PATTERNS OF INFORMATION EXPOSURE AMONG WORKERS IN A RURAL TOWN COMMUNITY IN SOUTHERN BRAZIL

Thesis for the Degree of Ph. D.

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Thomas L. Blair

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This is to certify that the

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presented by

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Charles P. Loomis
Major professor

Date June 18, 1956

PATTERNS OF INFORMATION EXPOSURE AMONG WORKERS IN A RURAL TOWN COMMUNITY IN SOUTHERN BRAZIL

by

Thomas L. Blair

A THESIS

Submitted to the School for Advanced Graduate Studies of Michigan State University of Agriculture and Applied Science in partial fulfillment of the requirements for the degree of

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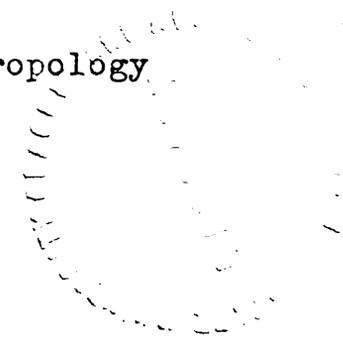
Department of Sociology and Anthropology

1956



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My sincere thanks are due to the mayor and officials of the town of Tapes, Rio Grande do Sul, Brazil, and the owners of the Fazenda Rosa Arrozeira Brasileira and the Mercantil Arroz company for their official assistance. Two factory workers who befriended the author should be mentioned here, Harmy Hoff and Gaston Cesar. Sr. João Batiste Aguiar participated in the field work.

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Dissertati

Major Field

Biographical

Born, Ju

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1949-50,

Graduate
MA 1951,
Michigan

Experien

Honora

Thomas L. Blair

candidate for the degree of

Doctor of Philosophy

Dissertation: Patterns of Information Exposure Among Workers in a Rural Town Community in Brazil

Major Field: Sociology

Biographical Background:

Born, June 9, 1926, New York, New York

Undergraduate Studies, Northeastern University, Boston, 1945-50, AB 1950

Graduate Studies, Boston University, Boston, 1950-51, MA 1951, Columbia University, New York, 1951-52, Michigan State University, 1952-56

Experience: Graduate Assistant, Department of Sociology and Anthropology, Boston University, 1950-1951, and Department of Sociology and Anthropology, Michigan State University, 1952-1953; Research work at Columbia University Bureau of Applied Social Research, 1951-52; National Opinion Research Committee, 1951-1952; International Public Opinion Research, 1952; Institute of International Education, 1952; and Michigan State University Area Research Center, 1952-53. Chairman, Department of Sociology and Social Studies, Jarvis College, 1954-56.

Honors and Memberships: Fellow, John Hay Whitney Foundation, 1952-54. Member, American Sociological Society, Society for the Study of Social Problems, Inter-American Congress of Psychology, and the Southwestern Sociological Society

Submitted

Approved

PATTERNS OF INFORMATION EXPOSURE AMONG WORKERS IN A RURAL TOWN COMMUNITY IN SOUTHERN BRAZIL

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AN ABSTRACT

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THOMAS L. BLAIR

ABSTRACT

In Brazil, the development of industrial enterprises based on the milling of agricultural cash crops placed large numbers of people into close proximity and manifold social relations. The process of industrialization created a wider range of communication and social interaction which facilitated the diffusion of information. Workers in rural town agro-industrial communities became increasingly exposed to new ideas, opinions, and news.

The author explored the variations in information exposure among three occupational groups, agricultural, factory, and office workers, in the agro-industrial structure of a rural town community in southern Brazil. Three sources of information exposure were investigated: (a) selected mass media, (b) social visiting, and (c) contact with outside persons. Answers were sought to several questions: How are workers exposed to new information? What are the patterns of exposure? What are the differences in the exposure of workers to various channels of information?

Tests of thirteen operational hypotheses indicated that agricultural workers were less exposed to information than factory workers who, in turn, were less exposed to information than office workers. It was noted that:

Agricultural workers did not possess the necessary prerequisites (e.g., literacy and income) for the use of media. They were infrequently exposed to new information

through social visiting and had infrequent contacts with bearers of information from the outside world.

Some factory workers possessed the prerequisites for use of media. Among those who were exposed most had access to newspapers and radios. Their information exposure was re-inforced and expanded by frequent visiting with other exposed workers and by frequent contact with outside persons. Cross-occupational visiting by factory workers facilitated the dissemination of information up and down the occupational scale.

Office workers were literate and had substantial incomes. They were frequently exposed to media. Their frequent exposure was expanded through visiting with highly exposed fellow workers and by wide contacts with outside persons.

The study revealed three specific types of audiences on the basis of exposure to new information:

Type A.

1. Primacy of inter-personal information exposure.
2. Exposure to new information infrequent.
3. Content of information received: local and provincial.
4. Persons typically rural illiterate agricultural workers.
5. Oriented toward traditional "folk" values and patterns.

Type B.

1. Primacy of oral and direct exposure to mass media; oral exposure supportive of direct exposure.
2. Exposure to new information more frequent than Type A.

3. Content of information received: often about non-local occurrences.
4. Persons typically urban semi-literate factory workers.
5. Transitional between traditional folk values and those of modern society.

Type C.

1. Primacy of direct exposure to mass media.
2. Exposure to new information a daily occurrence.
3. Content of information received: urbane and cosmopolitan.
4. Persons typically urban literate office workers.
5. Oriented toward modern values common in large Brazilian cities.

In sum, the socio-economic organization of the rural town agro-industrial community in Brazil exposes varying groups of workers to different social environments which in turn affect the probability that they will possess a given pattern of exposure to new social knowledge. Analysis showed that the observed patterns of exposure to information through mass media, social visiting, and contact with persons from outside were significantly related to occupational position, location of work, and position in the family life cycle.

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I. THE INDUSTRIALIZATION OF LESS DEVELOPED AREAS AND INFORMATION EXPOSURE

A significant contemporary social movement is the spread of the industrial mode of production to remote areas of the world. Industrial and technological systems, characterized by the application of rational and scientific principles, have penetrated to widely dissimilar cultures often referred to as "backward" or "underdeveloped." With industrialization have come new forms of social and economic organization, urbanization, new avenues of mobility, and motivations and aspirations toward higher standards of living. In addition, industrialization has exposed workers to new information, ideas, opinions, and thought, i.e., to new social knowledge. The main aim of this research is to study the relationship between the socio-economic position of workers in a rural town community of a newly-industrializing Latin American nation and the pattern of their exposure to new sources of information and new social knowledge.

The Less Developed Areas of the World

Their characteristics. In the modern world the most important factor distinguishing the more advanced from the less advanced societies is that of industrial economic development. Eugene Staley offers a suggestive grouping of

96 countries of the world in terms of their comparative economic development. Staley groups these countries as highly developed, intermediate, and underdeveloped, according to their per capita national income, degree of urbanization, and proportion of the working population engaged in non-agricultural occupations.[1]

The underdeveloped nations of the world include two-thirds of the world's population. These nations may be characterized by several interrelated factors:

(a) They are non-industrial and the level of business organization commonly encountered is still in the pre-capitalist stage.[2] Economic advancement is handicapped by the lack of use of the tools of scientific management (such as cost accounting, personnel departments, and modern mar-eting procedures), by limited natural resources, scarcity

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[1]Eugene Staley, The Future of Underdeveloped Countries: Political Implication of Economic Development (New York: Harpers), 1953, pp. 16-17. Staley's use of these criteria corresponds with those of other investigators. Cf. Kingsley Davis, "Population and the Further Spread of Industrial Society," Proceedings of the American Philosophical Society, Vol. 95, 1951, p. 8; Beate R. Salz, The Human Element in Industrialization (Chicago: American Anthropological Association and the University of Chicago), Vol. 57, No. 6, Part 2, Memoir 85, 1955, p. 1; and Hilda Hertz Golden, "Literacy and Social Change in Underdeveloped Countries," Journal of Rural Sociology, Vol. 20, No. 1, March, 1955.

[2]J. H. Boeke, The Structure of the Netherlands Economy (New York: Institute of Pacific Relations), 1942, pp. 90-91.

of capital, low labor productivity, and a "backward" economic "mentality" among entrepreneurs.[3]

COUNTRIES GROUPED BY LEVEL OF ECONOMIC DEVELOPMENT[4]

A. Highly Developed

1. Americas: Canada, United States of America

2. Europe: Belgium, Denmark, France, Germany, Netherlands, Norway, Sweden, Switzerland, United Kingdom

3. Oceania: Australia, New Zealand

B. Intermediate

1. Africa: Union of South Africa

2. Americas: Argentina, Chile, Cuba, Puerto Rico, Uruguay, Venezuela

3. Europe: Austria, Czechoslovakia, Finland, Hungary, Ireland, Italy, Poland, Portugal, Spain

4. Asia: Israel, Japan

5. Eurasia: Union of Soviet Socialist Republics

C. Underdeveloped

1. Africa: Algeria, Angola, Belgian Congo, Cameroons, Egypt, Ethiopia, French Equatorial Africa, French West Africa, Gold Coast, Kenya, Liberia, Libya, Madagascar, Morocco, Mozambique, Nigeria, Nyasaland, Northern Rhodesia, Ruanda-Urundi, Southern Rhodesia, Sudan, Sierra Leone, Tanganyika, Tunisia

2. Americas: Bolivia, Brazil, British West Indies, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Paraguay, Peru

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[3]See Staley, op. cit., p. 207, and Boeke, op. cit., pp. 91-93.

[4]Staley, loc. cit.

3. Asia: Afghanistan, Borneo, Burma, Ceylon, China, Formosa, India, Indo-China, Indonesia, Iran, Iraq, Jordan, Korea, Lebanon, Nepal, Malaya, New Guinea, Pakistan, Saudi Arabia, Syria, Yemen, Thailand, Turkey

4. Europe: Albania, Bulgaria, Greece, Rumania, Yugoslavia

(b) Poverty, illiteracy, ill-health, high birth and death rates, and low levels of living are common.[5]

(c) The majority of people get their living from the land and live on the land or in small village communities. Persistent problems in rural areas typically are excessive concentration of land ownership, uneconomic land practices, fragmentation of small holdings, absentee landlordism, and the lack of clear titles to land.[6]

(d) Rural persons are isolated from the mainstream of the modern social, political, and cultural life of the nations in which they live. This isolation plays an impor-

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[5]For a general analysis of the non-industrial areas of the world see Ralph Linton, Most of the World (New York: Columbia University Press), 1949. See also Golden, op. cit., pp. 1-7; Kingsley Davis, Human Society (New York: Macmillan Co.), 1948, p. 614 ff; C. E. A. Winslow, The Cost of Sickness and the Price of Health (Geneva: World Health Organization), 1951; Karl Sax, "Population Problems," Ralph Linton (ed.), The Science of Man in the World Crisis (New York: Columbia University Press), 1945, pp. 258-81; and Josue de Castro, Geography and Hunger (Boston, Mass.: Little, Brown and Co.), 1952, Chapters I-V. For elaborate statistics see Report on the World Situation (New York: UNESCO), 1952, E/CN. 5/267, and United Nations Monthly Bulletin of Statistics, June, 1952, pp. vii-xi, and Table 54.

[6]Staley, op. cit., Chapters I and II.

tant part in the oft-noted "backward-ness" and "conservatism" of native peoples.[7]

(e) These nations are or have been colonial or semi-colonial, economically and/or politically dependent upon Western nations.[8]

Economic development and its results. The course of recent history indicates that the less developed areas of the world are increasingly affected by the spread of industrialization.[9] Industrialization induces qualitative

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[7]Robert Redfield, The Primitive World and Its Transformations (Ithaca, New York: Cornell University Press), 1953.

[8]Raymond Kennedy, "The Colonial Crisis and the Future," Ralph Linton (ed.), The Science of Man in the World Crisis, op. cit., pp. 306-46.

[9]Industrialization as used here refers to the complex of factors, of primarily Western origin, involved in the transformation of the economies of underdeveloped countries through the introduction of scientific technology, power mechanization, factory systems, mass production, rational division of labor, and the related social, economic values, norms, patterns and institutions of the more advanced nations.

For discussions of the classical characteristics of the industrial mode of production see Wilbert Moore, Industrial Relations and the Social Order (New York: Macmillan), 1947, pp. 35-48; R. H. Tawney, The Acquisitive Society (New York: Harcourt Brace), 1920, passim, especially Chapter 3, and his Religion and the Rise of Capitalism (New York: Penquin), 1947, pp. 149-63; Talcott Parsons, Essays in Sociological Theory, Pure and Applied (Glencoe, Ill.: Free Press), 1949, pp. 93-116; and the works of Marx, Weber, Polanyi, and Veblen.

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changes in the traditional social structure and economy, the external consequences of which result in the slow emergence of native peoples from their centuries-old isolation, and in an increase in their political and economic importance in the larger world.[10]

As the economic evolution of less developed areas progresses there occurs,

> a whole complex of interdependent changes manifested simultaneously in (1) the physical environment, (2) in the forms of association by which men live and work, and (3) in the skills, habits, and thought patterns of individuals.[11]

Economic development modifies the physical environment through the introduction of new roads, buildings, factories, harbors; it brings the expansion of towns and cities, and readjustments in land use and tenure. It fosters new associations and increased interaction between large numbers of individuals. It introduces and enables the diffusion of literacy, health programs, higher standards of living, technical specialization, new ambitions, motivations and aspirations, respect for the scientific method, and the idea of "progress." The process of industrialization is

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[10] See Wilbert Moore, Industrialization and Labor: Social Aspects of Economic Development (Ithaca, New York: Cornell University Press), 1951, pp. 1-8 and Chapter XII; Staley, op. cit., pp. 200-10; Salz, op. cit., Chapter I; and George Soule, David Efron, and Norman T. Ness, Latin America in the Future World (New York: Farrar and Rinehart), 1945, Foreword and Chapter 18.

[11] Staley, op. cit., pp. 202-03.

clearly one of cultural diffusion and social and cultural change.[12]

Undoubtedly, there are variations in the effects of the introduction of Western world industrial technological systems.[13] Nevertheless, some major changes in the structure of traditional societies have been noted: (a) economic relations become separated from the traditional social system, (b) the rural town and factory rival the field and open country as a place of work, residence, and social interaction, (c) money becomes an acceptable standard as payment for work, (d) new groups of workers are formed and new individuals ascend to positions of wealth and power, and (e) the number of agencies transmitting information and knowledge increases.[14]

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[12]See Moore, op. cit., pp. 178-99; Bronislaw Malinowski, The Dynamics of Culture Change (New Haven: Yale University Press), 1945, Chapter II; and Redfield, op. cit., Chapter II.

[13]These variations depend on such factors as the nature of the society and the conditions extant at the time of industrialization, the type of political and economic system utilizing the industrial mode, the degree of harmony between the ends and values of the innovators and the native populations, and the methods by which industrialization is introduced. See Wilbert E. Moore, "Utilization of Human Resources in Industry," Modernization Programs in Relation to Human Resources and Population Problems (New York: Milbank Memorial Fund), 1950, p. 46 fn.

[14]See Yale Brozen, Social Implications of Technological Change (New York: Social Science Research Council), 1950; Milbank Memorial Fund, International Approaches to Problems

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These changes affect the exposure of individuals to new sources of information, opinions, attitudes, and news. The development of factory towns places large numbers of individuals in close proximity to each other and to media of information; exposing them, as a consequence, to new persons and differing points of view. New roads bring contacts between distant localities; bus drivers, tradesmen, and travelers serve as important disseminators of information. Thus, the process of industrialization creates a wider range of social interaction which facilitates the diffusion of information and social knowledge.

Statement of the Research

Area of inquiry. The advent of industrialization in rural Brazil brought about the rapid development of rural

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of Underdeveloped Areas (New York), 1948; Margret Mead, Cultural Patterns and Technical Change (Paris: UNESCO), 1953, pp. 243-68; Leo Lowenthal (ed.), Special Issue on International Communications Research, Public Opinion Quarterly, Vol. 16, No. 4, Winter 1952; and articles by S. Herbert Frankel, William Fielding Ogburn, Wilbert E. Moore, Jean Fourastie, and Einar Thorsud in Social Implications of Technical Change, International Social Science Bulletin (Paris: UNESCO), Vol. IV, No. 2, Summer 1952.

Often the "effective" industrialization of underdeveloped areas is handicapped by barriers and antipathies. See Mead, op. cit., pp. 260-63; James M. Reinhardt, Paul Meadows and John M. Gillette, Social Problems and Social Policy (New York: American Book Company), 1952, pp. 105-07; Preston James, "Significance of Industrialization in Latin America," Fred E. Dohrs, Lawrence M. Sommers, and Donald Petterson (eds.), Outside Readings in Geography (New York: Crowell), 1955, pp. 571-74; Wilbert E. Moore, "Labor Attitudes Toward Industrialization in Underdeveloped Countries," and Bert F. Hoselitz, "The City, the Factory and Economic Growth," in Papers and Proceedings of the American Economic Association, American Economic Review, Vol. XLV, No. 2, May 1955.

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town communities placing individuals, previously unknown to each other, into manifold social relations. New factory workers in these rural towns were exposed to mass media of communication and interacted without the restrictions of plantation life. Plantation workers, drawn into the orbit of the new economic order, were linked with urban life through the development of communication and transportation systems. The shift to cash wages led to the possibility of attaining such new social goods as education, radios, and newspapers. Social visiting and contacts with persons from outside the local community facilitated the inter-personal diffusion of information. As a result, workers in rural town communities became exposed increasingly, directly and indirectly, to new ideas, information, news, and opinion.

Several questions may be asked concerning this process of industrialization and information exposure: Has exposure to new social knowledge occurred equally for all workers, or do workers in one socio-economic position have a greater degree of exposure to information than workers in other socio-economic positions within the social structure? If there are differentials, are they patterned? Are office workers, for example, more exposed to information than factory workers, and are factory workers more exposed than agricultural workers? To what extent is occupational position a major determinant of information exposure? What are

the differences in the exposure of workers to information disseminated through different communication channels.

Objectives. This study has been approached with two principal objectives: (a) to establish whether patterned differences in information exposure exist among the three occupational groups studied; and (b) to make inferences about the historical, cultural, structural and situational factors which may account for the observed patterns and variations in information exposure.

The problem and hypotheses. The investigation to be presented here is an exploratory case study of the variations in the form and character of information exposure among fifty agricultural, factory, and office workers in the agro-industrial structure[15] of a Brazilian rural town community.[16] Three potential sources of information were investigated: (a) selected mass media of communication,

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[15]By agro-industrial structure is meant that type of economic organization involving high cost factory enterprise based on the milling of agricultural cash crops, such as rice, coffee, and sugar.

[16]A rural town community in Brazil consists of a town and its periphery, its social, occupational, and ethnic groups, and formal institutions. It is a small urban area serving as an administrative, marketing, religious, and information dispensing center. The research presented here specifically relates to agro-industrial rural town communities, i.e., those rural town communities whose economies are related to their rural surroundings through the dependence of the town factory on outlying plantations as sources of raw agricultural products.

(b) social visiting within the community, and (c) contact with persons from outside the community.

The focus of the study is on the social arrangement of three groups within the working population and their patterns of exposure to sources of information. The theme for inquiry suggests that the exposure of workers to information, ideas, news, and opinions, is related to the nature of their position in the socio-economic structure of the agro-industrial mode of production. The general proposition is that the economic organization of the rural town community in Brazil exposes (to a greater or less degree) varying groups of workers to different environments (more or less uniform for each) which affect the chances that they will possess a given pattern of exposure to new social knowledge.

For the purpose of providing a test of the general proposition an empirically testable hypothesis was formulated. It specified that the form and character of information exposure, expressed in terms of (a) mass media, (b) social visiting, and (c) contact with persons from outside, varies directly with the occupational position of the worker in the rural town community. To test this specific hypothesis thirteen operational hypotheses were developed. Each operational hypothesis asserted that significant differences among the average ranks for each group would exist in stated directions. The hypothesized direction for each

operational hypothesis was A-F-O: i.e., that agricultural workers (A) would have the lowest average rank indicating the lowest degree of information exposure; factory workers (F) would have the next highest average rank or the next highest degree of information exposure; and office workers (O) would have the highest average rank or the highest degree of information exposure. The differences found among the average ranks were evaluated statistically.

Summary

The spread of the industrial mode of production and its effects facilitated the diffusion of information, ideas, and opinions. The scope of the present investigation involves (a) an appraisal of the extent to which various occupational groups within a Brazilian rural town (agro-industrial) community are exposed to information, and (b) an identification and analysis of existent patterns of exposure and relevant social variables associated with these patterns. Chapter II attempts to picture some of the important technological and social structural changes resulting from the agro-industrialization of Brazil (the geographical locus of the study), and indicates the general context within which the information exposure of workers was studied.

II. AGRO-INDUSTRIALISM IN BRAZIL AND ITS EFFECTS

The socio-economic structure of Brazil in the first three hundred years of its existence was characterized by the plantation system.[1] At the turn of the twentieth century it underwent a slow process of industrial and technological change. In many rural areas of Brazil where industrialization impinged upon the traditional forms of economic organization, there developed high-cost agro-industrial enterprises based on the milling of such agricultural cash crops as rice, coffee, and sugar. The development of these enterprises had major effects upon the traditional structure of socio-economic organization.

The Process of Technological Change

Up to 1880, after more than three centuries of settlement, Brazil was primarily an agricultural and semi-colonial

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[1] The usage adopted here is that of George M. McBride, "Plantation," Encyclopedia of the Social Sciences (New York: Macmillan), 1937, Vol. 2, pp. 148-53: "Plantations . . . are a form of great landed estate usually in colonial or semi-colonial countries, which raise such . . . products as cotton, sugar, rubber, coffee, tea, rice, pineapples, and bananas, with a laboring class kept in economic, if not political servitude." For a penetrating social historical analysis of the Brazilian plantation system and its contributions to Brazilian civilization see Gilberto Freyre, Casa Grande e Senzala (Rio de Janeiro, Brazil), 1933, or the English translation by Samuel Putnam, The Master and Slaves (New York: Knopf), 1946.

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nation whose economy was based on the growing and selling, primarily abroad, of cash crops produced on large estates by plantation slave workers of African descent.[2] Concentration of land ownership among a relatively small number of large landholders had reduced the masses of people to landless agricultural plantation laborers. It had also produced low standards of living, a class system which polarized the rich landowner at one end and the landless laborer at the other, and a working population skilled only in the performance, under close supervision, of a limited number of manual tasks.[3]

At the turn of the twentieth century, a number of changes in the economic structure of Brazil occurred. These changes were related to the pressure of new competitive world economic conditions. The most important development was the introduction of the industrial mode of pro-

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[2]See Oliveira Vianna, "O Povo Brasileiro e Sua Evolucao," Recenseamento do Brasil, 1920, Vol. 1, p. 282; Fernando Azevedo, Brazilian Culture, tr. by William R. Crawford (New York: Macmillan Co.), 1950, p. 68; Pedro Calmon, Historia Social do Brasil (São Paulo, Brazil: Companhia Editora Nacional), Vol. 1, Chapter 10; and Dorival Texeira Viera, "The Industrialization of Brasil," T. Lynn Smith and Alexander Marchant (eds.), Brazil: Portrait of Half a Continent (New York: Dryden Press), 1951, p. 245.

[3]T. Lynn Smith, Brazil: People and Institutions (Baton Rouge, La.: Louisiana State University Press), 1946, pp. 489-96.

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duction into the plantation economy of the rural areas.[4] Its objective form, the usina (a large central agro-industrial plant), involved the application of organized methods and principles based on scientific knowledge. The use of mechanical, steam, and electric power allowed the extension of technical processes and the development of factories engaged in the milling of agricultural cash crops.

Industrial enterprise rapidly developed. In 1889 there were 636 industrial establishments; in 1907 this number had increased more than five times. to 3,250; and by 1920 the number had increased to 13,336. From its beginnings in 1850, when there were only 50 industrial establishments, agro-industries, i.e., those industries relating to the transformation of agricultural products, have always dominated the Brazilian economy. In 1907, the first industrial census indicated that foodstuff (or agro-industrial) enterprises represented 26.7 per cent, or the largest single proportion, of Brazil's total industrial production. In

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[4]See Viera, op. cit., pp. 247-60; Azevedo, op. cit., pp. 106-07; and Calmon, op. cit., Vol. 2, Chapter XIII. A definitive social historical work in this field is Gilberto Freyre's, Sobrados e Mucambos (Rio de Janeiro: Livraria José Olympia Editora), 1951 edition Coleçao Documentos Brasileiros, 3 volumes. These volumes outline the history of the patriarchal plantation system and analyze its decline and replacement by an urban bourgeois way of life.

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1920, such industries accounted for 40.2 per cent of all factory-produced goods.[5]

The development of agro-industrial enterprise was not universal, nor were its effects uniform. Everywhere its progress depended on the presence of an exploitable cash crop, on the ease or difficulty with which workers made the transition from rural life to the factory environment, and on regional and local conditions. Everywhere it involved a modification of the traditional feudal plantation system, its related values, and the characteristic modes of orientation of rural persons. The new agro-industrial system not only increased the exploitation of agricultural resources, the consumption of goods produced, and the efficiency of idle capital, but also brought about fundamental changes in the social order of Brazil.[6]

Changes in the Rural Social Order

Patterns of ownership. The introduction of agro-industry was related to the breakdown of the characteristic

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[5]Viera, loc. cit.; see also Calmon, op. cit., Vol. 3, pp. 194-96, and pp. 295-97.

[6]See Rocha Pombo, Historia do Brasil (Rio de Janeiro, Brasil), 1914, Vol. V; Calmon, op. cit., Vols. 2 and 3; Smith, Brazil: People and Institutions, op. cit., Chapter XVI; Julio Bello, Memorias de um Senhor de Engenho (Rio de Janeiro, Brasil: Livraria José Olympio Editora), 1938, especially Preface by Gilberto Freyre; and Azevedo, op. cit., Chapters I-III.

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pattern of individual family ownership of large estates and the substitution of corporate ownership of the means of production. This involved the gradual disappearance of the older familistic, aristocratic, local ownership pattern, and the appearance of corporations (sociedades anonymas), urban bourgeois control, absentee ownership, and a general business mentality. The older "master-slave" relationship was modified and developed into one between "worker and boss."[7]

Size of landholdings. In the sugar-producing areas of Northeast Brazil, along the coastal states, in the West and in the Southern states of São Paulo and Rio Grande do Sul, there was a trend toward even greater concentration of ownership and control of the land, as the large estates were consolidated into still larger holdings. By 1800, the utilization of Brazil's agricultural lands had already been established along the lines of the great landed estate, and the concentration of ownership of land in the hands of a few had reached a high degree.[8] Between 1800 and 1920, the

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[7]See Pombo, ibid., pp. 515-16; T. Lynn Smith, ibid., p. 516; and Bello, ibid., p. xi, pp. 60-61, and p. 191. The Brazilian novelist José Lins do Rego, writing in the 1930's, gives a vivid fictional account of the decay of the patriarchal society, the decline of the engenho, and the rise of the usina. His five novels, Menino de Engenho, O moleque Richard, Doidinho, Bangue, and Usina, form a picture of the sugar cane cycle.

[8]Smith, Brazil: People and Institutions, op. cit., p. 489. Concerning Rio Grande do Sul, Smith indicates that

consolidation of land had progressed to a point where more than three-quarters of the land was in the hands of only one-tenth of the total number of proprietors, and only 3.5 per cent of the land was in the hands of half of all proprietors. The average acreage held by large landowners was 5,250; for small landowners it was only 45 acres.[9]

Location of work. For centuries the primary transformation of agricultural crops had been accomplished by small crude mills (engenhos) located on individual plantations and operated by human, animal or water power. This method was superseded, under the impact of industrialism, by large central agro-industrial plants (usinas), serving many plantations, and powered by steam or electric generators. At first, the widespread use of the usina form of economic organization was hindered by the high cost of its capitalization and operation and the apathy of the landed rich. Later, with the appearance of the urban entrepreneur, agro-

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the plains were divided up into estancia (estates) many of them more than 60,000 acres in size (see p. 494). This observation is confirmed by another investigator who says, "At the end of the eighteenth century there were 539 landowners in Rio Grande do Sul each having more than 18,000 and up to 90,000 acres." See B. W. Diffie, Latin American Civilization (Harrisburg, Penna.), 1945, p. 308.

[9]George Soule et al., Latin America in the Future World (New York: Farrar and Rinehart), 1950, pp. 80 and 352. The authors indicate that between 1920 and 1934 this general pattern continued and there was "a further concentration of the bulk of the land in the hands of a much smaller number of the bigger proprietors."

industrial corporations were formed and the development of factory enterprise proceeded.[10]

The factory brought together for the first time a large number of voluntary daily wage workers engaged in the orderly production of goods in a fixed locality. Factory work placed new controls on the worker. He was not free to come to work at any time. Furthermore, he was subjected to the new discipline of punctuality. Alternation of work and rest occurred by the clock rather than by the sun. His work habits and efficiency were rigorously checked. Above all, the ex-peasant found himself in a new bustling environment which did not allow him to utilize his ancient skills or follow his traditional patterns of behavior.

Scope of ownership. The growth of the agro-industrial system under the leadership of urban entrepreneurs brought about an emphasis on the ownership and control of capital and the means of production, rather than land, as a yardstick for locating individuals in the social structure.

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[10]See Viera, op. cit.; Smith, Brazil: People and Institutions, op. cit., pp. 517-23. With the growth of factory enterprise came the first significant attempts at the organization of labor unions. In 1907 Brazil recognized the right of workers to organize; and in 1928, the first national union, Confederaçao dos Trabalhadores do Brasil, was organized. That year Brazilian workers participated in the founding of an international union, the Confederacion Syndical Latino Americano at Montevideo, Uruguay. See Moises Poblete Troncoso, El Movimento Obrero Latino Americano (Mexico City, Mexico: Fonda Economica), 1946, pp. 38-260.

The objective counterpart of this shift in socio-cultural values was the unification of the production of agricultural goods from the planting of the seed to the processing of the final product. The owners of the usinas usually bought up adjacent plantation lands and consolidated them into large productive holdings.[11]

An illustration of the immensity of landholdings is indicated by two analyses of landownership in Sao Paulo, Brazil's most industrialized state. Soule, Efron, and Ness indicate that in Sao Paulo, where industrialization reached its greatest heights, 64.2 per cent of all agricultural land in 1920-34 was controlled by less than seven per cent of all landowners.[12] Material presented by Smith indicates that in 1920, of a total farm acreage of 13,883,269, approximately six million acres were owned by eight foreign-owned corporations.[13] Both agree that similar situations existed in other areas of Brazil which underwent industrialization.[14]

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[11]Smith, ibid., pp. 512-19, especially quotation from De Carli, O Processo Historico da Usina em Pernambuco. See also Calmon, op. cit., Vol. 2, Chapter XIII.

[12]Soule et al., op. cit., p. 80.

[13]Smith, op. cit., pp. 496-506, especially Table LIII, and footnote, p. 500.

[14]One result of the incorporation of agricultural production into the province of the processing factories was that the entrepreneur performed the revolutionary task of bringing science and new technology to the planting and harvesting of agricultural cash crops.

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Class structure. The introduction of the agro-industrial mode of production also brought modifications in the organization of the class structure in rural Brazil. During the colonial period there had been essentially two classes--the white landowning masters and their Negro slaves.[15] In later years, this dichotomous social order was modified, principally through the abolition of slavery in 1889.

In the latter part of the nineteenth century the capitalist class came into ascendancy. These were entrepreneurs who were less interested in the mere ownership of land than they were in the formation of corporations to produce agricultural goods transferable into capital. The resultant rise of agro-industrialism and its new techniques of organizing personnel and exploiting economic resources led to a change in the traditional forms of relations between employer and employee. Where these relations were formerly marked by definite reciprocal social obligations between the "master" and his "slave," now the new directors and administrators were impersonal intruders, in many cases wage workers themselves, interested only in production.[16]

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[15] See Calmon, Vol. 1, op. cit., p. 18 and Chapter X; Azevedo, op. cit., Chapter 4; and Charles Wagley, Race and Class in Rural Brazil (Paris: UNESCO), 1952, pp. 7 and 142-155.

[16] Charles Wagley, A Typology of Latin-American Sub-Cultures (unpublished mimeographed monograph), 1953.

In the rural areas, which underwent agro-industrialization, two new types of workers emerged: the "white collar" worker and the factory worker. The one consisted of clerks, professionals, and minor officials who performed routine supervisory and technical functions; the other was made up of unskilled and semi-skilled manual laborers and machine-tenders. Despite differences in size, standard of living and life-style--the "intellectual" workers were a relatively small, well-paid, educated and urbane group--the manual and white collar groups had several things in common. They worked in rural towns. They represented occupational groups, the individual members of which obtained their chief means of subsistence from selling their services in return for a daily wage. Finally, they did not own or control the means of production.

At the bottom of the occupational ladder, within the agro-industrial class structure, were the masses of impoverished, unskilled, landless, disenfranchised agricultural plantation laborers. They did not reside in towns and were essentially "folk" peoples. Nevertheless, they were linked with factory and office workers within the total framework of the agro-industrial economic organization. These three groups were interrelated and inter-dependent in terms of the unitary nature of the existent modes of ownership, control, and production of the agricultural product. The agri-

cultural worker cleared the company land, planted the seed, and harvested the crop; the factory worker dried, shelled, and processed the product by machinery in the town factory; and the office worker toiled in the company office calculating costs, sales, profits, and wages. Each of these three groups occupied a given position in the hierarchy of occupations. That position was related to the role each group played in the productive system and to the scale of social values by which occupational groups were negatively or positively valued.[17]

The agro-industrial rural town community. The introduction of the agro-industrial mode of production also aided the development of small urban centers around the factory location. These small urban centers were tied to their rural hinterlands through the dependency of the factory on the outlying plantations as sources of raw agricultural products. These towns and their agricultural environs may be thought of as agro-industrial rural town communities.

The social organization of agro-industrial rural town communities in Brazil encompasses the social, occupational, ethnic, and institutional patterns of both the town and its

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[17]See Wagley, Race and Class in Rural Brazil, op. cit., pp. 144-46; and Wagley, A Typology of Latin American Sub-Cultures, ibid., p. 21.

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periphery. These communities represent a way of life to their inhabitants, and suggest, conceptually, "socio-cultural wholes."[18] While the limits of these rural town communities may coincide with political boundaries, they are neither independent nor self-sufficient entities, for they exist within larger regional and national systems. Although each community may have its own local customs, traditions, saints, kinship ties, and territoriality, each is part of the larger modern nation which controls its economic life, enforces a uniform code of law, requires educational instruction, and so on. The towns of two to five thousand persons within these communities serve as administrative, marketing, agro-industrial and information-dispensing centers, and are sensitive focal points of social interaction and social change.

Summary

The agro-industrialization of rural Brazil contributed to an increasing complexity of social life. Among the important results of this process, from the point of view of the present research, was the development of agro-industrial rural town communities and the increasing exposure of workers to new resources of social information. The diffusion

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[18] Julian Steward, Area Research, Theory and Practice (New York: Social Science Research Council), 1950, pp. 114-117, and p. 106.

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of information was facilitated through mass media and through new patterns of interaction which arose among local residents, and between local residents and persons from outside the community. The occupational groups in these rural towns cut horizontally across communities and regions. When arranged hierarchically they represent an important segment of the rural Brazilian class structure significant to the present inquiry.

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III. THE LOCATION OF THE FIELD RESEARCH AND CONDUCT OF THE INVESTIGATION

The Background of the Present Study

The basic data for the present study were gathered during an inquiry into the distribution and reception of United States Information Service films in rural Brazil.[1] That study was planned in the summer of 1952 and executed in the field between November 1952 and April 1953. Commitments to the sponsoring agency, the United States Department of State, required that special target areas and audiences in Brazil be the foci of investigation. The contract, No. SCC21623, signed by the Department of State and the Area Research Center, Michigan State College, stated that the Center was "to conduct overseas research in at least three sections of Brasil, with Porto Alegre, Belo Horizonte, and Recife tentatively selected."

In addition, the populations studied were to include both agricultural and factory workers, as well as other

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[1] The results of this study were presented in Raymond L. Scheele and Thomas L. Blair, Report on the Distribution and Reception of United States Information Service Films in Brasil, Area Research Center, Department of Sociology and Anthropology, Michigan State College, East Lansing, Michigan, 1953. The research design of the original research is reviewed in this chapter.

personnel involved in the planting and processing of agricultural cash crops. The investigators were to: (a) determine the seasonal round of occupational activities associated with such factors as weather, climate and type of crops; (b) identify the more important cultural events; (c) determine the more important patterns of inter-personal contacts; (d) determine any preference patterns existing among various groups in regard to motion picture content; (e) observe attendance patterns at film showings, and (f) determine the organizational structure that could most effectively be enlisted in reaching each priority target group.

The research team. A research committee and a field work team were formed at Michigan State College for the purpose of developing and carrying on this investigation.[2] The plan adopted by the field team involved (a) investigations of the social structure of the United States Information Service distribution offices, and (b) a survey of each target area and of selected communities and audiences. Prior to departure for Brazil and during the early stages of the field investigation, information relevant to the re-

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[2]The research committee consisted of Dr. Charles P. Loomis, Head of the Department of Sociology and Anthropology, Dr. Olen Leonard, Dr. Raymond Scheele; and graduate assistants, Mr. Charles Proctor and Mr. Thomas L. Blair. Dr. Scheele and Mr. Blair were chosen as the field research team.

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search was obtained from library sources and from American and Brazilian social scientists, government officials, international agency personnel, and United States embassy and consulate officials. This information helped orient and guide the development of the research design.

Confirmation of the significance of the areas and audiences. At an early stage in the research the significance of the three target areas--Porto Alegre, Rio Grande do Sul; Belo Horizonte, Minas Gerães; and Recife, Pernambuco--and the target audiences, was confirmed in conferences with academic and governmental personnel. In addition, several days were spent examining census materials. It was established that each of the three regions had a distinct cultural, social, historical and racial background; and that the target groups represented important segments of Brazilian society.

Selection of communities. A number of communities within each of the target areas were chosen for investigation. The field team developed a clearer conception of the types of communities within the target areas by hand-tabulating data from original 1950 census forms.[3] This analysis included data on population characteristics, resi-

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[3]This material was made available through the courtesy of the Brazilian census department (Instituto Brasileiro de Geografia e Estatistica).

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The purpose in selecting the communities was not to study them as communities, but rather to use them as empirical cases within which observations on certain limited areas of behavior pertinent to the investigation were to be made. Those finally selected for investigation were chosen on the basis of the following criteria:

(a) an economy based on an agricultural cash crop, such as sugar-cane, cotton or rice;

(b) the presence of an agro-industrial enterprise;

(c) the presence of large groups of daily wage laborers;

(d) a total population not in excess of 3,000;

(e) the distance from capital city not to exceed that covered by the United States Information Service distribution office; and

(f) whether or not United States Information Service films had been shown in the community.

Location of the Present Study: Tapes, Rio Grande do Sul, Brazil

The research site of the present study is the rural town community of Tapes, located in the central eastern portion of Rio Grande do Sul, a state in the southern part of Brazil. The southern region comprises the states of Parana, Santa Catarina, and Rio Grande do Sul, and lies on a plateau east of the Rio Parana river, south of the Rio

Grande river, and west of the Atlantic Ocean.[4] Rio Grande do Sul is bordered on the south by Uruguay, on the west by Argentina, on the north by the state of Santa Catarina, and on the east by two lakes, Lagoa Mirim and Lagoa dos Patos, and the Atlantic Ocean. It has a population of 4,164,821; most of which reside in rural localities. The economy of the state is based on the production of rice, corn, wheat, and the raising of cattle.[5] It has made some strides in mining and factory enterprises. In comparison to many other states in Brazil, Rio Grande do Sul has played an important economic and political role in Brazilian affairs.[6]

The cultural history of southern Brazil.[7] Rio Grande do Sul, along with Parana and Santa Catarina, has a dis-

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[4]Hilgard O'Reilly Sternberg, Chapter 2, "The Physical Basis of Brazilian Society," in T. Lynn Smith and Alexander Marchant (eds.), Brazil: Portrait of Half a Continent (New York: Dryden Press), 1951, p. 72.

[5]For maps and a review of some pertinent characteristics of the population and economy of Rio Grande do Sul, see Appendix A.

[6]See Anyda Marchant, Chapter 16, "Politics, Government, and Law," and J. V. Freitas Marcondes, Chapter 17, "Social Legislation in Brasil," in Smith and Marchant, ibid.

[7]Preston James, Chapter 3, "The Cultural Regions of Brazil," Smith and Marchant, op. cit.; Artur Ramos, Introdução a Antropologia Brasileiro (Rio de Janeiro: Livraria do Globo), 1947, Vol. 2, passim; Manoelito de Ornellas, Gauchos e Beduinos: A Origem Etnica e a Formação Social do Rio Grande do Sul (São Paulo: Livraria José Olympio Editora), 1948; Augosto Meyer, Guia do Folclore Gaucho (Rio de Janeiro: Grafica Editora Aurora, Ltda.), 1951; and the

tinct cultural history different from other regions of Brazil. It is a region settled almost exclusively by people of European origin. Furthermore, it is a region where small farmers have become successfully established on a permanent basis. The population in this area, in comparison to other regions, has a comparatively high standard of living and high rate of literacy for Brazil.

The first settlers in this area were roving bands of fighting men, known as the bandeirantes. In the earliest days the open grass-lands were settled as pastures for the grazing of cattle and horses, and the vast forests were left to the retreating Indian tribes. These bandeirantes married within the indigenous populations and their descendants are known as Luso-Brazilians. About 1825 the first colonists came into southern Brazil and tended to settle in the forest and mountain areas. The first colonists were Germans; later came Italians, Poles, Austrians, Spaniards, Armenians, Syrians and, in recent years, Japanese. These immigrant groups and their offspring became known as brasi-

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works of Emilio Willems, see Assimilação e Populações Marginais no Brasil (São Paulo: Companhia Editora Nacional), 1940, and A Aculturação dos Alemães no Brasil (São Paulo: Companhia Editora Nacional), 1946. For a contemporary picture of how Rio Grandense intellectuals view their cultural history see Jornal do Provincia de São Pedro and Revista Idade Nova, two journals printed in Porto Alegre, the state capital; and the third volume of Erico Verissimo's trilogy O Tempo e O Vento (Porto Alegre, Brasil: Editora Globo), 1950.

leiros de sangue estrangeiro, that is, Brazilians of foreign birth or parentage. They developed small peasant communities in the mountainous areas. The prairie lands, however, became the stronghold of the cattle-barons, and the coastal lowland was the domain of the rice plantation owners.

Tapes: Location and history. The town of Tapes is located on the shores of Lagoa dos Patos (Lake of the Ducks) in the flat lowlands of central eastern Rio Grande do Sul. It is approximately 100 miles by land, and 90 miles by water, from the state capital, Porto Alegre. The name Tapes refers to several politico-geographical entities: (a) it is the name of a town which is at one and the same time the district and sede do municipio (county seat), (b) it is the name of the district in which the town is located, and (c) it is the name of the county in which the district and town are located. For map showing Tapes see p. 157.

The economy of the county of Tapes is based on rice growing and the economy of the town is based on rice processing. Forty-four years ago Tapes was a small hamlet. Today, with a population of 2,966, it is the largest town in the county. Tapes' growth as an important processing center is related to the development of agro-industrial enterprise and to its strategic geographical position in relation to Porto Alegre. In 1833, the area now called the

municipio of Tapes was called Dores de Camaqua. In 1911 it was split into two municipios: Dores de Camaqua and Dores, with the county seat at Dores. The municipio of Dores was divided into several districts, the most important of which was called Dores; the second most important was Tapes. Shortly after 1911, Tapes became an important rice-producing area and two rice-processing plants located themselves on the shores of the lake. Tapes then became the rice-processing center for the surrounding plantations and a center for shipment of rice by water to granaries in Porto Alegre. With this development of agro-industrial enterprise Tapes grew in size, wealth, and population. In 1927, though Tapes was still the second district in the municipio, it had twice as many buildings as Dores and was a city of progress and great activity. Finally, in 1928, the name of the municipio of Dores was changed to Tapes with the county seat located at Tapes. This change led to an influx of various commercial establishments and governmental offices.

Physical structure. The lake-front is lined with docks and warehouses belonging to the two local rice-processing plants. The main avenue of the town runs directly away from the lake-front and is flanked by several smaller avenues. Its streets, beginning with the Rua 15 de Novembro, run parallel to the lake. The town is six blocks wide along the lake, and eight blocks long following the

main thoroughfare. The public square is in the center of the town in front of the Catholic church. Surrounding the square are the main shops, restaurants, markets, the bank, theater, telephone and telegraph office, a small hospital, several hotels, and the offices of various governmental agencies. The rural periphery is generally devoted to the growing of rice on large plantations.

Population. Demographic materials for the municipio of Tapes are limited. Census bulletins for 1950 report only information for the total population classified by sex, place of residence, and literacy. The population of the municipio is more than eighty per cent rural. The municipio of Tapes has three districts, Tapes, Cerro Grande and Vasconcelos, and each district contains a principal population center bearing the same name as the district. Comparison of the urban-rural composition of each district indicates that Tapes is the most urban. That is, it contains the locality, the town of Tapes, with the largest population of all localities in the three districts; and it has the highest ratio of urban dwellers to rural dwellers (see Table 1).

In the municipio of Tapes, 49 per cent of all persons more than five years of age are literate. Males have a slightly higher degree of literacy than the total population. Persons living in Tapes have a lower degree of lit-

TABLE 1. DISTRIBUTION OF MALES AND TOTAL POPULATION IN THE THREE DISTRICTS OF THE MUNICIPIO OF TAPES[a]

Districts	Urban		Suburban		Rural		Total	
	Per Cent Males	Total Population	Per Cent Males	Total Population	Per Cent Males	Total Population	Per Cent Males	Total Population
Tapes	47.2	2,582	53.1	384	51.2	6,140	50.2	9,106
Cerro Grande	52.3	147	35.0	20	50.6	5,918	50.5	6,085
Vasconcelos	47.2	258	49.2	138	50.8	7,984	50.7	8,380
Totals	47.5	2,987	51.4	542	50.9	20,042	50.4	23,571

[a]Derived from Censo Demografico (1° de Julho de 1950), Estado do Rio Grande do Sul, IBGE, Rio de Janeiro, Brasil, 1952.

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eracy than those living in the localities of Cerro Grande and Vasconcelos but all urban dwellers in the municipio have a decidedly higher degree of literacy than rural dwellers (see Table 2).

Male Workers. The distribution of occupations in Tapes was constructed from statements made by several local informants. Table 3 indicates the industry of occupation of the 651 known adult male employees in the town of Tapes. In the rural areas of the municipio the principal industry of occupation is farming. Agricultural workers generally work on the lands of other people. There is, however, a small number of farmers who own their own land. In addition to the laborers, foremen, and owners directly engaged in the production of cash crops there are also store-owners, artisans, and technicians who perform special services on the plantations.

Why Tapes was chosen. It cannot be claimed that Tapes is like all other towns in the state of Rio Grande do Sul.[8] Rather, Tapes appeared to be "representative" of an important segment of rural urban life in Rio Grande do Sul and southern Brazil touched by the process of agro-industriali-

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[8]Tapes is, however, like some other towns. Small rural towns are typical in Rio Grande do Sul. Of a total of 92 localities in the state, 43 have between 2,000 and 5,000 inhabitants. These towns are, like Tapes, generally municipal seats and centers of communication, administration, and industry.

TABLE 2. DISTRIBUTION OF PERSONS FIVE YEARS OF AGE AND OVER WHO ARE ABLE TO READ AND WRITE: FOR MALES AND THE TOTAL POPULATION IN THE TOWN OF TAPES AND OTHER PLACES, MUNICIPIO OF TAPES[a]

Location	Males Only		Total Population	
	Total Number	Per Cent Literate	Total Number	Per Cent Literate
Tapes	1,220	70	2,556	67
Hamlets	239	77	490	72
Rural	8,407	48	16,504	46
Totals	9,866	52	19,550	49

[a]Derived from Censo Demografico (1° de Julho de 1950), Estado do Rio Grande do Sul, IBGE, Rio de Janeiro, Brasil, 1952.

TABLE 3. THE INDUSTRIAL DISTRIBUTION OF ADULT MALES IN TAPES, 1952-53

Industry of Occupation	Number
1. Rice factory workers	250
2. Construction	50
3. Government	50
4. Banking	15
5. Commerce	50
6. Transportation	
7. and Navigation	70
8. Farming	30
9. Others (irregularly employed)	115
10. Professionals	21
Total	651

zation. Tapes was chosen because it was a small town serving as a marketing and communications center, having an agro-industrial enterprise, and a rural periphery whose socio-economic base was the growing of rice.

Certain other conditions favored the choice of Tapes: (a) Tapes was part of the larger United States Information Service study and was therefore accessible to the writer, (b) in Tapes the writer had the services of a trained Brazilian interviewer and the cooperation of local authorities, and (c) Tapes was one of the last towns investigated and the writer had, by then, the benefit of six months' residence in Brazil.

Conduct of the Investigation in Tapes

A main feature of the original USIS field study was to seek direct interviews, using a uniform interview schedule. In Tapes, the investigator utilized additional questions to elicit information on the attitudinal and behavioral characteristics of the respondents and provide information on their social backgrounds. The questions utilized in the thesis are reproduced in Appendix D.

The field workers gathered information on the historical, ecological, and demographic characteristics of the population, the region and the economy, and information on the social organization of the factory and plantation.

These data form the background for interpreting the study findings and are not presented in great detail here.

During the research investigation the writer had the services of Sr. João Batiste Aguiar, a graduate in law, philosophy, and social science from the Catholic University of Rio Grande do Sul, Porto Alegre. Sr. Aguiar was responsible for all direct interviews and underwent a short period of training in the technique of interviewing before conducting his first interview. In the early stages of the research the writer was present during each interview to offer advice and guidance.

The writer and the Brazilian interviewer lived in the town of Tapes for a period of one and one-half months. Interviews were obtained systematically, first from factory and office workers and then from agricultural workers. Each interview lasted approximately forty minutes and was obtained at the place of work or at other places the respondents desired. The investigators lived at a small hotel and spent most of the waking hours in the factory or in the rice fields. At night they lounged in the square, or went to the theater, or visited, or drank coffee with the workers in the local cafes and bars.

Summary

This chapter has served to indicate the broad background of the research, to specify the general geographical and cultural milieu, and to outline the way in which the research was conducted in Tapes. Chapter IV deals with pertinent aspects of the population studied and the treatment of the data collected.

IV. THE POPULATION STUDIED AND TREATMENT OF THE DATA

The Population

How the sample was chosen. As noted in Chapter III, the original United States Information Service research was specifically focused on agricultural, factory, and office workers. In Tapes, at the time of the investigation, there was one factory in operation and one large rice plantation which could be studied. Lists of the workers in the two establishments were drawn up and samples were obtained by random selection from the major work categories in each occupational group.

Size and structure of the sample. Among the fifty workers in the sample, twenty respondents were agricultural workers, i.e., persons who performed a variety of manual jobs on the rice plantation; twenty respondents were factory workers, i.e., persons who performed unskilled and semi-skilled jobs in the town rice mill; and ten respondents were factory office workers, i.e., persons who performed routine clerical duties in the office of the town rice mill. The office workers studied represent almost a hundred per cent sample of workers employed in that category; and the agricultural and factory workers studied

represent twenty per cent and ten per cent samples of such workers employed at the time of the study.

Analysis of the principal socio-economic characteristics of the three occupational groups in the sample indicates the following:[1]

A. Agricultural workers

1. Relatively young (28.9 average mean years)
2. White native; some mulato (mixed Negro and white)
3. Catholic; some non-Catholics
4. Never attended school; illiterate
5. Low mean income; large number of persons supported
6. Live in company-owned houses; own no land
7. Newcomers

B. Factory workers

1. Relatively old (39.5 average mean years)
2. White native; some mulato and preto ("un-mixed" African descent)
3. Catholic
4. Some primary school education; literate
5. Highest mean income; largest number of persons supported
6. Tendency to own homes and small kitchen gardens
7. Old-timers in the community; half have never lived outside

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[1]For a detailed discussion of the principal socio-economic characteristics of the three occupational groups in the sample see Appendix B.

C. Office workers

1. Youngest (26.4 average mean years)
2. White native and non-native only
3. Catholic; some non-Catholics
4. Highest education; highly literate
5. High mean income; fewest persons supported
6. Renters or own their homes; some own large tracts of land
7. Old-timers in the community; most have lived outside

Limitations of the sample and the sampling method. The present study is limited to the population universe and sampling methods of the original United States Information Service research. The study does not deal with samples that are "representative" in a statistical sense. The number of respondents is small and, as a consequence, the data are not adequate for treatment by many statistical tests. They are, however, amenable to the application of non-parametric or distribution-free statistics. The study, being exploratory, attempts to illuminate patterns and modes of behavior relating to information exposure in the agro-industrial structure of a small rural town community in a newly-industrializing Latin American nation.

The Analysis of the Data

Specification of the hypothesis. To investigate the causal relationships between socio-economic position in the

agro-industrial system of a rural town community and patterns of information exposure, the general hypothesis was re-phrased to make it testable in an empirical situation and to indicate the specific variables investigated. The general hypothesis stated that the economic organization of the rural town community in Brazil exposes (to a greater or lesser degree) varying groups of workers to different environments (more or less uniform for each) which affect the chances that they will possess a given pattern of exposure to a new social knowledge.

A re-phrased hypothesis specified that the form and character of information exposure, expressed through (a) use of mass media of communication, (b) social visiting, and (c) contact with persons from outside the local community, would vary directly with the occupational position of the worker in the agro-industrial structure of the rural town community.

A test of this hypothesis required research designed to provide information on the above three sets of dependent variables. A further requirement placed on the research was that the analysis permit an evaluation of the association between the independent variable (i.e., the pattern of arrangement of the three occupational groups) and each of the dependent variables. Is the exposure of each group patterned? What is the direction of the pattern? What are

the differences among the groups and are they likely to be significant?

Arranging the data for analysis. In arranging the data for analysis two techniques were undertaken initially: first, the occupational groups were ranked according to their positions in the socio-economic structure; second, the categories of responses to the questions relating to each of the potential sources of exposure were ranked. At the outset the three occupational groups were thought of as being ordered according to their social status in the socio-economic structure of the agro-industrial rural town community. Agricultural workers were accorded the lowest socio-economic position, factory workers the next highest, and office workers the highest position of the three groups. Analysis of the socio-economic characteristics of the three groups lent support to the order selected.

Once the arrangement of the three occupational groups had been established, the data for the dependent variables were arranged in such a way that, when analysis was undertaken, the exposure patterns of each occupational group could be shown in dimensions relevant to the specific hypothesis. Sets of categories for each of the several questions pertaining to the three dependent variables were devised so that they had an internal order that allowed sub-

jects to be ranked by their responses.[2] This ordering was arrived at by ranking the categories for each question to indicate relative degrees of information exposure from low to high. For example, the categories of responses for the question on frequency of newspaper reading were ranked "never, two or three times a year, once a month, once a week, several days a week, and daily."

For each question, low, middle, and high exposure meant something empirically specific. For example, lack of the necessary prerequisites for use of mass media, infrequent use of mass media, and listening only to local stations would constitute low exposure to information through mass media. Visiting with relatively unexposed persons would constitute low exposure through social visiting; and infrequent contact with persons from non-distant places

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[2] A. Exposure to mass media:

Do you read and write?
Do you read a newspaper?
How frequently do you read a newspaper?
Do you own a radio?
What radio stations do you listen to most often?

B. Social visiting:

Who are the three persons you visit most often in this community? (Information was obtained for kinship and occupation of person visited.)

C. Contact with outside persons:

How frequently do you meet persons from other localities, from the capital city, from other states, from other countries?

outside the community would be considered low exposure through contact with persons from outside the community. High exposure was considered, in each case, the opposite of low exposure, with medium exposure falling in between. By evaluating the position of each occupational group, for each dependent variable, some indication of the overall patterns of exposure for "average" individuals in each occupational group were established.

Average rank technique. The ordering of the question responses and occupational groups enabled a test of the validity of the main hypothesis by an evaluation of the differences among the average ranks of the three groups.[3] The "H" test was chosen for this purpose because (a) the responses to the questions were rankable in dimensions relevant to the specified hypothesis, (b) the size of the sample was small, and (c) no evidence of the shape of the

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[3]In computing this average rank for a group, one starts by assigning a rank of one to the most extreme type, and then assigns to that type as many additional ranks as there are additional cases of that type. The mid-point of this range of ranks is the rank of each case in that type. The next type is assigned the next consecutive rank and as many additional ranks as there are cases of that type. The procedure is repeated until all cases are given rank. The sum of all these ranks, when divided by the number of cases in the group, yields the average rank for the group. See W. H. Kruskal and W. A. Wallis, "Use of Ranks in One-Criterion Variance Analysis," Journal of the American Statistical Association, Vol. 47, December 1952, pp. 583-87.

distribution for the dependent variables in the universe was available.

Operational hypotheses. Once the procedure was established a series of operational hypotheses were developed. For convenience these hypotheses were arranged according to the cluster of variables to which they related, thus making it possible initially to treat each of the hypotheses as independent indices of the general category to which they belonged. A list of the operational hypotheses follows:

A. Selected Mass Media

(1) The average rank of agricultural workers, in terms of literacy and newspaper readership, will be lower than that of factory workers whose average rank will in turn be lower than that of office workers.

(2) The average rank of agricultural workers, who can read newspapers, in terms of frequency of newspaper readership, will be lower than that of factory workers who can read newspapers whose average rank will in turn be lower than that of office workers.

(3) The average rank of agricultural workers, in terms of extent of newspaper readership and radio ownership, will be lower than that of factory workers whose average rank will in turn be lower than that of office workers.

(4) The average rank of agricultural workers, who own radios, in terms of the cosmopolitan character of radio stations listened to, will be lower than that of factory workers who own radios, whose average rank will in turn be lower than that of office workers who own radios.

B. Social Visiting

(5) The average rank of agricultural workers, in terms of the occupations of persons visited most often, will be lower than that of factory workers whose average rank will in turn be lower than that of office workers.

(6) The average rank of agricultural workers, in terms of their kinship relations with persons visited most often, will be lower than that of factory workers whose average rank will be in turn lower than that of office workers.

(7) The average rank of agricultural workers, in terms of visiting kin who are in the same occupational position, will be lower than that of factory workers whose average rank will in turn be lower than that of office workers.

(8) The average rank of agricultural workers, in terms of visiting of non-kin in the same occupational position, will be lower than that of factory workers whose average rank will in turn be lower than that of office workers.

C. Contact with Person from Outside

(9) The average rank of agricultural workers, in terms of frequency of contact with persons from other rural localities within the state, will be lower than that of factory workers whose average rank will in turn be lower than that of office workers.

(10) The average rank of agricultural workers, in terms of frequency of contact with persons from the capital city, will be lower than that of factory workers whose average rank will in turn be lower than that of office workers.

(11) The average rank of agricultural workers, in terms of frequency of contact with persons from other states, will be lower than that of factory workers whose average rank will in turn be lower than that of office workers.

(12) The average rank of agricultural workers, in terms of frequency of contact with persons from other countries, will be lower than that of factory workers whose average rank will in turn be lower than that of office workers.

(13) The average rank of agricultural workers, in terms of the most distant place from which persons have been contacted, will be lower than that of factory workers whose average rank will in turn be lower than that of office workers.

Each of these hypotheses stated not only that significant differences in the average ranks would occur, but also

the hypothesized direction and pattern of these differences. The hypothesized direction for each operational hypothesis was A-F-O, i.e., that agricultural workers (A) would have the lowest average rank (i.e., low exposure); factory workers (F), the next highest average rank (i.e., the next highest degree of exposure); and office workers (O), the highest average rank (i.e., the highest degree of exposure). Deviations from this hypothesized direction were possible since the patterns which were possible included not only the hypothesized pattern A-F-O, but also non-hypothesized patterns F-A-O, F-O-A, O-F-A, A-O-F, and O-A-F. Furthermore, the differences between the average ranks of the three groups on any one operational hypothesis might have been either significant or non-significant. Therefore, eleven out of the twelve possible outcomes of the tests would not verify the working hypothesis.

Statistical analysis. A comparison of the average rank of each group indicated the direction and intensity of the differences among the three occupational groups for each of the operational hypotheses. The determination of the significance of these differences required statistical evaluation. A common problem in social research is to decide whether several samples should be regarded as coming from the same population. When the samples differ, the question arises as to whether the differences signify dif-

ferences among the populations from which the samples came, or merely chance variations among random samples from the same population. Tests of the null hypothesis that there were no differences between the groups were made for each operational hypothesis utilizing the "H" test devised by Kruskal and Wallis.[4] "H" is a useful statistic in that it

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[4]Given k samples with N_i observations in the $_i$th sample, a test of the hypothesis that the samples come from the same population may be made by ranking the observations from 1 to N_i, finding the sums of ranks for each of the k samples, and computing a statistic "H". The "H" test is a rank test and therefore may be used here. The statistic is computed in the following manner

$$H = \frac{12}{N(N+1)} \sum_{1}^{k} \frac{R^2_i}{N_i} - 3(N+1)$$

where k is the number of samples; N_i the number of observations in the $_i$th sample; R_i the sum of the ranks assigned to the observations in that sample; and

$$N = \sum_{1}^{k} N_i$$

Where there are ties, because two or more observations are equal, each observation is given the mean of the ranks for which they are tied, and H is divided by

$$1 - \frac{\sum T}{N(N^2 - 1)}$$

where $T = (t-1)t(t+1)$ and t = the number of tied observations in a group with the same rank. $\sum T$ is taken over all groups of ties.

makes it possible to assess the significance of the differences between the distributions of three or more groups ordered on the same criterion bycomparing the average ranks of the groups. Its interpretation is comparable to a single classification analysis of variance. It is advantageous in the present research because it is a non-parametric statistic.[5]

Summary

The general hypothesis underlying the present inquiry was re-phrased in the form of a testable hypothesis. Thirteen operational hypotheses were developed, based on a ranking of groups according to the extremity of their responses. Each operational hypothesis stated the expected differences, their patterns, and directions. In the case

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If the samples come from identical continuous populations, "H" is distributed as Chi-Square with k-1 degrees of freedom permitting the use of Chi-Square tables in interpreting the findings. Large values of "H" lead to rejection of the null hypothesis. In the present study the .05 level of significance has been used. See K. Walker and Joseph Lev, Statistical Inference (New York: Henry Holt), 1953, pp. 436-38, and Kruskal and Wallis, op. cit., pp. 583-587.

[5]Many statistical methods depend upon the assumption that the samples were randomly drawn from a normal population. Sometimes this assumption is unwarranted as is the case in the present study. Non-parametric or distribution-free methods of statistical analysis are methods for "making inferences without any assumption as to the form of distribution in the population." See Walker and Lev, ibid., p. 426. Such methods as the "H" test are valid for any parent population on a continuous variable. Ibid., pp. 426-50.

of each set of ranked categories it was hypothesized that the direction and pattern of the differences among the average ranks of each occupational group would be A-F-O, i.e., agricultural workers would have the lowest rank, factory workers the next highest, and office workers the highest ranking. The differences between the average ranks for each operational hypothesis were tested by use of the "H" test. The following chapter contains an analysis of the data organized to test the research hypothesis.

V. THE RESEARCH FINDINGS

The following is an analysis of the data collected to test the hypothesis that the form and character of information exposure, expressed in terms of (1) mass media of communication, (2) social visiting, and (3) contact with persons from outside the local community, will vary as the occupational position of the worker in the agro-industrial structure of the rural town community varies.

This hypothesis was investigated by an analysis of thirteen operational hypotheses considered as independent indices of three research variables relating to information exposure. Each operational hypothesis was tested by an evaluation of the probability of obtaining the differences observed among the average ranks of the three occupational groups if no differences did, in fact, exist. The tables and analyses relating to the thirteen operational hypotheses have been arranged and numbered, for the convenience of the reader, under each of the variables to which they relate.[1]

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[1]Complete statements of each of the operational hypotheses may be found on pp. 51-52.

Selected Mass Media[2]

As agro-industrial rural town communities developed, an increasing number of workers were brought into physical proximity to the major media of mass communication. A complex of factors brought about greater opportunity to purchase and use radios, newspapers and thereby to be exposed to the information available through these media. Two principal mass media, radios and newspapers, were selected for investigating variations in exposure to information through mass media of communication. In testing the hypotheses relative to mass media exposure, information was also obtained concerning not only the extent to which workers in each occupational group possessed the necessary prerequisites for use of the principal mass media, but also the extent to which they actually exposed themselves to these media.

(1) Literacy and newspaper readership. Investigation was carried out to ascertain the differences in literacy and newspaper readership among agricultural, factory, and office workers. The results supported the first hypothesis (see Table 4). Office workers were more literate and read

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[2]For a general review of the facilities for mass communication available in Brazil see Appendix C: Note on the Existence, Accessibility, and Limitations of Information Exposure through Mass Media in Brasil. For information relative to Tapes and Rio Grande do Sul see Tables at end of Appendix C.

TABLE 4. LITERACY[a] AND NEWSPAPER READERSHIP[b] OF AGRICULTURAL, FACTORY AND OFFICE WORKERS

Literacy and newspaper readership	Occupational group			
	Agricultural workers	Factory workers	Office workers	Total
Cannot read[c]	12	2	-	14
Can read and does not read newspaper	-	3	-	3
Can read and does read newspaper	8	15	10	33
Totals	20	20	10	50
Av. Rank	18.1	28.6	34	

$\overline{H}$ = 10.539 - $p < .01$; (d. f. = 2)[d]

[a]Based on responses to question "Can you read?"

[b]Based on responses to question "Do you read a newspaper?"

[c]These respondents reported they could neither read nor write.

[d]$\overline{H}$ means that H has been corrected for ties.

newspapers more than did factory workers who, in turn, exhibited these characteristics more than did agricultural workers. It was also found that most persons, irrespective of occupation, who were able to read did read newspapers.[3] The degree to which such behavior occurred for individuals in each group varied, A-F-O.[4]

(2) Frequency of newspaper reading. As predicted, the frequency of newspaper reading varied with occupational position (see Table 5). Office workers read newspapers more frequently than factory workers who, in turn, read them more frequently than agricultural workers.

Ability to read and educational attainment were explored as possible correlative factors in frequency of reading. For individuals in all three occupational groups, being able to read was not generally associated with frequent reading of newspapers.[5] Rather, the relationship between ability to read and the frequency of newspaper readership varied with the occupational position of the worker in the agro-industrial structure. Office workers, all of

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[3]Three factory workers deviated from this pattern. Each reported he could read but did not read newspapers.

[4]See pp. 52-53 for explanation of symbols.

[5]This is indicated by the fact that those able to read (rows 2 and 3 of Table 4) are found scattered throughout all categories of reading frequency (Table 5).

TABLE 5. FREQUENCY OF NEWSPAPER READERSHIP OF AGRICULTURAL, FACTORY AND OFFICE WORKERS WHO ARE ABLE TO READ[a]

Frequency of newspaper reading	Occupational group			
	Agricultural workers	Factory workers	Office workers	Total
Never	-	3	-	3
Two or three times a year	1	-	-	1
Once a month	5	3	-	8
Once a week	2	5	2	9
Several days a week	-	5	4	9
Daily	-	2	4	6
Totals	8	18	10	36
Av. Rank	10.0	17.4	27.2	

$\overline{H} = 12.5 - p < .01$; (d. f. = 2)

[a]Based on responses to the question "How often do you read a newspaper?"

whom could read, read newspapers frequently (daily or several times a week). Factory workers, who could read, did not read newspapers as frequently as office workers, but read them more frequently than did agricultural workers. Agricultural workers, who could read, reported reading newspapers infrequently (once a month or several times a year).

Perusal of background material on grade level attained in school for each person who reported reading newspapers indicated that frequent reading of newspapers was more common among those who had attained higher grade levels.[6] This occurred for individuals regardless of occupational affiliation. Individuals who had attended primary school one year or more but had not completed the primary school course read newspapers more frequently (at least once a week) than did those who had not reached this level of schooling. Those who attended high school read more frequently than all others. It is interesting to note, however, that the degree to which these individual patterns occurred within each occupational group increased in the patterned direction A-F-O. That is, among all workers who had been to school, office workers read more frequently

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[6]Material on the educational attainment of the sample population may be found in Appendix B.

than factory workers, who, in turn, read more frequently than agricultural workers.

In general, these observations lend support to the conclusion that, for the present sample, frequency of newspaper reading varies with occupational position in the agro-industrial structure. It appears to be related more to the level of educational attainment than to ability to read. Where individual variations occur they are patterned along occupational group lines.

(3) Newspaper reading and radio ownership. The ownership of radios was not widespread. Of the total sample population studied, only 19 persons owned radios. The extent of individual ownership of radios within each occupational group followed the hypothesized direction. Agricultural workers had a lower proportion of radio ownership than did factory workers who in turn had a lower proportion of radio ownership than office workers.

Table 6 indicates that the pattern of differences among the average ranks of agricultural, factory, and office workers was significant in the expected direction. This upholds the third operational hypothesis. All persons who owned radios, regardless of occupation, also read newspapers. (The degree to which individual consumption of both radios and papers occurred within each group followed the direction A-F-O.) The converse was not true; all persons who read newspapers did not own radios.

TABLE 6. NEWSPAPER READERSHIP AND RADIO OWNERSHIP[a] OF AGRICULTURAL, FACTORY AND OFFICE WORKERS

Newspaper reading and radio ownership	Occupational group			
	Agricultural workers	Factory workers	Office workers	Total
None	12	5	-	17
One only[b]	6	5	3	14
Both radio ownership and newspaper readership	2	10	7	19
Totals	20	20	10	50
Av. Rank	16.4	29.4	35.9	

$\overline{H} = 8.781 \sim .02 > p > .01$; (d. f. = 2)

[a]This table is based on a cross tabulation of the responses to the question "Do you read a newspaper?" and the question "Do you own a radio?"

[b]The only medium mentioned was newspapers.

Two conclusions may be drawn from these findings on potential exposure to information through mass media: (a) agricultural workers are least exposed, factory workers are more highly exposed than agricultural workers, and office workers are the most exposed, and (b) persons who own radios have their exposure reinforced by reading newspapers but persons who read newspapers do not necessarily have their exposure reinforced through the direct means of radio ownership.

(4) Locality of radio stations listened to by radio owners.[7] How "cosmopolitan" are the radio stations listened to by agricultural, factory, and office workers who own radios? That is, are the stations listened to located in small rural towns, in the state capital, in other state capitals and the national capital (Rio de Janeiro), or in the capitals of other nations? The chief criteria for determining the cosmopolitan character of radio stations in Brazil is their geographical location (coastal or inland, urban or rural), and their program content. Rural stations are small and provincial in their outlook, urban sta-

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[7]Analysis of the hypothesis relating to this aspect of the study is limited by the fact that there were no data collected on the radio listening patterns of non-owners. It is probable that the listening patterns of non-owners are similar to those of radio-owners in their own occupational groups since much radio listening occurs in the homes of fellow-workers. See discussion of social visiting later in this chapter.

tions are larger and carry a variety of news broadcasts, cultural and educational programs. Broadcasts from foreign capitals transmitted over large urban stations, or picked up on short-wave sets, provide additional information concerning world events.

It was found that office workers listened to more cosmopolitan stations than did factory workers who, in turn, listened to more cosmopolitan stations than agricultural workers (see Table 7). This finding was in the hypothesized direction, but was not significant. Office workers were more exposed to information from the outside world broadcast by radio than factory workers who, in turn, were more exposed than agricultural workers. It is probable that the findings shown in Table 7 are, in part, due to differences in "media tastes" and to factors associated with economic status. As you descend the socio-economic scale in Tapes workers increasingly lack money to buy powerful sets, lack the verbal literacy to comprehend "big city" programs, and so on.[8]

Profile of the three groups' exposure to information through mass media of communication. The analysis suggested that the three occupational groups showed differences in

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[8] See Appendix C (section on radio diffusion in Brazil) for discussion of factors which affect the diffusion and reception of information broadcast by radio.

TABLE 7. NUMBER AND LOCALITY OF RADIO STATIONS LISTENED TO BY AGRICULTURAL, FACTORY AND OFFICE WORKERS WHO OWN RADIOS[a]

Locality	Occupational group			
	Agricultural workers	Factory workers	Office workers	Total
Local[b]	1	1	1	3
State capital	2	12	7	21
Rio de Janeiro and other state capitals	-	4	7	11
Foreign capitals	-	1	2	3
Totals	3	18	17	38
Radio owners	(2)	(10)	(7)	(19)
Av. Rank	10	18.1	22.5	

$\overline{H} = 4.664 - .10 > p > .05$; (d. f. = 2)

[a]Table is based on a frequency distribution of the geographical location of radio stations mentioned by radio owners in response to the question "What radio stations do you listen to most often?"

[b]Tapes does not have a local radio station, but other nearby towns do.

both the degree to which individuals in each group possessed the necessary pre-requisites for use of mass media and the degree to which they were actually exposed to mass media. A summary of the tests of the operational hypotheses concerning exposure to mass media appears in Table 8.

A. Agricultural workers. Most agricultural workers were unable to read or write and those who were literate read newspapers infrequently. Few agricultural workers owned radios, and those that did listened to a low average number of stations.[9] Their listening patterns centered on programs emanating from stations in local areas or in the state capital. Agricultural workers (1) did not possess some of the necessary prerequisites for use of mass media of communication, e.g., literacy (and its correlate, comprehension), and (2) those who possessed these prerequisites were exposed infrequently to only one of the two principal mass media. Thus we may conclude that agricultural workers are infrequently exposed to information transmitted through the two principal mass media.

B. Factory workers. Factory workers generally were literate and read newspapers frequently, i.e., at least several days a week. Half of them owned radios and all of these owners were newspaper readers. Radio owners listened

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[9]Such an index gives a general estimate of the range of radio listening.

TABLE 8. SUMMARY OF TESTS OF OPERATIONAL HYPOTHESES RELATING TO EXPOSURE TO MASS MEDIA

Hypothesis	Direction of Difference	Significance
(1) Literacy and newspaper readership	Hypothesized (A-F-O)	$.01 > p$ (df = 2)
(2) Frequency of newspaper reading	Hypothesized (A-F-O)	$.01 > p$ (df = 2)
(3) Newspaper reading and radio ownership	Hypothesized (A-F-O)	$.02 > p > .01$ (df = 2)
(4) Cosmopolitan character of radio stations listened to by radio owners	Hypothesized (A-F-O)	$.10 > p > .05$ (df = 2)

to a higher average number of radio stations than did agricultural workers. The programs they listened to emanated from stations in the national capital and abroad, as well as from the state capital and local stations. Factory workers (1) possessed the necessary prerequisites for the use of mass media, and (2) those who were exposed tended to be exposed often to both principal mass media. They were exposed to information transmitted through newspapers and radio to a greater extent than were agricultural workers.

C. Office workers. All office workers were literate and read newspapers frequently, i.e., daily or several times a week. Seven of the ten office workers owned radios. Their listening patterns were distinctive in that they listened to foreign stations more than did members of the other occupational groups. In addition, office workers listened to the highest average number of different stations. Office workers (1) possessed the necessary prerequisites for the use of mass media, and (2) were all exposed to at least one media, and two-thirds were frequently exposed to two media. Office workers were the occupational group most exposed to information communicated through the principal mass media of communication. Whereas, factory and agricultural workers differed in the extent to which they possessed the prerequisites for use of the mass media, and the frequency with which they used such media, office

and factory workers differed in the quality of the prerequisites they possessed and their frequencies of exposure to mass media.

Further results. Several aspects of the data lend perspective to the research. There are a number of characteristics common to individuals regardless of their occupational group membership:

(1) Workers who were able to read did so. However, being able to read was not generally associated with frequent reading of newspapers; rather,

(2) Workers having the highest degree of educational attainment read newspapers more frequently than did those having a low degree of educational attainment.

(3) All workers who owned radios read newspapers. However, all persons who read newspapers did not own radios. This suggests that newspapers were the greatest single source of mass media information for workers.

(4) Workers who owned radios listened to stations emanating from such non-rural places as the state and regional capitals, the national capital, and foreign capitals.

Further observation of the data indicated that the degree to which these individual variations occurred for each occupational group varied in the direction A-F-O. For example, analysis of the finding that all workers who owned

radios also read newspapers, showed that the degree to which this phenomenon occurred was always higher for office workers than for factory workers; and always higher for factory workers than for agricultural workers. Thus, findings which appeared to be wholly individual were found, upon further observation, to have an underlying pattern and order (according to occupational group membership) similar to that hypothesized.

Social Visiting

Agricultural, factory, and office workers, as observed in this study, are differentially exposed to information disseminated through the two principal forms of mass media. However, another source of new information, ideas, opinions and news may be social visiting. It is possible that in agro-industrial rural town communities, where economic and cultural factors determine which segments of the population may be directly exposed to mass media information, many persons will be indirectly exposed by word of mouth. Since social visiting is an important activity in the lives of the people of rural Brazil and might function as an important informal source of information, a set of questions was asked to find out which persons the sample members visited most often. An evaluation of the tests of the general hypothesis that social visiting will vary in the patterned direction

A-F-O also indicated the manner in which social visiting supplemented information exposure.

(5) Visiting patterns: occupation. Are there differences in the occupational levels of those persons visited by agricultural, factory, and office workers?[10] Table 9 indicates that there is a significant pattern of intra-occupational group visiting for each of the three occupational groups in the hypothesized direction. The estimated amount of all such visiting by sample members was 68 per cent.[11] Further analysis was carried on to determine the extent of inter- and intra-occupational group visiting in each of the three occupational groups.

Given the estimate of the total amount of intra-occupational group visiting by all sample members, what is the probability that the patterns shown by agricultural, factory, and office workers will differ from it as they do as a consequence of chance factors? The null hypothesis was

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[10] Social visiting is a manifold interactive process which involves not only whom an individual visits but also who visits that individual. The latter is a significant aspect of social visiting, the data for which is lacking in the present research. It is probable that an auxiliary question "Who visits you most often?" may have added a new dimension to the material.

[11] This estimate was obtained by dividing the fifty cases of visiting with persons in one's own group by the total (73) cases of visiting.

TABLE 9. OCCUPATIONS OF PERSONS VISITED MOST OFTEN BY AGRICULTURAL, FACTORY, AND OFFICE WORKERS[a]

Occupational group visited	Occupational Group			
	Agricultural workers	Factory workers	Office workers	Total response
Agricultural	17 (+)[b]	8 (-)	- (-)	25
Factory	- (-)	15 (+)	5 (-)	20
Office	1 (-)	9 (-)	18 (+)	28
Totals	18	32	23	73[c]
Av. Rank	15.5	36.6	54.3	

$\bar{H} = 38.047 \sim p < .01$; (d. f. = 2)

$\chi^2 = 60.80 = \sim p > .001$ (d. f. = 4)

[a]Based on responses to the question "Who are the three persons you visit most often in this community?"

[b]Plus and minus signs indicate the direction of the differences between the observed frequency and the expected frequency.

[c]Of a possible 150 persons-occupations that could be mentioned, i.e., 50 respondents times three persons and their occupations, only 73 were actually mentioned. These were used in the tabulations presented here.

invoked for each occupational group, and the Chi-square goodness-of-fit test was utilized.[12] The results of the

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[12]This statistical technique was found to be adequate for use with small samples. Chi-square is conceived of as a measure of discrepancy between a set of observed frequencies and the corresponding frequencies expected under an hypothesis whose conditions are set by the investigator. As used here with three occupational groups, the data are expected to show evidence of significant differences in the tendency of each group to exhibit an intra-occupational group visiting pattern like that of the total population.

The general formula for Chi-square is:

$$\chi^2 = \sum_{i=1}^{k} \frac{(fi - Fi)^2}{Fi}$$

where Fi equals the expected or computed frequency and fi equals the observed frequency in a sample of N observations.

However, for small samples, according to Walker and Lev, op. cit., pp. 105-06, "the usual computation of χ^2 gives too large a value leading to rejection of the hypothesis more often than would the direct computation of probability by factorials. This error can be offset by a procedure commonly known as Yates correction." Following Walker and Lev, p. 106, the formula used was:

$$\chi_y^2 = \frac{(|ad - bc| - N/2)^2 N}{(a + b)(a + c)(b + d)(c + d)}$$

In all cases where the technique was used with only one degree of freedom the Yates correction for continuity was applied in the computation. The results of the Chi-square tests are all interpreted from the table of distribution for Chi-square found in G. Udney Yule and M. G. Kendall, An Introduction to the Theory of Statistics, 14th ed. (New York: Hafner), 1950, Appendix. p. x. The Chi-square table tells what the probability is that a Chi-square as unusual as that evaluated would be observed and on the basis of the probability we either accept or reject the hypothesis.

Interpretation of the results of the Chi-square goodness-of-fit test follow Walker and Lev, op. cit.,

tests[13] indicated that (a) agricultural workers did more visiting of persons in their same occupational group than would be expected from the estimate of such visiting for all sample members, (b) factory workers did less intra-occupational visiting than would be expected, and (c) office workers approximated the patterns of the total sample.[14]

It may be concluded that:[15]

(a) visiting fellow workers was common in all three occupational groups;

(b) the degree to which a worker visited fellow workers varied by occupational groups (see footnote 14: agricultural workers overwhelmingly visited fellow workers, while less than fifty per cent of factory workers visited

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pp. 81-108, and Margaret Hagood and Daniel O. Price, Statistics for Sociologists (New York: Henry Holt), 1952, pp. 264-71. Other sources referred to were W. G. Cochran, "The Chi-Square Distribution for the Binomial and Poisson Series with Small Expectations," Annals of Eugenics, 7 (1936), pp. 207-17, and "The Chi-Square Correction for Continuity," Iowa State College Journal of Science, 16 (1942), pp. 421-36; F. Yates, "Contingency Tables Involving Small Numbers and the Chi-Square Test," supplement to the Journal of the Royal Statistical Society, 1 (1934), pp. 217-35.

[13] The results were: agricultural workers $.05 > p > .025$, factory workers $.02 > p > .01$, and office workers $.50 > p > .25$.

[14] The derived estimates of intra-occupational group visiting for each of the three groups were: agricultural workers 94 per cent, factory workers 46 per cent, and office workers 78.2 per cent. For the total sample it was 68 per cent.

[15] A limitation is placed on the conclusiveness of these results, since in some instances there were few cases in the expected frequency cells.

inside their group; and office workers overwhelmingly visited persons within their occupational group);

(c) where visiting outside one's own occupational group occurred, agricultural workers visited office workers,[16] factory workers visited both agricultural and office workers, and office workers only visited factory workers;

(d) the degree to which outside visiting occurred varied: Factory workers visited persons outside their own occupational level to a much greater degree than did either agricultural or office workers.

(6) Visiting of kin. Analysis of the data to test hypothesis five showed that workers in each occupational group, if they visited, tended to visit persons in their same occupational group more than persons in any other occupational group. To what extent did agricultural, factory, and office workers visit persons who were related to them? Table 10 indicates that the persons visited by workers in the three occupational groups were usually related to them. The differences among the average ranks of agricultural, factory, and office workers were significant but they were not in the expected direction A-F-O; rather they were in the direction F-A-O.[17] Factory workers (F) visited kin to a greater degree than did agricultural workers (A), who in

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[16] Only one case.

[17] The total pattern F-A-O might have been significant

TABLE 10. RELATIONSHIP OF PERSONS VISITED MOST OFTEN BY AGRICULTURAL, FACTORY AND OFFICE WORKERS[a]

Relationship	Occupational Group			
	Agricultural workers	Factory workers	Office workers	Total
Immediate family	5	20	5	30
Relative	14	16	7	37
God—father	-	4	-	4
Friend	7	12	15	34
Totals	26	52	27	105[b]
Av. Rank	53.1	46.8	64.7	

$\bar{H} = 6.85$ - $.05 > p > .02$; (d. f. = 2)

[a]Based on responses to question "Who are the three persons you visit most often in this community?"

[b]Out of a possible 150 persons-relationships that could be mentioned, i.e., 50 respondents times 3 persons (and their relationship), only 105 persons-relationships were actually mentioned. These were used in the tabulations presented here.

turn visited kin to a greater degree than did office workers (O).

Since this result deviated from theoretical expectations, analysis was carried further to ascertain whether these deviations signified real differences between groups or whether they were due to chance. Evidence was sought by pairing each of the three groups to test the null hypothesis that each pair of samples came from the same population and that any differences observed would be due to chance factors. The "z"[18] test was utilized to test the null hypothesis.

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or either or both of the pairs (A-F, A-O, F-O) could have been the major contributor to the significant "H".

[18]"z" is a test of the significance of the difference between pairs of average ranks. It is computed according to the following formula:

$$z = 2R - n(N + 1)/2n\sigma_{\bar{R}}$$

where R is the sum of the ranks of all cases in a group; N is the number of cases in both groups; and n the number of cases in the group for which ranks are summed; and

$$\sigma_{\bar{R}}^2 = \frac{N(N^2 - 1) - \Sigma T}{12\,Nn} \cdot \frac{N - n}{N - 1}$$

where $T = (t - 1)t(t + 1)$ and t = the number of tied observations in a group with the same rank.

Computations of "z" may be adjusted for continuity. All results are interpreted from a table of areas under the normal curve at various ordinate positions. Since the operational hypotheses all stated the direction of the differences expected, one-tailed interpretations were used in

Evidence was found which appeared to confirm only that part of the original hypothesis which stated that office workers would visit kin less often than agricultural and factory workers. The patterns of visiting of factory and agricultural workers both differed from office workers but did not differ from each other.[19]

Concerning patterns of visiting kin we may conclude that (a) most workers who visited did so with persons related to them, (b) factory workers visited kin to a greater degree than agricultural workers who, in turn, visited kin to a greater degree than did office workers, and (c) factory and agricultural workers did not greatly differ from each other in the extent to which they visited kin, but both did differ significantly from the patterns exhibited by office workers.

At this point in the analysis of the data, an attempt was made to ascertain what part kinship played in the ob-

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evaluating the probabilities of the various differences. For a discussion of this statistic see Kruskal and Wallis, ibid., pp. 590-95. The authors do not assign a symbol to this statistic. Following Joel Smith, Organization of the Farm and Mass Communication (unpublished doctoral dissertation), Northwestern University, 1954, p. 42, footnote, it has been referred to as "z" since it is evaluated with a unit curve table.

[19] The differences between the average ranks were: (a) factory and office workers $p = .0055$, agricultural and office workers $p = .0455$, and (c) agricultural and factory workers $p = .1635$.

served intra-occupational group visiting patterns.[20] The research findings are presented under hypothesis seven (visiting of kin in the same occupational group) and hypothesis eight (visiting non-kin in the same occupational group).

(7) Visiting of kin in the same occupational group. Table 11 indicates that persons visited who were kin tended to be in the same occupational group as the respondent. The differences between the average ranks of agricultural, fac-

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[20]The data presented in Table 9 were analyzed further to determine the role of kinship in intra-occupational visiting. The following procedures were utilized to organize the data. For each of the three occupational groups, persons visited were separated into two categories: (a) persons who were kin, and (b) persons who were not kin, i.e., friends. Then the occupational affiliation of the persons visited was ascertained and cross-tabulated against the three original occupational groups. In this manner two tables were derived, one showing the occupational distribution of related persons visited by each of the three original occupational groups (see Table 11); the other showing the occupational distribution of non-related persons (friends) visited by each of the original groups (see Table 12).

A problem arises concerning hypotheses seven and eight, in connection with Tables 11 and 12. It was stated earlier that the operational hypotheses were developed as independent indices of their related categories. Hypotheses seven and eight are not entirely independent of each other, since the data used in testing each (Tables 11 and 12) are derived from Table 9, and are not independent. If one table is established it is possible to predict the other. However, hypothesis seven and eight are both independent of hypothesis five (Table 9) and six (Table 10) and thus serve to refine, clarify, and augment our knowledge of the patterns of social visiting among the occupational groups in the sample population.

TABLE 11. OCCUPATIONS OF RELATED PERSONS VISITED MOST OFTEN BY AGRICULTURAL, FACTORY AND OFFICE WORKERS[a]

Occupations of kin visited	Occupational Group			
	Agricultural workers	Factory workers	Office workers	Total
Agricultural	11	6	-	17
Factory	-	12	4	16
Office	1	8	6	15
Totals	12	26	10	48
Av. Rank	11.6	26.3	33.8	

$\bar{H} = 15.73 - p < .01$; (d. f. = 2)

[a]Based on cross tabulation of responses to question "Who are the three persons you visit most often in this community?" Respondents were asked to state the occupation and relationship of the three persons mentioned.

TABLE 12. OCCUPATIONS OF NON-RELATED PERSONS VISITED MOST OFTEN BY AGRICULTURAL, FACTORY AND OFFICE WORKERS

Occupations of non-kin visited	Occupational Group			
	Agricultural workers	Factory workers	Office workers	Total
Agricultural	6	2	-	8
Factory	-	3	-	3
Office	-	1	13	14
Totals	6	6	13	25
Av. Rank	4.5	9.6	18.5	

$H = 12.41 - p < .01$; (d. f. = 2)

tory, and office workers were in the expected direction and were significant.

Further investigation was carried on to find out (a) to what extent workers in each of the occupational groups visited kin who were also in the same occupational group, and (b) to what extent the intra-group patterns of visiting kin were significant in terms of the estimate of the total distribution of such visiting for the total population. The question was: Given the estimate of the extent of visiting of kin by all members of the sample, what is the probability that the pattern shown by agricultural, by factory, and by office workers will differ from it as a consequence of chance factors? (Sixty-four point four per cent of all visiting was with persons who were kin, i.e., members of the immediate family and/or relatives.) As before, the null hypothesis was invoked for each occupational group. To test the null hypothesis the Chi-square goodness-of-fit test was used. The results of the tests[21] indicated that agricultural workers did more visiting with kin who were fellow workers than would be expected, given knowledge of the estimate of such visiting for the total sample. Factory workers did far less visiting of kin who were fellow

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[21] The results were: agricultural workers $.05 > p > .025$, factory workers $.25 > p > .10$, and office workers, $.99 < p$.

workers than would be expected, and office workers approximated the expected patterns.[22]

From the analysis of materials relating to visiting kin who were fellow workers we may conclude that:

(a) visiting of kin who were fellow workers was common among all groups;

(b) the degree to which a worker visited kin who were fellow workers varied by occupational groups (see footnote 22);

(c) where visiting of kin who were not fellow workers occurred, agricultural workers visited office workers,[23] factory workers visited both agricultural and office workers, and office workers visited only factory workers;

(d) the degree to which visiting kin who were not fellow workers occurred varied: factory workers exhibited such behavior to a greater degree than did either agricultural or office workers.

(8) Visiting unrelated persons in the same occupational group. The same procedures used above were also utilized to investigate the relationship between visiting of

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[22] The derived estimates of visiting kin who were fellow workers for each of the three groups were: agricultural workers 91.6 per cent, factory workers 46.1 per cent, and office workers 60 per cent. For the total sample it was 60.4 per cent.

[23] Only one case.

unrelated persons and occupational position. It was found that visiting of unrelated persons also followed occupational group lines. Table 12 indicates that the observed patterns were in the expected direction and that the differences between the ranks were significant.

Eighty-eight per cent of the visiting among unrelated persons was with fellow workers, somewhat higher than that observed for kin visiting. To what extent were the intra-group visiting patterns with unrelated persons significant, for agricultural, factory, and office workers, in terms of the percentage of intra-group visiting with unrelated persons estimated for the total population. It was found that all agricultural and office workers who visited unrelated persons did so with fellow workers; this occurred to a greater degree than would be expected from the estimate for the total sample.[24] Factory workers who visited unrelated persons, contrary to the other two groups, visited across group lines with both agricultural and office workers; this occurred less than would have been expected from the total estimate. We may conclude that (a) visiting unrelated per-

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[24]The probabilities for the patterns were: agricultural workers $.5 > p > .3$, factory workers $.05 > p > .02$, and office workers $.5 > p > .3$. A limitation is placed on the conclusiveness of these results since, in some instances, there were fewer than five cases in the expected frequency cells.

sons who are fellow workers is common among individuals in all three occupational groups, and (b) agricultural and office workers are alike in their patterns but factory workers differ from both.

Profile of the three groups' exposure to information through social visiting.[25] The analysis suggested that the three occupational groups showed differences in patterns of information exposure through social visiting. A summary of the tests of the operational hypotheses appears in Table 13 at the end of this section.

A. Agricultural workers. Agricultural workers most frequently visit workers within their own occupational group and such visiting is most often done with relatives. It is apparent therefore that not only are agricultural workers unexposed to information through mass media, but they are also unexposed to new information through social visiting since the persons they visit (fellow workers) are no more exposed than themselves. One important source of exposure, however, does come from factory workers who visit them occasionally.

B. Factory workers. Factory workers consistently visited across occupational lines. More than half of all vis-

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[25] A summary of the tests of operational hypotheses relating to exposure to information through social visiting appears at the end of this section.

its made by them were to either agricultural or office workers. This cross-occupational visiting occurred with persons who were unrelated to them as well as with kin. Thus, the social visiting of factory workers differed from that of agricultural workers in that factory workers visited across occupational lines and visited regardless of family ties.

These findings suggest that factory workers, already shown to be exposed often to newspapers and radio, may have their information exposure reinforced or expanded by their frequent contacts with all groups. In addition, they may serve as transmitters of information, news, and opinions. Information they get through mass media may be passed up and down the communications ladder; and especially what they learn from office workers may be transmitted to agricultural workers with whom they frequently visit. This cross-occupational group visiting is an outstanding characteristic of the social visiting patterns among factory workers and is, of course, an important aspect of the process of information exposure in the rural town community.

C. Office workers. Office workers restricted their visiting to workers within their own occupational group. This pattern was more in common with agricultural workers than with factory workers; however, in contrast to agricultural workers, office workers visited workers who were not

kin. Where inter-occupational group visiting did occur it was only with factory workers who were kin. Thus, office workers may have their high rate of exposure to information through mass media reinforced in social visiting with fellow workers. In addition, their high media exposure and their frequent contact with factory workers makes them an important source of the information to which other workers are exposed.

For the total sample population it is apparent that workers tended to visit fellow workers and to visit kin. However, workers who visited kin tended to do so with workers on the same occupational level; and workers who visited unrelated persons tended also to do so with fellow workers. Several things seem apparent; first, much of the information to which persons are exposed is transmitted to them by other persons and most often by members of their own intimate face to face groups. Of these, face to face situations involving fellow workers and friends seem to be of greater significance as areas for obtaining new information and for transmitting information than do family groups alone. Furthermore, groups made up of "kin who are fellow workers" are probably the most dynamic source of information exposure, as far as oral transmission of information is concerned. It is highly probable that information transmitted in these ways may be modified in language form, content, and empha-

TABLE 13. SUMMARY OF TESTS OF OPERATIONAL HYPOTHESES RELATING TO EXPOSURE TO INFORMATION THROUGH SOCIAL VISITING

	Hypothesis	Direction of difference	Significance
(5)	Visiting patterns: occupation	Hypothesized (A-F-O)	$.01 > p$ ($df = 2$)
(6)	Visiting of kin	Contrary (F-A-O)	$.05 > p > .02$ ($df = 2$)
(7)	Visiting of kin in same occupational group	Hypothesized (A-F-O)	$.01 > p$ ($df = 2$)
(8)	Visiting of those who are not kin in same occupational group	Hypothesized (A-F-O)	$.01 > p$ ($df = 2$)

sis to meet the level of comprehension of workers in the lower economic strata and/or to serve the purposes of the transmitters.

Contact with Persons from Outside the Local Community

Contact with persons from outside the local community provides an important source of general information, news, ideas, and opinions. In this section the author examines the frequency of contact of agricultural, factory, and office workers with persons from other rural town communities, the capital city of Porto Alegre, other states, and other countries.

(9) Frequency of contact with persons from other rural town localities. Table 14 indicates that differences in the frequency of contact of the three groups with persons from other rural town communities did exist. The pattern, however, was not in the expected direction. Factory workers had a higher frequency of contact with persons from other localities than did office workers, who, in turn, had a higher frequency of contact with persons from other localities than did agricultural workers.[26] There was reason to believe that factors related to the type and location of work might have accounted for this result. This point will be discussed in the final chapter.

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[26]Deviations of this order were tested further. See later section on further analysis.

TABLE 14. FREQUENCY OF CONTACT OF AGRICULTURAL, FACTORY AND OFFICE WORKERS WITH PERSONS FROM OTHER RURAL LOCALITIES

Frequency of contact	Occupational Group			
	Agricultural workers	Factory workers	Office workers	Total
Never	1	-	-	1
Often in your life	6	-	-	6
Often in a year	12	5	5	22
Once a week	1	3	3	7
Daily	-	12	2	14
Totals	20	20	10	50
Av. Rank	14.3	35.3	27.2	

$\overline{H} = 5.39 - .10 > p > .05$; (d. f. = 2)

$z_{fo} = 1.5$; $p = .1336$

(10) Frequency of contact with persons from the capital city. The pattern observed in the case of other rural town communities also held for contact with persons from the capital city. Table 15 shows that differences existed but that the pattern of differences was not in the expected direction. Factory workers had a higher frequency of contact with persons from Porto Alegre than office workers who, in turn, had a higher frequency of contact than agricultural workers.

(11) Frequency of contact with persons from other states. The pattern of differences in frequency of contact with persons from other states among agricultural, factory, and office workers was not in the expected direction (see Table 16).

(12) Frequency of contact with persons from other countries. Table 17 indicates that the pattern of differences between the average ranks of agricultural, factory, and office workers was in the expected direction and was significant.

(13) Most distant place from which persons were contacted. A glance at the tables relating to frequency of contact with other rural town communities, with the capital city, with other states, and with other countries, discloses that the greater the distance away from Tapes the less frequent was the contact of all workers with persons from

TABLE 15. FREQUENCY OF CONTACT OF AGRICULTURAL, FACTORY AND OFFICE WORKERS WITH PERSONS FROM PORTO ALEGRE (CAPITAL CITY)

Frequency of contact	Occupational Group			
	Agricultural workers	Factory workers	Office workers	Total
Never	4	-	-	4
Often in your life	11	1	1	13
Often in a year	4	3	3	10
Once a week	1	6	4	11
Daily	-	10	2	12
Totals	20	20	10	50
Av. Rank	12.7	36.5	29.9	

$\bar{H} = 55.4 - p < .01$; (d. f. = 2)

$z_{fo} = 1.5843$; $p = .1140$

TABLE 16. FREQUENCY OF CONTACT OF AGRICULTURAL, FACTORY AND OFFICE WORKERS WITH PERSONS FROM OTHER STATES

Frequency of contact	Occupational Group			
	Agricultural workers	Factory workers	Office workers	Total
Never	18	5	3	26
Often in your life	2	6	3	11
Often in a year	-	9	3	12
Once a week	-	-	1	1
Totals	20	20	10	50
Av. Rank	15.3	32.1	31.5	

$\overline{H} = 18.685 \sim p < .01$; (d. f. = 2)

$z_{fo} = -.0232$; $p = .8180$

TABLE 17. FREQUENCY OF CONTACT OF AGRICULTURAL, FACTORY AND OFFICE WORKERS WITH PERSONS FROM OTHER COUNTRIES

Frequency of contact	Occupational Group			
	Agricultural workers	Factory workers	Office workers	Total
Never	38	23	12	73
Often in your life	2	14	4	20
Often in a year	-	3	4	7
Totals	40	40	20	100[a]
Av. Rank	39.3	57.7	58.3	

$\bar{H} = 14.397$ - $p < .01$; (d. f. = 2)

$z_{fo} = -.8552$; $p = .3954$

[a]Responses from a related question on frequency of contact with persons from the United States were included. This accounts for N of 100 instead of 50.

these areas. What is the pattern of the differences in the most distant place from which persons have been contacted for the three occupational groups? Table 18 shows that all groups had at least some contact with persons from other places, but the degree to which such contact was made varied among the occupational groups. Agricultural workers were less exposed than office workers who, in turn, were less exposed than factory workers. This pattern was not in the expected direction but was significant.

Further analysis. Analysis of contacts with persons from outside the community showed the pattern A-O-F (i.e., that agricultural workers were less exposed than office workers, who were less exposed than factory workers) recurred. Further investigation was carried on to ascertain whether the total pattern (A-O-F) was significant or whether only one or two pairs was the major contributing factor.[27] The findings indicated that agricultural workers (least exposed) differed significantly from factory and office workers (highly exposed) with respect to contact with persons from outside the community.

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[27]One pair of average ranks (F-O) was investigated for each table by use of the "z" test. The question posed was: What is the probability of getting a difference as great as the one obtained in the case where there really is no difference between the average ranks for F (factory workers) and O (office workers)? It was found that, for each table, the differences between the average ranks of the two groups (F-O) was not significant. Therefore, it was not the F-O relationship which was the contributing factor to the observed pattern A-O-F but either the A-F and/or the A-O relationship.

TABLE 18. MOST DISTANT PLACE FROM WHICH PERSONS HAVE BEEN CONTACTED BY AGRICULTURAL, FACTORY AND OFFICE WORKERS

Most distant place of origin of places contacted	Occupational Group			
	Agricultural workers	Factory workers	Office workers	Total
Contacts all local	1	-	-	1
Other localities	2	-	-	2
Capital city	14	3	2	19
Other states	1	4	3	8
Other countries	2	13	5	20
Totals	20	20	10	50
Av. Rank	18.3	40.7	37.6	

$\overline{H} = 52.3 - p < .01$; (d. f. = 2)

$z_{fo} = .7279$; $p = .4654$

Profile of the three groups' exposure to information through contact with persons from outside the community. The analysis suggested that the three groups showed differences in patterns of exposure through contact with persons from outside. A summary of the tests of the operational hypotheses appears in Table 19.

A. Agricultural workers. Agricultural workers are in contact with persons from (a) other rural town localities "often in a year," (b) the capitalcity a few times in their lives, and (c) from other states and other countries generally "never." The capital city of Porto Alegre is the most distant place of origin of persons who have been contacted by agricultural workers. Agricultural workers have only infrequent contacts with persons from the outside world--even neighboring rural town localities--who might introduce new ideas, attitudes, opinions and information into their lives. They have met persons from as far away as Porto Alegre which indicates that in their lifetimes their direct exposure to bearers of information and their vicarious exposure to new information has extended beyond the plantation.

B. Factory workers. Factory workers are in contact with persons from (a) other rural town localities and the capital city "daily," (b) other states "often in a year," and (c) other countries rarely. Other countries are the

TABLE 19. SUMMARY OF TESTS OF OPERATIONAL HYPOTHESES RELATING TO CONTACT WITH PERSONS FROM OUTSIDE THE COMMUNITY

Hypothesized	Direction of Difference	Significance
(9) Frequency of contact with persons from other localities	Contrary (A-O-F)	$.10 > p > .05$ ($df = 2$)
(10) Frequency of contact with persons from capital city	Contrary (A-O-F)	$.01 > p$ ($df = 2$)
(11) Frequency of contact with persons from other states	Contrary (A-O-F)	$.01 > p$ ($df = 2$)
(12) Frequency of contact with persons from other countries	Hypothesized (A-F-O)	$.01 > p$ ($df = 2$)
(13) Most distant place from which persons have been contacted	Contrary (A-O-F)	$.01 > p$ ($df = 2$)

most distant places from which persons have been met by the majority of factory workers. Factory workers have a high rate of exposure to persons from the outside world who might serve as sources of new social knowledge. In comparison to agricultural and office workers they (the factory workers) have the highest amount of such exposure. This point will be taken up again in the final chapter.

C. Office workers. Office workers contact persons from other rural town localities "often in a year," from the capital city "once a week" or "often in a year," from other states "often in a year," and from other countries rarely. For half of the office workers studied, "other countries" were the most distant places of origin of persons who had been met. Office workers fairly frequently experience contacts with persons from the outside world. They are much more exposed than agricultural workers and only somewhat less exposed than factory workers. The range of contact for individuals in the office worker group is wide and there exist all degrees of contact with persons from the outside rather than the pattern characteristic of the other two groups, in which only the extremes of high or no contact with outsiders were found.

For the total sample of occupational groups it may be concluded:

(1) Information exposure of workers in the rural town community is structured. Whether or not an individual worker is exposed to bearers of information from the outside, and the frequency and type of such exposure depends on the occupational group to which the individual belongs. It is probable that several other factors in the life experiences of certain groups of workers are also significant in this respect. These factors are identified at the conclusion of this chapter and discussed in the concluding chapter.

(2) Most workers are isolated from frequent contact with persons from the outside world (factory workers differ from this pattern more often than any other occupational group). However, all groups contain individuals who have met outside persons at least once in their lives. The most distant place of origin of such persons does not extend beyond the capital city for most workers. Agricultural workers are almost totally isolated from outside contacts even with persons from neighboring communities. It is apparent that, for most workers, what they know about the outside world is obtained indirectly through other agents within the communications process.

(3) For factory and office workers the greater the distance between Tapes and another place the more frequently do they mention it as a place from which persons have

been contacted.[28] Their contact patterns obviously involve them in the affairs of the wider society and expose them to sources of information about state, national, and international occurrences. For example, one office worker regularly went to Porto Alegre to meet with friends who, he felt, could inform him of important national issues. In the case of the Rosenberg trial, the death of Stalin, and the prisoner of war riots in Korea, the opinions that the Rosenbergs may not have been guilty, that Stalin was a great statesman, and that maybe there was something wrong with the treatment of Communist prisoners by American troops were first introduced by a factory worker who attended monthly trade union meetings in Porto Alegre.

Summary of the Results

Agricultural workers have a low degree of potential exposure to new ideas, information, attitudes, and opinions because: (a) they do not possess the necessary prerequisites (e.g., literacy and money) for use of mass media; (b) those who are exposed are limited to an infrequent reading of newspapers; (c) they are not exposed to new in-

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[28] Agricultural workers showed a tendency toward the reverse pattern, though any attempt at generalization is complicated by the fact that fewer persons (two) mentioned other rural communities than mentioned the capital city (fourteen) as the most distant place from which outsiders had been met.

formation in their social visiting since the persons they visit are fellow workers as unexposed as themselves; and (d) they have extremely infrequent contacts with bearers of information from the outside world.

Factory workers have a greater degree of potential exposure than agricultural workers because (a) some possess the necessary prerequisites for use of mass media; (b) those who are exposed often use both newspapers and radio; (c) they have their information exposure reinforced by frequent social visiting with fellow workers and with office workers who are highly exposed to conventional sources of information; and (d) they have a high rate of contact with bearers of information from the outside world.

Office workers have the highest degree of potential exposure to new social knowledge because (a) they are all able to read and write, and have a high purchasing power; (b) they are frequently exposed to both principal mass media; (c) they have their high exposure frequently reinforced in social visits with fellow workers; and (d) they have wide contacts with persons from outside localities.

These findings suggest that among agricultural, factory, and office workers in the agro-industrial structure of a rural town community in Brazil variations in information exposure are at least in part a function of occupational position. Variations in information exposure occur

in statistically significant patterned directions for eleven out of the 13 tests; and in more than half of these tests the direction of the patterns of variations were as hypothesized (see Table 20). However, the results of the tests indicated that the research hypothesis required some revision in order to take into account several other related factors not specified in the original statement. Through this revision the hypothesis may have greater utility for future research on this and related problems.

At the outset of the study a general principle was offered to explain differential accessibility to information among members of the labor force of an agro-industrial rural town community. This principle stated that the economic organization of the rural town community in Brazil exposes (to a greater or less degree) varying groups of workers to different environments (more or less uniform for each) which affect the probabilities that they will possess a given pattern of exposure to new social knowledge.

One specific testable hypothesis was developed to illuminate the general principle. This stated that the form and character of information exposure, as expressed in: (a) use of mass media of communication, (b) social visiting with persons within the community, and (c) contact with persons from outside the community, will vary according to

TABLE 20. SUMMARY OF TESTS OF THIRTEEN OPERATIONAL HYPOTHESES CONCERNING THE PATTERNS OF INFORMATION EXPOSURE AMONG FIFTY AGRICULTURAL, FACTORY, AND OFFICE WORKERS IN A RURAL TOWN COMMUNITY IN BRAZIL

Pattern	Significant Difference ($p = .05$ or less)	Non-significant Difference (p = greater than .05)
Hypothesized:		
A-F-O[a]	(1), (2), (3), (5) (7), (8), (12)	(4)
Non-hypothesized:		
F-A-O	(6)	
A-C-F	(10), (11), (13)	(9)

[a]Letters in the table refer to agricultural (A), factory (F), and office (O) workers. Numbers in the chart refer to the thirteen hypotheses (see pp. 48-49). They were:

(1) Literacy and newspaper readership (see Table 4).
(2) Frequency of newspaper reading (see Table 5).
(3) Newspaper reading and radio ownership (see Table 6).
(4) Cosmopolitan character of radio stations listened to by radio owners (see Table 7).
(5) Visiting patterns: occupation (see Table 9).
(6) Visiting of kin (see Table 10).
(7) Visiting of kin in the same occupational group (see Table 11).
(8) Visiting of non-kin in the same occupational group (see Table 12).
(9) Frequency of contact: persons from other localities (see Table 14).
(10) Frequency of contact: persons from capital city (see Table 15).
(11) Frequency of contact: persons from other states (see Table 16).
(12) Frequency of contact: persons from other countries (see Table 17).
(13) Most distant place from which persons were contacted (see Table 18).

the occupational position of the worker in the agro-industrial structure.

Thirteen operational hypotheses derived from thirteen independent situations in which the hypothesis should have applied were examined. It was expected that if the general hypothesis was valid, the patterns predicted would be observed in a certain number of these specific test cases. Since six of the thirteen tests did not provide supporting evidence for the research hypothesis, one might choose to come to one of the following conclusions:

(a) the non-conforming situations were not really situations in which the research hypothesis applied; therefore disregard them;

(b) the non-conforming tests were randomly distributed and seemed to have nothing in common; therefore discard the hypothesis and replace it with a new one;

(c) the general hypothesis needs expansion, so as to indicate the causal efficacy of factors in addition to stratification differences among the occupational groups studied.

The third alternative was accepted because there were explanations for the non-conforming tests. Of the six non-conforming tests, four (three significant and one not significant) concerned contact with persons from outside the community. In the case of these three significant non-

conforming situations (hypotheses 10, 11, and 13) there was reason to believe that factory workers had a greater degree of contact with outsiders as a function of their job location (i.e., visiting technicians and officials come into the factory proper).

The unexpected finding that factory workers visited kin more often than other groups may be explained by the fact that they are old timers in the town, are older than other occupational groups, and have large numbers of children.[29] Thus, they have the opportunity to visit their kin in their off hours and on Sunday, and to meet them in public places frequented by family groups. Pressure toward visiting kin is exerted by the norms governing social practices in rural Brazil. Such norms usually give positive sanction to visiting among family relations. These norms stem from a family structure which emphasizes filial love, and the Catholic church which emphasizes the family as an important unit of worship. Under these conditions family visiting among factory workers might be expected to be higher than other groups.

In contrast to factory workers, more office workers are young and single. Though they have kin residing in the community, their interests are in courting, excursions to

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[29] See Appendix B, "Some Characteristics of the Study Sample," for data introduced in this and the following paragraphs.

Porto Alegre, and in the search for new adventure. Agricultural workers may not visit kin simply because they are mainly migrant laborers who have come to Tapes alone or with only their wives and children. This explanation is supported by the fact that agricultural laborers had the greatest number of "newcomers" to Tapes of any of the groups.

As a result of these plausible explanations for the non-conforming situations[30] there is reason to believe that if (a) the location of work, and (b) the worker's position in the family life cycle, had also been predicated as significantly related to information exposure, then, perhaps, eleven or twelve of the thirteen tests would have supported the research hypothesis. A revised statement of the research hypothesis would indicate that the form and character of information exposure, expressed in terms of (a) use of mass media of communication, (b) social visiting with persons in the community, and (c) contact with persons from outside the community, will vary as the occupational position, location of work, and position in the family life cycle vary.

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[30]Hypotheses 10, 11, and 13, and hypothesis 6 were considered the major non-conforming situations since they all occurred in a non-hypothesized direction and were significant. Hypothesis 9 was related to 10, 11, and 13, was in the same direction, but was not significant. Hypothesis 4 was in the hypothesized direction but was not significant.

The author recognizes that there are major difficulties involved in using many-faceted predictive variables simultaneously. The variables may not be perfectly correlated and knowledge of only one variable may not provide a firm basis for prediction of all situations. Varieties of combinations of the variables may be found. In the present research, occupational position alone did not adequately explain the patterns observed in the tests of thirteen independent situations. It is probable that in some of the cases occupational position, structure of the job situation, and position in the family life cycle, all operate together to produce a given pattern of exposure; in others, only one or two of the variables may contribute to the observed patterns.

The revision of the original research hypothesis has served to sharpen the author's knowledge of some identifiable factors which affect the probability that agricultural, factory, and office workers will possess a given pattern of exposure to information, ideas, opinions and news. Furthermore, the simultaneous (not successive) analysis of breakdowns of "simple" patterns provided additional knowledge of why a certain percentage was as high or low as found. The data on social visiting provide an illustration of this point. More than fifty per cent of the social visiting in the sample population occurred where the respondent and the

person visited were in the same occupational group. It was suspected that the relationship between the workers might be a factor influencing the observed pattern. Further analysis, breaking down visiting into two categories--visiting with kin and visiting with unrelated persons--demonstrated that the size of the percentage of intra-occupational visiting was larger among fellow workers who were unrelated (88 per cent) than among related persons (60.4 per cent). It was possible to conclude that a major increase in intra-occupational visiting came where visiting occurs among unrelated fellow workers. Thus, information exposure is structured along occupational and friendship lines. In addition, the discovery that inter-occupational visiting increases when it occurs among relatives refined our knowledge of the communications process. Visiting among related persons serves to obscure stratification differences among different occupational groups. Such visiting, therefore, facilitates the transmission of information from the members of one occupational group to those in another.

The present study has illustrated one method for the study of information exposure in rural town communities like Tapes. The author has attempted to use empirically derived hypotheses framed operationally in such a way that the values of the variables concerned were immediate products of observational procedures. This method provided a

means of classifying, ordering, measuring, and evaluating the data; it also illustrated procedures for systematic treatment of comparable data. Chapter VI essays an attempt to make inferences about the research findings in relation to the structural and situational factors found to account for variations in the information exposure of the populations studied.

VI. CONCLUSIONS: SOME FACTORS AFFECTING INFORMATION EXPOSURE AMONG WORKERS IN A RURAL TOWN COMMUNITY

Occupational Position

The research findings reflected a basic occupational stratification. The broad limits of information exposure were set, in part, by the individual's occupational position in the social organization of production in the rural town community. The worker's occupational situation was a major source of "enlightenment" and a pathway for exposure to new social knowledge. Utilizing information gained through field observation and interviews, it was possible to outline the general boundaries of the differing occupational environments affecting information exposure.[1]

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[1] Many investigators have developed schema relating to the stratification aspects of Brazilian society. See previously cited works by Gilberto Freyre, T. Lynn Smith, Fernando Azevedo, T. Lynn Smith and Alexander Marchant, and Charles Wagley. For ethnic-class aspects see Arthur Ramos, The Negro in Brazil, Richard Pattee (tr.), Washington, D. C.: The Associated Publishers), 1939; Artur Ramos, Introdução a Antropologia Brasileira (Rio de Janeiro, Brasil: Coleçao Estudos Barailsiros), 1947, Vols. I, II, III; Donald Pierson, Negroes in Brazil (Chicago, Ill.: The University of Chicago Press), 1942; Emilio Willems, "Immigrants and Their Assimilation in Brazil," T. Lynn Smith and Alexander Marchant (eds.), Brazil: Portrait of Half a Continent (New York: Dryden Press), 1951, pp. 209-25; and Thomas L. Blair, "The Negro Worker in Urban Brazil," Crisis, Vol. 61, No. 10, December 1954.

The plantation. The organization of the Fazenda Rosa Arroziera Brasileira is somewhat typical of the working conditions of agricultural laborers in the municipio of Tapes. The Fazenda is a 14,000 acre rice plantation located several miles outside of Tapes; it is owned by a corporation having large landholdings throughout the state and general offices in Porto Alegre, the capital of Rio Grande do Sul. Plantation personnel include: a director, who supervises rice production; a foreman; a number of artisans, machine drivers, and small renters (parceiros);[2] and approximately one hundred resident unskilled laborers. This latter group constitutes the bulk of the working population and includes several job categories. Among these are (a) the aguador, who waters the rice fields; (b) the trabalhador de pas, who forms the mud-walls and digs the irri-

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[2]In Rio Grande do Sul a parceiro is one who enters into a contract, verbal or written, to cultivate a piece of land belonging to a large landholder under conditions that the owner provide water and tools and that the individual turn over forty per cent of the crop, more or less, to the landowner. Parceiros tend to be independent in spirit and occupy a social status somewhat higher than that of the agricultural laborer. For other definitions of parceiro see T. Lynn Smith, Brazil: People and Institutions (Baton Rouge, La.: Louisiana State University Press), 1946, p. 808, and Smith and Marchant, op. cit., p. 166. For comparable terms in use in Latin America see Sam Schulman, "The Colono System in Latin America," Rural Sociology, Vol. 20, No. 1, March 1955, and Beate R. Salz, The Human Element in Industrialization (Chicago, Ill.: American Anthropological Association and the University of Chicago), 1955, Vol. 57, No. 6, Part 2, Memoir 85, pp. 37-38.

gation ditches that carry water to the fields; (c) the pegador de percevejos, who hunts the insects which attack the rice buds when the fields lie deep in water; (d) the trabalhador de cerca de arame, who erects and maintains the fences which line the fields; the vaqueiro, who rides herd on the cattle owned by the plantation; the boieiro, who drives the oxen transport carts; and the peão de campo, the lowly field hand who does general work wherever he is needed.

Eighty per cent of the labor on the plantation is done by hand. The work tasks performed by unskilled workers are traditional, and were performed by them in the past, and by their fathers before them. Their work is arduous and long, and is usually done in work gangs under the supervision of a straw-boss. Each job can easily be performed by another worker and as a result there are widespread feelings of insecurity. Job performance does not require, nor does it lead to, literacy, intellectual ability, technical competence, or specialization. Unskilled workers have, as a result, little opportunity to develop skills which might be used in the acquisition of new information and social knowledge.

Economic rewards and incentives are lacking. The laborer works from sunrise to sunset for 25 cruzeiros a day (U. S. $1.20). There is no work on Sundays or on rainy

days; thus a worker averages 505 cruzeiros (U. S. $25.00) per month. Workers are paid once a month in company money (fichas) which can only be spent at the company store where prices are high. Debt bondage is common among workers. Some workers are not paid at all, but receive, in lieu of cash wages, a small plot of land (quintal) on which to raise subsistence crops.

There is one small school building on the plantation which has not been in use for many years. There is no electricity and agricultural workers do not own any instruments of mass media communication. In addition, they are not encouraged to "know." In the words of one office worker: "Why do they need to know anything? . . . Better to leave sleeping dogs lie." As in the past, the life of the agricultural worker is rooted in the soil. There is a great dependency on the slow changes of nature and these color the life cycle of the people. Religious beliefs dominate the values of men, and kinship and friendship are significant factors in social interaction. Illiteracy, disease, low standards of living, disenfranchisement, geographical and informational isolation, and dependence on the will of the foreman and the director are ever-present influences in the lives of workers.

The ebb and flow of life and labor on the plantation follows that of the rice crop. During the planting season

there is work enough for all; while the fields are cultivated only a few men are employed. At harvest time, the fields are dotted with men, wages are steady, and life is pleasant; but, when the fields lie fallow in the summer, employment subsides and the worker and his family must live on credit at the company store. On the plantation, where laborers are constantly faced with the problem of obtaining the barest necessities of life--food, clothing and shelter --information exposure is, at best, an indirect and infrequent process.

The rice mill. The rural town community engenho de arroz (rice mill or factory) is an important link in the transformation of the raw product. The function of the engenho is to transform raw rice into an edible product by husking, milling and polishing the rice grain. These engenhos, characteristically, own and control vast plantations which supply them with rice. Where there is no planning, life and labor in the engenho, as life on the plantation, is geared to the cycle of land use.

In the engenho there are: a director, office workers, factory technicians, foremen, mechanics and artisans, semi-skilled machine tenders, drivers, and unskilled laborers. The latter groups constitute the bulk of the working population. In these groups may be found: (a) the cabeceador, who transports the rice sacks on his head from one place to

another; (b) the operario comum who toils in a work gang wherever needed; (c) the empilhador do arroz who shovels the rice into the bins; (d) the ensacador do farelo who fills the sacks with rice after it has been polished and classified; (e) the tirador do farelo who tends the machine which separates the husk from the grain; (f) the secadores who tend the drying machines; and (g) the motorista who drives the trucks which transport the rice sacks to the waterfront pier.

Factory laborers are long-time residents of the town who were originally agricultural laborers. Many are now holding jobs which are more highly paid and socially valued than those in which they started their occupational careers. Thus, a segment of the factory workers are upwardly mobile in the agro-industrial socio-economic structure.

The average mill worker receives 740 cruzeiros (U. S. $37.00) per month and works a ten-hour day, five and a half day week. Workers possessing a carteira profissional receive higher wages than do other workers. The carteira is an occupational identification card issued by the national ministry of labor which must be held by all literate, gainfully employed workers 16 years of age and older. This card establishes literate factory workers throughout Brazil as one special group protected by national labor legisla-

tion.[3] They are, therefore, aware of their rights and of the conditions of labor beyond the limits of their own community.

In general, the workers at Mercantil Arroz feel that the director is interested in their welfare. He lends them money when they are in need and serves occasionally as the compadre (god-father) of a worker's child. However, in recent years the workers have grown increasingly critical of the internal operation of the rice mill. They have protested against the working conditions, the system or lack of a system of up-grading, and the discriminatory wage scale; and they have criticized the office workers for their snobbish attitude toward the mill workers. In 1950 the factory workers attempted to organize a local of a state union, Centro Sindical Estadual de Operarias de Industria. They were fought with all the power of the mill owners. The owners claimed that the organization of a union was a communist plot and succeeded in thwarting the workers' plans. By 1953 the workers had grown more vociferous in their demands and a union was established.

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[3]For additional information on workers' rights in Brazil and the labor legislation affecting them, see J. V. Freitas Marcondes, "Social Legislation in Brazil," Smith and Marchant, ibid., Chapter 17; and José de Segadas-Vianna, O Sindicato no Brasil (Rio de Janeiro, Brasil: Grafica Olympica Editora), 1953.

The status quo at the mill was further threatened by the announcement that a new mill was to be constructed. The source of capital for this new mill was to come from the Bank of Brazil and its principal stockholders were local plantation owners who had been customers of Mercantil Arroz. This not only meant a loss of business for the old mill, but meant that the new mill would be in competition for the small available supply of workers. Most people in the town felt that the establishment of the new mill, barring an agreement between the two owners, would mean a rise in wage levels.

These dynamic factors in the life of the rural town factory worker play a part in his acquisition of education and the instruments of mass communication. He becomes increasingly aware of the role that his class plays in the life of the community and the nation, and aspires to achieve a better position in life.

The mill office. The mill office is separated from the factory proper. In the office there is an air of efficiency and dispatch. Office workers, generally speaking, are the sons of established and important town families. Their fathers are small land-owners, professional, or office workers. The first jobs held by office workers tend to have been white-collar jobs, such as store clerks, salesmen, or municipal employees. In the office they wear white shirts, dress pants and polished shoes.

Office workers arrive at work at 8 A. M. and generally work nine hours a day for five and a half days. For this they receive a wage of 1,400 cruzeiros (U. S. $70.00) per month. This sum is augmented occasionally by gratificações (bonuses) of from one to five thousand cruzeiros. Twice a day work is stopped for café (a morning and afternoon coffee break). Office workers may also receive time off during the day to perform family or personal duties.

Office workers, by the nature of their high position in the life of the community, are expected by other townspeople to be well-informed. They own radios, and frequently read many newspapers and often attend movie showings.

Subjective sentiments. Subjectively, workers look at the world around them in different ways. Agricultural workers are caught in a web of isolation, ignorance, and apathy. Those few agricultural workers who do aspire to a better economic situation, who would like to change their jobs, and who hope that their children will own their own businesses, or be white-collar workers or professionals, do not know how to achieve this "better life"; and in their everyday situations there are barriers and antipathies which prevent attainment of the means for making their hopes come true.

Factory and office workers have high aspirations for themselves and their children; they are aware of the modern

facilities and institutions which can help them better their lot in life; they are aware that education helps them to get ahead in the world. They do differ on how a worker should go about utilizing his knowledge. An illustrative situation occurred during the field research: The company proposed a program of benefits (especially educational) to counter the workers' demands for a union. The opinion was common among factory workers that "a worker should increase his knowledge in order to have a greater opportunity for independent action . . . but it would be better to use our education to organize (a union) for a better distribution of the means of life." Office workers, on the other hand, were more prone to say, "I am against the union. It does not have any value. Education was not meant to be used against those who gave it to you."

Variations in Information Exposure Related to Location of Work, Occupational Position, and Position in the Family Life Cycle

Occupational position, location of work, and position in the family cycle are three related factors which have been found to affect the patterns of information exposure investigated in the present research. The following is a discussion of the relative importance of these factors and the circumstances under which each takes precedence in the information exposure of workers.

Availability of mass media. The exposure of agricultural, factory, and office workers to information was highly influenced by what media were available and how widely they were distributed. In the rural town community the diffusion of information through mass media is handicapped by a lack of availability and poor distribution of the instruments of mass communication.[4] These factors increasingly handicapped mass communication as one descended the class hierarchy.

In Tapes, newspapers, radios, and films were available, in varying degrees, though their distribution was not widespread beyond the town limits. Every evening approximately sixty copies of two Porto Alegre dailies, Diario de Noite and Correio do Povo, arrived by bus. One-half of these newspapers were delivered personally to the mill supervisors, the mayor and officials, the plant foremen, the priest, and some teachers and white-collar workers. The rest were sold on the streets and in cafes. All other reading matter had to be purchased by individuals on trips to other localities and the state capital.

There were about eighty radios in Tapes, a quarter of which were located in cafes. The ownership of radios was

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[4]This problem is common throughout Brazil. See Appendix C, "Note on the Existence, Accessibility, and Limitations of Information Exposure through Mass Media in Brazil." For pertinent information on media available in Tapes and Rio Grande do Sul see tables at end of Appendix C.

not limited to places having electricity since many persons possessed battery sets. The use of battery radios was restricted, however, since they could not be played for long periods of time. The local cinema had a capacity of five hundred persons and showed films three times a week. Admission was five cruzeiros (U. S. $0.20); and there were never more than one hundred persons in the theater at one showing.

The availability of media decreased as the distance from the town increased. On the plantation, media instruments were not readily available to the working populations. Battery sets were owned by the supervisor, the foreman, and one small renter (parceiro). There was no established paper route extending to the plantation, and no motion pictures had ever been shown. Workers did not use mass media available in the town, since this would require absence from work and a long journey by horse or by foot. The fact that mass media were only available in town made the location of the worker's occupation an important factor in information exposure. For the plantation worker, media availability was low; for the town worker it was greater. While media were available to both factory and office workers, they were not equally accessible, thus serving to bring about different exposure patterns for the two groups.

Recent communications investigations indicate that unavailability and poor distribution of mass media instruments are common problems in underdeveloped areas of the world. They also corroborate the present finding that the available media are limited to urban areas. Lerner,[5] in a study of communication behavior in Turkey and the Middle East, found that mass media were concentrated in three cities and that there were few theaters, radios, and newspapers in the rural hamlets and villages of this world area. Keesing and Kessing,[6] in an experimental case study of "elite communication" in Samoa, found that mass media were relatively unavailable to large segments of the population outside the urban centers. In 1952-53, Y. B. Damle,[7] studying seven

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[5]Daniel Lerner, "A Scale Pattern of Opinion Correlates: Communication Networks, Media Exposure, and Concomitant Responses," reprint from Sociometry, Vol. XVI, No. 3, pp. 266-271, August 1953. See also Daniel Lerner (with Paul Berkman and Lucille Pevsner), Modernizing the Middle East: Studies in Communication and Social Change (Cambridge, Mass., Center for International Studies, Massachusetts Institute of Technology), 1955, unpublished manuscript, Chapter 45. Through the kind auspices of Dr. Ithiel de Sola Pool, director of the Center for International Studies, several recent international communication studies were made available to the author.

[6]Felix M. and Marie M. Keesing, Elite Communication in a Non-Western Society: A Study of Leadership in Samoa (California: Committee for Anthropological Research, Department of Sociology and Anthropology, Stanford University, undated manuscript (circa 1954), Vol. II, Chapter VI.

[7]Y. B. Damle, Communication of Molern Ideas and Knowledge in Indian Villages (Cambridge, Mass.: Center for International Studies, Massachusetts Institute of Technology, 1955.

Indian villages with a scale along a continuum of distance from an urban center, found that availability of media instruments decreased as distance from an urban area increased.[8] In studies of information exposure in underdeveloped areas, especially where comparisons are to be made, it is of primary importance that basic knowledge be acquired concerning the existence, availability, and distribution of mass media.[9]

Access to information. In the rural town agro-industrial community there were essentially two modes of access to information; one mode involved direct exposure to

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[8]The work of G. K. Zipf and his followers indicates that in the United States the farther the distance from a large population center the less facilities and use of facilities exist. Relevant works by G. K. Zipf include: "On the Number, Correlation-Sizes, and the Probable Purchasers of Newspapers," American Journal of Psychology, Vol. LXI, 1948, pp. 83-92; "On the Frequency and Diversity of Business Establishments and Personal Occupations: A Study of Social Stereotypes and Cultural Roles," Journal of Psychology, Vol. 24, 1947, pp. 139-48; and Human Behavior and the Principle of Least Effort (Addison-Wesley Press: Cambridge, Massachusetts), 1949, pp. 386-415. See also J. P. Boland, "On the Number and Sizes of Radio-Stations in Relation to the Populations of their Cities," Sociometry, Vol. XI, February-May, 1948, Numbers 1-2; and J. M. Conant and Allen Davis, "A Measurement of the Number and Diversity of Periodicals in Ninety-Two American Cities," Sociometry, Vol. 11, 1948, pp. 117-20.

[9]See Paul F. Lazarsfeld and Genevieve Knupfer, "Communications Research and International Cooperation," Ralph Linton (ed.), The Science of Man in the World Crisis (New York: Columbia University Press), 1945, pp. 477-78; and Charles Y. Glock, "The Comparative Study of Communication and Opinion Formation," Public Opinion Quarterly, Vol. 16, No. 4, Winter 1952-53.

media instruments, the other was basically indirect. Direct exposure occurred through personal ownership, or use of, media instruments or through collective radio listening and newspaper reading. Indirectly, persons were exposed to information through informal, oral, face-to-face communication with carriers of media information. These carriers of news included kin, fellow workers, and visitors from the outside.[10]

Frequent access to direct means of information exposure was most common among office workers, while access to the indirect means was common among agricultural workers. Factory workers exhibited patterns which fell between these two polar types. Accessibility to direct means of information exposure was related to the life situation of individuals as this involves such factors as residence, education, income, and attitudes. In general, the more urban, educated, economically secure, and mentally emancipated the individual the greater the accessibility to direct means of information exposure.

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[10]Other persons of importance in the communications process, but not included in this research, were the priest, teachers, the boss and supervisors. They have positions of authority and were more important as clarifiers of the news, and opinion-givers, than mere transmitters of information. (A worker might go to the priest, for example, and say, "Padre, John (fellow worker or kin) tells me that the Americans are experimenting with a big bomb, do you think that the world will be blown up?")

Where media were located, their availability and distribution affected the accessibility of direct information to different segments of the working population. Mass media and their related facility, electricity, were available only in the town. Thus townspeople had a greater degree of physical access to these instruments than did non-urbanites. Access to media was further limited for rural workers by the exigencies of travel and absence from work. Access to popular events, e.g., a film showing by an United States Information Service mobile cinema unit, was curtailed since news of current events did not travel fast to outlying districts. A study of film distribution and reception in six rural town communities in Brazil[11] showed that distance from the projection center located in the town square was a contributing factor in attendance at film showings. Those who worked in town were more likely to attend showings than those persons at greater distances from the center of town. The investigators also observed that despite many publicized announcements almost half of the agricultural and factory workers in the communities did not know of the event. The works of Keesing and Keesing, Damle, Lerner,

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[11]Raymond L. Scheele and Thomas L. Blair, Report on Distribution and Reception of United States Information Service Films in Brazil (East Lansing, Michigan: Area Research Center, Department of Sociology and Anthropology, Michigan State College), 1953, pp. 83-97.

and Rossi and Bauer[12] also indicate that accessibility to, and use of, direct means of exposure decrease as the distance from urban centers increases.[13]

Consumption of media. Some literacy is a necessary requirement for consumption of mass media information; lack of literacy makes the media virtually useless to individuals in any direct form. How much literacy is necessary for use of media? In the present study the author found that the attainment of at least one year or more of primary school education was a basic requirement for use of mass media. Bonilla,[14] in a study of the audience of mass media in three Latin American capitals--Santiago de Chile, Mexico City, and Panama City, found that a secondary education

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[12]Peter H. Rossi and Raymond Bauer, "Some Patterns of Soviet Communications Behavior," Leo Lowenthal (ed.), Special Issue on International Communications Research, Public Opinion Quarterly, Vol. 16, No. 4, Winter 1952-53, pp. 653-670.

[13]Accessibility to facilities is related to their use. Zipf reports data which show that use of facilities decreases as population size decreases and as distance from a large center increases (see Human Behavior . . . , p. 392ff). C. P. Loomis and J. A. Beegle, analyzing the ecology of library service, make essentially the same statement; see Rural Social Systems (Prentice-Hall: New York), 1950, pp. 524-33. Babette Kass, "Overlapping Magazine Reading: A New Method of Determining the Cultural Levels of Magazines," Paul F. Lazarsfeld and F. N. Stanton, Communications Research 1948-1949 (Harper: New York), 1949, suggests that the place of publication of a magazine (in her case it involved proximity to the reader) affects the use of magazines (p. 151).

[14]Frank Bonilla, A Comparative Study of the Audience for Mass Media in Three Latin American Capitals (New York: New York University), unpublished master's thesis, 1953, p. 30.

provided the basic skills for use of media. Bonilla reports that the differences in exposure between university-trained persons and those who had a high school education were not easily discernible; however, both groups were more exposed than those who had not attained a high school education. In all three capitals studied he found that use of media dropped off sharply as education decreased; and that radio listening was least affected by differences in formal schooling.[15]

In Tapes, related factors of illiteracy and impoverishment placed definite limits on the use of media by agricultural and some factory workers. The ability to afford a radio, a daily newspaper, or an occasional visit to the cinema decreased as one descended the class hierarchy. For many literate persons the consumption of media was restricted by lack of money.[16] Attitudinal factors operated to re-

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[15]This was true in the present study. By contrast, Loomis and Beegle report that in rural areas of the United States, as income and education decrease radio ownership decreases; see op. cit., pp. 553-54.

[16]This, however, does not explain why some persons who have the social skills and the money do not report use of mass media. For example, three literate factory workers in the study said they did not read newspapers. Unfortunately, there was no follow-up information obtained on why they did not read newspapers. It is probable that the answer to this question involves social psychological, cultural and personality factors, e.g., lack of "ego involvement in the system" and lack of "mobile sensibility."

Concerning lack of "ego involvement in the system" as a factor in information exposure, see Rossi and Bauer, op.

strict use of mass media, especially among agricultural and factory workers. Uneducated persons were mystified by and had a fear of the radio and cinema; they felt that modern means of communication were the "devil's work."[17] Some had no interest in material communicated through mass media;[18] others appeared more sophisticated and said that "It's all propaganda."[19] The traditional geographical and mental

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cit., pp. 63ff.; and Wilbert E. Moore, Industrialization and Labor (Ithaca, N. Y.: Cornell University Press), 1951, pp. 35-41. "Mobile sensibility" is a term introduced by Daniel Lerner and David Riesman, Self and Society: Reflections on Some Turks in Transition, reprint from Explorations, No. 5, June 1955, published by the Center for International Studies, Massachusetts Institute of Technology, Cambridge, Massachusetts. The authors define "mobile sensibility" as "the personality so adaptive to changes through time, space, and empathy that displacement is its permanent mode." They suggest that "mobile sensibility" is a necessary psychological factor enhancing the acquisition of information and new ideas. It precedes occupational mobility and functions as a type of "anticipatory socialization."

Relevant discussions of some factors which play a part in the information exposure of people in underdeveloped areas may be found in Ralph Linton, "Cultural and Personality Factors Affecting Economic Growth"; Melville J. Herskovits, "The Problem of Adapting Societies to New Tasks"; and Samuel P. Hayes, "Personality and Culture Problems of Point Four," in Bert Hoselitz (ed.), The Progress of Underdeveloped Areas (Chicago, Ill.: University of Chicago Press), 1952.

[17]Lerner, Modernizing the Middle East, op. cit., p. 14.

[18]Lerner, ibid., p. 28.

[19]This type of response often masks a popular sentiment against the excessive control by government agencies of the content of news. Most people agree with one respondent who said, "Seven-thirty to eight P. M. (the nightly broadcasting time of the government program, "Brazilian Hour") is the best time to shut off your radio!" See also Keesing and Keesing, op. cit., Chapter VI.

isolation of the peasant crippled his imagination, leaving him incurious, apathetic, and undesirous of knowing more about the world outside his family, neighborhood, and place of work.

Direct access through social innovations. Where there existed restricted accessibility to exposure to new information by direct means, social innovations were found which extended direct exposure to the excluded populations. In every cafe in Tapes there was usually a radio in operation at full volume during the day and evening. Visiting cafes was a widely accepted custom among factory workers, and they were, as a result, frequently exposed to information broadcast by radio. There was also widespread collective radio listening in the homes of kin and fellow workers. In addition, the oral reading of newspapers, and other printed material, was common among groups of factory workers. Accessibility to public and private places where media instruments were available supplemented, and in some cases, substituted for, direct accessibility through personal ownership.[20]

Town workers were also exposed to information while sitting in the public square, another traditional pastime.

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[20]See Lerner, Modernizing the Middle East, pp. 14-15, and Keesing and Keesing, ibid.

Recently some local businessmen formed a group called the Alto-Falantes. They erected a public address system, with loudspeakers distributed around the square, and each night broadcast commerical advertisements, music and news reports from 7:30 to 10:30 P. M. There was a paid announcer (an office worker); on a typical night he would broadcast commercials for the local cinema and the main grocery stores, read public announcements, summarize the day's news, and play Brazilian, Spanish (Argentinian), and American records.

These social innovations were restricted to the urban area of the rural town community. Despite these social innovations which increased the direct exposure of factory workers especially, office workers always made the most frequent use of direct means and had, therefore, a higher degree of information exposure, than all other occupational groups.

Oral communication. In the rural town community much of what is communicated is never channeled through mass media. In Tapes, the most important means of access to news and information was through indirect, informal, oral, face-to-face communication in a social situation. For agricultural workers, oral communication was the only means of access to new information and functioned as a substitute for direct access to media. For factory workers, oral communication served as a supplement to their direct, but not too

frequent, exposure to media. It was a means of obtaining the "news behind the news," or of finding out what positions, opinions, and interpretations others had about the news. Office workers made the greatest use of direct means of media exposure and when engaged in oral communication were mainly transmitters of news.

One important setting for the oral transmission of news occurred during visits between friends, fellow workers and relatives.[21] In Tapes, social visiting occurred on an intra-class basis;[22] the exchange of news occurring prima-

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[21]Charles P. Loomis, J. Allan Beegle, and Olen E. Leonard have made contributions to the identification and analysis of rural collectivities. See Charles P. Loomis, Studies of Rural Social Organization (East Lansing, Michigan: State College Book Store), 1945, Chapters 16 and 37; and his Studies in Applied and Theoretical Social Science (East Lansing, Michigan: Michigan State College Press), 1950, Chapter 6; Charles P. Loomis and J. Allan Beegle, Rural Social Systems (New York: Prentice-Hall), 1950, Chapter 5, and Appendices A and B (by Paul Honigsheim); Charles P. Loomis, Julio O. Morales, Roy A. Clifford and Olen E. Leonard, Turrialba: Social Systems and the Introduction of Change (Glencoe, Ill.: The Free Press), 1953, pp. 183-203; Olen E. Leonard, Problems of Rural Housing in Pernambuco (New York: United Nations Technical Assistance Program), 1952, pp. 49-52; and Charles P. Loomis (tr.), Ferdinand Tönnies, Gemeinschaft and Gesellschaft (Fundamental Concepts of Sociology), (New York: American Book Company), 1940, p. 21ff.

[22]In Turrialba it was found that most of the visiting among the families in two communities, Atirro (a hacienda community) and Aquiares (a community of family-sized holdings), took place within "family-friendship groups" which appeared to be closed systems as far as visiting was concerned. The authors found that "family-friendship" group visiting most often occurred within the same class, though it varied somewhat by communities. See Turrialba, op. cit., pp. 40 and 62. These findings were confirmed by Loomis et

rily among members of the same class.[23] For factory and agricultural workers, visiting with relatives in one's own social class played the most important role in the oral transmission of news and information.[24] Important reasons for the high frequency of visiting with kin among factory workers were that (a) they were generally older and had large numbers of children and relatives residing in Tapes, and (b) the general norms of the society emphasized intra-familial interaction. The norms of the society also applied to other workers, but agricultural workers did not have relatives in residence in Tapes and office workers were young.

The social visiting patterns of factory workers aided their exposure to information. Members were moderately exposed to media and had something to transmit orally; the receivers had enough media literacy to absorb any new information received. Agricultural workers, when visiting

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al. in "Social Status and Communication in Costa Rican Communities," Olen E. Leonard and Charles P. Loomis, ibid., pp. 183-203.

[23]For example, Scheele and Blair, op. cit., found that people who saw United States Information Service films discussed them with other persons in their same occupational group. See their "Findings and Conclusions."

[24]With reference to the visiting of kin as a cultural orientation of persons in "traditional" societies, the works of Loomis, and Loomis and Beegle are standard sources. Concerning Brazil see previously mentioned works of Azevedo, Smith, Freyre, and Smith and Marchant, for discussions of the role of kinship in social life.

kin, did not have access to persons highly exposed to media, since the persons visited were exposed to media as little as they.

The intra-class visiting patterns of each occupational group limited the effective transmission of news and information across occupations. Significantly enough, some inter-class visiting did occur and facilitated the transmission of information from one class to another. In inter-class visiting kinship was important. Factory workers were the chief inter-class visitors, visiting both of the other occupational groups. Agricultural and office workers, on the other hand, visited factory workers only, and never each other.

The oral communication of information across class lines also occurred when an exposed person of a higher class engaged in conversation with several members of a lower class in a group situation, e.g., during a coffee break or the noon hour. On the plantation the parceiro was extremely important in this regard. In town, the priest, teachers, mayor, the mill director and supervisors performed this function for factory and office workers.

Oral exposure to information further occurred when workers came in contact with persons from outside the community. The job situation of factory workers placed them in easy access to bearers of information from the outside.

Technicians from Porto Alegre, the state capital, periodically visited the factory. The exposure of factory workers also occurred during chats with company truck drivers who transported cargo to the piers. The drivers transmitted news they received from seamen who worked on boats shuttling between Tapes and the capital city. Salesmen, bus drivers, soldiers, and migratory persons often stayed at boarding houses and ate in cafes frequented by factory workers, and this afforded an opportunity for the oral transmission of news, opinions and information.

The patterns of access to information exposure found among agricultural, factory, and office workers in Tapes suggest that the transmission of information in the rural town community cannot be simply viewed as flowing from the top of a class hierarchy to the bottom. While it is true that the communication process was, in part, vertical, information does go up the occupational ladder as well as down. Furthermore, the horizontal, intra-class and intra-familial, aspects of the process cannot be overlooked. In Tapes, the communication of new information is a multi-dimensional process.

Audience for new information. The present study revealed three specific types of audiences on the basis of exposure to new information:

Type A.

1. Primacy of inter-personal information exposure.
2. Exposure to new information infrequent.
3. Content of information received: local and provincial.
4. Persons typically rural illiterate agricultural workers.
5. Oriented toward traditional "folk" values and patterns.

Type B.

1. Primacy of oral and direct exposure to mass media; oral exposure supportive of direct exposure.
2. Exposure to new information more frequent than Type A.
3. Content of information received: often about non-local occurrences.
4. Persons typically urban semi-literate factory workers.
5. Transitional between traditional folk values and those of modern society.

Type C.

1. Primacy of direct exposure to mass media.
2. Exposure to new information a daily occurrence.
3. Content of information received: urbane and cosmopolitan.
4. Persons typically urban literate office workers.
5. Oriented toward modern values common in large Brazilian cities.

These findings coincide with those of another recent investigation. Lerner,[25] in his study of communications behavior in the Middle East, located three groups of Turks in terms of their exposure to media: "moderns," who regu-

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[25]Lerner, Modernizing the Middle East, op. cit.

larly consumed media, "traditionals," who did so occasionally, and "traditionals," who were rarely directly exposed to media and relied on work-of-mouth networks. His findings concerning the frequency of use of mass media were identical with the present study, i.e., use of direct channels of information increased and varied directly with social position. The characteristics of the three groups delineated by Lerner were similar to those found in the present study. In essence, then, office, factory, and agricultural workers in Tapes exhibited the same patterns of information exposure as Lerner's "moderns," "transitionals," and "traditionals."[26]

Control over exposure. The great dependence of workers on other persons, rather than on the mass media directly, as a means of information exposure placed the directly and frequently exposed individual into a position of dominance and control over the transmission and interpretation of information. Office workers, in the sample population, exercised the greatest degree of control over information. They were highly exposed and were thus in a position to give or withhold information, or interpret the content as

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[26]Communication studies in India, Samoa, the Soviet Union, and Latin America have reported similar findings. See publications of Damle, Keesing and Keesing, Rossi and Bauer, and Bonilla mentioned previously.

they saw fit.[27] Respected persons of lower statuses (e.g., factory workers), also exercised control over the transmission of information. This was possible because, when class is not considered, the worker having the greatest direct access and exposure to information exercised the greatest degree of dominance over the exposure of other persons. Such dominance placed immense power in the hands of such individuals. The fact that highly exposed persons had higher positions in the agro-industrial structure than those to whom the news was carried influenced the acceptance of the information transmitted. Notes from field records illustrate this point:

> After lunch João (the Brazilian interviewer) and I returned to the company store to interview the plantation workers. While he was inside interviewing I talked with some workers outside under a tall figueira de mato tree. It was about one o'clock and the sun was high . . . under the tree it was cool. The men, about twenty of them, had placed some broad tree leaves on the ground, and were laying about, talking, and enjoying their lunch hour . . . . One of the men knows quite a lot about the war in Korea. He is one of the few persons here who knows anything about what's happening in the world. He is a parceiro (small independent land renter); he owns a radio and says he is literate.
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> He has a lot of hostility toward American participation in the war. He is very outspoken in his attitudes

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[27] Keesing and Keesing, op. cit., p. 170, note that in Samoa "a great temptation exists for the elite person to impose idiosyncratic interpretations deliberately upon messages in the interests of facilitating communication or advancing other goals and values." See also Lerner, Modernizing the Middle East, Chapter III.

> and says that "The war in Korea is useless and illogical." "Why are there so many men being killed over there? Some people (said looking at me) care to continue to fight over nothing when there are really so many problems in the world, and in Brazil, that can be attacked without guns!" He knows what the stated purposes of the United Nations and the United States are but he believes that the war in Korea was provoked by the U. S. to further its war against communism. He says he doesn't think Brazilians are, or should be interested in fighting anybody else's war--not against communism any way--which "may not be as big a threat as they (the U. S.) say it is." Brazilians are more interested in women and the samba, and will only fight if someone starts a war on the their home ground, says he. All the while he is talking he is being listened to attentively by all the others. There are many reasons why. He has a strong personality, a loud voice, he is fairly independent, and a class above these fellows, what he says sounds true. But most important is the fact pointed out by one worker: "He gets his information straight from the radio and newspaper, doesn't he . . . why should he lie?"

The naiveté of agricultural workers as compared to the communicators of information is not shared by factory workers. They were more often aware of the orientations and interests of upper-class communicators and denied the validity of the information transmitted if it was not deemed to be in their own best interests. For factory workers certain kinds of information were more favored, depending on whether they were thought of as means of bringing about some desired future state of affairs.

Class and information exposure: statics and dynamics. In the analysis of information exposure among workers in the rural town agro-industrial community it is necessary to take into account the class situations of workers and the

concrete causes and conditions of the historically based class structure. Class, however, is not without its status correlates. In Tapes the values of the older feudal plantation order served as an additional means of status-fixing and patterning of social relations. An individual's contact with other persons, and with the objects of the modern agro-industrial society, was limited by such factors as his family background and inherited work-status group. Agricultural, factory, and office workers were not socially valued in the same manner and were not equally stigmatized.[28] Higher status was given to urban persons of "good" family and educational background engaged in professions not requiring manual work.[29] Higher class, status, and power positions were universally held by, or given to, such persons, and systematically denied other persons. The

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[28]Several authors cited previously have dealt with the effects on rural persons of such historical social values and patterns as ethnic discrimination, family nepotism, latifundism, unfavorable sentiments toward manual work, and the lack of reward for individual merit, experience, ability and education. See Azevedo, Wagley, Freyre, and T. Lynn Smith.

[29]This observation is generally true for Brazil (with the exception of São Paulo) as a whole. One investigator suggests that this is true for Latin America in general. See Kingsley Davis, "Political Ambivalence in Latin America," Journal of Legal and Political Sociology, Vol. 1, No. 1-2, October 1942. Negative attitudes toward manual work is by no means an exclusively Latin American trait; it is also prominent in American occupational attitudes. See Robert K. Merton, Social Theory and Social Structure (Glencoe, Ill.: The Free Press), 1949, p. 136 and footnote 17.

three groups occupied different positions in the productive system and did not share equally in the distribution of the goods of the society. Office workers had decidedly better "life chances" than factory and agricultural workers; and the "dead hand of the past" functioned to discourage individual and group mobility and to maintain the social patterns of centuries ago. In the rural town community the class-status position of workers structured their interaction and their information exposure.

What is described here is not, however, a fully closed system. Manifold internal and external factors associated with the development of agro-industrial enterprise have caused tensions and changes in the class structure of the rural town community. The development of new jobs requiring specialization and literacy,[30] the displacement of old jobs and skills, and the purposive recruitment of agricultural workers into the factory system,[31] all created ten-

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[30]Increases in literacy are correlated with technical change in underdeveloped areas. Relevant discussions appear in Hilda Hertz Golden, "Literacy and Social Change in Underdeveloped Countries," Rural Sociology, Vol. 20, No. 1, March 1955; Margaret Mead, Cultural Patterns and Technical Change (Paris, France: UNESCO, 1953, pp. 268-78; Wilbert E. Moore, Industrialization and Labor, pp. 15-20; Charles P. Loomis et al. (eds.), Turrialba, pp. 171-92, and pp. 268-69; Beate R. Salz, op. cit., pp. 64-67.

[31]This is itself a source of tension since the habits of work in agriculture and in factory work are radically different. See Wilbert E. Moore, ibid., Chapters III, V, and VI.

sions in the class structure. In the ensuing upheavals the social order underwent changes as individuals advanced or descended from one class to another.[32] A factory class emerged, and its members interacted, individually and in combinations, with persons from other social classes in dynamic life situations. In these dynamic life situations individuals acquired the necessary skills for information exposure, or, already possessing these skills, became increasingly exposed. The desire for a more satisfactory life, for higher wages and standards of living, for new experiences, for class mobility--all imperatives for effective participation in the new situation[33]--served to motivate persons toward greater knowledge of the world around them. In the rural town community factory workers are an emergent class and their patterns of information exposure, as they result from occupational position and other factors, represent a transition away from the traditional exposure patterns of agricultural workers toward the more modern exposure patterns of office workers.

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[32]Changes in technology affect class relations and "changes in class (in turn) affect the individual's position in his family, work group, and community in an intimate, personal way." See Delbert C. Miller and William H. Form, Industrial Sociology: An Introduction to the Sociology of Work Relations (New York: Harper Brothers), 1951, pp. 799-803, and p. 394.

[33]Moore, op. cit., Chapter VIII.

Summary

The information exposure of workers in the rural town agro-industrial community is structured by the life-situations common among specific occupational groups. Who talks to whom, how often, on what subjects, with what influences, and the ways in which persons are exposed, when, and how frequently are all affected by position in the socio-economic structure. Information exposure takes place within a complex network of local social activity. Such behavior patterns as collective radio listening and newspaper reading, social visiting and exchanging of information among kin, attendance at movies with friends and fellow workers suggest that there is a well-developed web of organized social relationships which influences the exposure of individuals. There are socially approved media and channels of exposure, and as a result, shared selections. Social circumstances pre-dispose groups toward certain patterns of exposure and within broad limits of life conditions differential exposure occurs as a part of social activities.

In the rural town community, there appears little justification for studying audiences for new information as simple aggregations of discrete individuals. Members of audiences belong to distinct social groups which differ in origin, occupational position and location of work, styles

of life, family structure, and age grade. In sum, the "audience" for new information in the rural town agro-industrial community is, in reality, a number of varying audiences centering around disparate social groups.

APPENDICES

APPENDIX A

SOME CHARACTERISTICS OF THE POPULATION AND ECONOMY OF THE STATE OF RIO GRANDE DO SUL

Presented below is a brief review of some pertinent characteristics of the population and economy of the state of Rio Grande do Sul.

(a) Geographical location. The state of Rio Grande do Sul extends over a territory 267,455 kilometers square. It is bordered on the south by Uruguay, on the west by Argentine, on the north by the state of Santa Catarina, and on the east by Lagoa Mirim and Lagoa dos Patos and the Atlantic Ocean. (For a map of Brazil showing Rio Grande do Sul and for a short discussion of the geography, culture, history, government, and economy of Brazil, see Figure I at end of Appendix A.)

(b) Population. The population of Rio Grande do Sul, according to the 1950 census, was 4,164,821. The largest concentration of persons centered around the capital city of Porto Alegre, on the East coast, and the adjacent northwestern portions of the state.[1]

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[1]Source: Censo Demografico (1° de Julho de 1950), Estado do Rio Grande do Sul, Recenseamento Geral do Brasil, Servico Grafico do Instituto Brasileiro de Geografia e Estatistica (IBGE), Rio de Janeiro, Brasil, 1952.

(c) Residence. More than sixty per cent of the population live in rural places.[2]

(d) Age. The largest numbers of persons are concentrated in the age category 0-19 years of age. This is particularly true in the rural areas of the state (see Tables 21 and 22; all tables may be found at the end of Appendix A.)

(e) Color. Almost ninety per cent of the population is white (see Table 23).

(f) Nationality. The majority of the population is native-born (see Table 24). However, a small but significant number of the population, in comparison to most Brazilian states, are foreign-born persons and their offspring.

(g) Religion. Catholicism is the official religion in Brazil. Census materials indicate that most people in Rio Grande do Sul are Catholics (see Table 25). Ten per cent of the population is Protestant. Rio Grande do Sul is one of the few Brazilian states having such a large percentage of non-Catholics within its population. The major Protestant group is the Lutheran church. Other Protestant religions include Seventh Day Adventist, Pentecostal, Methodist, Episcopal, Baptist, and the Salvation Army. The Lutheran church claims a membership which is larger than all

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[2] Ibid.

other Protestant groups combined.[3] The nationality background of its membership is almost one hundred per cent German-Brazilian.

(h) Literacy. Two-thirds of all persons 15 years of age and over and 58.6 per cent of all persons 5 years and over are able to read and write (see Table 26). Literacy appears to be related to urban residence (see Table 27).

(i) Education.[4] In 1949 there were 507,576 persons of a total population of 4,162,305, enrolled in 7,541 schools throughout the state. More than 80 per cent of these schools were located in rural areas.

(j) Industry or occupation. The largest numbers of persons are employed in some phase of agriculture (see Table 28). Manufacturing and domestic employment follow in that order. For males, agriculture is the overwhelming source of employment. Housewives and school children represent 45.4 of the total population 10 years of age and older. If we add to this figure the 7.1 per cent who are unemployed or inactive it appears that for every employed worker there is one person who is unemployed. This factor places limitations on the standard of living that might be

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[3]Source: Anuario de Estatistica Educacionais e Culturais, IBGE, Rio de Janeiro, Brasil, 1949.

[4]Ibid.

achieved by the worker in Rio Grande do Sul even though his present standard of living is among the highest in Brazil.

(k) The economy. The economy of Rio Grande do Sul is based on agricultural production. Other economic pursuits include the raising of cattle, the extraction of minerals and agro-industrial production. The three main agricultural crops are rice, corn and wheat. Rice is the state's most important cash crop and is produced intensively on a smaller total area of cultivated land (234,393 hectares) than corn (883,737 hectares) or wheat (557,140 hectares).[5]

The real monetary value of all agricultural establishments was 400 millions of dollars. Seventy-two per cent of all establishments were 10 to 100 hectares in size and occupied one-quarter of all the cultivated land. The value of these farms represented seven-tenths of the total value of all establishments. Establishments of from 100 to 1000 hectares accounted for one-third of all cultivated land and for one-tenth of the total value of all farms. The smaller farms tend to be located in the inland mountainous areas and the large rice plantations are located on the coastal lowlands. Small farms are owned and operated, in the main,

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[5]Source: Anuario Estatistica do Arroz, Safra 1950/51, Institute Rio Grandense do Arroz, Porto Alegre, Rio Grande do Sul, Brasil, 1952. A hectare is a standard Brazilian land unit and is approximately two and one-half acres (U. S. A.) in size.

by private persons, but large establishments and especially rice plantations tend to be owned by corporations and managed by paid administrators.

TABLE 21. POPULATION AGE COMPOSITION, RIO GRANDE DO SUL, 1950[a]

Age	Number	Per Cent
1-19 years	2,176,686	52.2
20-49 years	1,573,418	37.7
50-80 years	406,508	9.7
Age unknown	8,209	.4
Totals	4,164,821	100.

[a]Derived from Censo Demografico (1° de Julho de 1950), Estado do Rio Grande do Sul, IBGE, Rio de Janeiro, Brasil, 1952.

TABLE 22. AGE AND PLACE OF RESIDENCE OF POPULATION, RIO GRANDE DO SUL, 1950[a]

Age in years	Urban		Suburban		Rural		Total	
	Number	%	Number	%	Number	%	Number	%
0-19	438,423	43.1	206,791	50.9	1,531,472	55.8	2,176,686	52.2
20-49	449,306	44.2	159,182	39.1	964,930	35.1	1,573,418	37.7
50-80	126,021	12.4	39,317	9.6	241,170	8.7	406,508	9.7
not known	2,118	.3	822	.4	5,269	.4	8,209	.4
Totals	1,015,868	100.	406,112	100.	2,742,841	100.	4,164,821	100.

[a]Derived from Censo Demografico (1° de Julho de 1950), Estado do Rio Grande do Sul, IBGE, Rio de Janeiro, Brasil, 1952.

TABLE 23. DISTRIBUTION OF POPULATION BY COLOR, RIO GRANDE DO SUL, 1950[a]

Color	Number	Per Cent
White	3,712,239	89.2
Negro	217,520	5.2
Yellow	495	.0
Mixed	226,174	5.4
Undeclared	8,393	.2
Totals	4,164,821	100.0

[a]Derived from Censo Demografico (1° de Julho de 1950), Estado do Rio Grande do Sul, IBGE, Rio de Janeiro, Brasil, 1952.

TABLE 24. CIVIL STATUS COMPOSITION OF POPULATION, RIO GRANDE DO SUL, 1950[a]

Civil Status	Number	Per Cent
Native-born	4,086,373	98.1
Naturalized	14,679	.4
Foreigners	63,459	1.5
Undeclared	310	.0
Totals	4,164,821	100.0

[a]Derived from Censo Demografico (1° de Julho de 1950), Estado do Rio Grande do Sul, IBGE, Rio de Janeiro, Brasil, 1952.

TABLE 25. RELIGIOUS AFFILIATION OF POPULATION, RIO GRANDE DO SUL, 1950[a]

Religious Affiliation	Number	Per Cent
Catholic	3,507,559	84.2
Protestant	442.242	10.6
Spiritualists[b]	115,552	2.7
Orthodox[c]	3,255	.1
Jewish	8,048	.2
Other Religions	14,859	.4
Undeclared	73,306	1.8
Totals	4,164,821	100.0

[a]Derived from Censo Demografico (1° de Julho de 1950), Estado do Rio Grande do Sul, IBGE, Rio de Janeiro, Brasil, 1952.

[b]The official source does not define these groups. Spiritualists are a small sect not recognized by the Catholic or Lutheran Church.

[c]"Orthodox" probably refers to both the Russian and Greek Orthodox Churches.

TABLE 26. LITERACY OF POPULATION (15 YEARS AND OVER), RIO GRANDE DO SUL, 1950[a]

Literacy	Number	Per Cent
Read and write	1,616,990	66.2
Cannot read and write	820,659	33.6
Undeclared	3,843	.2
Totals	2,441,282	100.0

[a]Derived from Censo Demografico (1° de Julho de 1950), Estado do Rio Grande do Sul, IBGE, Rio de Janeiro, Brasil, 1952.

TABLE 27. DISTRIBUTION OF POPULATION 5 YEARS OF AGE AND OVER BY PLACE OF RESIDENCE AND ABILITY TO READ AND WRITE, RIO GRANDE DO SUL, 1950[a]

Place of Residence	Read and Write		Do Not Read and Write		Total	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Urban	701,408	78.6	190,949	21.4	892,357	100.0
Suburban	219,653	64.2	122,385	35.8	342,038	100.0
Rural	1,123,770	49.8	1,130,659	50.2	2,254,429	100.0
Totals	2,044,831	58.6	1,443,993	41.4	3,488,824	100.0

[a]Derived from Censo Demografico (1° de Julho de 1950), Estado do Rio Grande do Sul, IBGE, Rio de Janeiro, Brasil, 1952.

TABLE 28. INDUSTRY OF OCCUPATION OF POPULATION 10 YEARS OF AGE AND OLDER, RIO GRANDE DO SUL, 1950[a]

Industry of Occupation	Male Population Only		Total Population	
	Total	Per Cent	Total	Per Cent
Agriculture	727,819	49.9	824,629	28.1
Extractive	19,794	1.4	19,985	.7
Manufacturing	141,375	9.7	162,699	5.5
Commerce	78,826	5.4	89,932	3.1
Domestic Workers	56,433	3.9	133,647	4.5
Transport and Communication	52,174	3.6	54,191	1.8
Liberal Professions	5,161	.3	6,667	.2
Governmental Workers	67,198	4.6	93,662	3.2
Domestic(Non-Remunerated) and School Children	166,731	11.4	1,335,456	45.4
All Others	6,814	.5	7,737	.3
Unemployed and Inactive	135,908	9.3	210,396	7.2
Totals	1,458,233	100.0	2,939,001	100.0

[a]Derived from Censo Demografico (1° de Julho de 1950), Estado do Rio Grande do Sul, IBGE, Rio de Janeiro, Brasil, 1952.

FIGURE I. MAP AND PERTINENT INFORMATION ON BRAZIL

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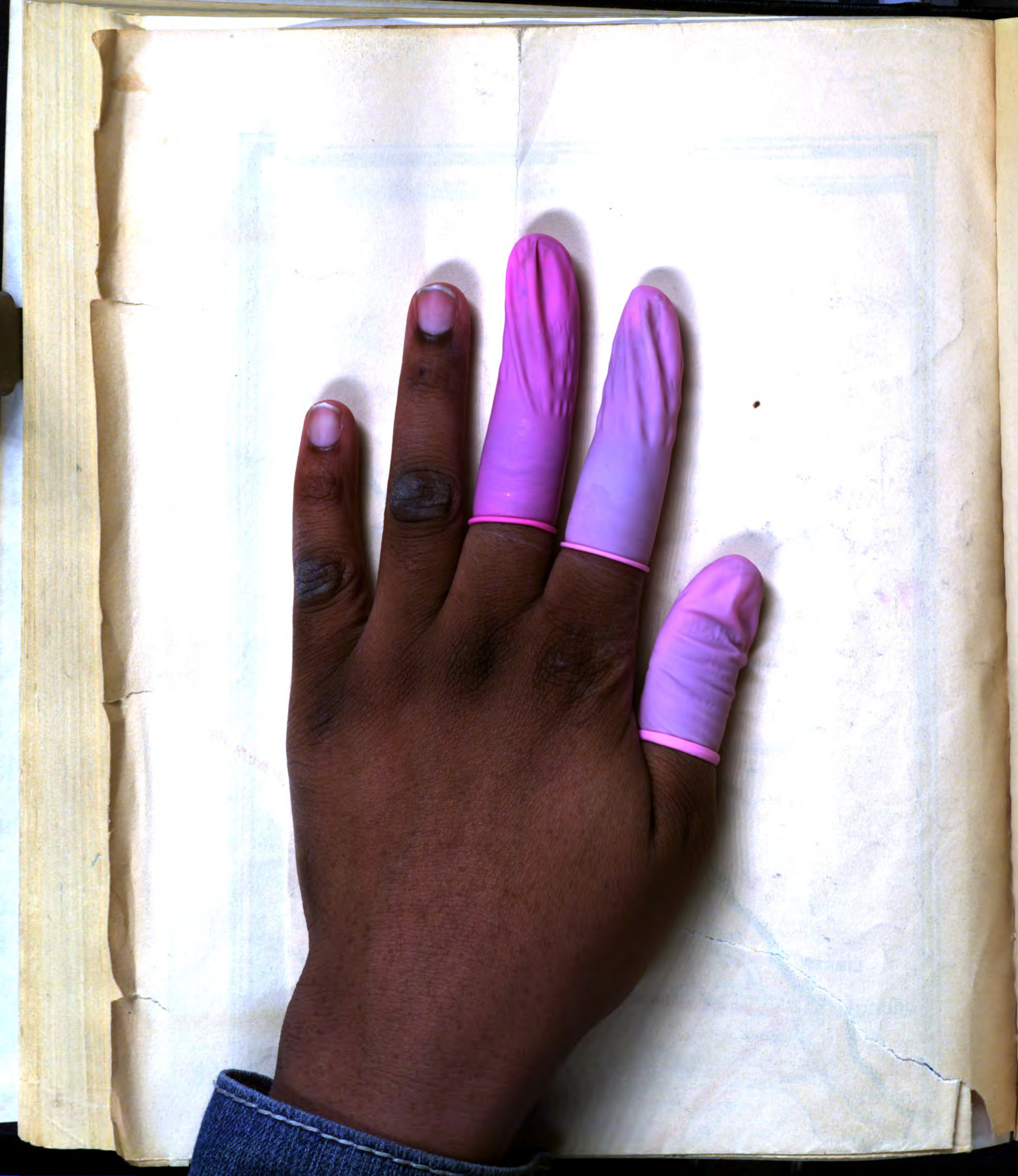
ARA
AULO
IO
)OU VIA
ANOPOLIS
RITIBA



APPENDIX B

SOME CHARACTERISTICS OF THE STUDY SAMPLE

Age. In general, the respondents were concentrated in the age categories 20-39 years. However, agricultural and office workers tended to be concentrated nearer the younger ages and factory workers were spread out through the middle and older age categories. The mean ages for agricultural, factory, and office workers were 28.9, 39.5, and 26.4, respectively (see Table 29; all tables may be found at end of Appendix B). This suggests that factory workers may have been agricultural workers and that office workers enter their occupation directly.

Ethnic affiliation. Brazilian society represents a unique racial and cultural intermixture of three human groups: the Indian, the Negro, and the white-European. The traditional classification of the Brazilian population --white, Negro, Indian and their respective crosses--is based on physical traits. Thus brancos (whites) include not only people whose ancestry is white European but also persons possessing the physical traits attributed to whites: pretos (blacks) include not only the descendants of African slaves but also persons who exhibit physical traits attributed to "Negroids," i.e., black skin, kinky hair, thick lips, broad nose, etc.; mulatos (mixed bloods) are persons

who result from preto-branco crossings and who do not appear as either branco or preto. In the present sample native white Brazilians constituted more than one-half of the total number of respondents; mulatos comprised the next largest group and non-native white persons are the third largest group (see Table 30).

Religion. All respondents were asked to report their religious affiliation. The majority were Catholic which is not surprising since Brazil is Catholic country. However, there were ten respondents who did not claim affiliation with the Catholic church and three of these were Protestants (Lutheran). (See Table 31.)

Educational attainment. Each respondent was asked to state the last grade he attended in school. Responses ranged from "never attended school" to "attended high school, but did not complete." No respondent reported attaining education beyond the high school level. Office workers tended to have completed primary school and three had attended high school. The largest number of factory worker respondents had attended primary school for more than one year, but not completed. Almost half of the agricultural workers never attended school; some had completed one year or more of primary school, and one had attended high school. In general the educational level attained by the largest number of all respondents was one year or more of

primary school education but without completion of the primary school curricula (see Table 32).

High educational attainment was generally related to ability to read; and low educational attainment was related to inability to read. This was especially true for office and agricultural workers. However, among factory workers there were some persons who, according to a local teacher informant, had less formal education than would be required to be able to read but who reported that they were able to read. This latter fact suggests that persons who aspire to factory work learn to read in order to get a job and/or once on the factory job, they learn to read as a consequence of having the job.

Income. An idea of the relative economic position of respondents was obtained by asking the question "How much money enters your household during one year?" Agricultural workers had the lowest incomes ($250-$499), and factory and office workers were generally in the category $625-$1,999. The respondent reporting the highest yearly income ($2,000-$3,000) was an office worker. The mean incomes for agricultural, factory, and office workers were $515.61, $1,125.14, and $1,049.99, respectively, and indicated that in terms of mean yearly income, factory workers ranked higher than office workers (see Table 33).

That some types of factory workers, especially skilled artisans, receive higher monthly wages than office workers

is indicated by Table 34. However, yearly income alone does not give an adequate picture of the true economic position of the respondents; the number of persons supported by workers must also be taken into account. Office workers tended to be young men and did not report supporting many persons other than themselves. Thus they have an opportunity to develop surpluses of cash beyond that required for basic needs. Factory workers, on the average, support more people than any other group. In general, there was a tendency for workers with low incomes to support the largest number of dependent persons (see Table 35). When the reported yearly incomes for agricultural, factory, and office workers were re-computed, in terms of the number of persons supported by each group, office workers had twice as many dollars available per consumption unit as factory and agricultural workers (see Table 36).

This latter observation indicates that agricultural and factory workers, in comparison to office workers have relatively small sums of money (less than a dollar per day per person) available to provide food, clothing and shelter for themselves and their dependents. This situation is offset somewhat by the fact that agricultural workers, for example, live in company-owned houses and do not pay rent and, in addition, they can grow subsistence crops on the land provided for them by the plantation owners. Factory work-

ers, on the whole, do not share these benefits; they, like the office workers, must purchase the necessities of life on the open market. This situation, because of their low ratio of dollars to persons supported, puts factory workers at an obvious disadvantage. Tables 37 and 38 indicate the prices for basic food and clothing items, and building materials in 1951 and 1952.

Home ownership-land ownership. Agricultural workers live, rent free, in company-owned houses on the plantation. Almost half of the factory workers owned their homes; and office workers tended to either rent or own their homes (see Table 39). In general the workers studied did not own land. The greatest degree of land ownership was reported among factory workers, one-third of them owned land (see Table 40). The amount of land owned ranged from small kitchen gardens to 51-100 acres. Office workers owned the largest single plots of land.

Concerning home and land ownership, of a total of eleven workers who reported they owned their own homes, seven reported ownership of land also. In general, home ownership and land ownership go together. Factory workers to a greater extent than any other group report high degrees of home and land ownership (see Table 40). The land which factory workers reported they owned was actually in the form of small kitchen gardens. The ownership of large

tracts of land is basically a characteristic of the office workers and others higher up in the social structure.

Length of residence in the community. Respondents from all three occupational groups tended to be long-time residents--15 years or more--of Tapes. Agricultural workers have the largest number of "newcomers" to the community and have also lived in more places, prior to residence in Tapes, than any other group. Factory workers are "old-timers" and half have lived in no other place than Tapes. Office workers are also long-time residents, but they have lived in other places (see Tables 41 and 42).

TABLE 29. AGE OF AGRICULTURAL, FACTORY AND OFFICE WORKERS, TAPES

Age in Years	Agricultural workers	Factory workers	Office workers	Total
19 or less	4	-	2	6
20-29	9	4	6	19
30-39	5	7	1	13
40-49	-	6	1	7
50-59	2	2	-	4
60 or more	-	1	-	1
Totals	20	20	10	50
Mean Age	28.9	39.5	26.4	

TABLE 30. ETHNICITY OF AGRICULTURAL, FACTORY AND OFFICE WORKERS, TAPES

Ethnicity		Agricultural workers	Factory workers	Office workers	Total
Mulatto		7	5	-	12
Preto		-	2	-	2
Italian	non-native white	-	2	1	3
German	non-native white	2	1	2	5
Syrian	non-native white	-	-	1	1
White native		11	10	6	27
Totals		20	20	10	50

TABLE 31. RELIGIOUS AFFILIATION OF AGRICULTURAL, FACTORY AND OFFICE WORKERS, TAPES

Religious Affiliation	Agricultural Workers	Factory Workers	Office Workers	Total
Catholic	15	18	7	40
Protestant	1	1	1	3
Spiritualist	-	1	1	2
No religion professed	4	-	1	5
Totals	20	20	10	50

TABLE 32. EDUCATIONAL ATTAINMENT OF AGRICULTURAL, FACTORY AND OFFICE WORKERS, TAPES

Educational Attainment	Agricultural Workers	Factory Workers	Office Workers	Total
Never attended school	8	2	-	10
Primary--less than one year	6	1	-	7
Primary--one year or more	5	14	3	22
Primary--completed	1	2	4	6
High School--not completed	1	1	3	5
Totals	20	20	10	50

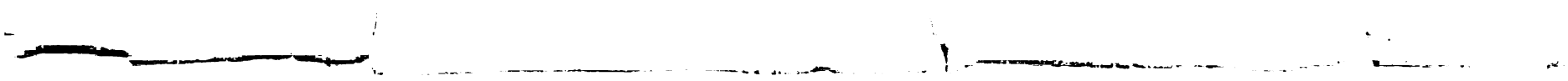


TABLE 33. TOTAL INCOME PER YEAR IN DOLLARS FOR AGRICULTURAL, FACTORY AND OFFICE WORKERS, TAPES[a]

Income	Agricultural Workers	Factory Workers	Office Workers	Total
$250-$499.99	12	1	-	13
$500-$624.99	2	2	3	7
$625-$749.99	3	4	1	8
$750-$999.99	3	6	3	11
$1000-$1999.99	-	7	2	9
$2000-$3000.00	-	-	1	1
Totals	20	20	10	50
Mean income	$515.61	$1125.14	$1049.99	

[a]The official Brazilian monetary unit is the cruzeiro. It was worth approximately five cents in U. S. currency. The above categories were originally stated in terms of the cruzeiro and have been computed in dollars for presentation here.

TABLE 34. RANKED AVERAGE MONTHLY WAGE FOR VARIOUS CLASSES OF WORKERS IN FACTORIES AND PLANTATIONS, MUNICIPIC OF TAPES[a]

Factory		Plantation	
Occupation	Monthly Salary	Occupation	Monthly Salary
Carpenter	$90	Foremen	$60
Blacksmith	90	Carpenter	48
Mason	90	Mason	48
Driver	75	Driver	75
Office worker	70	Bookkeeper	35
Mechanic	60	Mechanic	30
Electrician	50	Laborer	25
Artisan's helpers	45		
Mill workers	37		

[a]Derived from Inquerito Municipal, Tapes, 1950, Departamento Estadual de Estado do Rio Grande do Sul, IBGE, 1952.

TABLE 35. NUMBER OF PERSONS SUPPORTED BY AGRICULTURAL, FACTORY AND OFFICE WORKERS INTERVIEWED IN TAPES

Number of Persons Supported	Agricultural Workers	Factory Workers	Office Workers	Total
Nine	2	-	-	2
Eight	-	1	-	1
Seven	1	1	-	2
Six	3	2	3	8
Five	1	5	-	6
Four	3	4	1	8
Three	3	5	2	10
Two	4	2	1	7
One	3	-	3	3
Totals	20	20	10	50
Average number of children	4.0	4.3	3.3	

TABLE 36. COMPUTED AVERAGE YEARLY NUMBER OF DOLLARS PER CONSUMPTION UNIT FOR PERSONS SUPPORTED BY AGRICULTURAL, FACTORY AND OFFICE WORKERS INTERVIEWED IN TAPES

Dollars	Agricultural Workers	Factory Workers	Office Workers	Total
$50- $74.99	-	1	-	1
$75- $99.99	4	2	-	6
$100-$124.99	1	-	-	1
$125-$149.99	2	-	-	1
$150-$199.99	2	7	-	9
$200-$249.99	2	5	2	9
$250-$499.99	7	3	2	12
$500-$749.99	-	2	4	6
$750-$999.99	-	-	2	2
No response	3	-	-	3
Totals	20	20	10	50
Average yearly no. of dollars per consumption unit	$201.5	$248.1	$544.9	

TABLE 37. AVERAGE CURRENT PRICES AT RETAIL LEVEL FOR BASIC FOOD ITEMS, MUNICIPIO OF TAPES[a]

Item	Unit	1951	1952
Sugar	kg	.25	.29
Alcohol (heating)	gf	.25	.27
Rice	kg	.20	.25
Oil for cooking	lt	3.00	3.10
Bananas (fresh)	dz	.25	.28
Bananas (refrigerated)	kg	.80	.85
Potatoes (English)	kg	.10	.15
Coffee	kg	1.60	1.70
Meat (beef with bones)	kg	.27	.34
Meat (pork)	kg	.40	.42
Meat (sheep)	kg	.40	.42
Coal	kg	.02	.04
Onion	kg	.10	.12
Dry salted beef	kg	.50	.52
Mate herb (tea)	kg	.22	.23
Mandioca meal	kg	.11	.15
Corn meal	kg	.11	.13
Wheat meal	kg	.20	.27
Black beans	kg	.19	.21
Milk	lt	.11	.13
Linguica (sausage)	kg	.75	.80
Butter	kg	1.30	1.35
Honey	kg	.40	.45
Cooking oil	lt	1.25	1.30
Eggs	dz	.28	.48
Bread	kg	.25	.30
Kerosene	lt	.10	.12
Soap	kg	.45	.49
Salt	kg	.16	.17
Salami	kg	.80	.85
Vinegar	gf	.10	.12
Wood	m3	1.80	2.00
Clothing:			
Pants (cheapest quality)		2.20	2.40
Shirt (cheapest quality)		1.75	1.90
Wooden slippers		1.25	1.50
Alpargatas (a type of slipper)		.60	.75
Shoes		5.00	5.50
One clothing outfit (less hat and shoes)		7.50	17.50

Definitions of abbreviations: kg is kilogram, 2.2 lbs.; gf is grama-força (no English equivalent); lt is liter, 1.0567 liquid quarts; dz is dozen; m3 is one cubic meter.

[a]Derived from Departamento Estadual de Estatistica, IBGE, Rio Grande do Sul, 1952.

TABLE 38. AVERAGE CURRENT PRICES FOR HOUSE RENT AND FOR CONSTRUCTION MATERIALS, MUNICIPIO OF TAPES[a]

Item	1951	1952
House rent--for workers:		
In zone without electricity	$4.00	$5.00
In zone with electricity	5.00	7.50
In zone with electricity and canalized water	7.50	9.00
House rent--for middle classes:		
In zone without electricity	7.50	-
In zone with electricity	12.50	15.00
In zone with electricity and canalized water	15.00	17.50
Construction materials:		
One thousand bricks	16.50	19.00
One thousand roof tiles	60.00	65.00
One kg of white-wash	.05	.06
One sack of cement (50 kg)	3.50	4.50
One worker's house (cheapest material)	1,250.00	1,400.00

[a]Derived from Departamento Estadual de Estatistica, IBGE, Rio Grande do Sul, 1952.

TABLE 39. TYPE OF HOME TENURE OF AGRICULTURAL, FACTORY AND OFFICE WORKERS INTERVIEWED IN TAPES

Home Tenure	Agricultural Workers	Factory Workers	Office Workers	Total
Company owned	19	3	-	22
Rented	-	5	4	9
Self-owned	-	9	2	11
No response	1	3	4	8
Totals	20	20	10	50

TABLE 40. TYPE OF HOME TENURE AND LAND TENURE FOR AGRICULTURAL, FACTORY AND OFFICE WORKERS INTERVIEWED IN TAPES

Home Tenure	Agricultural Workers		Factory Workers		Office Workers	
	Land	No Land	Land	No Land	Land	No Land
Company owned	2[a]	17	-	3	-	-
Rented	-	-	2[a]	3	1[b]	3
Self-owned	-	-	5[a]	4	1[c]	1
No response	-	1	-	3	-	4

[a]Quintal (small kitchen garden)

[b]51-100 hectares

[c]21-50 hectares

TABLE 41. LENGTH OF RESIDENCE FOR AGRICULTURAL, FACTORY AND OFFICE WORKERS INTERVIEWED IN TAPES

Years of Residence in Tapes	Agricultural Workers	Factory Workers	Office Workers	Total
1-14 years	9	2	2	13
15 years or more	11	18	8	37
Totals	20	20	10	50

TABLE 42. NUMBER OF PLACES LIVED IN FOR AGRICULTURAL, FACTORY AND OFFICE WORKERS INTERVIEWED IN TAPES

Past Place of Residence	Agricultural Workers	Factory Workers	Office Workers	Total
Tapes only	6	10	3	19
Tapes and one other	6	5	3	14
Three or more	8	4	3	15
No response	-	1	1	2
Totals	20	20	10	50

APPENDIX C

NOTE ON THE EXISTENCE, ACCESSIBILITY AND LIMITATIONS OF INFORMATION EXPOSURE THROUGH MASS MEDIA IN BRAZIL[1]

Today the press, the cinema, the radio and television are playing an ever-increasing role in transmitting news, information, attitudes, opinions, in short, social knowledge, from one country to another, from region to region, and from city to hamlet. In any study of information exposure it is important to know what are the gross physical resources for communication among the population studied. The following is a brief examination of available data on the physical facilities for mass communication in Brazil and in the area

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[1]In preparing this section the investigator has made use of the following publications:
World Communications: Press, Radio, Film and Television (Paris, France: UNESCO), 1951; The Use of Mobile Cinema and Radio Vans in Fundamental Education (London, England: Film Centre), 1949; Peter Baechlin and M. Muller-Strauss, Newsreels Across the World (Paris, France: UNESCO), 1952; J. H. Grenfell Williams, Radio in Fundamental Education in Under-developed Areas (Paris, France: UNESCO), 1950; Frances Williams, Transmitting World News: A Study of Telecommunications and the Press (Paris, France: UNESCO), 1953; Press, Film, Radio (Paris, France: UNESCO), 1949; Fernand Terrou and Lucien Solal, Legislation for Press, Film, and Radio (Paris, France: UNESCO), 1951; Television, A World Survey (Paris, France: UNESCO), 1954; Television, A World Survey, Supplement (Paris, France: UNESCO), 1950; Claude Mercier, Low-Cost Radio Reception (Paris, France: UNESCO), 1950; J. C. Ribeiro Penna, "Brasil's Press Today: Progress of Daily Newspapers," Latin-American World (El Mundo Latino-Americano), London, June, 1946, pp. 21-23; Unsigned article, "Brasil Reads and Listens," Brasil, November, 1945, pp. 13-14.

studied. Tables 43-47, placed at the end of this appendix, give some picture of the mass media situation in Rio Grande do Sul and Tapes.

News agencies. News agencies have been active in Brazil since the beginning of the Twentieth Century. At present the distribution and collection of news in Brazil is divided among two types of organizations: (a) several small national news agencies, and (b) five large international agencies.

There are three small national news agencies. They do not have correspondents abroad and serve primarily as purveyors of local news. Agencia Nacional is a government-owned information bureau located in Rio de Janeiro. Its services are available free of charge. Agencia Sul Americana de Noticias (Asapress) is a private company, located in São Paulo, which limits its services to 100 subscribers throughout the country. It is the most important national news agency. Agencia Meridional is a private-owned agency serving only newspapers belonging to the group known as Diarios Associados. These agencies have their greatest influence in urban areas and service in the rural areas is poor.

Foreign news agencies in Brazil concentrate on foreign and international news. They include: United Press (NY), Agence France Presse (Paris), Reuters (London), Associated

Press (NY), and the International News Service (NY). In contrast to the local news agencies the international agencies are large and efficient; and as a result urban Brazilians are better informed of events abroad than those in their own country. News between Brazilian state capitals, and between Brazil and other countries is to a great extent the product of the presence of international news agencies. Within Brazil, the transmission of news is best along the coast and between its two largest cities, Rio de Janeiro, the nation's capital, and São Paulo, the nation's most industrialized city.

The work of news agencies is closely related to the use of telecommunications. The first cable system in Brazil was opened in 1874 between Europe and Brazil. By 1953 there were four cable services, one each from Italy and the United States and two from England. In addition, there is a telephoto service between Brazil and England, the United States (two), and Argentina. The effective transmission of information to Brazil is affected by the high cost of cabling news. Within the country the lack of adequate telecommunications facilities hinders the effective development of national news distribution.

The Press in Brazil

There has been a steady growth in the scope of press activities in Brazil since the founding, in Recife, Pernam-

buco, of the first newspaper in South America. Newspapers in Brazil are urban phenomena and tend to be concentrated along the Atlantic coast where some 88 per cent of the population reside. Literacy rates in these centers are much higher than in rural and inland areas.

There are approximately 220 daily and 638 weekly newspapers in Brazil with a total circulation of 1,500,000. There are thirty cities with daily newspapers. The two largest press concentrations are in Rio de Janeiro and São Paulo. Newspapers published in these cities comprise three-quarters of the total national circulation. The newspaper O Globo (Rio de Janeiro) publishes an average of 145,000 copies daily and has the highest newspaper circulation in Brazil. Two Rio newspapers, Diario da Noite and A Noite, have two daily editions. São Paulo has, probably, the largest single press concentration with an estimated twenty dailies in operation.

There are several foreign language newspapers printed in Brazil. Fanfulla (Italian) and Deutsche Nachrichten (German) printed in São Paulo have an estimated daily circulation of 20,000 each. The Brazil Herald (American) is the only English language newspaper printed in Brazil. It has a daily circulation of 5,000.

The presence of a large number of newspapers in Brazil is partially due to a law which requires the publication in

local newspapers of editorials issued by the local government. Thus a large amount of space is devoted to the publication of these editorials. There has been a widespread expansion of press activities in recent years because of the establishment of a regional press located in the capital cities of various states. As a result, newspapers are printed in the urban center and distributed on the same day in many parts of the state. There has been, however, no development of a system whereby an issue of a newspaper is printed simultaneously in different locations.

Distribution is at present a difficult problem facing newspapers in Brazil. There are no news distribution agencies agencies and as a consequence in São Paulo less than 18 per cent of the newspapers printed every day are delivered to the customer's door. The large majority of papers are sold on the street. The reading of a newspaper is, however, not reserved only for buyers as news-stands post copies of papers and allow passersby to gather and read them.

Some further restrictions on the development of a national press are the tremendous size of the country, the concentration of newspapers in a few large cities, the lack of adequate means of transport, the low number of potential readers because of high rates of illiteracy, and the low economic status of the general population. In addition,

no single Brazil newspaper possesses a teleprinter and as a result the distribution of news is delayed. There is some governmental control over the press and over the import of newsprint and printing machinery. At one time even advertisements had to be submitted for the approval of the government press bureau. Finally, there is little "on-the-spot" news coverage, since there are few correspondents and news is almost entirely supplied by news agencies.

Brazilian newspapers give exceptional coverage to international affairs. Daily papers have literary sections and Sunday supplements. Such United States magazines as Life, Time, Look, Saturday Evening Post, Good Housekeeping, and the Ladies Home Journal are available on news-stands for Brazilians who are acquainted with the English language. The Readers Digest has a Portuguese edition called Selecoes with an average monthly circulation of 350,000.

Radio in Brazil

Radio broadcasting began in 1922 under the aegis of a group of social scientists led by Professor Roquette Pinto. There are at present 254 radio transmitters in operation. Seven of these are government owned. There were an estimated 2,500,000 radio receiving sets in existence in 1948-50--an average of 51 sets per 1,000 inhabitants (or one per twenty persons).

There are four types of broadcasting companies: (a) official organizations subsidized by municipal, state and federal authorities, such as the educational stations Radio Educativa and Radio Roquette Pinto; (b) official companies deriving their revenue from commercial advertising, e.g., Radio Nacional (federal government) and Radio Maua (Ministry of Labor), the workers' station; (c) private broadcasting companies organized as networks and deriving their income from advertising; and (d) private independent companies whose main source of income is advertising.

The vast majority of daily radio program time is taken up with musical recordings (as high as 94 per cent for some stations), sports broadcasting and advertising. This is especially true among smaller stations. The quality of programs and their content vary by the size of the station.

During the day stations broadcast news bulletins supplied by national and foreign news agencies. Small stations compile their own bulletins from newspaper information. From 7:30 P. M. to 8 P. M. all stations must carry the Brazilian Hour, a news service broadcast from Radio Nacional and prepared by the government information bureau Agencia Nacional. Foreign broadcasts are heard every evening. At 9 P. M. BBC news bulletins are relayed by Radio Educativa and at 10:35 P. M. Radio Nacional relays the news bulletins of NBC. In addition, especially prepared records sent by the United States Information Service are used.

The primary function of Radio Educativa and Radio Roquette Pinto is to transmit educational and cultural programs. Radio Roquette Pinto transmits for one-quarter hour daily and Radio Educativa is on the air fourteen hours daily. The content of educational broadcasts are dramas, novelas (short day-time stories), adult education courses; and programs for women, children, farmers and rural residents. A popular program called "This Wonderful World" presents the lives of persons who have contributed to the welfare of humanity. In the past, this program has presented programs on the peace theories of Gandhi, the life of Einstein, the struggle for human rights, the racial problem in the United States and the problem of hunger throughout the world. In a country where more than 70 per cent of the population live in rural areas, and in communities of less than 5,000 inhabitants, the use of radio as a means of education augments that of established institutions of learning.

The diffusion of radio listening is not without tremendous handicaps. There is a tax of 10 cruzeiros (approximately U. S. $0.50) plus an eight per cent purchase tax on the price of every radio set. In 1948 the average price for a radio was U. S. $137. In addition, the names and addresses of all radio owners are required to be registered with the Postal Department and there is a punishment for

failure to comply with this regulation. In 1948 there were an estimated 2,500,000 sets in operation and only 800,000 were actually registered. The majority of sets were owned by urban literate persons.

Radio diffusion is further handicapped by the lack of widespread distribution of radio sets, the high cost of maintenance and repair, the lack of money to buy sets or the verbal literacy to use them, the lack of electricity in rural areas, the lack of community collective listening, and the fact that most stations are urban located, with low-powered transmitters and covering relatively small geographical areas.

The Cinema in Brazil

Brazil has six feature film studios which produce 15-20 full-length films a year. They are Cinedia, S. A., Brasil Vila, Atlantida, Sol, Gibi and Tupi. There are 30 companies which produce film shorts and a majority of these are located in Porto Alegre. Several governmental and semi-governmental agencies also produce films. In addition to these national film producers, popular movies are imported from foreign countries and have become standard film fare. Of all the popular films shown in Brazil in 1951, 70 per cent were from the United States, 10 per cent were nationally produced and the rest were distributed among Italy, Mexico and France, the United Kingdom, and Portugal. For-

eign business, cultural and governmental organizations have developed mobile cinema to urban and rural populations.

Movies are shown mainly in cine-theaters, i.e., theaters equipped for the showing of both films and plays, and cinemas, i.e., standard movie houses. In 1946 Brazil had 1606 cine-theaters and cinemas with a total seating capacity of 1,000,000. Small theaters with a seating capacity of less than 500 seats predominated. There was a national average of one showing per day but theaters in large cities generally have four showings per day every day and small rural theaters have one showing per day three times a week. In Brazil as a whole there were about 20 cinema seats available per 1,000 inhabitants.

In round figures there were nearly 150,000,000 paid attendance at movies in 1946. The average percentage of seats occupied was very low (28 per cent). Admission prices average five cruzeiros (U. S. $0.20) and attendance per capita was three times a year.

The development of a thriving film industry is aided by a governmental provision that every cinema program must contain a national film of good quality. However, this potential development is hindered by the close supervision and control of the government censorship bureau. Furthermore, the distribution of films is hindered by the high cost of rental, i.e., five times the price of every seat in the cinema.

In Brazil, the Agencia Nacional, attached to the Ministry of Justice has regularly produced newsreels since 1946. These are generally available free of charge. Other newsreels are infrequently produced by national film companies. News films are also imported from the United States, United Kingdom, France, Portugal and Spain. There are approximately 180 newsreel issues shown per year.

The general difficulties with newsreels in Brazil are: (a) sound and commentary are added after the film is taken and there is a great use of stock cliches; (b) they are severely edited by private and government censorship; (c) current events do not receive competing coverage; often only one company makes a coverage on a rotating basis; and (d) there is little social responsibility on the part of newsreel companies.

Television

Brazil is one of the 52 countries that had television in 1953. Telecasting was initiated in 1950 and at present there are three privately owned television stations located in Rio and the other half in São Paulo. There is a potential audience of 700,000 or 14 per cent of the total population.

The service area of these stations generally extend no further than the immediate rural periphery. Programs are patterned after the United States. Sports are popular and

there are Monday night musicals and variety shows. Radio Roquette Pinto is preparing to install an educational television station. The ownership of television sets is entirely beyond the reach of the masses of Brazilians. Small sets are sold for 10,000 cruzeiros (U. S. $550) and 16-inch models sell for U. S. $750. Collective television viewing has not been developed, thus making the content of television programs available only to the wealthier classes.

Conclusion

Material presented here on the existence of mass media in Brazil serves more or less to establish general limits but does not tell anything conclusive about information exposure. For example, many theater seats go unoccupied and many newspapers are never read. It should be kept in mind that these figures are presented for the country as a whole and that there are sharp distinctions between regions in terms of availability and accessibility of information sources. The sharpest distinctions are, of course, between coastal and inland areas, between urban and rural areas, and generally between Rio de Janeiro and São Paulo and the rest of Brazil. It is in these two cities that the bulk of the communications facilities in Brazil are located. Even within these cities it has not been established that many groups other than the wealthier classes are highly exposed; and in the rural areas, even those adjacent to Rio and São

Paulo, there are persons who have never read a newspaper or heard a radio braodcast or even seen a movie.

TABLE 43. GEOGRAPHICAL ORIGIN OF PUBLICATION[a] AND FREQUENCY DISTRIBUTION OF THE NUMBER OF MENTIONS[b] GIVEN TO SEVEN BRAZILIAN NEWSPAPERS[c] READ BY 33 AGRICULTURAL, FACTORY AND OFFICE WORKERS, TAPES

Name of Publication and Location	Number	Per Cent
State Capital (Porto Alegre)		
Estado do Rio Grande	1	2.8
Diario de Noticias	12	34.2
Correio do Povo	18	51.4
Folha da Tarde	1	2.8
Revista do Globo	1	2.8
National Capital (Rio de Janeiro)		
A Cigarra (magazine)	1	2.8
O Cruzeiro (magazine)	1	2.8
Total number of mentions (base)	35	100.0
Total number of respondents answering[d]	33	

[a]The town of Tapes does not have a newspaper. Other nearby towns do have newspapers but none of these were mentioned.

[b]Some respondents gave multiple mentions.

[c]Two of the newspapers mentioned, O Cruzeiro and A Cigarra, are actually weekly magazines.

[d]Fourteen respondents reported they could not read and three reported they could read but did not read newspapers.

TABLE 44. PERTINENT CHARACTERISTICS OF SEVEN IMPORTANT DAILY NEWSPAPERS IN PORTO ALEGRE[a]

Name	Founded	Published	Daily Average Circulation	Sunday Average Circulation	Type Coverage	Ownership
Correio do Povo[b]	1895	AM & Sun	55,000	80,000	General	Private
Folha da Tarde[b]	--	PM & Sun	45,000	63,000	General	Private
Diario de Noticias	--	AM & Sun	43,000	54,000	General	Private
Diario Oficial[c]	1935	AM & Sun	3,200	--	Official	Government
Folha da Tarde Esportiva[b]	1949	PM no Sun	29,000	--	Sports	Private
Jornal do Dia	--	AM no Sun	20,000	--	General	Private
Correio de Noite	--	PM	--	--	General	Private

[a]Porto Alegre is also the publishing location for many educational and cultural periodicals, such as, A Mulher e O Lar (Women and the Home), Ateneia (organ of the women's literary academy), Provincia de São Pedro, and Revista Idade Nova (a magazine dedicated to the commemoration of gaucho traditions). The material presented in this table is derived from the Inter-Continental Press Guide, January 1955, and the Editor and Publisher International Yearbook (1955), Vol. 88, No. 10, February 1955, p. 351.

[b]The newspapers Correio do Povo, Folha da Tarde, and Folha da Tarde Esportiva are all owned by the same publisher.

[c]The Diario Oficial is an official newspaper of the Rio Grande do Sul state government.

TABLE 45. GEOGRAPHICAL LOCATION OF[a] AND FREQUENCY DISTRIBUTION OF THE NUMBER OF MENTIONS[b] GIVEN TO ELEVEN RADIO STATIONS LISTENED TO BY NINETEEN AGRICULTURAL, FACTORY AND OFFICE WORKERS, TAPES

Name of Radio Station and Location	Number	Per Cent
Local (other)		
Radio Cultura (Pelotas)	2	5.2
Radio Progresso (Novo Hamburgo)	1	2.6
State Capital (Porto Alegre)		
Radio Farroupilha	11	28.9
Radio Gaucha	7	18.4
Radio Difusora	3	7.8
National Capital (Rio de Janeiro)		
Radio Nacional	4	10.5
Radio Tamoia	1	2.6
Radio Marinck Viega	2	5.2
Other Cities in Brazil		
Radio Tupi (São Paulo)	4	10.5
Foreign Capitals		
Radio El Mundo (Buenos Aires)	2	5.2
B. B. C. (London)	1	2.6
Total number of mentions (Base)	38	100.0
Total respondents reporting	19	

[a]The town of Tapes does not have a radio station.

[b]Some respondents gave multiple mentions.

TABLE 46. MAJOR RADIO STATIONS IN RIO GRANDE DO SUL, 1948[a]

Name	Location	Power (kw)
Sociedade Difusão Radio Cultura	Pelotas	1
Radio Sociedade Farroupilha, Ltda.	Porto Alegre	25
Radio Sociedade Gaucha	Porto Alegre	5
Radio Difusão Porto Alegrense	Porto Alegre	5

[a]There were also 10 stations of 0.1 kw, and ten stations of 0.25 kw.

TABLE 47. SOME POPULAR FILMS SHOWN IN LOCAL MOVIE HOUSE (1952-53) BY NATIONALITY OF ORIGIN AND NAME, TAPES[a]

Nationality of Origin and Title	Type of Film
America	
Real Policia Montanda	outdoor adventure
Traidor Inesperado	urban cops and robbers
Porto de Nova York	urban cops and robbers
Armadilha de Morte	urban cops and robbers
Calunia	mystery
Terra de Desordeiros	Western
Argentina	
O Homem e A Besta	
England	
Jornada Interrompida	mystery
German	
O Grande Amores de Schubert	life of Schubert
Italian	
O Diabo a Poma	mystery
O Lobo da Montanha	mystery
Sem Piedade	Negro-white amity

[a]The United States Information Service Bureau attached to the United States Consulate at Porto Alegre has shown two movie programs in Tapes. The first was an open air show, April 16, 1952. The program consisted of the following short films: News Magazine, Children's Zoo, Navajoland, A Boy at Court, Rodeo, and a propaganda film, One Year in Korea. The second film showing, early in 1953, was indoors and included three short films: Portrait of an American Family, The Union in the Community and the propaganda film, Prisoners of War.

APPENDIX D

QUESTIONS RELATING TO BACKGROUND CHARACTERISTICS AND INFORMATION EXPOSURE OF WORKERS IN THE RURAL TOWN COMMUNITY OF TAPES[1]

1. Age
2. Ethnic affiliation or nationality.
3. Religion.
4. Education.
5. Can you read?
6. Do you read a newspaper? (If "yes", then ask question 7)
7. How frequently do you read a newspaper?
8. Which are the newspapers you read most frequently? (List by name and locality)
9. Do you have a radio? (If "yes", ask question 10)
10. What stations do you listen to most often?
11. What was your father's occupation?
12. What is your occupation?
13. In what industry do you work?
14. For whom do you work?
15. How many months a year do you work paid by another person?

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[1]These questions originally appeared in the interview schedules of the United States Information Service study. Only those questions directly utilized in the present study are included here. They have been translated by the author from Portuguese into English. All original materials are on file at the AreaResearch Center, Department of Sociology and Anthropology, Michigan State University.

16. For how many years have you worked full time?

17. How much money enters your household in one year? (Include: salary, bonuses, sales of home-grown vegetables, etc.)

18. How many people do you support with this sum?

19. If you have children over 16 years of age what are their occupations? (List and describe)

20. The house in which you live is:

    1. owned by you
    2. rented by you
    3. lent to you by the company

21. If you have another house, is it:

    1. owned by you
    2. rented by you
    3. lent to you by the company?

22. Do you have land to work? (If "yes", ask question 23)

23. How much land do you have? (If "yes", ask question 24)

24. Do you rent some of this land? (If "yes", ask question 25)

25. How much of this land do you rent out?

26. How long have you lived in this community?

27. In how many places have you lived since you were grown up?

28. What jobs have you held?

29. What was your father's occupation when you were a boy?

30. In youropinion, are you now, economically speaking, better off than, worse off than, equal to you your parents' situation when you were a boy?

31. Do you expect to change your job in the future? (If "yes", ask question 32)

32. To what job do you expect to change?

33. For the future do you think you will be economically better off than, worse off than, equal to your situation at present?

34. What jobs do you think your children will have when they are grown up?

35. What do you think can better your life and the life of your children?

36. Who are the three persons you visit most often at home? (List name, address, occupation, and relationship to respondent.)

37. How often do you meet persons from:

    1. other localities
    2. the capital city (Porto Alegre)
    3. other states
    4. the United States of America
    5. other countries?

    (For each statement: Does he meet these persons daily, once a week, often in a year, often in life, or never?)

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