell him that they had become convinced that the junta would not work. No one else mentioned this visit. Eventually the situation resolved itself by José negotiating rates with each man or with one man speaking for others who worked on the same item.

I asked the Molders what men were nominated to serve on the rate-setting junta. Pablo's answer was rambling and veered off into his standard poverty theme, but the other responses are revealing. Attilio and Rodrigo were together when we were pursuing the matter. They agreed that the original nominees had been Don Noah, Hector and Attilio. Ramiro at first identified as nominees Attilio and Noah. Later he added Pablo. Hector remembered Don Noah and Pablo being the first slate which was later replaced by Attilio and himself because Noah was not in favor of either incentive pay or the junta. Young Carmelo, who may have been confused with the later pairing up of the men to negotiate individual rates, reported that Noah, Pablo and himself constituted the junta. Noah remembered nominating Pablo, Attilio and Hector, with Pablo later being replaced by Ramiro. These recollections are charted in Exhibit 11.

For a week after Don José issued the invitation, nothing was done. "We're very poorly prepared for such matters," said Ramiro. Then one day interest in the matter was revived. Attilio and Hector work at adjacent stations with Ramiro's station intervening. One day at work the two of them were pursuing the rate-fixing matter when the following exchange took place:





<u>Recalled by</u>	<u>Recalled as Nominees</u>						
	Attilio	Rodrigo	Ramiro	Hector	Carmelo	Pablo	Noah
Attilio	X			X			X
Rodrigo	X			X			X
Ramiro	X					(X)	X
Hector	(X)			(X)		X	X
Carmelo					X	X	X
Noah	X			X		X	
Total	5			4	1	4	5

Exhibit 11--Recollections of Molders about Who Was  
Nominated to Serve on Rate-fixing Junta.

Hector: Why don't we go to see Don José?

Attilio: Why not!

Ramiro: Let's go!

Whereupon the three men - having constituted themselves as the active rate-setting junta - shut off their machines and went to talk with Don José.

What are we to make out of the rate-setting episode? Granted the men's historic inability to organize for the purpose of solving their own problems, José gave the Molders a rough assignment to handle. The group responded by designating its four most visible members to serve as its junta: Attilio, the loquacious upstart; Hector, the eager neophyte; Pablo, the chronic complainer; and Noah, the respected "king" of the Molders. It



is easy to understand why Rodrigo and Carmelo, satellites of other available primary figures, were passed over; but how about Ramiro? I asked the old Polisher who made the first nominations. He claimed that Ramiro was not present at the meeting. Others said: "We don't really know Ramiro!" Attilio and Rodrigo said: "Ramiro can speak up, but won't."

The reactions of the men to José's invitation varied. Pablo, pre-occupied with his thoughts of misery and poverty, didn't even hear it. Noah heard it, but was opposed to the idea. It was Noah's refusal to take the lead the men had accorded him that stalled the procedure. Attilio was eager to respond. This fitted with his idea that workers should "speak up." Attilio saw Hector as one of the men who hesitated to speak up for fear of "losing his job." With eight children Hector may well have entertained such a fear, but he was also eager to establish his serviceability to his new associates and thus to achieve a central position in the group. For this reason it was Hector who called attention to the junta's inactivity on the rate issue and responded to Ramiro's invitation to do something about it.

Ramiro's position is the most interesting one of all, and I pursued it with him at some length. His outside experience had convinced him that the Molders needed to take an expanded future role in the shaping of their own destiny. Thus he rejected Noah's position that the Patron should take action unilaterally and deal only with individuals in doing so. But his understanding of the villagers had also convinced him that the men could not vault into this new circumstance overnight. Thus he also rejected as currently untenable Attilio's attempt to make his own style of behavior the general one. Ramiro patiently played the waiting game. When circumstances had worked them-



selves up to the point where he judged that a delayed intervention on his part could inch the group ahead towards a modified circumstance. He intervened as only one with his special condition of involvement could intervene. His occasional strength and his capacity to intervene at key junctures depended on his ability to coordinate a sustained and somewhat enigmatic low visibility with personal activity at the point where the activities of others had reached the flood and begun to ebb.

The Molding group has no social leader at this point. Circumstances do not currently permit this luxury. But it does have a sharpening cleavage of distinctive social roles, and the interplay between the role incumbents is sparking a dynamic of the kind that tends to pull a leader to the fore. Attilio's gambits, arising as they do out of a unique personal history, raise issues that require response. It is Don Noah's ordained position to offer response. In doing so, he is playing a losing game. But he is also providing a service to the group. The interplay between Attilio sharpens the issue, highlights it for the group's attention, provides an interlude during which consensus may be worked on and leadership emerge.

While Attilio and Noah provide important services to the group, neither will be its eventual leader. Heavy commitment to their extreme stands has required a high degree of visibility and rigidity. These traits they have displayed at the price of the low visibility and issue flexibility that a social leader in La Nueva's circumstance requires.

Ramiro will be the leader. Out of his special personal history he is able to provide the kind of low-keyed, delayed intervention which will eventually build him into the group. If Ramiro moves out of the picture,



Hector will take his place - Hector who desperately wants the job and will do the things that have to be done to get it.

### A Comparison of Village Ways and Factory Ways

One final task remains. We must hold the structure of sentiments, relationships and activities uncovered in the village up against that of the work group and see what can be said about the discrepancies between the two.

The basic feature of Sanctuarian society is a set of sentiments - really a prior sentiment supported by several secondary ones - maintained by particularistic interaction patterns and compatible with the village's activities and spatial arrangements.

The prior sentiment of the Sanctuarian is that he has an assigned destiny which it is his purpose to manifest. Destiny casts him either as rich or poor, patron or worker, hombre completo or wastrel. As long as his expectations are congruent with this destiny, he will fulfill the expectations of others and the circle will be closed. Things will be as they should be. The pervasiveness of this compact is, after all, why El Sanctuario is a wholesome place in which to live, why it avoids the ills and perils that beset its neighbors.

This sentiment defines the styles of interaction as it is in turn reinforced by them. It is the patron's destiny to initiate action for the padre de familia as it is the padre de familia's to initiate for his son. If the patrons need action to be taken, they turn to the religious padre, the bishop. In so doing, all parties respond to deeply-ingrained understandings of the proper and the appropriate. To act differently would be to run counter





to the conventional wisdom of the village which has brought the Sanctuarians such well being as they have achieved.

The villagers are aware that people in other villages and in the city hold contrary views. In fact they have spotted a few in their own number. Such contrary views must be dealt with or the advantage gained will be washed out. The outsider's views must be held at arm's length. The few in the village who endorse them must be excluded. Thus migration and tourism both into and out of the village are discouraged. Thus the Plaza Phenomenon as a useful device for spotlighting and controlling deviant behavior. Thus the strange myths about the violence and chicanery that await those who stray beyond village bounds. Thus the strong treatment accorded the obstinate Alberto Bermudez who is losing his house on the Plaza.

Human tendencies to empathize with Alberto or to project oneself into his plight are easily rebutted. Alberto is, after all, running counter to his assigned destiny. If he were to succeed, the entire system upon which the village draws for strength would be undermined. Moreover, villagers are early conditioned against empathy and projection. It is not part of the hombre completo code. The world is crowded with human suffering and misery, and El Sanctuario is no exception. Misery is one's daily companion. An hombre completo does what he can, learns "to be faced with anxiety without becoming anxious, disturbances without becoming disturbed,"\* and closes his mind to his neighbor's plight. If the neighbor is having trouble, his destiny is to have the trouble. If not, the patron would have done something about it.

---

\*Quoted in El Pueblo Antioqueno, P. 297, Universidad de Antioquia, Medellin (Colombia), 1960.



These kinds of sentiments and styles of interaction not only do not impede village activity including manufacturing, they actually forward it. Industry is small and homemade. There is always a patron at hand. The graduates of the local schools and farms are not only all that industry needs, they are just what industry needs. There is no need to run the risks of bringing in outside specialists to man and maintain the homemade manufacturing apparatus. Why add to your troubles when there is an ample supply of village boys who were brought up under "the law of work" and "know what it is to suffer."

Wittingly or not, Don José is housing a center of sentimental subversion in his plant beyond the mountain flank. The arrival of electrical energy and his own pique at having his planning for its economic utilization rejected have combined to create spatial and organizational circumstances within which new ideas are taking root. Arrangements in the older, more compact potteries pulled together the various occupations, generations and sexes around a central "plaza" where the patron could preside, where the old social mechanisms could operate. In José's plant, electrification and mechanization stretched out this variegated assembly, exploded the central "plaza" that had been the heart and the method of factory organization. New sub-plazas have congealed featuring segregation according to task, generation and sex. The patron-padre de familia-son compact has been spatially undermined. The patron is busy in other parts of the plant, the son no longer works at his father's side. Young mecánicos move into the plant from the city, ally themselves with younger functionaries around the plant, and create further social blockage between patron and padre. The old social molecule has subdivided and reconstituted itself.



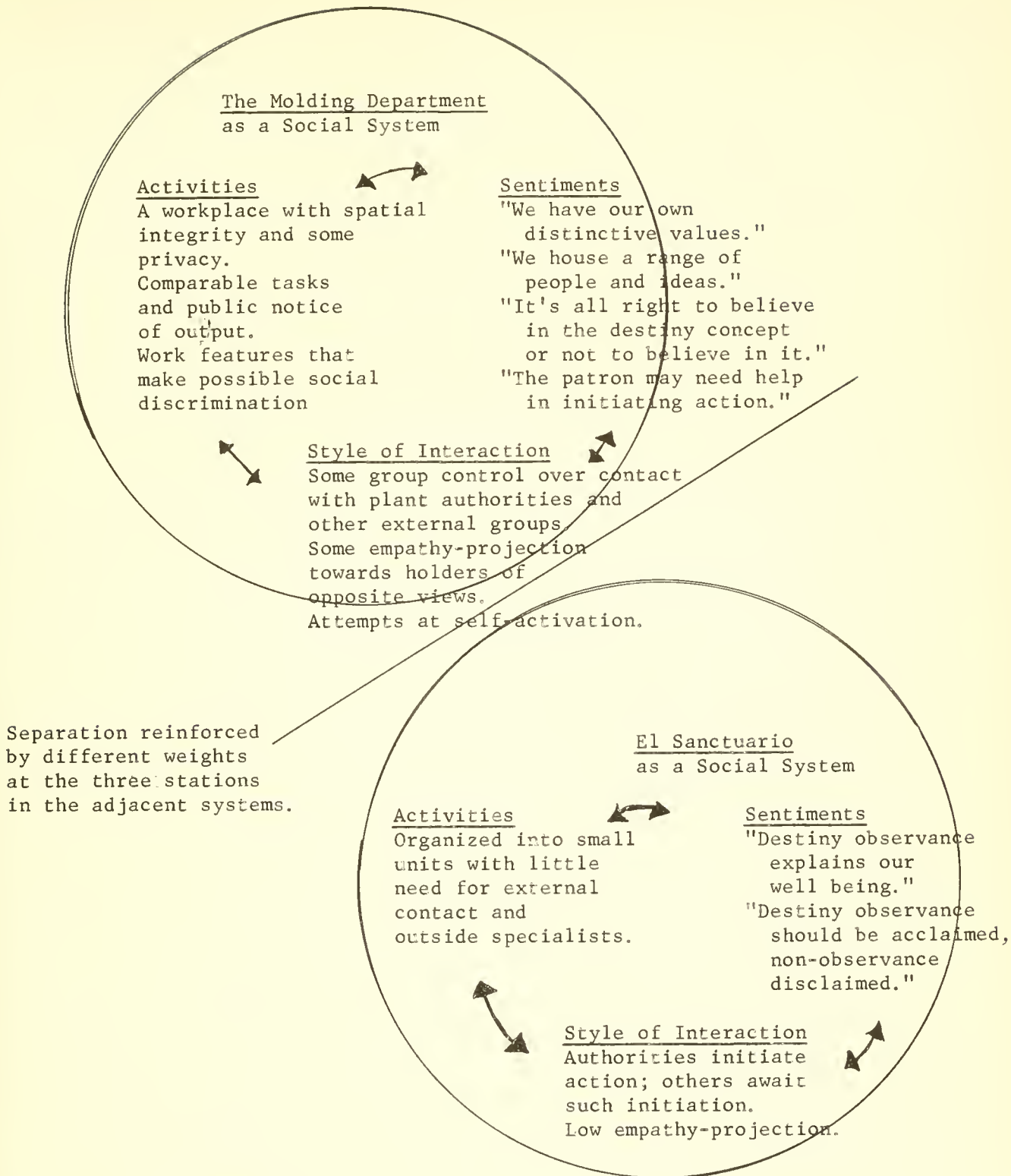


Figure 12--Elements in the Social System of the Molding Department

Contrasted with the Same Elements in the Village.



As the sub-plazas gain integrity and define their frontiers, shelter is acquired under which variant interactional themes gain currency. A prior site in this process is the new "plaza" that is coming into existence in the Molding Department. It brings into direct and intensive confrontation mid-career partisans of the older and the newer orders among the spatially and operationally central Molders. As the village Plaza is the mechanism for sustaining the old vis-a-vis a contrary external circumstance, the Molding room Plaza is a mechanism for sustaining the new.

The old order still prevails in the Molding Room in the person of Don Noah, but its foundations have been undercut. Attilio has challenged the old order and has gotten away with it. His reasons for doing so reach deep into his personal history, but a subtly shifting social climate has made possible his feat. The old mechanisms are less operative and there is something in the changing sentimental make-up of his neighbors that supports his campaign. But these same neighbors also need a Noah. They need the sentimental standoff that his presence provides. They need time to tool up for the new tasks that await them. It is not within their repertoire of historical competencies to initiate in the absence of a patron, to reach out horizontally to their neighbors for concerted action on issues for which their patron is becoming increasingly unavailable, to learn to designate and work with leadership, to empathize and project, to make provision for contrary views, to deal with their own historical sense of inadequacy. They need time to develop and practice these competencies. The interplay between Noah and Attilio is buying them this time.





One final thought! If some such working through of evolutionary stages is inevitable in the industrialization process, why should managers be concerned or attempt to intervene? The answer is that it hasn't been inevitable as the failures of industrial starts indicate, that managers haven't always been concerned, and the fact that the process has been carried through in the face of the inept intervention that arises from a lack of managerial concern is more a tribute to the resiliency of the human spirit among the workers than to managerial competence.

José's concern is genuine and imaginative if not always precise. Granted no unforeseen catastrophe, he will in his lifetime command an expanded La Nueva that will be one of Colombia's larger and sounder enterprises. This will be so because of his appetite for presiding over risk of both an economic and sociological character. His personal make-up impels him to attempt technological innovation with the full - if not precise - knowledge of the social storm that he stirs up in so doing. He not only foresees the social consequences of the technical activities that he is about, he welcomes them when they arrive. Such managerial posture requires special serenity and strength.

It is the function of the manager, and this is especially true in the developing nations, not only to know what he is doing but also to understand why. José well knows what it is what he is doing. It is the author's hope that this report will add to his understanding of why it is that he does the things that economic development requires that he do.





PAID  
Date Due

	NOV. 09 1984	
<del>FE</del>		
<del>RE</del>		
<del>AG</del>		
	JUL 17 00	
	AG 21 '84	
	AG 11 '87	
	AG 8 '89	

Lib-26-67

MIT LIBRARIES  
3 9080 003 899 587

142-65

MIT LIBRARIES  
3 9080 003 899 595

143-65

MIT LIBRARIES  
3 9080 003 899 603

144-65

MIT LIBRARIES  
3 9080 003 899 611

145-65

1751893  
HD28 M.I.T. Alfred P. Sloan  
.M414 School of Management  
Nos.142-65 Working Papers.  
Nos.151-65

MIT LIBRARIES  
3 9080 003 868 624

146-65

MIT LIBRARIES  
3 9080 003 899 629

147-65

MIT LIBRARIES  
3 9080 003 900 153

148-65

**BASEMENT**

MIT LIBRARIES  
3 9080 003 869 135

149-65

SIGN this card and present it with book  
at the CIRCULATION DESK.

MIT LIBRARIES  
3 9080 003 900 138

150-65

MASSACHUSETTS INSTITUTE OF  
TECHNOLOGY LIBRARIES

MIT LIBRARIES  
3 9080 003 869 168

151-65

**DEWEY LIBRARY**

