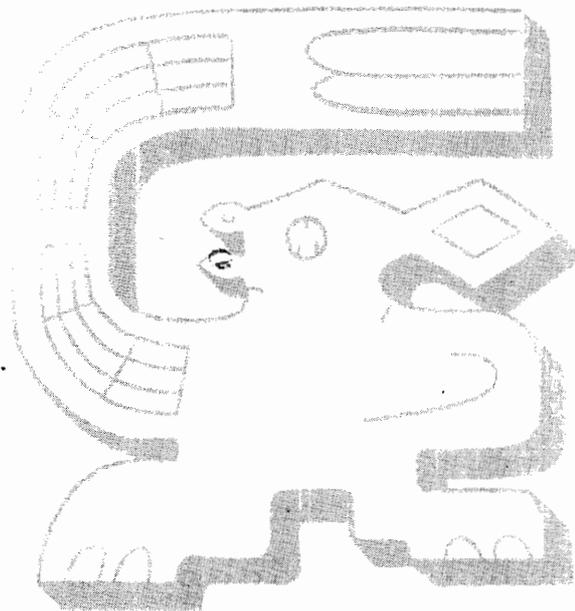


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Grassroots Economic Pressures in Chile:
An Enigma for Development Planners

William C. Thiesenhusen

LAND TENURE CENTER

University of Wisconsin
Madison, Wisconsin 53706

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William C. Thiesenhusen
University of Wisconsin

Since popular pressures may be more powerful allocators of government investment funds than social productivity criteria or capital-output ratios in at least some underdeveloped countries, their causes and consequences are of interest to economists and other planners. Recent *jacquerie* that affected Chile's rural development budget involved a local movement by Araucanian Indians (also called Mapuches)¹ to seek an adequate resource base in Arauco Province. It stemmed largely from the fact that the man-land ratio in the area has been rising regularly without a commensurate increase in agricultural productivity and alternative employment possibilities.

The issues central to this grassroots movement and its influence on national policy are analyzed in the four sections of this paper: (1) a summary of how the problems currently faced by the Mapuche developed; (2) a description of the current economic structure of Arauco Province to which the Indian discontent there can be traced; (3) an analysis of a successful joint effort in 1962 to increase the Mapuche resource base in Arauco; and (4) an account of the difficulties confronted by Indian farmers in making good concerns of the new farms they acquired.

When juxtaposed with other cited documentation, the arguments presented here seem to imply that whenever governments are ill informed of local conditions (or obdurate in the face of evidence), and legal channels are not equally open to all for redress of grievances, groups which see themselves as deprived may resort to civil disobedience, thus making it impossible for their demands to be ignored. In the history of development, there has been much repetition of this pattern: local pressures build up in an atmosphere of apparent tranquility and result in strife and even violence when a critical situation is stimulated by the proper catalyst. Governments may respond by repression, but if public opinion can be sufficiently mobilized for the cause of the disadvantaged, the government must—at the very least—attempt ameliorative projects.

1. Background: The Mapuches of Southern Chile

When the Chilean government provided for the settlement of its belligerent Mapuche population on reservations (*reducciones*) in a Delaware-sized area south of the Bío-Bío River and north of the prearchipelagic range area, the move was not immediately resisted by the natives. At the time, in 1866, Araucanian numbers were small in relation to resources.

Beginning in 1884, when the Araucanians were pacified, surveyors were brought to the zone. By 1921 the work of distributing land titles to *reducciones* that were to be given out was completed. After each property had been assigned a number and a name, a legal land title was signed by all joint owners, filed, and a copy given to the chief. During this period 3,078 titles were distributed. The names of 77,751 heads of families appeared as joint land owners.² Although the surveyors had instructions to take account of the differing carrying capacities of the soil when granting legal land rights, there is little evidence that knowledge of potential productivity was responsible for the variation in land allotted per person (at the time, an average of from 3.7 to 9.2 hectares in the seven present provinces containing *reducciones*).³ In addition, boundary definitions were often poor, overlapping titles were issued, and some land was left titleless.

Land in the public domain became available after Indian *reducciones* were staked out, but the Indians usually did not have the capital to purchase it. At times the European-born settlers and creoles who did were also known to bribe Indians, unused to the legalities of land ownership, into relinquishing their rights. Some even succeeded in buying land at below market price in deals which they foisted upon Indians who were inexperienced in conducting market transactions. On other occasions, they offered short-term loans to the Mapuches and then took their only collateral—crops or the land itself—when the Indians defaulted. The history of the latter part of the nineteenth century is scarred with violence and even atrocities on the part of the Indians as well as the new settlers. While protective legislation was being passed in Santiago,⁴ in Araucania subtle land grabbing through bribery, unfair pricing, or the credit mechanism sometimes gave way to crude disregard of law.⁵ From available sources it is impossible to distinguish titleless land from property that has changed hands since the *reducción* was instituted. Titles were issued for 475,423 hectares; in 1963 the Bureau of Indian Affairs (Dirección de Asuntos Indígenas) reported that 322,916 Mapuches (about 4 percent of Chile's population) inhabited *reducciones* occupying 565,931 hectares.⁶ It is not uncommon to find these *reducciones* squeezed between 200- to 500-hectare farms owned by creoles.

Between 1931 and 1949 the government followed policies based on a belief that only when the Indian was released from the grips of the anachronistic *reducción* would he become an effective participant in the national economy. Yet, because the Indians realized that their collectivity was a

protection of sorts against white neighbors, Mapuches largely resisted legislation aimed at the division of the *reducción*, with fee simple title to all legitimate claimants. In this period only about 793 *reducciones* were split up, even though a favorable vote of but one-third of the landholders on each *reducción* was all that was necessary to initiate the cumbersome fragmentation procedure.⁷ The *reducción*, then, is—and will probably remain for some time—the common feature of the agricultural economy of the Araucanian, even though a law was passed in 1961 to make it easier than ever to subdivide.

The general structure of the *reducción* is still what it was half a century ago.⁸ Land is worked as a family farm, and only occasionally is poorest land grazed in common. Even though land is owned jointly, the *reducción* chiefs broke up the property into family units at the time that titles were issued. This customary parcel is inherited, and income from it is fragmented with each new generation. Rights to this property may not legally be alienated to outsiders, but they can be sold to Indians from the same or another *reducción*. Some seasonal common labor practices have evolved, but they are no more collectivistic than the “threshing ring” that existed through the first half of the twentieth century in the North American Midwest.⁹ Sharecropping with non-Indians is sometimes practiced if a white neighbor has a needed farm implement (the Indian’s most common lack). But the Mapuche is wary of becoming dependent on any such arrangement.

2. Current Economic Problems of the Mapuche in Arauco Province

Arauco has the fifth largest Indian population of any Chilean province. Mapuche numbers are variously estimated at between 4,000¹⁰ and 6,215¹¹—somewhere between five and seven percent of the provincial population. Dwelling on 69 reservations, Indians form a hard core of poverty.¹² No province in Chile has a smaller industrial base to which surplus labor might be attracted.¹³ Furthermore, returns to labor in agriculture, the main source of employment in Arauco, are among the lowest of all Chilean provinces.¹⁴ While the land base in Arauco appears to be of no better quality than in other Indian provinces, the average per person assignment of land at the time of title issuance was lowest of the seven Indian provinces—3.7 hectares.¹⁵

Public spending in Arauco might be some gauge of government efforts to create jobs there. The central government (the only relevant governmental accounting unit when collection and dispersal of public funds are considered) spent only about 1.4 percent of its budget in Arauco in 1961—an amount roughly comparable to the percentage of Chile’s population who live in the province.

In times past, young men from the *reducción* area in southwest Arauco could find seasonal employment in coal mines in the northern part of the province. But the late ’fifties and early ’sixties brought a decline in

internal and external (Argentine) demand for Chile's coal, with increased substitution of hydroelectricity and petroleum. This production decline (from index number 100 in 1950 to index number 66.4 in 1960, when output was at its lowest level since 1933)¹⁶ was first felt by mines in Arauco, which produce the poorest quality coal in the country (and account for about 20 percent of the coal mined in Chile). The first impact of the concomitant reduced employment fell on the transitory and often nonunionized mine workers with least skill—the Indians.

At first glance, use-category trends within the total may give some cause for optimism. While coal sales to the merchant marine, the railroad, and fabricating industries dropped between 1947 and 1956, coal purchased by the steel industry in neighboring Concepción province grew from 1 to 25 percent of total output.¹⁷ But this expansion can be expected to have few repercussions on employment in Arauco. The formula for steel manufacture requires at least 35 percent high grade coal, which must be imported.¹⁸ Of domestic supplies, only that mined in Concepción (mines here have a 70–75 percent share of the Chilean coal market) is of high enough quality to be used for the remaining 65 percent needed to produce metallurgical coke.¹⁹ Any widening of the coal market in Chile will probably induce investment in capital-intensive technology at the Concepción sites. Labor productivity in mining did not change substantially between 1938 and 1960, and since the Chilean Development Corporation (Corporación de Fomento de la Producción) is now adding capital to the Concepción mines, the management is under pressure to show increases in production per man.²⁰ And in 1966 the government agreed to a “portal-to-portal” work day, which may make further mechanization even more urgent, as it shortens “on-the-job” time.

In sum, the mines in Arauco face a declining market, with no upturn in sight. The traditional “safety valve” for the Indian here—seasonal labor in the mines—is closing rapidly.²¹

Moving to large cities like Concepción—a three-hour trip by bus from the *reducción* area—is an apparent alternative for a part of Arauco's labor force. But in 1960 unemployment in Concepción stood at about 7.7 percent, and it increased to at least 9.6 percent in 1963,²² implying that the unskilled labor market is filled to overflowing. Then, too, employment in Concepción represents a complete uprooting from the *reducción*, instead of seasonal work. To the Indian, complete desertion of his minuscule plot of inherited land for the unknown is frequently perceived as too great a risk to take. In addition to problems generated by an overfilled market for unskilled labor, Indians find it hard to compete for available skilled jobs, since their mobility is hampered by inadequate education. In no other province of Chile is the primary school teacher-student ratio lower.²³ Arauco is among the group of provinces in Chile having the highest rate of functional illiteracy (61.6 percent, compared to the national average of 37 percent).²⁴ No province has a lower percentage of its population

between 13 and 18 years of age in school (14.3 percent in Arauco; the country average is 29.0).²⁵

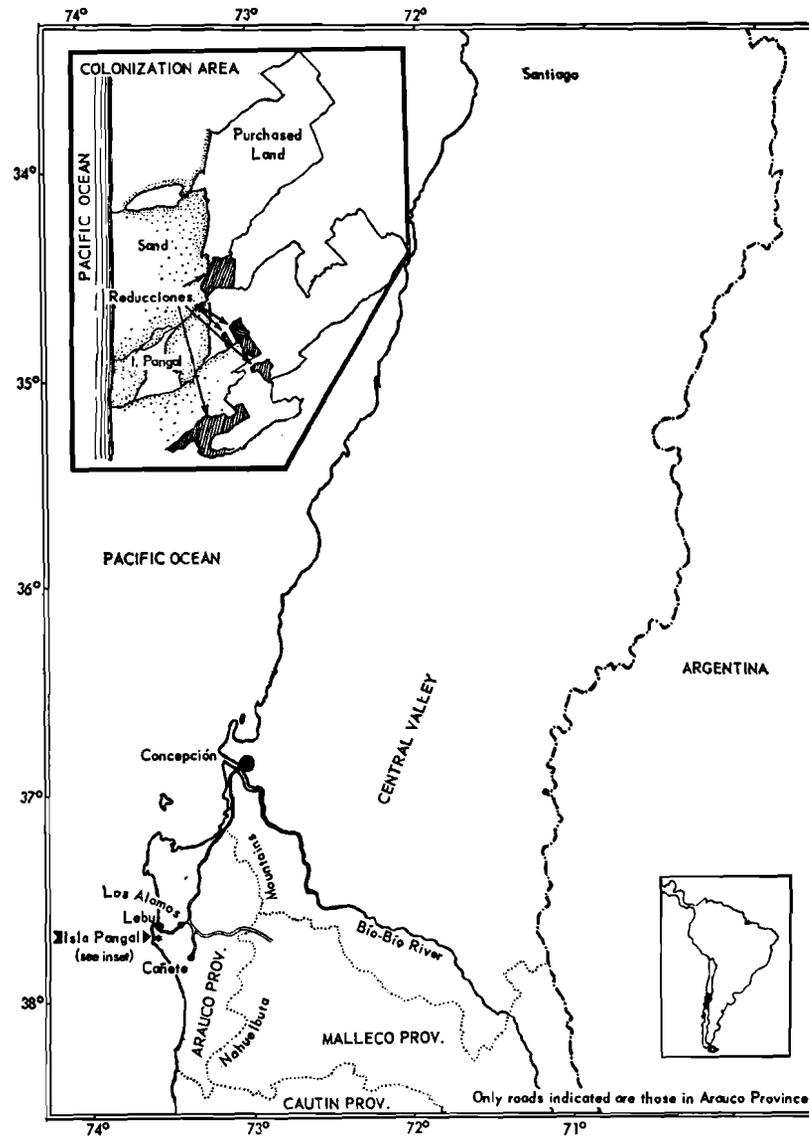
A study which grouped all provinces according to nine "cultural strata" (which may alternatively be considered factors influencing the quality, and hence the mobility, of labor), placed Arauco in the second level from the bottom.²⁶ If Arauco occupies a low position on the cultural-level ladder in Chile, its Indian population is at the bottom-most rung within the province.

The general impact of ambiguous land titling, small parcels, labor immobility, and paucity of job opportunities outside of agriculture has been extreme subdivision of the *reducción*, accompanied by increasing underemployment and sagging per capita incomes. The Mapuche feels a deepening distrust of the creole; its most obvious manifestation is a feeling of anomie toward the government in Santiago. Because the Indian population of Arauco increased more than threefold from the time titles were issued to the early 'sixties (from 1,912 at the time of titling to 6,215 in 1963) while the land base has remained stable, the current landholding per person is about one-third of the original assignment in Arauco—1.2 hectares per person.²⁷ Little government policy was enacted to help the Mapuche intensify his operation (or shorten his fallow period) as his land base diminished.²⁸ Since the Indian was not encouraged to vote over a long period of Chilean history (if unable to sign his name, he is still not permitted the franchise), he was politically impotent. Easier registration procedures, coupled with recent threats of government sanctions against registered nonvoters and greatly heightened activity of left-wing politicians in the zone, have combined in the present decade to make the Indian a more viable countervailing power than formerly.

3. Pressure for Land on the Los Alamos *Reducciones*

Lately, underemployment on *reducciones* in Arauco has been translated into invasion of some of the approximately 80 extensively operated farms owned by creoles in the province. The pattern has been repeated in fairly regular fashion: with the encouragement of a zonal politician or a politicized *campesino* organization, Indians occupy a little-used section of a creole neighbor's farm which, Mapuches contend, was taken from them through deception. They use various degrees of belligerency, intransigence, and petition to reinforce their claims and to focus public attention on their plight.²⁹ One successful use of this scheme occurred in 1962 with the encouragement of the Marxist-oriented Federación Campesina e Indígena, for which elected politicians are the most articulate spokesmen. It was engineered by a closely knit member organization representing five *reducciones* near Los Alamos that had traditionally been relied upon for mutual protection.

Scarcity of land on these *reducciones* had become extreme. One hundred sixty families depended on 468.9 depleted hectares for their sole



income—less than 3 hectares per family, and well below even the provincial average for Indians. The analysis which follows reports how, through joint action, the land-base of the *reducciones* was expanded seventeenfold.³⁰

Minifundismo on these *reducciones* was intensified by the return to fulltime farm employment of eight of the approximately thirty families who had previously spent part of each year at more lucrative employment in the mines. With a larger number of returnees expected (to say nothing

of the new families of the current generation who would need land), the council of the five *reducciones*, working through the Federación Campesina e Indígena, decided to occupy the nearby "Isla de Pangal," a 120-hectare sandy quasi peninsula jutting into the Pacific which contains a silt delta that can be used for grazing.³¹

The title to Pangal had been held by the owner of Ranquilco, the neighboring *fundo* (large Chilean farm) since 1931. Parts of the five *reducciones* fronted on it too, and as Mapuche land for family subsistence was subdivided, grazing land for the small number of animals each family owned was brought under the plow.

Prior to occupying Pangal, the Indians attempted to legitimize their invasion by asking the *intendente* of Arauco (the highest presidentially appointed official at the provincial level) for permission to pasture livestock on certain public land in the area. Not knowing that there were private claims to the property to which the Mapuches were referring, the *intendente* consented. But when he heard of this deception late in January, he sent police to burn the hastily constructed Indian dwellings.

On March 1—and with the *intendente's* permission—the owner brought 500 animals to the island to demonstrate his use of the land. But before that, 50 families from the five *reducciones* had returned to the island with their stock and had erected 30 new shacks. The president of the five-*reducción* council (who is also an official of the Federación) refused to recommend that the Indians move from the area.

The resulting stalemate led the *intendente* to appeal the case to his superior, the minister of the interior (who, in practice, usually is also vice president of the republic). It was obvious that the *intendente* wished to avoid violence; to harm a few, he correctly reasoned, would be to incur the wrath of the entire reservation population. But as he sent the police to the island, he warned that "private property must be protected." In response, the Indians took a more militant line and laid at least rhetorical claim to the entire farm and to "all the lands in the area out of which our ancestors were cheated."

By March 8, the situation was being felt in the Chilean parliament. A bill was presented to the chamber by a bipartisan (center-to-left) group, including the socialist deputy (who was also national secretary to the Federación) and the Communist congressman from the zone who had supported the invasion from the beginning. The bill authorized Pangal to be expropriated under the colonization law applying to land that was "manifestly badly worked." The proposed legislation was dropped, however, since it failed to receive the president's endorsement.³²

On March 11, the *intendente* was successful in having a high-level study team appointed to examine the condition of the Indians in the zone. Local meetings commencing two days later were attended by the head of the Dirección de Asuntos Indígenas, the *intendente*, and the socialist and Communist deputies. They resulted in a *détente* and a decision that the

squatters should be set up on a farm to be purchased by the Caja de Colonización Agrícola and be given technical help and credit.

The urgency of the matter was underlined by the appearance of editorials recommending strong action by the Bureau of Indian Affairs to relieve the deplorable conditions of the Indians and check "extremist elements."

On March 20, the Concepción daily, *El Sur* (usually rightist in editorial policy), spoke out for the Indian and noted the possibility that only expropriation from existing proprietors would satisfy Indian demands. More importantly, the problem was brought to the floor of the senate, where a middle-of-the-road senator claimed that the employment situation in Arauco was at a "crisis stage" and vaguely noted that farms in Arauco that were not operated intensively could be used to alleviate Indian problems.

These events, which indicated growing public support for the Indian cause, were reinforced by the deplorable conditions the study team found. On March 21, over the strenuous objections of the *fundo* owner's lawyer, the Acta de Pangal was released by the local negotiators. It provided that: (1) all but five families representing the reservations would leave Pangal; (2) Indian livestock up to 100 head could be pastured there; (3) the *fundo* owner's animals would be withdrawn; (4) the Dirección de Asuntos Indígenas would give the Indians welfare-type aid for eight months; and (5) property would be purchased by the Caja de Colonización Agrícola for division among the Indians. On April 21, the *fundo* owner finally agreed to sign the Acta. He had paid a dear price for the pressure of public opinion that had built up against him. And the government, whose orientation was center-to-right, found itself with a vested interest in improving the living conditions of the Los Alamos Indians—and in claiming credit for its actions.

Over a year later, in August 1963, the newly created Corporación de Reforma Agraria (CORA succeeded the Caja after passage of the Agrarian Reform Law of November 1962) completed the purchase of 8,173.8 hectares—among them the entire *fundo* of Ranquilco—at a price calculated as average for farm lands in the zone. Eighty individually owned parcels (varying in size from 27 to 109.3 hectares) were to be distributed to those Indians from the five *reducciones* selected by the Bureau of Indian Affairs. The remainder of the land would be used as reserves, as infrastructure, and for allocation to a few non-Indian resident laborers who worked on the *fundos* before the reform. Families remaining on the *reducciones* would be able to enlarge their holdings as their neighbors moved away to take up new land.³³

While the program set up was small and proceeded slowly—by planting time in 1964 only the first 36 parcels had been distributed—it represented a substantial victory for the Indians and for the Federación. On May 1, 1963, a hundred hectares on another *fundo* in Arauco was invaded

by Mapuches. This *fundo* was also subsequently purchased in its entirety by CORA. In early 1965, there were a number of new land invasions. By then, the new Christian Democrat government in Santiago announced that it would not be pressured by the Indians, although it would proceed as fast as it was able with an extensive agrarian reform.

Time will tell whether the government will be able to hold to this resolve. Historically, however, governments have seldom been able to answer protests at specific pressure points by making general promises to improve economic conditions.³⁴ When viewing the situation of Arauco, the government of Chile might ponder U.S. parallels: the American farmer and industrial worker in the 'thirties and the Negro of the mid-'sixties may have resorted to force out of despair, but the tempo of their rebellion increased with the first flush of success. In response, the U.S. government was forced both to engage in specific fire-fighting missions and to take general steps to advance the welfare of the disenfranchised minority groups.³⁵ In the process, institutional change occurred and is occurring.³⁶

4. Problems in the Establishment of the New Indian Colony

While a local group may not need outside funds or technical help in order to take gross actions—such as invading and holding land—the successful operation of an emergent economic organization is another matter. Indeed, its well functioning may depend upon interactions between the pre-established matrix of the local association and material resources loaned by the governmental bureaucracy. And while policy may be made in response to grassroots pressures, its ultimate success will probably depend on the degree to which the programs it brings can actually operate in congruence with community desires.

In some respects the new agency, charged by the government with administering the Arauco project (CORA), was redundant in the eyes of the reform beneficiaries, who heretofore had turned to the Federación to supply needed help. More importantly, the new organization competes for the loyalties of the new colonists. Credit and physical inputs, for example, are available only from CORA.³⁷ In order to maintain itself, the Federación fosters distrust in CORA by reminding *campesinos* who their “true friends” are and offering to protect the Indians from the arbitrary caprices of the novice organization. For the Federación, these tasks have been made easier by the newness and hence the impersonal nature of CORA's Arauco office, by management mistakes in the first year, by announced threats to take away new land if Indians could not make their first amortization payment, and by CORA's persistent attempts to neutralize the Federación through its efforts (so far unsuccessful) to found a CORA-sponsored “cooperative.”³⁸

More specifically, one of the initial problems the colonists faced was the repayment schedule for the land, the first payment for which was due

from the 36 first colonists after the harvest in 1965. These parcels were billed to colonists at an average cost of about \$4,200 each, about half representing the value of infrastructure. The settlers will pay for their land and its improvements with an extremely favorable (considering inflation) 2 percent interest over a 30-year period, according to a schedule which allows no down payment and low payments in the initial five years. The base debt will be adjusted each year for inflation.

We set out to measure labor returns of colonists their first year under reform. We had planned to calculate later whether colonists were able to acquire equity in their new farms. Because of the nature of colonists' incomes in 1964-65, however, these efforts were unnecessary; labor income calculated in the conventional manner (net income minus payments for the use of land and capital) was a negative number. Indeed, only half of the sample showed a positive net income. This conclusion is based upon interviews from a randomly drawn sample of the 36 original colonists (12 farms) after the 1965 harvest. The data tabulation reveals that net income averaged only about E°138 (E°1,303 gross income—mainly from wheat, potatoes, peas, and beans—minus E°1,165 operating expenses).³⁹ In making this calculation, no charge is made for land rental. And valued in-kind consumption which did not enter market channels (about E°943) is included in gross. Because of in-kind and purchasable consumption needs of the 12 families over the year, it is obvious that colonists retained an amount over net income for family subsistence.

If all gross income save the E°63 paid out immediately for outside labor had been retained and consumed—a situation which interviews revealed was close to reality—the average colonist family would have actually consumed products valued at E°1,240 during the 1964-65 crop year. It could not pay its operating expense credits advanced by CORA (E°1,102), the land payment due CORA in 1965 (E°64), or the other intermediate term credit extended by CORA (of which E°98 was due in 1965), making a total unpaid debt by the average colonist in 1965 of E°1,264.

But an exact measurement of income is beside the point. The central issue is that colonists now face more debts than they had ever imagined possible. Furthermore, they realize that if CORA insists on regular payment they must either raise production markedly or leave their new farms.

One must certainly not judge economic performance during the first year too harshly, and CORA's own technical assistance was partially at fault for the colonists' poor results. The farming program it designed on the sandy soil in the area calls for a five-year fallow. Only one-sixth of the crop land is used in a single year, and this portion is dependent upon heavy applications of fertilizer for its success. Late and inadequate application of fertilizer, tardy sowing (seed and fertilizer also arrived late from Santiago), and poor soil preparation the first year of occupancy, coupled with an unusually rainy year, combined to produce the low yields reported.

Economic Development and Cultural Change

At harvest time in 1965, the colonists' single preoccupation was their inability to make a payment to CORA. At this time, the Federación stepped into the picture to assure colonists that by joint appeal they would be able to convince CORA not to collect the first year, and that not even the least successful would be evicted. These efforts proved effective, and a moratorium was granted.

On still another matter, the Federación is raising serious objections to CORA's program. The houses that have been erected on most of the parcels were built according to CORA's master plan for colonist houses in the Central Valley. Dwellings are roomy, but since Mapuches consider that functions centering on food ought to be performed in a building separated from sleeping quarters, most colonists spend their days in a cooking shack they have thrown up in back of the house. Because of the inadequacy of the relatively expensive dwelling and the funds that were spent for fences and gates and open-sided sheds (also rather nonfunctional in this rainy area), the Federación president repeatedly asks CORA, "Why should colonists pay for these unnecessary luxuries? All they want is the land, and infrastructure can be improvised for a time."

One must not be overly critical of CORA, however. Its personnel, who had the bulk of their agricultural training in Mediterranean Chile, where the climate and soils are vastly different from the rainy and cold Indian area, must learn with experience—especially when crucial research data such as crop responsiveness to fertilizer application is nonexistent. But the analyst must also recognize that these early management difficulties and investment errors have strengthened the hand of the Federación and heightened Mapuche anomie toward the government. Most colonists now speak of rejecting future advice from CORA when it is proffered. They also claim that they will be extremely wary of accepting inputs, since the 1965 experience did not prove that returns justify their use.

Clearly, an accord must soon be reached between the Federación and CORA if the projects established are to become going concerns. The government's early response was to invasion pressures from the grassroots. It must now become attuned to a more subtle form of feedback. As in most other "agrarian reform" projects, CORA finds the task of infusing production inputs and the technical skill to use them eminently more difficult than the original task of distributing land.⁴⁰ For its part, the Federación will have to be more patient. If its goal is improvement of levels of living in the Indian countryside, it must recognize that rural Arauco must have access to resources which the Federación does not possess and cannot acquire.

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1 Technically, Mapuche is the language the Araucanians speak. In pre-Columbian times the Araucanians were made up of Picunches (found in Middle Chile, north of the Bío-Bío River) and Huilliches and Mapuches (in the rainy and forested portion of Southern Chile). According to Donald Brand, these tribes were never a political, physical, or cultural unit. Donald D. Brand, "A Brief History of Araucanian Studies," *New Mexico Anthropologist*, Vol. 5, No. 2 (April, May, June 1941), p. 19. At any rate, the Picunches and Huilliches either fled Chile, became assimilated, or were exterminated.

2 Comité Interamericano de Desarrollo Agrícola (CIDA), *Chile: Tenencia de la Tierra y Desarrollo Socio-económico del Sector Agrícola* (Santiago, 1966), Cuadro VII-6, p. 82. One hectare equals approximately 2.47 acres.

3 *Ibid.*

4 See Alejandro Palacios Gómez and Patricio Pinto Pérez, *Estudio Socio-económico de la Agricultura Indígena en la Provincia de Cautín*, unpublished dissertation, Facultad de Agronomía, Universidad de Chile, 1964.

5 Roberto MacLean y Estenós, *Indios de América* (Instituto de Investigaciones Sociales, Universidad Nacional Autónoma de México, 1962), p. 265.

6 CIDA, *op. cit.*, pp. 81–82.

7 *Ibid.*, pp. 80–82.

8 Social scientists have reached little agreement on the extent to which the culture of the Araucanian is changing, however. McBride explains: "The Indian, as a separate racial group, has almost disappeared: he is fast becoming amalgamated with the rest of the Chilean people." George McCutchen McBride, *Chile: Land and Society* (New York: American Geographical Society, 1936), p. 308. In his classic analysis, Mischa Titiev wrote that the Araucanian is "virtually indistinguishable from the poorer Chilean farmers who live in their vicinity." See his *Araucanian Culture in Transition* (Ann Arbor: University of Michigan Press, 1951), p. 36. On the other hand, John Cooper saw the Araucanian society as relatively static, writing: "Araucanian culture in the central zone . . . remained fairly intact until well toward the end of the Nineteenth Century, and much even remains today." See his article in Julian Steward, ed., *Handbook of South American Indians*, Vol. 11 (Washington: Smithsonian Institution, 1946), p. 697. The present author's work implies that the intermediate position taken by L. C. Faron (who originally made the above distinction between Titiev's and Cooper's viewpoints) is more correct.

Faron states, "I view Mapuche society as being in a phase of structural equilibrium. It is undergoing some organizational change, as always, but this represents minor pattern adjustment within a stable social structure. . . . During the past five or six decades Mapuche society has exhibited marked structural stability." See his *Mapuche Social Structure* (Urbana: University of Illinois Press, 1961), p. xiii. Faron has also done a number of other studies on the family organization of the Mapuche. See, for example, his "Matrilateral Marriage among the Mapuche (Araucanians) of Central Chile," *Sociologus: Zeitschrift für Volkerpsychologie und Soziologie*, Vol. 12, No. 1 (1962), pp. 54-66. For other descriptions of the Araucanian social structure, see also Alejandro Lipschutz, *La Comunidad Indígena en América y en Chile* (Santiago: Editorial Universitaria, 1956); Ricardo Latcham, "Ethnology of the Araucanians," *Journal of the Royal Anthropological Institute*, Vol. 39 (1909), pp. 334-70; William W. Winnie, Jr., "Communal Land Tenure in Chile," *Annals of the Association of American Geographers*, Vol. 55, No. 1 (March 1965), pp. 67-86, esp. pp. 84-85; and Alejandro Saavedra, "Consideraciones sobre la Cuestión Mapuche," Borrador, Instituto de Capacitación e Investigación en Reform Agraria (Santiago, 1966).

9 For complete descriptions of the *reducción*, see Faron, *Mapuche Social Structure*, *op. cit.*; McBride, *op. cit.*, pp. 285-313; Titiev, *op. cit.*; Saavedra, *op. cit.*; and Palacios and Pinto, *op. cit.* These seasonal labor institutions are often erroneously referred to, even by Chileans, as being "collectivistic." In fact, labor patterns here are very similar to those in some Indian areas of Peru which are, as Richard W. Patch has pointed out, equally noncollective in nature. In describing the group work called *aine* (or, alternatively, *mingay* or *minka*), as practiced in Huancárama in Southern Peru, he notes: "During the agricultural year there are several periods of intense labor. . . . For these [times] small groups of relatives or friends in a single residence area . . . in effect trade days of labor. On one day the group will work with an individual on his land, finishing all of his plowing in a single day. That individual must furnish one or two large meals, and he also owes one day of work to each of the men. . . . In any event it appears that the *aine* or *minka* is no more communistic . . . than a . . . husking bee." Richard W. Patch, "How Communal Are the Communities?" American Universities Field Staff Letter, Lima, June 12, 1959, pp. 7-8. Though the reservation in Colombia was disbanded by law in 1941, communal labor in the harvesting and planting seasons (called *minga*) still exists in former *resguardo* areas—at least in Contadero, Nariño. See D. W. Adams and A. E. Havens, "The Use of Socioeconomic Research in Developing a Strategy of Change for Rural Communities: A Colombian Example," *Economic Development and Cultural Change*, Vol. 14, No. 2 (January 1966), p. 207. The *altepetlalli* were common lands, but it is doubtful that a full-blown collective work system was very prevalent on them even in pre-Columbian times, because the common lands were usually wooded, and the Aztecs did not own grazing animals. See François Chevalier, *La Formation*

des Grands Domaines au Mexique: Terre et Société aux XVI^e-XVII^e Siècles (Paris: Institut d'Ethnologie, 1952).

10 Armond Mattelart and Manuel A. Garretón, *Integración Nacional y Marginalidad: Ensayo de Regionalización Social de Chile* (Santiago: Editorial del Pacífico, 1965), p. 55.

11 CIDA, *op. cit.*, Cuadro VII-5, p. 81.

12 *Ibid.*

13 Corporación de Fomento de la Producción, *Síntesis Estadística de las 25 Provincias del País* (Santiago, Agosto 1963, mimeo.), 13/VII.

14 Mattelart and Garretón, *op. cit.*, p. 103. Crop yields also give some clues as to labor productivity. In the five years from 1960 to 1964, series data reveal that the per hectare yield of potatoes in Arauco was 34.3 quintals below the national average. Other crops grown in Arauco, with the amounts their per hectare yields were below the national averages for this period, are: wheat—5 quintals; beans—3.2 quintals; and oats—3.4 quintals. Compiled from Dirección de Estadística y Censos, *Boletín* (Sinopsis) (Santiago, 1962, 1963, 1964).

15 CIDA, *op. cit.*, Cuadro VII-6, p. 82.

16 Universidad de Chile, Instituto de Economía, *La Economía de Chile en el Periodo 1950-1963*, Tomo II (Santiago, 1963), Cuadro 109, p. 85.

17 *Ibid.*, Cuadro 112, p. 87. Coal used for the merchant marine dropped 1.5 percent of total supply in this period. Drops recorded for the state railroad and fabricating industries were 1.2 percent and 12.0 percent of total supply, respectively. As mentioned previously, total supply was also shrinking.

18 Merwin L. Bohan and Morton Pomeranz, *Investment in Chile* (Washington: Department of Commerce, 1960), p. 190.

19 *Ibid.*

20 *Ibid.*, p. 191.

21 There seem to be parallels in the economic problems of areas that are extremely dependent on coal mining and agriculture. See, for example, Donald A. Crane and Benjamin Chinitz, "Poverty in Appalachia," in Leo Fishman, ed., *Poverty amid Affluence* (New Haven: Yale University Press, 1966), pp. 124-49. For less technical but highly readable accounts of the coal-agriculture complex in the U.S., see Harry M. Caudill, *Night Comes to the Cumberlands* (Boston: Little, Brown, 1962); and Jack E. Weller, *Yesterday's People: Life in Contemporary Appalachia* (Lexington: University of Kentucky Press, 1965). There are, of course, many similarities between this situation and the U.S. Indian problem. See, for example, Annals of the American Academy of Political and Social Science, *American Indians and American Life*, Vol. 311 (Philadelphia, May 1957); Peter P. Dorner, *The Economic Position of the*

American Indians: Their Resources and Potentials for Development, unpublished Ph.D. dissertation, Harvard University, February 1959; Fred Voget, ed., *American Indians and Their Economic Development*, a special issue of *Human Organization*, Vol. 20, No. 4 (Winter 1961-62); and D'Arcy McNickel, *The Indian Tribes of the United States: Ethnic and Cultural Survival* (Oxford: Oxford University Press, 1962).

22 Mattelart and Garretón, *op. cit.*, Cuadro IX, p. 179. A study in March 1961 showed the rate of unemployment in Santiago to be higher than most other towns in Chile. Two-and-one-half years later, the situation had changed only for a group of towns in a five-province area near Concepción, which now registered more unemployment than the capital. Instituto de Economía, *Ocupación y Desocupación* (March 1961 and September 1963). Bruce H. Herrick reports that the probability that unemployment in Concepción was between 6 and 8.4 percent, and that unemployment in the coal mining region of Concepción province was between 9.6 and 13.0 percent, in September 1963, is at the 0.95 confidence level. See *Urban Migration and Economic Development in Chile* (Cambridge: MIT Press, 1966), pp. 33-35. Indications are that the inflow of labor resources to Santiago from these rural areas of frontier Chile remains very low.

23 Mattelart and Garretón, *ibid.*, Cuadro XIX, p. 190.

24 *Ibid.*, Cuadro I, pp. 38-39. Considering only the population over 15 years of age, all who have not received more than three years of primary education are enumerated by this study as "functionally illiterate." Interregional comparisons in which the definition of functional illiteracy is held constant are useful. Intercountry comparisons should be avoided, however, since the definition of functional illiteracy varies widely. For a discussion of this point, see Everett M. Rogers and William Herzog, "Functional Literacy among Colombian Peasants," *Economic Development and Cultural Change*, Vol. 14, No. 2 (January 1966), pp. 190-203.

25 *Ibid.* McClelland has reported that because of scarcity of data such as expenditures on education, enrollment figures of this sort may be revealing in showing the emphasis a country puts on education (or, alternatively, intercountry differences). "Among such figures, primary enrollments seem less likely to be important for economic growth for a variety of reasons. On the one hand, correlations of economic levels with primary school enrollment ratios are lower than with secondary enrollment ratios. On the other, primary school attendance has a doubtful relationship to significant improvements in the labor force or even to literacy itself. That is, the marginal product of a primary school education would seem likely to be low, because skilled artisans may function practically as well without being literate. . . . For these reasons postprimary education seems likely to be the more important input for economic growth. . . ." David C. McClelland, "Does Education Accelerate

Economic Growth?" *Economic Development and Cultural Change*, Vol. 14, No. 3 (April 1966), p. 262.

26 Mattelart and Garretón, *op. cit.*

27 CIDA, *op. cit.*, Cuadro VII-5, p. 81.

28 While until the early 'sixties no agricultural credit from the central government was available to Indian communities, in 1962 about \$500,000 was earmarked for short-term lending to Indians. About two-thirds of this could be considered supervised credit, but lack of supervisory technicians made much of the credit ineffective. Ministerio de Tierras y Colonización, Dirección de Asuntos Indígenas, "Los Araucanos . . ." (Santiago, 1963, mimeo.), pp. 7-9. Usurious credit from private sources is frequently made available to Indians through the mechanism of selling crops *en verde*—literally, "green." The lender buys a standing crop at a price that will be lower than its harvest-time level, paying immediately in cash. At harvest, the Indian turns over the crop to cancel his debt.

29 This invasion pattern seems similar in some respects to the one followed in Cuzco province (Peru) from December 1963 to March 1964. See, for example, Hugo Neira, *Cuzco: Tierra y Muerte: Reportaje al Sur*, Problemas de Hoy (Lima, 1964), a perceptive journalist's account; and Ricardo Letts Colmenares, "Breve Historia Contemporánea de la Lucha por la Reforma Agraria en el Perú," *Economía y Agricultura*, Vol. 1, No. 2 (Lima, December 1963-February 1964). The role played by peasant *sindicatos* in Venezuela is analyzed in John Duncan Powell, *The Politics of Agrarian Reform in Venezuela: History, System and Process*, unpublished Ph.D. thesis, Department of Political Science, University of Wisconsin, 1966. The role beginning to be played by *ligas camponesas* in Brazil's Northeast is covered in Josué de Castro, *Death in the Northeast* (New York: Random House, 1966). For another well articulated account of civil disobedience in Latin America, see Germán Guzmán, Orlando Fals Borda, and Eduardo Umaña Luna, *La Violencia en Colombia, Estudio de un Proceso Social*, No. 12, Monografías Sociológicas (Bogotá: Facultad de Sociología, Universidad Nacional, 1962) (Tomo 1). See also classic studies such as Germán Arciniegas, *Los Comuneros*, 2nd ed. (Bogotá: Editorial ABC, 1939); Boleslao Lewin, *Tupac Amaru: El Rebelde* (Buenos Aires: Editorial Claridad, 1943); and Euclides Da Cunha, *Os Sertões*, 15^a ed. Corrigida (Rio de Janeiro: Paulo de Azevedo, 1940).

30 Corporación de la Reforma Agraria, Departamento de Formación de Colonias, *Proyecto de Parcelación "Los Alamos,"* Sector No. 1, 2, 3 (Santiago, 1963, mimeo.).

31 The information in the following paragraphs of this section is condensed from interviews with Germán Errázuriz Arnold, director of CORA in Arauco province (Cañete); with others in CORA; Chilean congressmen; president of the five-*reducción* council; and articles in *El Sur* (Concepción), March 4, 8, 5,

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6, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, and 21; April 13; and May 1, 2, 3, 4, 6, 7, and 8, 1962. Arauco province has no daily newspapers.

32 The Chilean congress considers bills not proposed or endorsed by the president between May 21 and September 18 of each year. In March, since the congress was in "special session" called by the president to consider bills he deemed urgent, this bill could have been voted upon only if he had placed it on the agenda.

33 Paradoxically, by the time of land assignment in 1964, a number of Indians on the five *reducciones* selected to receive parcels decided not to exercise their option for one or a combination of three reasons. (1) They felt so much anomie toward the government that they questioned the motives of the center-to-right leadership of CORA and the Dirección de Asuntos Indígenas. More specifically, they felt certain that there were ulterior motives behind the government's action. For historic reasons and under the recent tutelage of the left, they had learned to deeply distrust the central bureaucracy. (2) They were afraid of not being able to pay off their land according to the predetermined schedule. (3) They felt the land in some parcels was extremely poor, and since assignment was by raffle, they were afraid they would receive the inferior land. As a result, CORA allowed parcel-takers to maintain their claims in the *reducción* to reduce their initial risk, thinking that in due time new owners could be convinced to alienate this property (source: the office of CORA in Arauco province and the local president of the Federación Campesina e Indígena). The economic results of the first crop year on the new colony (see below) only strengthened the parcel-holding Indians' desires to keep their *reducción* property.

34 Neither will blaming the left for mobilizing the aggrieved remove the basic cause behind the exercise of civil disobedience.

35 This may be interpreted more broadly. If the Negro problem in North America had remained quiescent, instead of erupting periodically into violence, some sociologists doubt that the War on Poverty (more inclusive than the Negro and including Appalachia, areas of the cut-over in the Midwest, etc.) would have been declared. See, for example, Nathan Glazer, "A Sociologist's View of Poverty," in Margaret S. Gordon, ed., *Poverty in America* (San Francisco: Chandler, 1965).

36 Raymond J. Penn has cogently spoken to this point. "When an institution or a rule is inadequate for current needs, it must be changed—either with orderly procedures or in a more violent manner. Witness the sit-down strikes in the 1930's or the Iowa judge unable to foreclose on a farm; these were violent reactions to rules too rigid for the public interest. The violence of the change is, I think, in direct proportion to the inappropriateness of the rule or institution and the rigidity with which it is held." Raymond J. Penn, "Public Interest in Private Property (Land)," *Land Economics*, Vol. 37, No. 2 (May 1961), p. 103.

37 The government's determination to push its influence as far as possible is even reflected in the name selected for the colony, Rosa Ester Rodríguez de Alessandri, mother of President Jorge Alessandri (1958–64). Even so, the most common answer to the question, "How did you get this land?" when posed to the colonists was: "We fought for it."

38 There is a temptation to say that if the political coloration of the two organizations were similar, CORA would be able to delegate many of its duties to the Federación. But one must be careful of pushing this assumption too far. In addition to the reluctance of government agencies to cultivate positive relationships with the Federación Campesina e Indígena, there is a feeling within the group of Church-backed peasant unions that they, too, are in competition with the Christian Democratic government's efforts to improve rural conditions. The largest of the unions of Roman Catholic orientation (Christian Peasant Union, or UCC) is wary of the current government program. More pronounced, of course, is the UCC's strong feeling that no joint action between it and the Federación is possible. "The main reason cited was that the Federación was 'political' and not concerned with immediate bread and butter issues; that the Federación was led by Parliamentarians who were simply interested in attacking the government and not in the trade union struggle." James F. Petras, "Chile's Christian Peasant Union: Notes and Comments on an Interview with Hector Alarcón," *Land Tenure Center Newsletter No. 23* (Madison, Wis., March–July 1966, mimeo.). The documentation in this article would seem to throw some doubt on this UCC assertion.

39 At the time of these calculations, \$1 = 3.7 Chilean *escudos* (E°).

40 Further documentation on the difficulties of providing technical skills to *campesinos* in colonization and reform programs is given in the author's monograph, *Chile's Experiments in Agrarian Reform* (Madison: University of Wisconsin Press, published for *Land Economics*, 1966); and in the following articles by the author: "A Cooperative Farming Project in Chile: A Case Study," *Journal of Farm Economics*, Vol. 48, No. 2 (May 1966); "Chilean Agrarian Reform: The Possibility of a Gradualistic Turnover of Land," *Inter-American Economic Affairs*, Vol. 20, No. 1 (Summer 1966), reprinted in *Development Digest*, Vol. 4, No. 3 (October 1966); and "Agrarian Reform and Economic Development in Chile: Some Cases of Colonization," *Land Economics*, Vol. 42, No. 3 (August 1966).

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