THE PSYCHOSOCIAL COSTS
OF DEVELOPMENT:
Labor, Migration, and Stress in Bahia, Brazil*

Naomar de Almeida-Filho
Universidade Federal da Bahia

INTRODUCTION

The social and psychological consequences of economic development have frequently been ignored in social science research in Third World countries, and most comprehensive analyses of the problem do not attach much importance to individual-level characteristics, such as the psychopathological outcomes of modernizing experiences. Migration and cultural change, which are closely related to the broader development process, traditionally have been viewed by social psychiatric research as independent variables associated with mental disorders (Murphy 1976).

Reviewing the literature on the issue for South America, I found only two hospital data studies (Seguín 1956, Brody 1973), one "anthropological" investigation (Mangin 1960), and five population-based surveys (Caravedo et al. 1963, Ponce 1970, Inkeles and Smith 1970, Dutt and Baker 1978, Micklin and Leon 1978) that were concerned primarily with the mental health consequences of modernization.

Seguín (1956) reported that a large number of Peruvian Indians referred to a psychiatric service were suffering from what he called "psychosomatic disadaptation syndrome." He linked the clinical picture with the fact that they had recently migrated and had problems in adjusting to city life, and concluded that the disease was caused by "sociocultural stress." Mangin (1960), based on unsystematic data gathered by means of "traditional anthropological techniques," tried to refute the idea of a "migrant syndrome," arguing that a migrant is not necessarily a victim of extreme biological, cultural, social or psychological stresses.

Brody (1973), using data from three psychiatric hospitals in Rio de Janeiro, found an excess of uneducated, poor, unemployed, and migrant individuals among patients admitted for the first time, as compared to the general population. This author mentioned many factors, from cultural shock and acculturative stress to lack of social support and marginalization, as related to the patients' psychopathology.

The first community surveys on the relationship among migration, cultural change, and mental health in South America were conducted in Peru, explicitly as an attempt to support Seguín's clinical findings through epidemiological research (Caravedo et al. 1963). The Cornell Medical Index (CMI) was employed in this series of studies, but the authors did not report any revalidation of the symptom scale. Urban-rural comparisons revealed that the urban population had higher levels of depression and aggressiveness and "an extremely high incidence of alcoholism." The authors found depressive reactions and psychosomatic disorders to be much more prevalent among migrants, and reported higher rates of all psychiatric disturbances but epilepsy among mountain peasants (of Indian origin) who migrated to the city.

Ponce (1970), also using the CMI as the basic data collection device, studied the housing, health, and mental health conditions of in-migrants to the metropolitan area of Lima-Callao, Peru. In addition to an association between mental illness and socioeconomic status (measured by an ecological classification of neighborhoods), Ponce reported that migrants had slightly worse mental health conditions than nonmigrants. Among migrants, those who came from the mountains and from rural areas had higher rates of depression, anxiety, and stress. In his discussion of findings, Ponce emphasized that there was a clear relationship between urban stress and maladaptation, which was more intense in the lower economic levels, and that poverty should be considered "an aggravating factor for the adaptation process."

Inkeles and Smith (1970) presented some analyses based on data collected by the Harvard Project on the Social and Cultural Aspects of Development in six countries (including Argentina and Chile), in order "to resolve the controversy of whether migration and subsequent modernizing experiences in developing countries are or are not deleterious to mental health." Using the Psychosomatic Symptoms Test to measure psychological adaptation, they concluded that urban experience, education, factory work, mass media contact, and individual modernity in developing countries were not regularly associated with increased psychological distress. Particularly in relation to migration, these authors stated that "moving in itself seems to be neither here nor there with regard to psychic health" (p. 106).

The findings of the Cali study (Micklin and Leon 1978) indicate that social mobility was associated with levels of psychiatric disturbance,

as measured by a Spanish translation of Langner's twenty-two-item scale. There were no clear-cut differences in scores according to migrational status, once controlled for life-cycle interval of migration. With regard to type of migration, analyses of variance showed that when "all variables were considered simultaneously, however, the effect of migration on psychiatric disturbances virtually disappears" (p. 103).

In Southern Peru, Dutt and Baker (1978) studied the relationship among migration, environmental stress, and illness in general, including "emotional symptoms," from an ecological perspective. They reported higher levels of psychopathology for migrants as compared to nonmigrants, and, among migrants, those who came from mountain areas had higher rates than those from coastal environments. The authors found that poor living conditions and selective migration did not explain their results, and concluded that a "change of physical and cultural environment may be detrimental to health."

The investigations reviewed above had basic methodological problems, which ranged from several kinds of sampling biases to the use of nonvalidated translations of foreign symptom scales as a measurement of individual mental health status. In addition, except for Inkeles and Smith and Micklin and Leon, these studies did not control for the effect of potential confounding factors.

Two competing theoretical approaches are present in this literature to explain the variations of stress levels among social groups exposed to the process of economic development. Is stress due to modernizing pressures, which require rapid and difficult acculturation, including the migratory attraction to urban centers (in itself a life-crisis event)? Or is it due to changes in the economic system, which expells labor without providing sufficient new employment opportunities for the full reincorporation of these groups within a modernized productive process? This paper represents an attempt to test these competing hypotheses with data from a survey conducted in an urban area of Salvador (capital city of the rapidly growing State of Bahia, Northeast Brazil), which was designed especially to avoid some of the methodological problems pointed out above.

CONCEPTUAL ISSUES

The "Modernization" Hypothesis

Undoubtedly, the dominant paradigm in the literature on migration has been the notion of culture change, and its correlate, modernization. As a result, in the literature concerned with the social and psychological consequences of migration, predominantly produced by anthropologists, a general trend has been set in which the notion of culture has been

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ascribed the status of a basic variable in causal models (Leighton and Hughes 1961, J. Murphy 1976, H. Murphy 1977).

Cassel, Patrick, and Jenkins' (1960) model of health implications of cultural change is perhaps paradigmatic of the use of modernization to explain the consequences of migration. These authors were explicitly concerned with acculturation as manifested by geographical moves from a rural traditional context to a modern industrial society. Cassel et al. assumed that a traditional folk culture provides the rural migrant with a "design for living quite appropriate to the social situation of the folk community, but a culture adapted to rural life may increase rather than decrease the stresses of the rural migrant to an urban situation" (p. 946). This model held that rural-urban migration may lead to cultural incongruency, depending upon the "fit" between the migrant's culture and his new social situation. Such incongruities, in turn, tend to arouse excessive stress on the migrant's affiliative network and on the individual personality that may or may not be absorbed by either system (Leighton and Hughes 1961, Hughes 1970). In summary, the theory states that the nonabsorption of those "sociocultural stresses" is associated with the onset of psychiatric and psychosomatic symptoms.

Although most of the research on the subject carried out in South America assumed theoretical models based on the notion of modernization (Seguín 1956, Rotondo 1961, Caravedo et al. 1963, Brody 1973, Ponce 1970, Dutt and Baker 1978), none made explicit such an elaborate model as Cassel et al. The Peruvian studies did mention a cultural shock mechanism to account for the higher rates of psychological disorders among mountain Indian migrants to the cities. Caravedo et al. (1963) went further in suggesting a conflict between modal personality traits and the urban culture, while Ponce (1970) used the expression "cultural contrast" to describe better the preconditions of the cultural shock phenomenon. Indeed, cultural shock implies the notions of adaptation and cultural distance, in that large differences in symbolic patterns would lead to uncertainty and unpredictability, with the subsequent arousal of levels of anxiety and stress in the individual (Hughes 1970). In this sense, cultural shock is viewed as a consequence of the migration process (which therefore is taken as a change of cultures instead of a culture change), and it is regarded as the immediate determinant of psychiatric disturbance.

Either explanation, sociocultural stresses or cultural shock, provides the rationale for Hypothesis 1, which postulates that the process of migration is associated with the mental health of individuals in the following direction: *Migrants (living in the urban area) have higher levels of stress than nonmigrants (born in the urban area).*

On the other hand, the failure in finding a clean positive association between psychopathology and migration after controlled analyses

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led some authors to suggest alternative interpretations. Micklin and Leon (1978), who initially considered migration as a life crisis causally related to psychological maladaptation, pointed out that insertion in the urban social mobility system would be the main factor involved in being emotionally disturbed under such circumstances. In relation to this issue, Inkeles and Smith (1970) made a similar suggestion: "It is revealing to consider the fate of those who migrated to the city but did not succeed in finding the higher-paying, more secure, and generally more prestigious jobs represented by those in industry" (p. 106). Despite indicating that, in this particular aspect, the problem of migration/modernization in developing societies could be better interpreted as a process of formation of an urban labor force instead of a modernization/cultural change process, these authors did not present any theoretical model to explain their findings.

The "Labor Force" Hypothesis

In social formations like Northeast Brazil (and Bahia), much of the population still remains within a subsistence economy (Sá 1977). The so-called development process places into a market economy increasing numbers of that population, as a result of the penetration of capitalism into the rural sector (Arciniega 1977, Oliveira 1977). This implies constant changes in class structure, determined by the conflict between different modes of production at the root of the social formation (Castells 1977, Srour 1978). Following upon such changes, some classes may lose their position in the social structure, and their members, therefore, undergo either a process of absorption by the new emerging classes, or are displaced from the new social order.[1] Often, moves from one class to another are simultaneous with geographical population movements, such as internal migrations (Balve and D'Alessio 1970).

According to Singer (1975), rural-urban migration is the consequence of two "expulsion factors." The first is the result of population pressure on the land caused by natural increase, associated with either few reserves of arable land or the monopoly of big properties; these are called "stagnation factors." The second is the contact of a rural and isolated economy with the capitalist market system, which profoundly changes formerly established relations of production. The result is the creation of a labor surplus which is forced to migrate; these are called "change factors."

The influence of the migration process on the constitution of the urban labor force is primarily the result of the predominant expulsion factor. For Singer, change factors generate a kind of technical unemployment in the rural areas, with the magnitude of the migrant contingent being a function of the increasing productivity and specialization of

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agrarian labor. When the out-migration is caused by these factors, there is an indirect relationship between the volume of labor force freed from agriculture and the demand for urban production (Oliveira 1972, Yoder and Fuguitt 1979, Carvalho and Souza 1980). On the other hand, stagnation factors produce an out-migration whose volume depends first upon the growth rate of the population under the subsistence economy and second upon social and political variables, such as land tenure, the rural power structure, etc., which can reduce the amount of available useful land (Velho 1976). The resulting population pressure on scarce land is alleviated by out-migration either to other rural areas or to metropolitan centers.
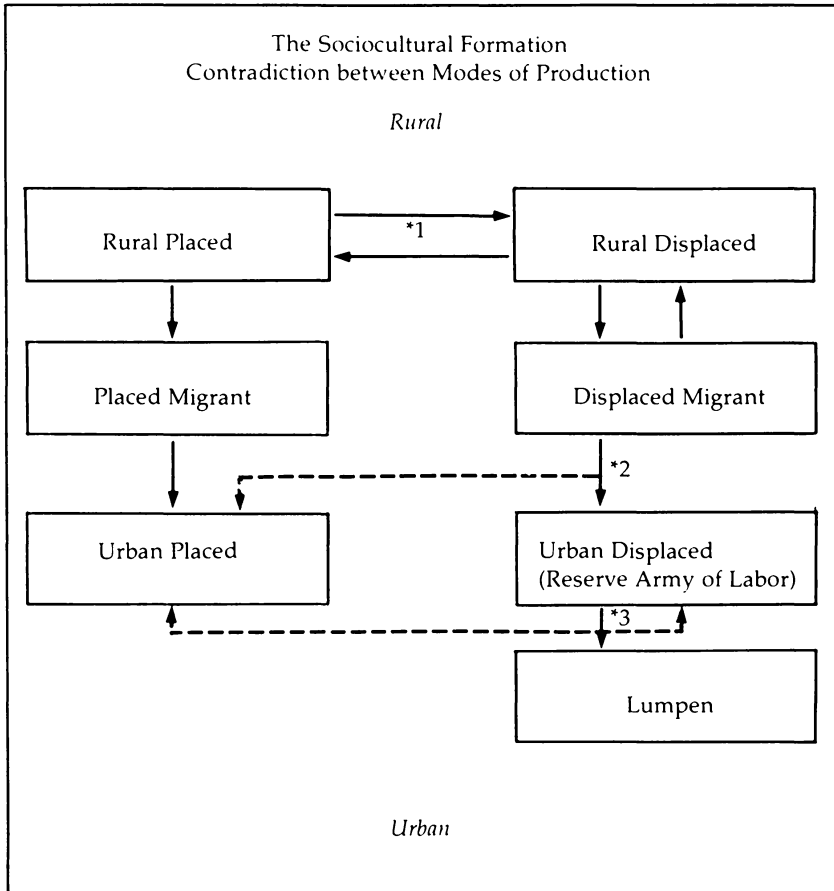
The selection for displacement, at any moment of the migration/class formation process, is set according to the individual's previous contractual power. Either before or after being displaced, the individual's contractual power ultimately reflects his position in the relations of production. The individual can lose, or have never achieved, contractual power according to his class place. In addition, other factors, such as sex, race (Girvan 1974), age, or cultural background, can affect the person's contractual power or, under certain circumstances, can influence directly the power relations established for the selection process.

As shown in the figure, the dynamics of the selection/displacement process can be understood in terms of a set of points or levels arrayed along a line parallel to the processes of rural-to-urban migration, or modernization, or urbanization.

The first selection point is in the rural areas, and refers basically to the question of which individuals are more affected by the contradiction between the old and new modes of production. Criteria for this selection are a function of the person's position in the former relations of production which, depending upon the nature of the subordinated mode, can be fundamentally a matter of land tenure (Shaw 1974). However, during the period of transition, access to capital and technology, individual characteristics, chance (natural) factors, and subjective considerations can determine a person's position in the face of the class formation process set in motion (Singer 1975, Saltalamacchia 1979). Once displaced, the peasant or artisan will try to escape by reintegrating himself into the changing productive cycle; but his chances of success are slim because he has been caught up in the "surplus" labor force (Nun 1978, Pereira 1978).

Once displaced at this level, the individual can stay in the countryside, but he is more likely to migrate (Balve and D'Alessio 1970). The second selection occurs in the course of the migration process proper. Here, the migrant is faced with many options, primarily stemming from structural factors, but also a function of certain individual characteristics. At this stage, other criteria for displacement, such as lack of education or

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The Process of Selection/Displacement

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┌─────────────────────────────────────────────────────────────────┐
│                   The Sociocultural Formation                     │
│             Contradiction between Modes of Production             │
│                                                                   │
│                              Rural                                │
│                                                                   │
│   ┌──────────────────┐      *1      ┌──────────────────┐          │
│   │   Rural Placed   │ ────────────▶│  Rural Displaced │          │
│   │                  │◀─────────────│                  │          │
│   └──────────────────┘              └──────────────────┘          │
│            │                                 │      ▲             │
│            ▼                                 ▼      │             │
│   ┌──────────────────┐              ┌──────────────────┐          │
│   │  Placed Migrant  │              │ Displaced Migrant│          │
│   └──────────────────┘              └──────────────────┘          │
│            │           ┌────────────────┐ *2                      │
│            ▼           │                ▼                         │
│   ┌──────────────────┐              ┌──────────────────────┐      │
│   │   Urban Placed   │              │   Urban Displaced    │      │
│   │                  │              │ (Reserve Army of Labor)│    │
│   └──────────────────┘              └──────────────────────┘      │
│            ▲           ┌───────────────┐ *3   ▲                    │
│            └───────────┘               ▼      │                    │
│                                     ┌──────────────────┐          │
│                                     │     Lumpen       │          │
│                                     └──────────────────┘          │
│                                                                   │
│                              Urban                                │
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*1, *2, *3: Selection points

professional training, can play a role (Durham 1973), but the condition of displacement itself has now become the main criterion. It is true that the migrant displaced at the first selection point still has a chance of being reintegrated at the second point; that is, he may get replaced into the productive system in another rural area such as the frontier or in an area in which there is capitalized agriculture (Velho 1976, Yoder and Fuguitt 1979). However, the likelihood of his remaining displaced becomes greater at each step of such a process, because his lack of bargaining power, as related to the condition of being displaced, is the

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immediate determinant of his displacement. Remaining displaced throughout the transition, the individual can return to the countryside, but he is indeed more likely to follow the migrational stream toward the cities (Durham 1973, Alonso et al. 1980).

The third selection point occurs in the urban areas, where migrants form so-called "marginal" groups (Pereira 1978), urban surplus population living in squatter settlements in the periphery of Latin American cities (Kowarick 1975). In Salvador, when they are of recent occupation, these settlements are called *invasões* (invasions), because people literally invade public or private areas and build their huts in a matter of days. Older settlements that have gradually lost their provisional character are called *bairros*, as any other established neighborhood in the city.

At this level, the selection process as well as class formation are closely related to the capitalist mode of production, since the city is the place where production, circulation, and consumption are more tightly controlled, where the contradictions between capital and labor and the class struggle are more acute (Castells 1977, Alonso et al. 1980). In fact, the selection for displacement at this level affects all inhabitants of the city and the condition of being a migrant and/or one of the urban displaced both reduce the bargaining power of the worker within the productive context (Coutinho 1980). In terms of class formation, the urban selection process can eventually lead those who are successively displaced to form the so-called "lumpenproletariat."

As far as psychological stress is concerned, one of the most consistent findings of sociopsychiatric research has been a negative association of "socioeconomic status," as measured by different indicators, and mental health conditions (Dohrenwend and Dohrenwend 1969). In this literature, the relationships between socioeconomic factors and psychopathology are considered mainly in terms of the "social stress" theory (Langner and Michael 1963). Stressful life events, the harshness of poverty, the impossibility of personal achievement, feelings of resentment and self-hostility, social discrimination, etc. have been indicated as triggering factors of certain psychiatric conditions (Wheaton 1978) or even as causal factors of other psychopathologies (Myers et al. 1974, Wheaton 1980). Particularly in relation to the manner of insertion into the productive system, one could hypothesize that the condition of being displaced implies, for the individual, extreme uncertainty and social stress, with temporary or permanent repercussions at a psychological level (Almeida-Filho 1980). Thus, Hypothesis 2 can be formulated as follows: *Displaced individuals (belonging to the urban reserve army of labor) have higher levels of stress than placed (into the formal labor market) individuals.*

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Some Comments about Hypothesis Testing

If the social process of migration/displacement is related to individual stress levels, then it is necessary to ascertain which group of variables is more relevant in influencing the association. With this aim, two points have to be taken into account: on the one hand, they share a common root—the class formation process—so interaction between them is expected; on the other hand, as they are connected to other social processes as well, it is also expected that their effects, either isolated or together are modified by ''extraneous'' variables that are manifestations of those processes. These points raise the need for considering some specific control variables as confounding variables or effect modifiers, as well as different combinations of the independent variables, not only among themselves but also with the potential modifiers, in order to distinguish precisely the variables affecting the relationship between stress and migration/displacement.

A further comment has to be made on the operational grounds of the proposed model assessment. The usually extensive geographical area covered by the mobile population renders longitudinal investigations unfeasible. Therefore, cross-sectional approaches are indicated for this kind of population study, and the urban settlement is chosen as the research setting because it represents the final stage of the rural-urban migration flow.

The complexity and extent of the migration process make it almost impossible to cover all variables identified by the model in a single research design, except in a retrospective fashion. Nevertheless, the historical character of such a process is summarized in some of its outcomes, like the migration status or the condition of placement into the labor force of individuals who have passed through the whole process. But to be rigorous, these outcomes are only levels of the process, which have to be considered as very limited manifestations of highly complex relationships within the social formation, only poorly represented by structures of explanation.

Given these precautions, what are the implications of this hypothesis assessment for the validity of the models? In the case of finding a clear dominance of the labor force dimension (i.e., rejection of Hypothesis 1 and nonrejection of Hypothesis 2), the proposition of defining migration as basically a selection/displacement process can be provisionally supported. That is, the model, at least at this preliminary level of inquiry, is not to be rejected. If the spatial dimension of the process (represented by migration status variables) is relevant to the structure of associations found (nonrejection of both hypotheses), then the model has to be reevaluated. In this case, perhaps the class determination of the mental health status of migrants should be thought of as largely

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mediated by the process of uprooting in itself, rather than as a constant and pervasive effect of one of its direct manifestations, the selection for displacement. If, in opposition, only Hypothesis 1 is not rejected, the "modernization" model may be considered as having better explanatory power, at least with regard to the problem under investigation, as compared to the "labor force" model.

THE RESEARCH SETTING

Salvador is the capital city of the State of Bahia, which is the largest and most populated of the northeastern Brazilian states. The city's privileged location, with a large and well-protected harbor, surrounded by one of the major sugar cane plantations of the time, contributed to making Salvador of Bahia the most important economic center of the colony during two and a half centuries (Prado 1971). During the nineteenth century, the Bahian economy was still largely agricultural, but its relative role in the national economy was reduced by coffee agriculture in the Southeast. In the first two decades of this century, the economy of Bahia, and consequently the importance of Salvador, still played an important role in the Brazilian economic system, which had just strengthened its dependent character by isolating the few industries organized during the past century and by encouraging an export-oriented agrarian production. During the fifties, the discovery of oil in Bahia lead to the establishment of refineries near the city of Salvador. In the next decade, following the concession of fiscal incentives to industrial projects in the Northeast, Salvador started to receive massive capital investments, initially from local corporations centered in São Paulo and Rio de Janeiro, and later from subsidiaries of transnational groups (Azevedo 1975). In addition, the overall trend of income concentration of the Brazilian "model of economic development," together with recent government policies, have turned Salvador into perhaps the most important tourist site in the country. All these factors led to a boom in the city's civil construction sector in the late sixties, which, despite some occasional crises, does not seem to have stopped.

Salvador is currently the largest Brazilian metropolis outside the southern part of Brazil, and, with the exception of São Paulo, it had the highest growth rate in the country for the past decade. According to Carvalho and Souza (1980, p. 77), the average growth rate of urban employment in Salvador has been around 2 percent a year, while the population increase due to migration in the same period has been 3 percent, leading to a clear disproportion between the amount of labor force ready to enter the labor market and the number of jobs. The result has been a rapid increase of a reserve industrial army in the city, which

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has reproduced there the widely described phenomenon of a "surplus population," as discussed previously.

These past thirty years have witnessed the establishment of numerous squatter settlements around the city of Salvador. One of the first invasões near the south shore started in the early sixties, and it will be called herein the bairro of O. This bairro was chosen as the research setting for the survey primarily because the Faculty of Medicine of the University of Bahia conducted a community health program in the area between 1969 and 1978, and a fairly large amount of demographic and socioeconomic information about the area was already available.

According to the 1974 census, the bairro of O had approximately sixty thousand residents, living in more than twelve thousand houses. Most of those houses (80 percent) were declared as *proprias* (owner-occupied residences), and about 40 percent were made of *sopapo* (walls of clay and straw, stuffed into a net of wood pieces). The population of the bairro was predominantly young, more than 40 percent below fifteen years of age, and the sex ratio was about one. The residents were indeed very poor: the average monthly per capita income of half of the population was below the regional minimum wage, which was around US $900 annually, while only 58 percent of those of productive age had a regular job. Only 11.3 percent of the adult population completed elementary school, with an overall illiteracy rate of 30 percent. Almost 60 percent of the dwellers were migrants, most of them coming from the Reconcavo, the area surrounding Salvador (UFBA 1974).

METHODS

Sampling Methods

The sample size of the survey was estimated at around 1,500 subjects, 5 percent of the total population aged fifteen and above, living in the area at the time of the data collection (over 27,000 people). Due to the inadequate address system, a random surface sample was used, based on a detailed and updated map (scale = 1:8,000) of the area. That map was divided into 936 equal subareas, with a mean of fourteen households in each. Using random numbers, eighty-five subareas were then selected and numbered by order of entry. Ten extra ones also were sampled the same way, and kept as reserve. Those subareas were to be surveyed in the order of their entry until the total sample number of 1,500 subjects was achieved. The study comprised 39 of the 936 subareas (also 5 percent of the total), where 515 households were identified. The final sample included 1,549 subjects, with an average of forty persons per subarea. The sample deviance was negligible, estimated at 0.09 percent,

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and the representativeness of the sample was tested through comparison with the age distribution of the 1974 census of the area. No significant difference for any age group was found (Santana 1978).

The Screening Instrument

A standardized questionnaire to detect psychiatric symptomatology was developed by Santana (1978) specifically for the O study. It was named the Questionario de Morbidade Psiquiatrica de Adultos (Adult Psychiatric Morbidity Questionnaire—QMPA). The QMPA was largely based on the clinical experience of the research team, but also included items from a Colombian questionnaire—the CEM developed by the Universidad del Valle (Groot and Arévolo, n.d.)—and from a Brazilian health opinion questionnaire—developed by the Epidemiology Department of the Universidade da São Paulo (USP 1977)—in order to facilitate comparability of the results. Regional language and idioms, as well as psychopathological particularities, were also carefully considered by the research team.

The final form of the QMPA has forty-three items, scored by yes/no answers with values of 1/0. The instrument was tested for validity by means of a two-step study.[2] The QMPA was also tested for reliability by calculating sensitivity rates for each of the field interviewers compared with the psychiatric diagnosis. The variation between interviewers did not reach significant levels (p>.05 percent).

Data Collection

For every household in the sample, interviewers completed a family chart and applied the final version of the QMPA.[3] First, the interviewer introduced himself to the head of the household, explaining briefly the objectives of the research. In the case of refusals, he did not insist but rather pursued information on how many people lived in the household, with their ages and sex, if possible. After a clear agreement, the interviewer called the mother, who was the informant of choice, but the presence of the whole family, making it a group interview, was also encouraged. In the absence of the mother, another adult, preferably the one assuming her role in the family (grandmother, aunt, adult daughter, etc.), provided the information.

The family chart consisted of twenty items, covering the following areas: personal information (age, sex, marital status, position in the family, education, religious affiliation, religious practice), migrational history ("municipio" of birth, rural-urban origin, time of residence in urban areas, age at migration), and socioeconomic data (occupation, income, social security membership). Interviews included both closed

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and open-ended questions, which were completed for each family member. After completion, all charts were checked by the research assistant, who identified incomplete answers and possible mistakes and returned them to the interviewer. Interviewers had to revisit the families as many times as necessary to complete the chart. The QMPA was scored by a research assistant for each person according to the criteria discussed above. Strict instructions were given to avoid communication between those who handled the scores and the examination team. There were refusals in nineteen households, with thirty dwellers. After the administration of the family chart to 493 households, covering 1,519 adults, five individuals failed to complete the QMPA.

Data Analysis

The QMPA scores, assumed here as a rough measurement of stress levels, was the dependent variable for these analyses. The scores ranged from 0 to 61, with mode of 0 and a standard error of 0.191.

Independent variables were migration status and placement in production. A migrant was defined as a person who moved into Salvador, at any time of his life, from the Bahian hinterland or from any other state. Migrants can be either of rural or urban origin, depending on their last place of residence. Urban migrants were those who came from agglomerations that were classified by the Brazilian Census Bureau as cities (municipal centers). For operational purposes, placement was divided into two categories: placed—a person formally employed, receiving at least the regional minimum wage, regularly registered with the Labor Office, or any kind of employer or owner; displaced—a person currently unemployed or underemployed, even if registered with the Labor Office or working *por conta propria* (literally working without a boss, or self-employed).

Age, sex, family size, marital status, education, and family per capita monthly income were taken as potential confounding variables or effect modifiers throughout the analysis. Length of urban residence, expressed in years, was also employed as a potential confounding variable. Marital status had five classes: single, married, *amasiado* (a kind of common-law engagement), widowed, separated. Education had six levels: illiterate, incomplete primary, complete primary, incomplete secondary, complete secondary, college. Family per capita income was calculated by dividing the sum of monthly earnings of all household members by the family size. Age, family size, income, and length of urban residence were taken as discrete covariates for all analytical purposes.

The test of hypotheses consisted of comparisons between the mean QMPA scores for the groups of the independent variables con-

sidered respectively. In order to assess different combinations of those variables, plus other "extraneous" variables as potential confounding or effect modifiers, analysis of covariance was employed to provide adjusted mean scores for each group. The independent variable of one hypothesis was in some cases regarded as a potential confounding and/ or effect modifier for the other one, and vice-versa. The independent effect was measured by a ratio of the means of each class of the independent variable. Alterations in ratios that happened after controlling for one or combinations of extraneous variables were considered as an indication of confounding. As an analogy to standard stratified analyses with rate ratios, interaction was considered evident when the ratios of means were sensibly different among the strata of the potential confounding variables. As the independent variables are dichotomous, the hypothesis testing corresponds to a test of the difference between means adjusted for extraneous variables present in the model under consideration. These analyses were carried out by using the SPSS procedure of Multiple Classification Analysis (Nie et al. 1975, pp. 416–18) for the adjustment of means, and the General Linear Models SAS procedure (SAS 1979, p. 245) to perform the partial F-tests.

RESULTS AND DISCUSSION

Table 1 presents some demographic characteristics of the O sample. The population of 1,514 subjects was predominantly young, with almost 37 percent below twenty-five years old. The overall sex ratio was 1.20 in favor of the female group and this proportion remains roughly the same for all age groups. The large proportion of single individuals (38 percent) found in the sample may correspond to the age distribution of the population. The illiteracy rate of the sample was about 18 percent, lower than the 30 percent overall rate found by the above-cited census. Such a difference can be explained either by the distinct age ranges considered or by the time that elapsed between both data collections.

Over 60 percent of the sample were migrants (910). Of these 910, 56 percent had moved into Salvador from rural areas, while 35 percent came from other cities. Information in this regard was missing for eighty-two migrants (9 percent) because the names of their places of origin could not be found in the list of Bahian cities and villages (they are thus more likely to be rural than urban migrants).

Approximately 20 percent of the migrants living in O moved into the city within the past five years. Other groups of time of urban residence, stratified by five-year periods, show an almost even frequency distribution: 5–10 years, 14.78%; 10–15 years, 16.21%; 15–20 years, 17.64%; 20–25 years, 14.49%; and more than 25 years, 17.22%.

In regard to source of migration, the majority (36 percent) moved

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T A B L E 1 Demographic Characteristics of the Sample

Characteristics	Frequency	Percent
Sex		
Female	825	54.49
Male	689	45.51
Age		
15–24	559	36.92
25–34	393	25.96
35–44	276	18.23
45 +	283	18.69
Missing data	3	0.20
Marital Status		
Single	577	38.11
Married	544	35.93
"Amasiado"	268	17.70
Widowed	68	4.49
Separated	47	3.11
Missing data	10	0.66
Education		
Illiterate	274	18.10
Incomplete primary	522	34.49
Complete primary	263	17.37
Incomplete secondary	239	15.78
Complete secondary	117	7.73
College	58	3.83
Missing data	41	2.70
Migration Status		
Migrant	910	60.11
Nonmigrant	557	36.79
Missing data	47	3.10
Urban Rural Origin		
Urban	860	56.81
Rural	507	33.49
Missing data	147	9.70
Total	1514	100.00

from the Reconcavo area, as confirmed by the census data, while 21 percent came from the region surrounding Feira de Santana (second largest city of Bahia, about eighty miles from Salvador). Eighty-eight people (12.8 percent) migrated from other states. All other administrative regions of Bahia were also represented in the sample.

    A brief socioeconomic description of the sample is given in table

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2. Data on occupational status show that more than 70 percent were classified as unskilled or semiskilled workers (levels 0, 1, and 2 of the occupation scale; Singer 1975); less than 3 percent had occupations of higher levels of specialization. Approximately 33 percent of the total, 498 individuals, were not working. The unemployment rate, including only those who had been recently fired and those who were looking for a job, was about 8 percent. This does not include the 251 individuals who worked por conta propria (over 16 percent). These three categories were collapsed under the label of "displaced" for the placement in production variable, where they constitute 57.5 percent of the total, or 870 persons.[4] More than 42 percent had a formal place in the labor market, mostly employed in private industrial, commercial, and service enterprises (38.5 percent of the total sample). The small proportion of owners (0.73 percent) in the sample should also be noted. This picture can be complemented with the profile of income distribution in that population: among the 1,401 individuals for whom data on income was available, 91 percent had a family per capita income lower than US $160 a month, 71 percent less than $80, and near 40 percent lower than $40. Only twenty-four people (1.7 percent) in the whole sample earned more than $320 a month.

As shown in table 3, women had higher stress scores than men, 5.23 compared to 3.18, a difference statistically significant at the 0.5 percent level, and one that persisted even after controlling for the effect of age. Single individuals were the least stressed group, with a mean score of 2.88, while those separated reached the highest unadjusted mean (7.89). It is interesting to observe that, after controlling for age and sex, the widowed category became the least stressed. The F-test of the effect of marital status after controlling for those variables reached high levels of significance ($p < 0.005$).

Table 3 presents an almost steady decrease of stress levels along the educational scale, from 6.76 for illiterate to 1.59 for complete high school, with a slight upward trend again for college. Besides slightly changing the mean values, the adjustment for age and sex did not modify the relative positions, with illiteracy remaining the highest mean score (6.10). The F-test of the effect of education on stress levels, after the adjustment, was significant at the 0.5 percent level.

The analysis of position within production, in terms of both crude and adjusted measures, shows that owners, considered the ruling social class, indeed had the lowest mean scores (2.46). At the bottom of such a scale, nonworkers yielded the highest stress levels (5.49 and 5.21). The profile of adjusted scores turned out to be a steady decrease of mean stress levels, from the bottom to the top, after the control for age and sex reduced the value for public employee. The partial F-test of the effect of

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T A B L E 2 Socioeconomic Characteristics of the Sample

Characteristics	Frequency	Percent
Occupation (Singer's scale)		
0	493	32.58
1	258	17.04
2	326	21.53
3	243	16.05
4	143	9.44
5	9	0.59
6	4	0.26
7	25	1.65
Missing data	13	0.86
Position within Production		
Nonworker	498	32.89
Unemployed	121	7.99
"Conta-propria"	251	16.58
Salaried	585	38.64
Public employee	43	2.84
Owner	11	0.73
Missing data	5	0.33
Placement in Production		
Displaced	870	57.46
Placed	639	42.21
Missing data	5	0.33
Total	1514	100.00

this variable on the stress levels of the sample reached significance levels of 5 percent.

The preliminary assessment of these variables indicates that they all significantly affect the patterns of distribution of stress levels in the sample. The suggestion that they should be treated as potential confounding variables is therefore confirmed. The position within production variable is a special case, insofar as its effect is included in the placement in production variable. The effect of the independent variables on stress scores, which implies a first level testing for the research hypothesis, is now considered.

Table 3 also shows that the unadjusted mean score for migrants was higher than for nonmigrants, 5.14 compared to 3.21, and the difference was highly significant ($F=21.15$, $p<0.005$). Adjusting for age and sex reduced the difference, but it still remained highly significant ($F=10.24$, $p<0.005$). The analysis of unadjusted scores and also the first-level controlled analysis lend support to Hypothesis 1.

T A B L E 3 Mean Scores by Selected Variables

Variables	N*	Mean	Overall F-test	Adjusted Mean**	Multiple Partial F-test
Sex			13.23HS		5.14SS
Female	808	5.23		5.15	
Male	672	3.18		3.21	
Marital Status			11.50HS		6.00HS
Single	565	2.88		3.36	
Married	533	4.90		4.73	
"Amasiado"	260	5.11		5.02	
Widowed	66	5.20		2.98	
Separated	47	7.89		6.69	
Education			7.27HS		4.39HS
Illiterate	263	6.76		6.10	
Primary incompl.	512	4.70		4.72	
Primary compl.	259	4.12		4.07	
Secondary incompl.	232	2.64		3.01	
Secondary compl.	116	1.59		1.99	
College	58	2.74		2.75	
Position			4.87HS		2.39SS
Nonworker	485	5.49		5.21	
Unemployed	121	4.97		4.47	
"Conta-propria"	248	4.55		4.21	
Salaried	571	3.14		3.57	
Public employee	42	3.26		2.84	
Owner	11	2.45		2.46	
Migration			21.15HS		10.24HS
Migrant	882	5.14		4.91	
Nonmigrant	543	3.21		3.46	
Placement			26.13HS		9.80HS
Displaced	854	5.15		4.80	
Placed	625	3.13		3.53	
Urb-rur Origin			6.55HS		1.08NS
Rural	487	4.90		4.50	
Urban	840	3.88		4.09	

*Subtotals vary due to missing values.
**For sex, adjusted by age; for the remaining variables, adjusted by age and sex.

Significance levels: HS: $p < 0.005$; SS: $0.025 > p > 0.005$; NS: $p > 0.05$

Similarly, the group of individuals placed in the formal labor market had lower mean scores than the displaced and the difference of 2.02 points was highly significant (F=26.13, p<0.005). The difference between means adjusted for age and sex dropped to 1.27, but the partial F-test was statistically significant at the 0.5 percent level. Hypothesis 2 is then supported by the comparison of both crude and adjusted measures of stress levels.

The comparison of unadjusted mean scores for rural and for urban groups yielded a significant F-value (F=6.55, p<0.025). However, taking into account the effect of age and sex in the association considered, the difference was reduced to nonsignificant levels (p>0.05).

Table 4 shows the mean stress scores broken down by the independent variables of this analysis plus place of origin as a potential effect modifier. This represents an attempt to assess the role of interaction. The F-test of the three-way analysis of variance was significant at a 0.01 percent level (F=14.71).

The effect of migration status after controlling for urban origin (since by definition there cannot be nonmigrants of rural origin) was ascertained by comparing the means for nonmigrants (3.21) and for migrants who came from other urban areas (5.54). This difference was in the direction predicted by Hypothesis 1, and it reached the 0.1 percent level of statistical significance (see contrast AB vs. CD). Within the placed group, both urban and rural, the mean score of migrants was 3.64 (C + E), while for nonmigrants it was 2.34, and the difference was highly significant (t=4.541, p<0.001). Within the displaced group, both urban and rural, the mean scores were 6.22 for the migrant subgroup (D + E) and 3.95 for nonmigrants, also highly significant (t=14.637, p<0.0001). The migrant/nonmigrant ratio of mean scores was 1.55 for the former subgroup and 1.57 for the latter one, suggesting that placement in production does not seem to be an effect modifier for migration status.

From the standpoint of the placement in production variable, neither migration status nor place of origin seems to be an effect modifier. The displaced subgroups showed mean scores significantly higher than the placed ones, throughout all strata of both migration and origin (see contrasts A vs. B, C vs. D, E vs. F, and CE vs. DF). Within the migrant group, the mean score for displaced was 6.22, and for placed it was 3.64, which yields a ratio of means of 1.70. Within the nonmigrant group, this ratio is 1.68. Taking only the urban group, the mean score was 4.65 for displaced and 2.71 for placed, with a ratio of 1.71. Within the rural group, this ratio turns out to be 1.66. It should be noted that placed nonmigrants form the subgroup that had the lowest stress score (2.34), while the highest one (6.99) was for displaced urban migrants.

Table 5 presents the results of a covariance analysis of the effect of

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TABLE 4 *Controlled Analysis of Mean Scores by Migration Status, Urban-Rural Origin, and Placement in Production*

Status	Origin	Placement	N*	Mean	SD
A Nonmigrant	Urban	Placed	226	2.34	4.59
B		Displaced	317	3.95	6.53
AB		Subtotal	543	3.21	5.85
C Migrant	Urban	Placed	77	3.80	6.38
D		Displaced	95	6.99	9.79
CD		Subtotal	172	5.54	8.54
E Migrant	Rural	Placed	171	3.57	7.15
F		Displaced	238	5.92	9.10
EF		Subtotal	409	4.94	8.41

*N varies due to missing values.

T-test for selected contrasts:

A/B:	$t = 2.545$,	$p < 0.01$
C/D:	$t = 2.867$,	$p < 0.005$
E/F:	$t = 3.233$,	$p < 0.005$
A/CE:	$t = 4.545$,	$p < 0.001$
B/DF:	$t = 14.637$,	$p < 0.0001$
AB/CD:	$t = 3.512$,	$p < 0.001$
CD/EF:	$t = 0.903$,	$p > 0.05$
CE/DF:	$t = 8.069$,	$p < 0.0005$

migration status on stress levels, controlling for selected variables that were considered potential confounding variables in light of the findings reported above.

The difference between unadjusted mean scores for migrants and nonmigrants was statistically significant, and yielded a ratio of means of 1.60. Controlling for sex did not change that ratio, while the adjustment for age dropped it to 1.42. The difference between means, however, remained significant ($F = 10.24$). Controlling for marital status alone reduced the ratio of means even more, down to 1.38, but the effect of the independent variable was still significant at a 0.5 percent level. Education also dropped the ratio, as well as the significance level. Controlling for placement in production did not change the ratio, while the adjustment for place of origin seemed to enlarge the difference. It should be recalled here that, as there are no rural nonmigrants, the migrant group is the only source of variance for this latter control variable, certainly distorting this adjustment.

From this first step, age, marital status, and education appear as confounding variables in the association between migration status and stress levels, but none was strong enough to wipe out that association. Two other variables (sex and placement in production) were not con-

T A B L E 5 *Analysis of Covariance of the Effect of Migrational Status on Mean Scores Adjusted for Confounders*

Control Variables	Migrational Status			F−test (HO: M1 = M2)
	Nonmigrant	Migrant	Ratio	
Unadjusted	3.21	5.14	1.60	21.15 HS
SEX	3.21	5.13	1.60	10.43 HS
AGE	3.46	4.91	1.42	10.13 HS
SEX, AGE	3.46	4.91	1.42	10.24 HS
Marital status (MST)	3.49	4.82	1.38	8.12 HS
MST, SEX	3.48	4.83	1.38	8.42 HS
MST, AGE	3.56	4.75	1.33	6.63 SS
MST, SEX, AGE	3.56	4.76	1.33	6.75 HS
Education (EDC)	3.57	4.81	1.35	6.32 SS
EDC, SEX	3.55	4.88	1.37	6.85 HS
EDC, AGE	3.66	4.72	1.29	4.78 BS
EDC, SEX, AGE	3.65	4.73	1.30	5.22 SS
Placement (PLA)	3.19	5.16	1.62	16.34 HS
PLA, SEX	3.18	5.14	1.62	16.16 HS
PLA, AGE	3.41	4.95	1.45	10.93 HS
PLA, SEX, AGE	3.41	4.93	1.45	10.87 HS
Urb-rur origin (URR)	2.98	5.34	1.79	12.46 HS
URR, SEX	2.92	5.39	1.84	18.78 HS
URR, AGE	3.18	5.15	1.62	9.45 HS
URR, SEX, AGE	3.12	5.21	1.67	10.48 HS
URR, PLA	2.93	5.36	1.83	10.83 HS
URR, PLA, EDC	3.13	5.19	1.66	7.56 HS
URR, PLA, MST	3.23	5.10	1.58	9.09 HS
*Covariates	3.22	5.41	1.68	5.46 SS
MST, EDC	3.73	4.61	1.23	3.37 NS
MST, EDC, AGE	3.79	4.57	1.20	3.10 NS

NS: p>.05   (not significant)
BS: .05>p>.025   (borderline significance)
SS: .025>p>.005 (significant levels)
HS: p<.005   (highly significant)

*Age, Income, Family size, Length of Urban Residence

founding variables, while a third one (place of origin) presented results that proved difficult to interpret.

As a second step, an analysis is made of selected two-by-two and three-by-three combinations of these variables. None of the combinations including sex and placement in production yielded a ratio of means different from the one achieved by the other one or two variables con-

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sidered alone. The combined effect of age and marital status brought the ratio down to 1.33, and the difference between means was significant only at the 2.5 percent level. Age and education together reduced the ratio to 1.29 and raised the p-value of the partial F-test to borderline significance levels (0.05>p>0.025). Finally, the combination of education and marital status seemed to wipe out the association between migration status and stress levels, by dropping the difference between means to less than 0.9, with a ratio of 1.23, which is not significant. With combinations of three variables, neither sex nor placement changed much the pattern apparent from the previous analyses. The joint effect of age, marital status, and education was responsible for the lowest difference between adjusted means (0.78), with the corresponding lowest ratio (1.20), also not statistically significant.

Two points should be outlined here: first, no interaction term reached the 10 percent level of significance for entry into any of the models considered; second, the combined covariates did not significantly change the ratio of adjusted mean scores. In conclusion, the covariance analysis for the control of extraneous variables did not support Hypothesis 1.

In summary, initial analysis with unadjusted mean scores and after controlling for several potential confounding variables seemed to lend support to Hypothesis 1. However, the cumulative confounding effect of age, education and marital status erased any significant effect of migration status on stress levels. Indeed, migrants tended to be older, engaged, and less educated than nonmigrants and, as presented above, each of these conditions is associated with higher mean scores.

Most studies on this subject found an association between internal migration and mental disorders, but none of these reported having controlled for the effect of confounding variables. (The two exceptions were the investigations by Inkeles and Smith (1970), and Micklin and Leon (1978), that yielded results similar to the present research.) These studies have been subjected to two types of criticism: first, the instruments employed to measure psychological adjustment can be considered as culturally biased, in spite of careful considerations about the problems with the instrument reported in these papers; second, the study designs had serious sampling biases, insofar as they did not include urban unemployed or underemployed individuals in the samples.

It is interesting to note that the kind of sampling bias which could be a source for methodological criticism of the results of those investigations is absent in the O sample. As for the interpretation of the present results for the population studied, the process of migration does not seem to have determined permanent or residual psychological problems. However, migrants who were too transient or displaced to establish residence in the studied area, or who arrived and later returned to

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their areas of origin, are not well represented in the sample. These possible biases should also be noted.

In terms of the proposed model, the two first selections for displacement may not be so important in predicting higher stress levels, insofar as ideological factors (such as the excitement of feeling free from a former condition of exploitation and/or the illusion of hope in a new life in the city), may have balanced the alleged deleterious effect of that life change. In addition, perhaps those successive displacements had been as distressful as displacement number three, which is happening in the urban area, but had been "lost" in the past. As we are dealing with cross-sectional data, the consequences of the current selection for displacement may be more important to the individual's mental health than his past experiences. Furthermore, nonmigrants also can have a life history of displacement that is comparable to that of migrants, with the only difference being that their selection has not been associated with subsequent geographical mobility.

Table 6 presents the controlled analysis of the effect of placement in production on stress levels. The ratio of unadjusted means was 1.64, in the direction predicted by Hypothesis 2, at levels of statistical significance. Taking the potential control variables one-by-one first, it can be observed that age, marital status, place of origin, and migration status do not seem to be confounding variables in this association, yielding ratios of adjusted means varying from 1.58 to 1.68. Unlike the previous analysis of migration status, here sex appears as a confounding factor, by dropping that ratio to 1.44, but its effect is not strong enough to erase the effect of the independent variable. Here, too, education seems to be a confounding variable, but also not strong enough to make the association between stress levels and placement not significant.

The second step of this analysis, which takes the variables two and more at a time, reveals that only combinations that included education or sex reduced the displaced/placed ratio of means below the levels already reached by these variables considered alone. Again, the partial F-test of the effect of placement in production on stress levels remained highly significant ($p < 0.005$). In addition, the low level of influence of the other control variables was confirmed by this second step, since no combination of the nonconfounding variables (age, marital status, place of origin, migration status) changed the patterns of association found in the first step of the analyses. As happened in the analysis of migration status, no interaction terms reached statistical significance levels for entry into the models, nor did any combination of covariates significantly affect the association. With all covariates in the model, the ratio dropped only 0.11 points, and the F-value was still highly significant (F=15.45, $p < 0.005$).

In conclusion, the findings of both unadjusted and controlled

T A B L E 6 *Analysis of Covariance of the Effect of Placement in Production on Mean Scores Adjusted for Confounders* †

Control Variables	Placement in Production			F–Test (HO: M1 = M2)
	Placed	Displaced	Ratio	
Unadjusted	3.13	5.15	1.64	26.13 HS
AGE	3.15	4.97	1.59	21.19 HS
SEX	3.42	4.93	1.44	12.99 HS
AGE, SEX	3.53	4.80	1.36	9.80 HS
Marital Status (MST)	3.18	5.02	1.58	22.99 HS
MST, AGE	3.20	5.00	1.56	22.13 HS
MST, SEX	3.42	4.83	1.41	12.24 HS
MST, AGE, SEX	3.46	4.80	1.39	11.10 HS
Education (EDC)	3.36	4.93	1.47	16.70 HS
EDC, AGE	3.39	4.91	1.45	15.60 HS
EDC, SEX	3.61	4.75	1.31	7.95 HS
EDC, AGE, SEX	3.65	4.73	1.30	7.12 HS
Urb-rur origin (URR)	3.10	5.06	1.63	24.42 HS
URR, AGE	3.22	4.97	1.54	19.55 HS
URR, SEX	3.32	4.88	1.47	13.94 HS
URR, AGE, SEX	3.45	4.79	1.39	10.38 HS
Migration (MIG)	3.02	5.07	1.68	26.68 HS
MIG, AGE	3.14	4.99	1.59	22.15 HS
MIG, SEX	3.27	4.88	1.49	13.39 HS
MIG, AGE, SEX	3.39	4.79	1.41	10.44 HS
MIG, URR	3.01	5.05	1.68	24.39 HS
MIG, URR, EDC	3.21	4.92	1.53	16.53 HS
MIG, URR, EDC, AGE	3.27	4.88	1.49	14.98 HS
MIG, URR, SEX, AGE	3.39	4.77	1.41	10.28 HS
*Covariates, MIG, URR	3.41	5.22	1.53	15.45 HS

HS: p<.005 (highly significant)

*Age, Income, Family Size, Length of Urban Residence
†Computer analysis of all possible combinations of the confounding variables was performed—57 different ones for the 3 x 3 combinations—but only results that clarify the presentation are included here.

analyses reported in table 6 support Hypothesis 2, which predicted higher stress levels for displaced than for placed individuals. These findings indicate a predominance of the labor force dimension over the spatial dislocation dimension in constructing the basic model. Again, the present findings point in the same direction as the Harvard Project (Inkeles and Smith 1970). No interaction effects between migration status and placement in production were found throughout the data analy-

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sis, suggesting that, despite their sharing of a common root in the class formation process, these dimensions were not interrelated in their patterns of association with the individual's psychological status. Therefore, it would seem that, with respect to the association addressed here, the basic model needs to be reevaluated. In a word, this model has to be taken up even more "radically": migration status is not related to deviant behavior either directly or indirectly (through its consequences in the labor force dimension).

The evidence produced by the present study seems to support this prediction. First, at the initial level of controlled analysis, no significant differences in stress scores were found as far as place of origin is concerned. Second, considering only the migrant subgroup, those of rural origin did not have higher levels of symptomatology than those of urban origin. Despite not reaching levels of statistical significance, the results indicate that urban migrants have higher stress levels, exactly the opposite direction of association. The findings of no association between rural origin and higher stress levels, either in general or only among migrants, are in opposition to the bulk of the South American literature reviewed (for example Rotondo 1961, Ponce 1970, Brody 1973).

In conclusion, the migration process itself or acculturation phenomena related to it do not seem to be associated with mental illness health processes in the social setting of Bahia. The results of this investigation suggest that geographical mobility as a life-change or as a cultural change may *not* be the basic process of interest for the study of social factors and mental illness in Third World social formations. Indeed, the fundamental process that should be taken into account in such research is the process of formation of an urban labor force and a reserve industrial army, essential conditions for the dependent capitalist development in those countries.

NOTES

1. For operational purposes, the outcomes of such a selection process will be provisionally termed herein "placement" or "displacement." Displacement, in this sense, refers to the absent or defective relationship of the worker with the formal labor market. Conversely, placement refers to a formal relationship with the labor market. The adjective "formal" is underscored here in order to make clear that displaced workers are not actually put outside the productive system, but rather, as part of a reserve army of labor, they perform an important role in the maintenance of the capitalist evolutionary trend in dependent social formations (Nun 1978, Pereira 1978, Carvalho and Souza 1980).
2. A pretest was carried out with a group of sixty-three mental patients, diagnosed with the most common psychiatric conditions in Bahia, and a comparison group of an equal number of students in a professional course at a Catholic community center in O. The former included hospitalized as well as ambulatory patients, with ages ranging from 17 to 84 years. The latter were selected on the basis of absence of treatment background, personal feelings of emotional well-being, and no detectable professional impairment. Both groups were matched by age and sex. In this pretest, the

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QMPA showed high sensitivity (89%), high specificity (98%), and low overall mis-classification rate (6%), with a cutoff score of 8.

  A field test was completed during the data collection. Double-blind, psychiatrists examined individuals (n = 327) suspected of being psychiatric cases, and a proportional subsample of 8% (n = 91) of the nonsuspected. (A suspected case was defined as a person who had QMPA scores equal to or above the cutoff point; conversely, the nonsuspected was one who had scores below that point.) In this test, the instrument showed a different performance, still with high sensitivity (93%), but lower specificity (72%), and an acceptable misclassification rate of 12%, with its cutoff point at 7. Therefore, the cutoff score for the field data collection had to be changed.

3. The research team was composed of seven trained interviewers who were psychiatry interns in the Faculty of Medicine of the University of Bahia. All of them were trained intensively in interviewing and questionnaire administration for up to twenty hours, basically through techniques of role-playing. They were also trained in the field, in order to get them acquainted with the research setting, by practicing identification of subareas and application of the questionnaire to families previously selected but not included in the sample.

4. In this population—adults living in an invasão—"students" and "housewives" are included in the "displaced," given the low frequency of "pure" students and the double economic function of "donas de casa," who, in fact, perform a wide range of noncapitalist economic activities and are always ready to get a salaried job, if they have the chance to find one.

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