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Frontier Population Absorption and Migrant Socio-Economic Mobility: Evidence from Brazilian Amazônia¹

In Brazil it has been argued that major public and private efforts to develop the country's northern economic frontiers would provide land for the surplus labor force and, at the same time, opportunities for socio-economic advancement for migrants (Brasil, 1972, 1; Camargo, 1973, 5-8). A review of the literature, however, demonstrated that these issues have generally been neglected by geographers (Aragon, 1978). This paper is a review of the frontier migration process and an examination of some neglected aspects of frontier population absorption and socioeconomic mobility in Brazil's North Region.

Frontier Population Absorption and Stability

After two decades of investment to equip the North Region with adequate infrastructural, financial, and institutional resources, low population absorption still persisted in 1970 (Keller, 1977, 172, 174; IBGE, 1978, 309). Development programs to foster inter-regional migration brought about little net gain in population (Hébette and Marín, 1979, 158-162; Katzman, 1975, 104; Carvalho and others, 1977, 97).

Most of northern Brazil experienced either absolute or relative depopulation. The Upper Rio Negro region, penalized by deteriorating conditions for plant extraction, and smaller areas close to capital or mining municipalities suffered absolute depopulation. Three major regions in northern Brazil experienced relative depopulation at the municipal level since 1950. The area served by the middle Amazon and its southwestern tributaries, whose economy is based on plant extraction, suffered less than the Upper Rio Negro because of low population densities, poor accessibility to urban centers, and the presence of a marketing system for agro-industrial staples in its south-central section (ACA, 1975). The second region, in Pará, has declined in population because of increased road access from the soil-depleted Bragantina and Salgado micro-regions to agro-pastoral project areas on its westward fringes and to major urban centers elsewhere. The third region, the northern edge of Amapa Territory, has been plagued by declining fur trade and plant extraction and as a result it has "lost considerable numbers of its people to the territorial capital" (Keller, 1977, 232-

240).

Although population has declined in northern Brazil, spatial mobility in this area is not well known. Long distance moves are obscured by the large size of the northern *municípios* and the frequent use of rivers as *município* boundaries. Even if information on migration were available, census data would not account for multiple migration, return migration of the native born, and deceased migrants, so total population mobility would still be underestimated. These limitations force us to assume that municipal natural increase rates are equal to the regional rate and that any departure from the latter is attributable to migration. During the 1950s and 1960s Brazil's North Region demonstrated a limited ability to absorb migrants from other regions of the country. Instead, intraregional population redistribution trends indicate a concentration of people in the major urban centers of Belém, Manaus, Porto Belho, and Macapá and in reactivated frontier areas in southeastern Pará and Rondônia. Recent studies have questioned the ability of active frontiers to retain the people they have attracted (Baez-Jorge, 1976; Vogeler, 1976; Townsend, 1977; Revel-Mouroz, 1977; Bromley, 1972; Hiraoka, 1978; Wennergren and Whitaker, 1976).

Frontier Migration and Socio-Economic Mobility

The effects of road penetration and credit policies on land speculation, illegal transactions, and tenure conflicts are the same in northern Brazil as in other parts of Latin America. Here are observed the eviction of subsistence farmers and their incorporation into a landless labor force. Some people have been temporarily absorbed by agro-pastoral projects or by informal service and craft sectors that are economically precarious (Lisansky, 1979, 1-2). Others have been displaced toward less accessible areas on the subsistence frontier. These changes are seen in previously settled cattle ranching areas of northern Mato Grosso and along the Belém-Brasília Highway and have recently appeared in the state of Acre and in southwestern Pará (Riviere d' Arc, 1977; Riviere d' Arc and Apesteguy, 1978; Dupon and Vant, 1978, Hébette and Marín, 1979; Wesche, 1977, Carvalho and others, 1977) .

Although the government sponsored agricultural colonization schemes along the Transamazonian Highway appear to be justified in other respects (Bunker, 1979, 64-70), they are relatively inefficient in terms of population absorption or socio-economic mobility of the migrants. Not only have relatively few families been settled in the projects but also of those numbers a significant proportion have left.

The post-1974 turnabout in governmental strategy has further diverted support from family-scale farming projects along the Transamazonian Highway toward large-scale agro-pastoral, lumber, and mining projects (Beril, 1975, 19-20). This change is likely to limit access to land and marketing facilities by landless rural workers and middle class commercial agriculturists. In Rondônia, where the National Institute for Agrarian Reform and Colonization (INCRA) has concentrated most colonization efforts, the process has resulted in massive seasonal migration, overwhelmed colonies, burgeoning urban centers, and sharply intensified conflict over possession of land in recent years (Martine, 1978, 35, 38; Katzman, 1977, 81).

It is generally believed that migrants to frontier rural areas come from generating areas where capital-intensive, private, modern agriculture and manufacturing leads to structural overpopulation (Grawunder, 1976; Martin, 1976, Toscano, 1976, Hall, 1978; Goodman, 1972; Neto, 1976). These people have become involved in the North Region's transformation from subsistence to commercial farming areas, which has generally required large landholdings and some migrant labor.

Though considerable research has been conducted on the subject, the relationship between frontier migration and socioeconomic advancement requires still further investigation. In general, there is a lack of inter-regional and inter-occupational comparisons because most studies have concentrated on development in the rural areas and have neglected the growth of local urban centers.

Methodology and Findings

This study contributes further evidence on the relationship between frontier migration and socio-economic advancement in the Brazilian North. The procedure employed is to select study areas, and to conduct a survey of migration and socio-economic advancement.

The four urban centers where field research was conducted were founded during the late nineteenth century and participated as staple export and supply import centers in the rubber boom period of 1875-1912. Subsequently, with their local economy stricken by declining international demand for Brazilian rubber, these centers and their surrounding *municípios* experienced depopulation. The four localities demonstrated different abilities to recuperate during the 1960s and as of 1970-72 they showed varying degrees of rural and urban development.

In terms of rural development, the localities represented four local phases within the general process of agricultural frontier development as shown by census data available either at the municipal or micro-regional level. Humaitá in southwestern Amazonas typified phase 1, with predominant subsistence agriculture and primary extraction. Conceição do Araguaia in southeastern Pará was at phase 2, exhibiting a transformation from subsistence to commercial production, especially of livestock. Altamira in central Pará was Phase 3, with middle-sized commercial farming. Marabá in eastern Pará was phase 4 because of its commercial farming and large scale pastoral production as well as extraction. Urban development is characterized by an increasing percentage of persons engaged in industrial activities, merchandise sales, services, commercial transportation, and warehousing with increasing city size.

Field research in the four localities during 1978 and 1979 indicated that post-1970 local government sponsored projects affected substantially both the population size and occupational structure of the urban centers. With regard to population growth, Humaitá increased from 962 inhabitants in 1970 to 10,919 in 1978; Conceição de Araguaia from 5,068 to 14,666; Altamira from 5,734 to 27,617; and Marabá from 14,585 to 52,249.

A household survey was conducted in each of the four urban centers. Each center was allocated 100 interviews with heads of household. Sample size was limited by time availability and kept constant for emphasis on inter-regional comparisons. The margin of error in estimates derived from selecting a fixed number of cases from the four populations varied little. Heads of household were selected through spatially stratified, proportional random sampling in two stages, block selection and then house selection within the block selected. Though the unit of observation was the head of household, the sampling unit was the house. Structured questionnaires were administered in order to obtain data on informants as well as on their living relatives: spouse, children, brothers, and parents. The present study deals only with male active migrants who, in cross-tabulations involving the largest number of cases, total 23 percent of the 4,566 individuals documented. An active male migrant is defined in this study as any male age 10 years or more when he migrated to the urban center.

Occupations recorded at various places and points in time were assigned a social score from the Brazilian occupational scale designed by Silva (1973) on the basis of 1970 national census data on income and education. The classification adopted for analysis consists of the following five groups:

Group 1-2: Administrators, large proprietors, professionals, highly skilled technicians;

Group 3: Primary sector technicians and administrators, middle level technicians and assistants, elementary school teachers, office employees, foremen, middle size agriculturalists and businessmen;

Group 4: Workers in mechanical and metalurgical industries, skilled and semi-skilled workers in communications, transportation, construction, lumber, and furniture industries;

Group 5: Workers in food and textile industries, craftsmen, housekeepers, street vendors and other sales services, bricklayer helpers;

Group 6: Workers in primary sector activities.

Socio-economic mobility of migrants was estimated for three geographic phases: in-migration to, residence at, and out-migration from the centers surveyed. Socio-economic mobility corresponding to an individual's immigration is the difference between the last principal occupation at their previous place of residence and the first principal occupation at arrival to the center surveyed. Similarly, socio-economic mobility corresponding to an individual's residence is the difference between first principal occupation at arrival to the urban center surveyed and principal occupation at the moment of the interview. The third element of socio-economic mobility surveyed was the difference between the respondent's last principal occupation at the urban center surveyed and their principal occupation at their place of residence at the moment of the interview.

Personal and group variables that affect socio-economic mobility with migration are found to operate in all 294 frontier urban male migrant informants studied. Generally speaking, the higher the migrants' position in the occupational group structure at their previous residence the smaller the social mobility they experience with in-migration. Once group affiliation at previous residence is controlled, average upward mobility with in-migration is generally greater for migrants aged 10-29, who account for 41 percent of all migrant informants. Average upward socio-economic mobility increases with length of residence for all occupational groups. In general, the degree of socio-economic mobility increases with length of residence for all occupational groups. In general, the

degree of socio-economic mobility experienced over a period of up to two years is greater than that associated with migration to the present residence.

The general evolution of the group occupational structure of informants from previous residence until the moment of the interview reveals a general expansion of upper groups at the expense of group 6.

The relative upward socio-economic mobility experienced by migrants at each center tends to be inversely related to the level of development of the center, and so is greater in Humaita and Conceição do Araguaia and smaller in Altamira and Marabá. The more developed the urban center, the more likely in-migrants will be higher on the occupational scale.

Groups that gained in socio-economic standing differ from one another, with development projects being largely responsible for the expansion of particular groups in each center. In Humaitá, state and federal investments opened opportunities for group 1 and 2 positions. Expanding opportunities in group 3 are due mainly to the changing system of work relations in the rubber economy and to INCRA's rural settlement project along the Humaitá-Jacareacanga segment of the Transamazonian Highway. Urban construction projects have increased the number of people in group 4 because many of them are former road workers.

In Conceição do Araguaia, an increase in group 3 population is related to the growing function of the city as a center for the import and redistribution of goods to the westward-advancing agro-pastoral front. Groups 4 and 5 act as refuge sectors for the underemployed landless rural labor force, which is absorbed mainly in low-grade personal services, crafts, and rural construction.

In Altamira, the amount of change in the original socio-economic structure is more limited, confined basically to group 4. Though group 3 absorbs some group 6 landless rural workers as colonos, this upward movement is offset by unsuccessful *colonos* moving, along with other rural workers, to group 4 occupations, mainly in construction and transportation.

In Marabá, the change in socio-economic status is absorbed by groups 1, 2, and 4. Construction activities, such as the federally-subsidized Nova Marabá urban relocation sector, the Transamazonian bridge over the Tocantins River, and ranch related construction along highways PA-70 and PA-150, northeast of the city, are responsible for group 4 expansion. Merchants in this subregional center enter

groups 1 and 2, thereby increasing the number of the resident elite.

Conclusion

This paper has addressed systematic aspects of two cultural processes, population absorption at the regional level and migrant socio-economic mobility at the local level, in the context of frontier development. In Brazil, census data show that in recent decades the North Region's ability to absorb surplus population from other regions has remained unchanged and negligible despite major governmental investments. In fact, an increasing number of the region's *municípios* are losing population. Active frontier areas and major urban centers within the region owe most of their rapid population growth to in-migration from economically depressed areas within the region and mature frontier areas on the southern periphery.

In the case of the active frontier areas, the study indicates that male migrants who move to selected fast-growing centers experience considerable socio-economic mobility. This mobility is enhanced among persons who were at the lower end of the occupational scale. In general, upward social mobility is greater for younger migrants and tends to be directly related to period of residence at the urban center. The more developed the urban center, the less the opportunity for upward socio-economic mobility because it attracts more people already in the upper socioeconomic strata.

Finally, though frontier urban migrants undergo upward mobility with in-migration and residence in the centers surveyed, they are unlikely to achieve socio-economic levels comparable to those of their migrant relatives who never lived at those centers but rather lived at larger urban places.

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