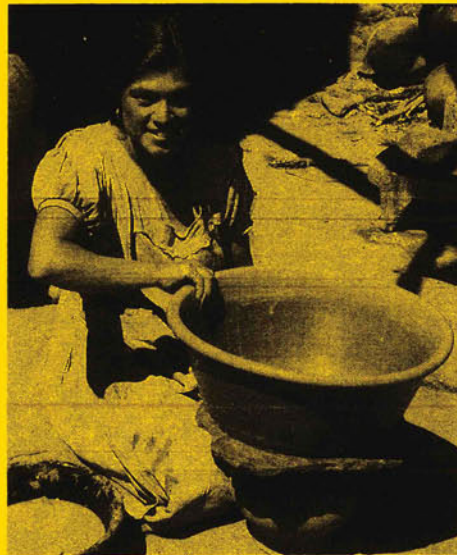


**CULTURAL, SOCIAL AND ECONOMIC CHANGE IN
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IN THE LATE 1960'S**

by

Charlotte Stolmaker



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Mary S. Thieme, Special Editor



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Introduction

Charlotte Stolmaker's *Cultural, Social and Economic Change in Santa María Atzompa in the Late 1960's* is the second in the series, "Ceramics and Culture of Oaxaca", to be published in **Vanderbilt University Publications in Anthropology**. The series was inaugurated with Jean Hendry's monograph, *Atzompa: A Pottery Producing Village of Southern Mexico in the Mid 1950's* (VUPA No. 40, 1992). Dr. Stolmaker's study focuses on the economics of ceramic production and marketing, and on social and technological change in the pottery industry and other aspects of life in Atzompa in the late 1960's. It reflects the approach of an ethnographer working from the perspective of the development anthropology of the 1960's and early 1970's. This perspective viewed change and development positively, with tradition as an obstacle to be overcome.

Ceramics have been present in the region from formative times to the present. Pottery continues to be produced in Oaxaca city and in at least 20 towns in the state of Oaxaca. The series "Ceramics and Culture of Oaxaca" is making this and other ceramic research available to anthropologists and other scholars interested in ceramic studies. It will include archaeological, historical, ethnographic, and technical studies of ceramics, and it is our intent to present previous studies as well as current research. It is our hope that the series will encourage further research on all aspects of the ceramics of Oaxaca.

Mary S. Thieme

PREFACE
A Brief Overview of Previous Studies of Oaxaca Ceramics

Building on studies by Bernal and Caso (1967), Shepard (1963, 1967) conducted technical studies of clays and tempers. Ceramic studies have continued to be an important component of archaeological projects in the valley, resulting in publications by Feinman, Kowalewski, Redmond, Flannery and Marcus, and others (Feinman 1980, 1982; Feinman et al. 1984, 1989; Kowalewski et al 1978, 1989; Redmond 1983; Flannery and Marcus 1994). Through surveys and excavations of production sites, Feinman has investigated and co-authored papers on the economics of ceramic production (Feinman et al 1981,1984) and technological analysis of greyware (Feinman et al 1989). Houston and Wainer (1971) examined pottery making tools in the valley and coast.

Three studies focusing on ceramics in the Mixteca have been published previously in the VUPA series. Spores (1972) developed a taxonomy for the classification of ceramics in the Nochixtlán valley; Hopkins' (1973) *Ceramics of La Cañada* describes ceramic material from surface surveys in this region, and Lind's (1987) study of Mixtec ceramics looks at the function of ceramic artifacts within the context of a social system.

W.O. Payne (1968,1970,1982), a working potter, investigated sources of materials and firing methods. Through examining materials at Lambityeco and other sites in the valley of Oaxaca, he also contributed technical analysis to Flannery and Marcus's volume on Formative Pottery (1994). With Winter (1976), he investigated the possibility of the presence of kilns at Monte Albán.

George Foster, in his survey of contemporary Mesoamerican pottery (1955), included methods and practices of pottery production in the valley towns of San Bartolo Coyotepec (see also 1959) and Santa María Atzompa. The descriptive study of the production of the black pottery of Coyotepec by P. and H. M. Van de Velde (1939) is historically important, and no subsequent investigation has been published on this important town. Lackey's (1981) thorough study of contemporary pottery production in Acatlán should also be mentioned, although Acatlán is located just north of the boundary of Oaxaca state, in the state of Puebla. In addition, working potters and students of folk art have investigated and published on the ceramic styles of Santa María Atzompa, San Bartolo Coyotepec and Ocotlán (Whitaker 1978, Espejel 1975, Mulroyan 1982.)

Mary S. Thieme

Bibliography

Caso, Alfonso, Ignacio Bernal, and Jorge R Acosta, Eds.

1967 *La Ceramica de Monte Albán*. Mexico City: Memorias del Instituto Nacional de Antropología e Historia XVIII.

Espejel, Carlos

1975 *Mexican Folk Ceramics*. Barcelona: Editorial Blume.

Feinman, Gary

1980 *The Relationship between Administrative Organization and Ceramic Production in the Valley of Oaxaca*. Unpublished PhD dissertation, Department of Anthropology, City University of New York.

1982 Appendix IX: Production Sites. In Blanton et al., *Monte Alban's Hinterland part I: The Prehispanic Settlement Patterns of the Central and Southern Parts of the Valley of Oaxaca, Mexico*. Ann Arbor: University of Michigan, Museum of Anthropology, Memoir 15.

Feinman, Gary, Steadman Upham and Kent G. Lightfoot

1981 *The Production Step Measure: An Ordinal Index of Labor input in Ceramic Manufacture*. *American Antiquity* 46:871-884.

Feinman, Gary, Stephen Kowalewski and Richard E. Blanton

1984 *Modelling Ceramic Production and Organizational Change in the Pre-hispanic Valley of Oaxaca, Mexico*. In *Many Dimensions of Pottery*, Sander E. Van der Leeus and Alison Pritchard Eds. Amsterdam.

- Feinman, Gary, Sherman Banker, Reid F. Cooper, Glen B. Cook and Linda M Nichols
 1989 A Technological Perspective on Changes in the Ancient Grayware Ceramic Tradition: Preliminary Results. *Journal of Field Archaeology* 16:331-344.
- Flannery, Kent and Joyce Marcus
 1994 Early Formative Pottery of the Oaxaca Valley of Mexico. *Memoirs of the Museum of Anthropology*, No. 27. Ann Arbor. University of Michigan
- Foster, George
 1955 Contemporary Pottery Techniques in Southern and Central Mexico. Middle American Research Institute #22. New Orleans. Tulane University.
 1959 The Coyotepec Molde and some Associated Problems of the Potter's Wheel. *Southwest Journal of Anthropology* 15:53-63
 1967 Contemporary Pottery and Basketry. In *Social Anthropology*, Manning Nash ed., Handbook of Middle American Indians, vol 6 Robert Wauchope, gen. ed. Austin:University of Texas Press.
- Hendry, Jean
 1957 Atzompa: A Pottery Producing Village of Southern Mexico. PhD Dissertation, Cornell University
 1992 Atzompa: A Pottery Producing Village of Southern Mexico in the Mid-1950's. Nashville: Vanderbilt University Publications in Anthropology, No. 40.
- Hopkins, Joseph
 1973 Ceramics of La Canada, Oaxaca, Mexico. Nashville: Vanderbilt University Publications in Anthropology, No. 6.
- Houston, Margaret, Judith Wainer Carson
 1971 Pottery-Making Tools from the Valley and Coast of Oaxaca. In *Boletín de Estudios Oaxaqueños*. No. 36 Museo Frissel de Arte Zapoteca.
- Kowalewski, Stephen A., Charles Spence and Elsa Redman
 1978 Appendix II: Description of Ceramic Categories. In Richard E. Blanton, ed., *Monte Albán: Settlement Patterns at the Ancient Zapotec Capitol*. New York. Academic Press, 167-93.
- Kowalewski, Stephen A., Gary Feinman, Laura Finsten, Richard E. Blanton, and Linda M. Nichols.
 1989 Monte Albán's Hinterland, Part 2: The Prehispanic Settlement Patterns of Tlacolula, Etla, and Ocotlán, the Valley of Oaxaca Mexico. *Ann Arbor:University of Michigan Museum of Anthropology*, Memoir 23.
- Lackey, Louana M.
 1981 *The Pottery of Acatlán: A changing Mexican Tradition*. Norman: University of Oklahoma Press.
- Lind, Michael
 1987 *The Sociocultural Dimensions of Mixtec Ceramics*. Nashville: Vanderbilt University Publications in Anthropology, No.33.
- Mulryan, Lenore Hoag
 1982 *Mexican Figural Ceramicists and their Works*. Monograph Series 16. Los Angeles: UCLA
- Payne, William O.
 1970 A Potter's Analysis of the Pottery from Lambityeco Tomb 2. *Boletín de Estudios Oaxaqueños*. Oaxaca.

1982 Kilns and Ceramic Technology of Ancient Mesoamerica. In *Archaeological Ceramics*, ed. J.S. Olin and A.D. Franklin, 189-92. Washington, DC. Smithsonian Inst.

Redmond, Elsa

1983 *A fuego y sangre: early Zapotec imperialism in Cuicatlán* Canada, Oaxaca. Ann Arbor: University of Michigan, Museum of Anthropology, Memoir 6

Shepard, A.O.

1963 *Notes from a Ceramics Laboratory, Beginnings of Ceramic Industrialization. An example from the Oaxaca Valley.* Washington D.C. Carnegie Institution of Washington.

1967 *Preliminary Notes on the Paste Composition of Monte Albán Pottery.* In *La Ceramica de Monte Albán.* Mexico City: Memorias del Instituto Nacional de Antropología e Historia XVIII.

Spores, Ronald M.

1972 *An Archaeological Settlement Survey of the Nochixtlán Valley, Oaxaca.* Nashville: Vanderbilt University Publications in Anthropology, No. 1.

Stolmaker, Charlotte

1973 *Cultural, Social and Economic Change in Santa María Atzompa.* PhD Dissertation. University of California Los Angeles.

1974 In Scott Cook and Martin Diskin, eds. *Markets in Oaxaca.* Austin: University of Texas Press.

Van de Velde, Paul and Henriette R. Van de Velde

1939 *The Black Pottery of Coyotepec, Oaxaca, Mexico.* Southwest Museum Papers 13 Los Angeles.

Whitaker, I. and E. Whitaker

1978 *A Potter's Mexico.* Albuquerque: University of New Mexico Press.

Winter, M.C. and Payne, W.O.

1976 *Hornos para ceramica hallados en Monte Albán.* Boletín INAH no 16. Oaxaca.

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CHAPTER 1

INTRODUCTION

This study is concerned with progressivism and conservatism in Santa María Atzompa, Oaxaca, a community with a mestizo population, whose major economic activities are ceramics production and farming.¹ Conservatism is an attitude which favors stability over change. It can be defined as "the tendency to accept an existing fact, order, situation or phenomenon, and to be cautious toward, or suspicious of, change."² . Whether it emanates from a defensive posture towards established custom or from indifference to new ways, the result is non-acceptance of new procedures. A psychological view sees the individual as the locus of conservatism. His vested interests and cultural indoctrination are examined to discover motives. In contrast, a structural point of view, assumes that there is a degree of uniformity in the vested interests and behavior of individuals holding the same relative positions in the societal network. Barth (1967), attempting to examine the nature of change from a structural perspective, views change as a reallocation of resources, involving increasing numbers of community members based on their observations that pay-offs result from the new behavior. His approach is edifying in a descriptive sense but offers little in the way of explanatory insights. What the anthropologist may perceive as a pay-off may not be so perceived by the society. Within the society, there may be sub-cultures with different value systems resulting from differences in education, occupation, ethnicity, social status, financial status, cosmopolitanism, etc. Particular experiences influence the individual's attraction toward specific innovations, and his acceptance of risks. It would be strange indeed if the reality of the microcosm showed change to be as uniform and thoroughgoing as it sometimes appears in macrocosmic theory.

For those who seek to promote development in traditional communities, the disinclination of villagers to try new alternatives is a source of frustration. After World War II, problems of technological change assumed new urgency as less-developed countries attempted to cope with rapidly-growing populations and to improve the quality of life. When the introduction of modern technology and procedures met with unexpected resistance social scientists were called upon to probe the cultural matrices in order to identify and weed out culturally-motivated barriers to such change (e.g., Spicer, 1952; Mead, 1955; Dube, 1956, 1957; Foster, 1962; Goodenough, 1963). Loci of resistance were identified. They included commitment to self-image and role expectations (Goodenough 1963:198-199), lack of group cooperation models (Erasmus 1961:89-91), and the tenacity of basic food habits (Apodaca 1952). The atomization of peasant communities was held to be an obstacle to progress in Italy (Banfield 1958), India (Wiser 1963), Mexico (Foster 1967), and Thailand (Piker 1968). Foster's themes of ritualized envy and socially enforced homogeneity were based upon what Banfield had termed "amoral familism". Foster went beyond Banfield's thesis of maximization of the nuclear family (1958:85) in his suggestion that an "image of limited good" motivates the nuclear family to restrain others. The over-all impression gained from this literature was one of almost unmitigated conservatism in peasant communities.

Nevertheless, some community studies in rural Latin America highlighted progressive adaptations, usually in the economic sphere, which seemed to have no adverse effects on other areas of the respective cultures. Examples include Muquiyaayo, Peru (Adams 1959), Paracho in the state of Michoacán, Mexico (Kaplan 1960), Cantel, Guatemala (Nash 1958), and Nayón, Ecuador (Beals 1953, 1966). Although, in the latter case, commercial traveling resulted in some sacrifice of social relations in the village. As early as 1939, Redfield pointed out that impersonal dealings in economic life, often considered a "modern" trait, could exist in traditional societies (Redfield 1939, Tax 1941). The coexistence of traditional and modern traits in the same community is recognized as a commonplace in autonomously developing societies, such as Bolivia after the 1952 revolution (Patch 1960). Also, the adoption of a recently-introduced trait does not necessarily entail discarding the corresponding "old" trait (Patch 1960:145, Lewis 1963:433, Gusfield 1967:354). In order to understand conservatism in developing communities, therefore, it seems profitable to inquire to what extent such societies are susceptible to piecemeal change; to examine the way people behave in their selective adoption of new ways, and to identify, as far as possible, the common characteristics linking individuals who adopt specific innovations or types of innovations.

It is hypothesized (1) that the various elements of the cultural, social and economic life of a community are differentially interdependent; (2) that change in one particular of an individual's behavior is not necessarily accompanied by changes in other particulars; (3) that changes in one sphere of behavior are not necessarily accompanied by changes in other spheres of behavior; and (4) that within the community -- particularly in a transitional community where many new alternatives are present and autonomously accepted or not accepted -- patterns of change in the various spheres of village life will tend to be uneven.

There are, however, certain fundamental conditions which limit these hypotheses. One is the nature, intensity and frequency of the society's external contacts. These determine the type and degree of innovation to which that society is exposed. Secondly, some traits cannot be introduced without the prior existence of others. For example, bus service requires roads, and the use of some electrical appliances presupposes electric service in the community. These factors limit the *introduction* of innovations in practical terms. Then, there are the limiting factors in the *diffusion* of innovations. Perhaps the most important is financial ability to adopt them (cf. Rogers 1962).

SOME THEORETICAL VIEWPOINTS CONCERNING THE CAPACITIES OF CULTURES TO CHANGE

Concepts of culture change in the early 1900's were heavily influenced by anthropologists' fascination with the geographic diffusion of traits. Malinowski's subsequent attempt to transfer the burden of culture content from traits to closely integrated institutions produced an equilibrium model that exaggerated the disruptive effects of piecemeal change (Malinowski 1945:71, Mair 1957:239). While such views are no longer current, advocacy of total change is heard from time to time, as in Mead's report on Peri, New Guinea (1956), and Erasmus's conclusions from his study of the results of an irrigation project and associated development in Sonora, Mexico (1961:*passim*). Few, however, are the beneficiaries of such massive government investment as Sonora, and fewer still are the communities that can be mobilized to become something quite different in one generation, as was Peri.

All societies change. Murphy (1964) contended that in the recent past virtually all communities have been in contact with dissimilar societies, and external contacts necessarily precipitate some degree of change. A society without internal change of any kind is also unthinkable. As Hallowell (1945:175-177) pointed out, people do not follow the customs and conventions of their societies like robots. There are continual adaptations and modifications in traditional systems, often beginning as idiosyncratic behavior. All people are faced with daily decisions in their allocations of time and other resources, and in periods of environmental pressures, such as droughts, floods or invasions, they must demonstrate flexibility and ingenuity to survive.

It is widely recognized by students of modernization phenomena that processes and paths of change vary among communities (Hoselitz 1964:679, Feldman and Hurn 1966:380, Levy 1966:235)³. Some cultures are inherently more rigid than others (Barnett *et al.* 1954:176-177). Where sanctions against non-conformity are extreme, as in some Pueblo communities, deviation in the controlled spheres may not be countenanced at all, but such rigidity is the exception rather than the rule. Virtually every society tolerates some marginal behavior, and the breaking away from traditional ways of life often begins with individuals or groups considered deviants (Linton 1936:274; Barnett 1953:378 ff.; Hagen 1960, 1962:364 ff.). This suggests that custom does not hold individuals in a monolithic grip -- that there is differential acceptance of change within groups as well as between groups.

Probably no community can be said to be categorically conservative (cf. Steward 1967:viii). Rather, the components of a culture are susceptible to progressive change to the extent that they are flexible enough to accommodate new alternatives, and to the extent that existing institutions are adaptable to modern forms. In those aspects of culture where psychic involvement is low, there is less resistance to change than in those which carry a high psychological commitment (Hallowell 1945:188-189, Malinowski 1945:152). New alternatives in material culture are often easily accepted even in very conservative communities, (e.g. Adair and Vogt 1949:555), whereas a household's dissociation from a communal system of religious service may elicit indignation and even social sanctions. Not all components of culture are uniformly flexible nor are institutions uniformly adaptable. A massive introduction of modern elements is not likely to produce a uniform pattern of change, and recent literature suggests

uneven change in various spheres of behavior within a single community, and even in the same individual (Gusfield 1967, Kahl 1968, Schnaiberg 1970).

This study will show the extent to which patterns of change in a peasant-artisan community of southern Mexico support the latter findings. It will identify interconnections among types of change and reasons for these interconnections. Thus it should lead to a better understanding of patterns of acceptance of those non-traditional procedures which tend to improve production and income and raise standards of living.

DEFINITIONS OF TERMS

A few key terms, used frequently and subject to varying interpretations in the literature, are defined here for the purposes of this discussion.

Conservatism has been defined as an attitude favoring non-change over change in a particular sphere of behavior. Progressivism, is here defined as an attitude favoring experimentation with new alternatives in a particular sphere of behavior. The types of change resisted or embraced are not limited to those advocated by Western capitalist societies, although in practice these are the kinds usually introduced.

For the sake of clarity, the terms "traditional" and "modern," with their connotations of past and present, will refer to usages acquired by the village before and after the turn of the 20th century, respectively.

"Peasant" will refer to one who lives and works in a rural community whether or not he practices agriculture. In fact, the majority of the inhabitants of the village studied are farmers to some degree, and their agricultural techniques are largely traditional.

METHODS OF STUDY

The hypotheses are tested in a microcosmic analysis in the form of a village study. The principal data consist of

1. an occupational census of village households
2. the results of two questionnaires
3. formal interviews with a few key informants

The first questionnaire was administered to a sample of 80 households, comprising approximately one-fifth of the total village population. The second was administered to 78 households, the sample having been selected to include the important occupational combinations.⁴

During the study I lived in the home of a former mayor of the village. My status as a student was understood by the community as a whole, and the nature of anthropological inquiry was familiar to some, as there had been previous visits by anthropologist Jean Hendry in 1955 and another student, David Young, for a brief period in 1966. The favorable impressions left by these workers facilitated the development of rapport for this study.

While the census, questionnaires, and some of the interviews were of a formal nature, they were supplemented by intensive participant-observation, including many informal conversations in a majority of the village homes. It was relatively easy to talk to the potters. Both men and women were glad of diversion as they pursued their routine tasks in the home. Non-potters, too, were very cooperative when they were free from their occupational activities.

The sample was designed to include the community's major economic activities. It consisted of 69 potters' households, 23 active in farming; 7 full-time farmers, one of which had given his lands to his sons for sharecropping but continued to go to the fields daily; and four households dependent primarily on wage earning, one supplemented wages with farming, another with storekeeping, and a third with tortilla sales. The fourth, a schoolteacher, had no other regular source of income. The sample included five pottery dealers, each received gross profits of at least 100 pesos weekly⁵ from that activity. Of the farmers, three had family histories of pottery making in the previous generation. Of the rest, three were immigrants from nearby hamlets, and one was the son of such an immigrant.

Figure 1. Percentage Of Households In Each Occupational Group, In The Sample And In The General Population, 1967-1968

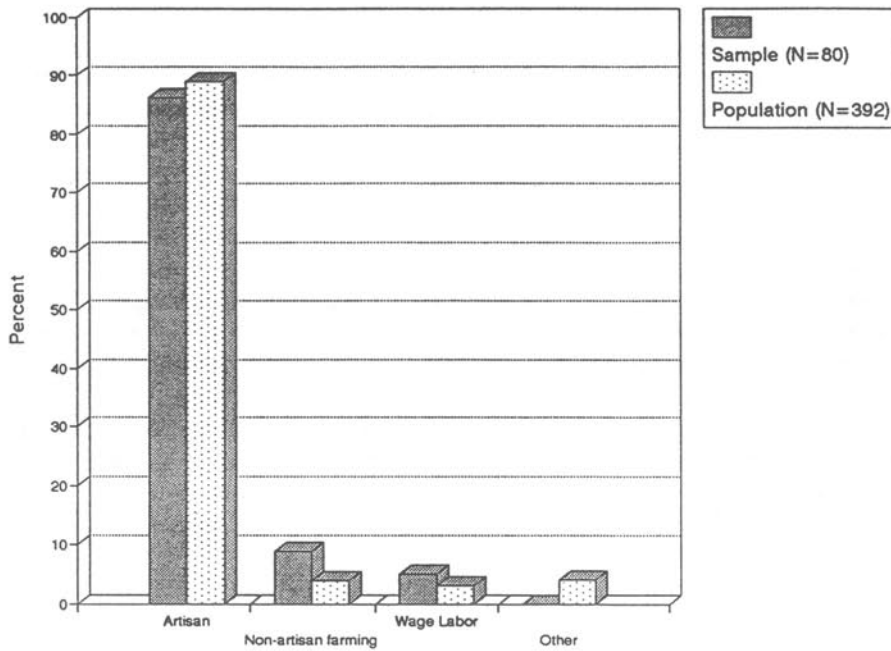
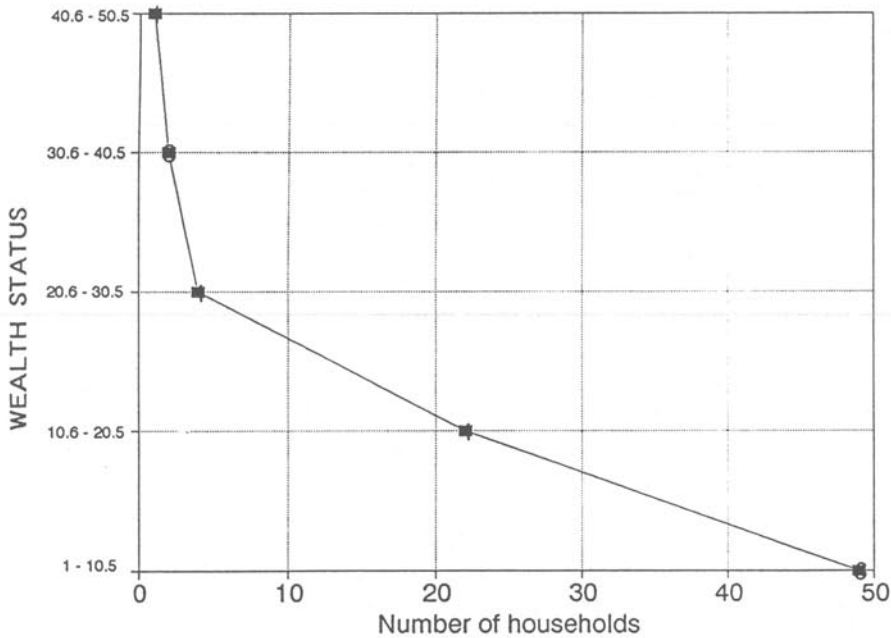


Figure 2. Wealth Statuses Of Sampled Households^a



^aFor operational definition of "wealth status" see Appendix B2. For household scores on wealth variable see appendix D.

In economic terms, the composition of the 1967-1968 sample was as follows:

A. 69 households with income from pottery-making, of which 54 derived substantial portions of their incomes from other activities:

1. 7 from irregular wage work and 5 from regular wage work
2. 26 from the product of farm lands, as landholder or landholder-cultivator or sharecropper
3. 4 from other secondary economic activities, such as storekeeping and pottery dealing
4. 12 from the product of farm lands and also from other secondary occupations

B. 7 non-artisan households deriving all, or almost all, of their incomes from the product of farm lands

C. 4 non-artisan households deriving most of their incomes from wages

Compared to the village population as a whole, the numbers of households in Groups B and C were disproportionately large (Figure 1) because of the need to provide sufficient numbers of units in each group and subgroup in order to examine their economic activities adequately.

By the time of the second period of field work in 1969-1970, the occupational pattern of the sample had changed slightly, due to the dispersal of two households (see endnote 4) and some shifts in the remaining households. The pattern in 1969 was as follows:

A. 67 households with income from pottery-making, of which 55 derived substantial portions of their incomes from other activities:

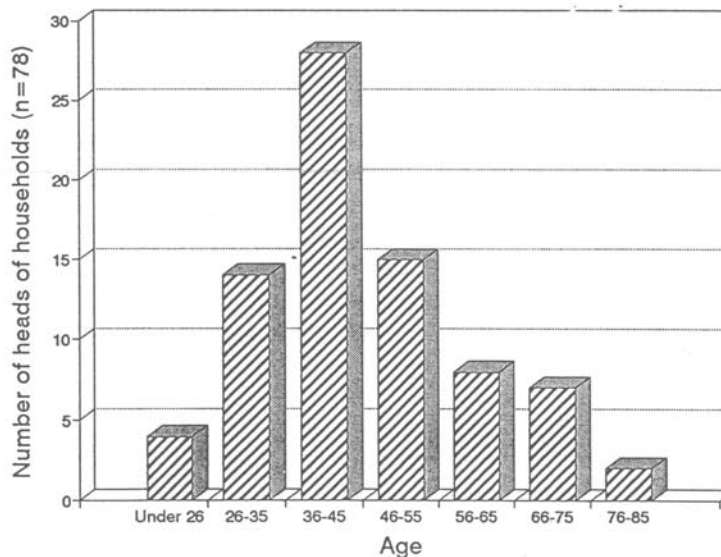
1. 3 from irregular wage work and 6 from regular wage work
2. 25 from the product of farm land
3. 7 from other secondary economic activities
4. 14 from the product of farm lands and also from other secondary occupations

B. 7 non-artisan households deriving all or almost all of their incomes from the product of farm lands

C. 4 non-artisan households deriving most of their incomes from wages

The plotting of wealth statuses in the sample, shown in Figure 2, indicates a steep reverse slope with lower statuses preponderant. This is characteristic of the village as a whole.

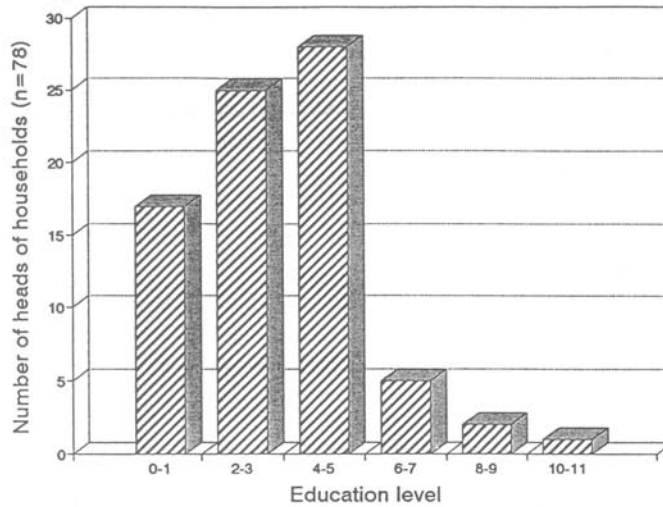
Figure 3. Ages of Heads of Households in the Sample



Figures 3 and 4 show that the heads of households responding to both questionnaires represented a wide range of ages and educational levels. To some extent, educational level is dependent on age. The complete elementary course has been available in the village only since 1958. It is also somewhat dependent on sex, as girls have traditionally been given less schooling than boys. In the past, the schooling of girls was rare, and even today most girls leave school after three or four years (see also Table 8, chap 4 page 156,) to take up their traditional role

as potters. Two-thirds of the female heads of households in the sample were illiterate and unschooled, as against 13% of the male heads of households. In the sample of 78, 9 heads of households or 11.5% were women. The number of female heads of household in the village as a whole was 41, or 10.5%; 10 of the 41 lived alone. Another consideration in the selection of the sample was representation from all of neighborhoods of the village. Finally, other things being equal, the selected households were those which appeared to be most cooperative and sincere during the field census.

Figure 4. Education Levels of Heads of Households in the Sample ^a



^aEducation level is represented by number of years of formal schooling plus 1, "1" being reserved for unschooled but literate individuals.

The major part of the field work was carried out from September 1967 through September 1968 in connection with a study of the Oaxaca regional marketing system. It was oriented toward economic themes, and the first questionnaire was formulated along these lines. The economic study included 17 household inventories, and records of daily purchases kept by three families for periods ranging from six to nine months. A second questionnaire, based primarily on attitudes toward change, was administered during a four-month period beginning September 1969.

Facets of social, cultural and economic life were selected for analysis. They included pottery-making and farming procedures, economic and educational mobility, involvement in community activities, material possessions and desiderata, and medical beliefs and practices. In each category items were selected from the questionnaires which would reflect acceptance or non-acceptance of new behaviors by the respondents. A scoring system was devised, giving maximum weight (1.0) to the acceptance or practice of non-traditional behaviors for the selected items, and nil weight (0.0) to non-acceptance or rejection of such behaviors (see Appendix A). Acceptance and rejection were measured by both overt practices, such as installation of utilities in the home or adoption of non-traditional styles of dress, and by attitudes, for example, career aspirations and occupational preferences. In most cases, allowance was made in the scoring for intermediate practices and attitudes. In addition, the descriptive variables of age, number of years of education, degree of cosmopolitanism, and wealth status were scored for each respondent. (For operational definitions of "cosmopolitanism" and "wealth status", see Appendix B.) Through computer analysis rankings for respondents on each variable and questionnaire item were obtained, and also regression matrices for all variables and items, and for the groups of items constituting each category. The statistical method was used as an adjunct to the ethnographic method, to suggest relationships for examination and to test conclusions drawn from the observational data.

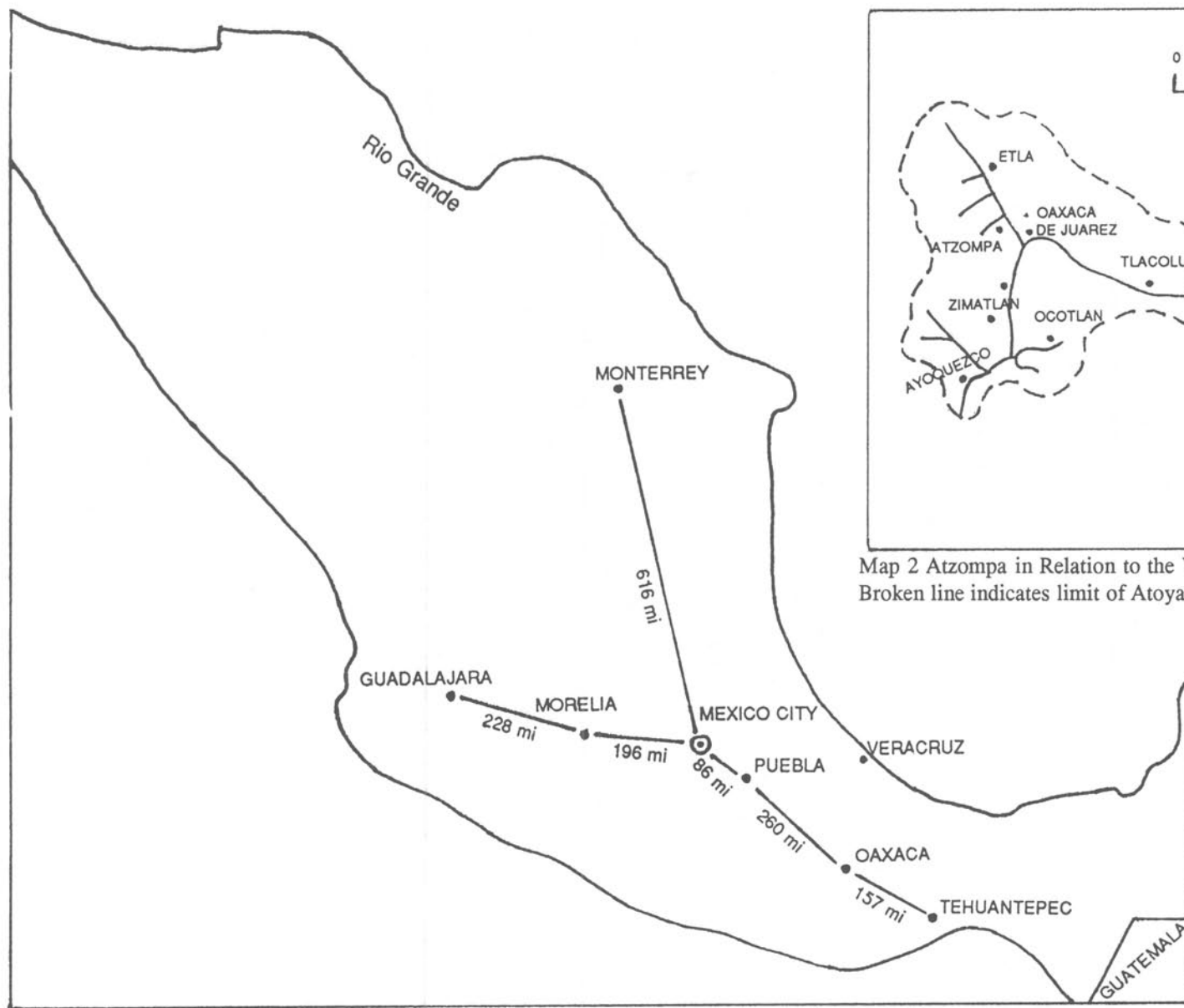
THE VILLAGE

The village of Santa María Atzompa in the State of Oaxaca, Mexico, is situated in the Valley of Oaxaca, about five miles northwest of the state capital of Oaxaca de Juárez. To the south of the village lies the archaeological site of *Cerro de Atzompa* ("Atzompa Hill"), divided by a small valley from Monte Albán. According to oral tradition, Atzompa was Mixtec speaking, but no trace of the language remains.⁶ All residents now are Spanish speaking. This tradition is supported by the facts that the village was a dependency of Cuilapan, that it had a Mixtec name, and that it was listed with Mixtec communities by Villa-señor y Sanchez in the 18th century (1952:II:119-121) and in the 20th century by Esteva (1913:53).⁷ Villa-señor y Sanchez says of the Cuilapan district, under which Atzompa is listed: "In this District the Mexican Language is little spoken, since Mixtec is common in all the Towns that comprise it" (1952:II:121). In the early 1930's, Elsie Clews Parsons wrote that Atzompa was "in the Mixteca" (1936:250 n. 20), a rather strong statement, inasmuch as "the Mixteca" in current parlance is considered to include the Mixteca Alta and the Mixteca Baja but not Valley settlements. It may be that some Mixtec was spoken in Atzompa at the time of Parsons's visit, but she does not say so.

Today, villages such as Santa María Atzompa, with mestizo populations, are culturally as well as genetically, mixed. Most people sleep on floor mats and base their diets on the Prehispanic staples of maize, *frijol* beans and chile, although the total diet includes many Spanish introductions. They use terms derived from Nahuatl such as *chiple*, an adjective characterizing the jealousy of a child toward a new-born or expected sibling, and *samosuchitl*, the name of a popular flower for the Day of the Dead, as well as the Aztec names for their villages. Some of the pottery forms produced by Atzomperos today resemble forms that were associated with the Mixteca in Prehispanic times (for example, see Bernal 1966:355, Fig. 12). The glaze they use, however, is a Spanish introduction. The appliqué decoration and small animal figurines of Atzompa potters have counterparts in Prehispanic pottery, but were only recently introduced to the village. Perhaps one may call this "re-culturation", although we do not know that the appliqué and animal figurines were products of this particular site. Indeed, to "invoice back" the various traits found in a village such as Atzompa would be a complex and perhaps impossible task.⁸

Undoubtedly, Atzompa was little more than a hamlet at the time of the Spanish conquest.⁹ Even as late as the publication of the work of Villa-señor y Sanchez in the mid-18th century, it numbered only 143 families. By the late 19th century it had grown to 1,468 inhabitants (Martínez Gracida 1883 [unpaginated]). Residents say that in the last generation the *Barrio Chico*, the smaller of the two village wards, was very thinly populated, although it then had its own chapel and its own "saint." Today, the chapel lies in ruins, and the "saint," a figure of San Sebastian, is now in the main church. The *Barrio Chico* received most of the farmers who migrated in from the hamlets and the dissolved *haciendas*. However, some immigrants married residents, and are residing with their spouses in both *barrios*. There has been enmity between the *barrios* in the past, particularly during the Agrarian Revolution, when some of the larger landholders of the *Barrio Grande* supported the *hacendados*. There seems to be little hostility now, however, and inter-marriage between the *barrios* is not considered unusual.

The village of Atzompa has more than 2,000 inhabitants and is the *cabecera* (head town) for a *municipio* (township) of five hamlets.¹⁰ The field census of 1967-1968 listed 392 households, that is, family groups living on a single budget. Population growth is accelerating here as elsewhere. While the village grew 12% during the 20-year period between 1930 and 1950 (from 1,463 to 1,631), it increased even more -- 13% -- in the seven years between January 1960 and February 1967 (from 1,726 to 1,948). In other words, the growth rate increased from 0.6% per year to 1.8% per year.¹¹ There is limited immigration. Immigrants are welcome, provided they participate in community activities, both civil and religious. In addition to farmers who have moved in from other communities in the *municipio*, two butchers and one storekeeper are immigrants, from Roalo near Zaachila, from neighboring San Jacinto Amilpas, and from Oaxaca City, respectively. A man from the State of Puebla settled in Atzompa in the early 1940's and became a wealthy miller and butcher. He was run out of the village when tensions developed between him and other villagers concerning a transport service he controlled. Probably village reaction to what was considered an arrogant manner would not have been so severe in the case of a native-born villager.



Map 2 Atzompa in Relation to the Valley of Oaxaca
Broken line indicates limit of Atoyac River Drainage

Map 1 Road distances (in miles) from Oaxaca to Other Cities in Mexico

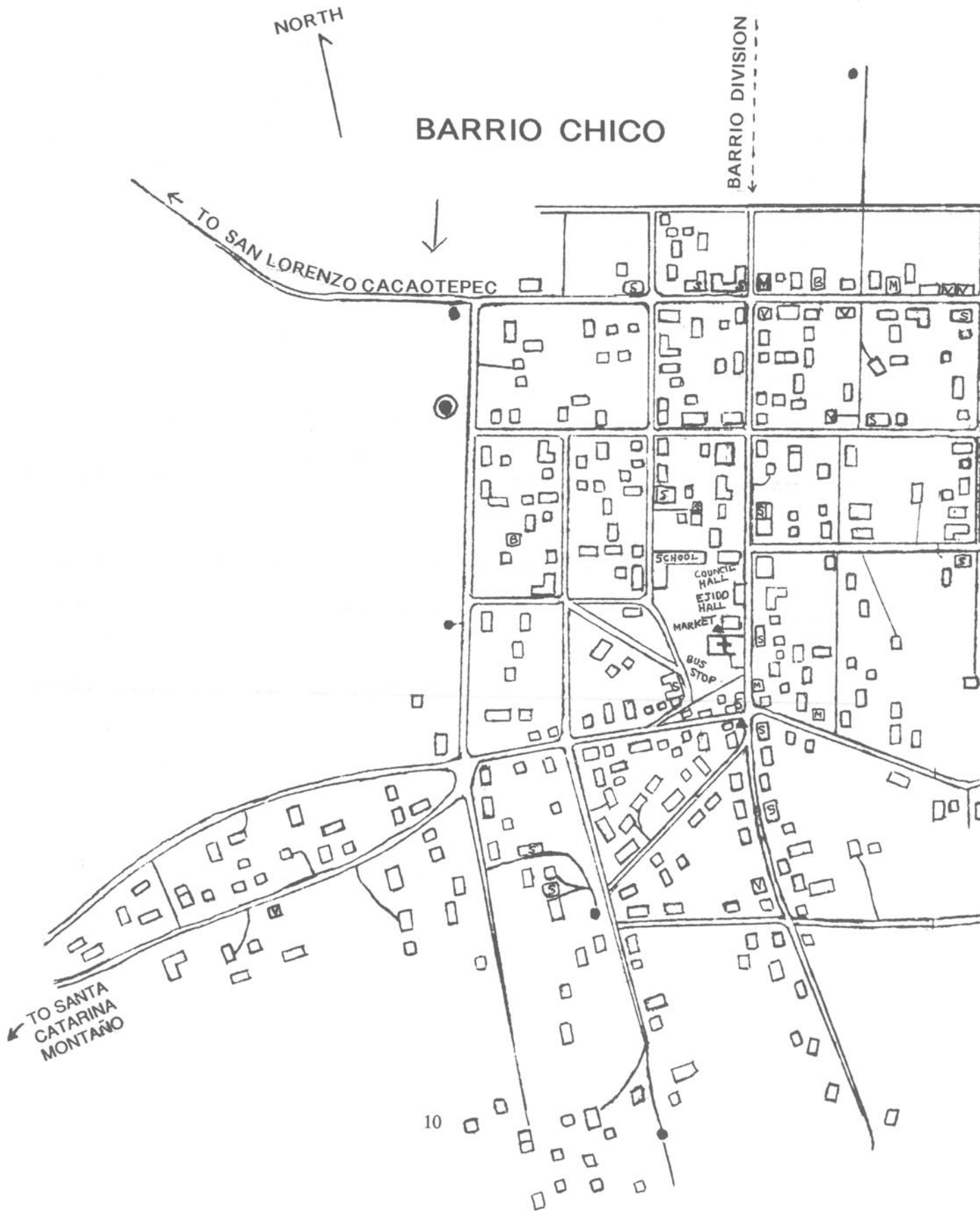
Entering the village from the southeast, one sees several adobe dwellings and a few *jacales* (cane huts) dotting the hillside to the left of the road. These houses in the communal lands are fairly recent, and the number is growing as the population expands, and as real estate values in the village rise. The cost of a 100 square-meter lot in the communal lands is only 100 pesos, a token payment to the village council. Usufruct rights may be transmitted with the council's approval. The village seems quite dry at the southeastern end, but as one proceeds westward toward the *Barrio Chico*, trees and grass are more luxuriant, and a plot of tall sugarcane shares a street corner with a large well. Here wells never run dry. A brook flowing into the *Barrio Chico* from the direction of San Andrés and San Pedro Ixtlahuaca runs full when the rains are heavy, and even overflows. The lowlands between Atzompa and San Lorenzo Cacaotepec, to the northwest, are also sometimes flooded.

Back-yard *milpas* (maize fields) are rare, but farm land to the northeast adjoins residential property. These fields extend eastward to the boundary of the San Jacinto Amilpas *municipio*. To the southwest lie former *hacienda* lands near the hamlet of Santa Catarina Montaña. Most of these are now farmed by Atzomperos as *ejidos* (government-grant plots). Southeastward, *ejido* lands taken from a hacienda near Montoya are drier, and farther south, *ejido* lands lying at the western foot of the Monte Albán ridge near Los Ibañez are said to be poor. In any case, it is a long way, about 5 miles, for Atzompa cultivators to travel daily.

The bus turns south as it reaches the dividing line between the two wards and stops alongside the church at the edge of the main square. The church, dedicated to Saint Mary of the Assumption, was renovated and roofed between 1945 and 1954. Subsequently, a new meeting hall was built for the *ejido* holders, the village council hall was replaced, and in 1969 construction of a new schoolhouse was in progress. Atzomperos are proud of their public buildings, constructed entirely through community assessments and communal labor.¹² A new public water system was established in 1967 with federal and state aid, under the direction of the Health Department. A monument in its honor adorns the square, and the existence of the system is confirmed by the water faucet outside the marketplace shed.

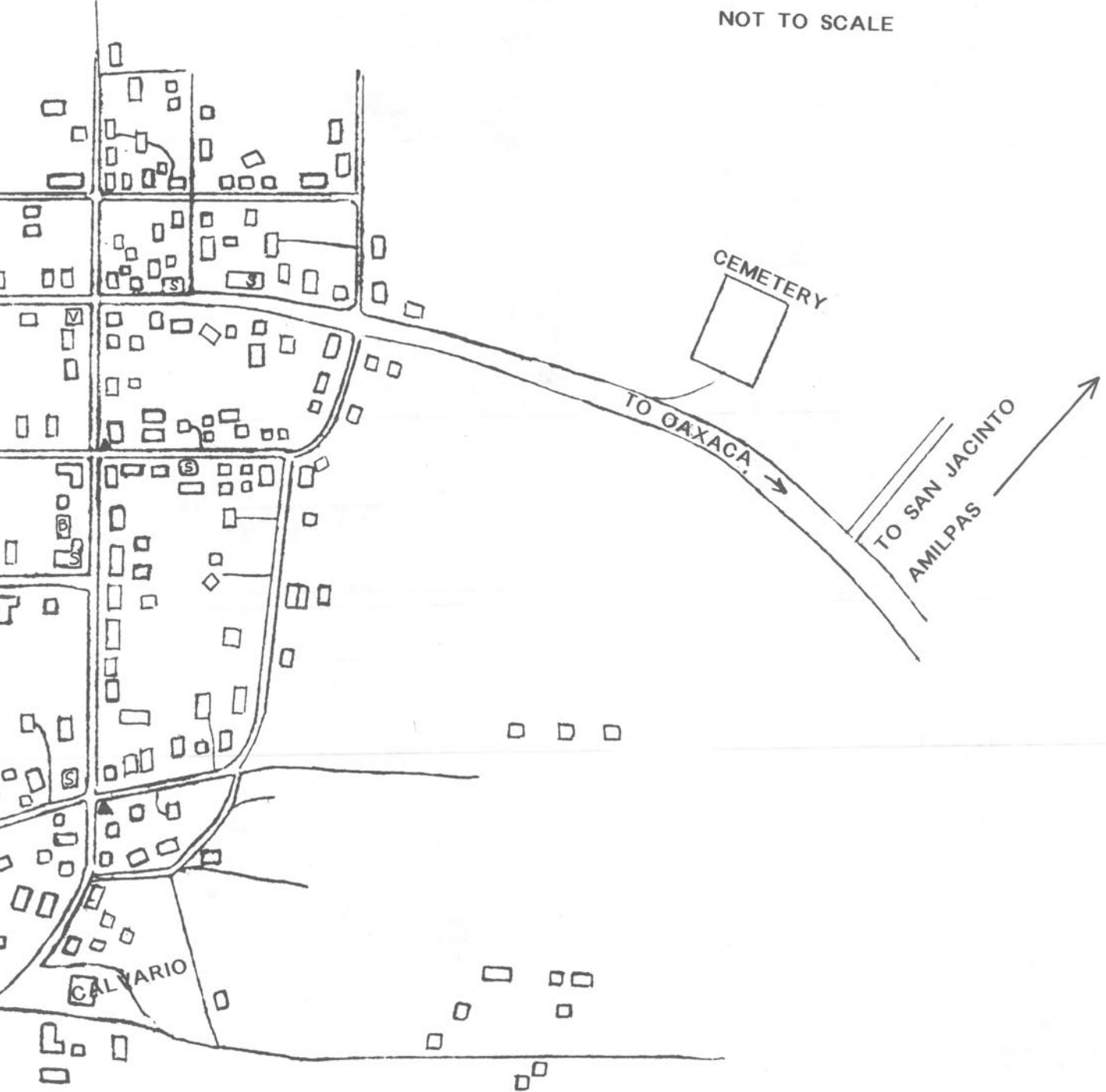
Tuesday is the primary market day. In the previous generation the marketplace consisted of a few vendors, who congregated at the intersection of two main streets. Since this is a main route for animals being driven to and from the fields, the location was changed to the main square, and in 1952 a shed was constructed. Today the marketplace houses five regular daily vendors, two of them local women, and 20 to 25 vendors on a busy Tuesday before All Saints Day. In the mornings, there are always a few tortilla vendors from the hamlets selling outside the shed. On a Tuesday, there may be ten or a dozen vendors outside, selling a variety of goods. Atzompa is a good place to sell, since potters always have a little ready cash, and most of the school-children spend 20 centavos in the marketplace during recess. An attraction for the non-local vendors is the imperfect pottery offered for sale at bargain prices at the Tuesday market by girls from the pottery making households. Potters are ashamed to engage in this kind of disadvantageous selling, so they send their daughters. On Tuesdays and also on Fridays, the secondary market day, itinerant vendors, as well as some of those who sell in the marketplace, make house-to-house calls. They sell their foodstuffs and usually buy some pottery for resale. Most of them deal regularly with the same potters. These small-scale traders represent mainly the villages of San Lorenzo Cacaotepec, San Pablo Etlá, San Felipe Tejalapan, and San Raymundo Jalpan.

Six stores lined the bus route in 1968, with a seventh, the largest, at the corner of the church yard just beyond the bus stop. Ten others were scattered through the village. Five of the stores were minimal operations, primarily in the *Barrio Grande*, and new ones were opening continually. Between the inception and the conclusion of the field work, seven additional stores had been established and two closed, giving a net total of 22 in early 1970. (Hendry [1957] reported 12 stores in 1955.) One of the major village stores dates to 1910 and another to 1938. The rest were established from 1953 onward. Also, along the bus route, are two maize mills and a butcher shop. In 1969 a third mill opened, just behind the second. In addition to the butcher shop on the main street, there are two regular pork butchers, one in each ward. Two other households slaughter pigs occasionally to sell the pork products. Since 1955 the number of regular butchers has remained stable. The number of mills has increased from two to three, and the number of barbers is up from one to three.



BARRIO GRANDE

NOT TO SCALE



- S- STORE
- M- MILL
- B- BUTCHER'S SHOP
- V- VACANT
- PUBLIC WELL
- ⊙- WELL FOR POTABLE WATER SYSTEM
- ▲- PUBLIC WATER FAUCET
- PATHWAY



Jacal



Hilling and Weeding Sprouted Maize



Mayordomía Fiesta



Wedding Car

The streets are laid out roughly in rectangular blocks or *manzanas*. The grid is fairly regular at the margins, although the streets tend to fade into paths on the slopes of the hills. At the southeastern corner of the grid, on a height, is the *Calvario*, a chapel used once a year at Easter time to house the figure of the dead Christ. The *manzanas* are divided into house lots which often are separated from one another by *organos*, a type of cactus. Placement of the house on its lot is variable, but there is always an open space or patio used for a play area, for clay and temper preparation, for laundering, for washing dishes, for storing water in large *ollas* and for firing pottery. Almost every house lot is marked by an above-ground kiln made of stones bonded with an adhesive clay called *pito*. The size of the kiln gives some indication of the size of the ware made by the household. Alongside the house is a roughly made shed of cane and maize leaves which serves for a kitchen. Alternatively, the "kitchen" may be a corner of the porch. Rarely is cooking done in the living quarters. That space is needed for pottery production, storing pots, and, if the family has a maize harvest, storing ears of maize.

In the early 1960's a new bus route to Oaxaca city was developed with community assessments and a contribution from the bus company in Oaxaca. The route was leveled in 1961 by communal labor and in 1962 the main street, where the bus enters the village, was widened. The new route was used for the first time in 1965. Since 1969, the streets and many of the houses have undergone electrification. Gradually, paraffin candles and the crude little kerosene lamps called *bombitas* are giving way to electric bulbs. Street lighting has taken much of the fear out of going abroad at night. Now, in the well-lighted streets, it is easier to avoid belligerent dogs and late tipplers weaving home from the bars.

The essential social features have not changed significantly since Hendry's 1957 report. These include the prevalence of village endogamy, virilocality, and wife stealing or elopement; the multiplicity of *compadrazgo* relationships and the great importance of this institution in social relations.¹³ The class structure is still flexible, but the accumulation of wealth in new forms and the growing importance of education and of white-collar and professional opportunities for villagers are having effects on the socio-economic patterns. New attitudes are developing toward traditionally prestigious civil and religious service. The civil government has acquired continuity and is becoming an instrument for progress, incurring increased responsibilities. Leading it has become a task for forceful progressives. These changes and others will be examined in the chapters that follow. They deal with occupational practices, socio-economic advancement or mobility, the individual's relationship to his community, preference patterns for goods and other desiderata, and medical practices and beliefs.

Notes to Chapter 1

1. The community is entirely Spanish speaking; no trace of its aboriginal language remains. From appearances, the inhabitants are racially mixed, with a wide range of skin color, head shape, nose shape, etc. The life style also shows a range, as indicated by the data presented below, particularly in Chapters III and V. More important is the Atzompero's self-image. A question about his race elicits the term "*mestizo*" from a villager. He looks with disdain on the "*inditos*" the shabbily-dressed Indians who live on the slopes of the western Sierra, speak Spanish poorly, and in his view, are dirty and ignorant. On the other hand, Atzomperos feel at a social disadvantage with "*gente decente*" of the city, although many have *compadres* among the urban professional as well as shopkeeping classes. The feeling of disadvantage stems not from race but from rural status. One villager remarked that he takes care to dress well when shopping in the Oaxaca market district in order not to be mistaken for an Indian, who would be treated as an inferior by *mestizo* market vendors.
2. Webster's International Dictionary, Third Edition, 1961.
3. Speaking of agrarian systems, Levy makes the point that the range of variation found is greater in relatively non-modernized societies. Relatively modernized societies tend to be more isomorphic.
4. The study was carried out in two discontinuous periods, as will be explained below. During the interval, one of the 80 households left the village, and another was dissolved as the result of outmarriage, death and adoption.
5. At the time of the field work one Mexican peso was equivalent to US\$0.08 (US\$1.00 = 12.50 pesos).

6. This opinion was given by a man in his 40's and another, unrelated, in his 60's. The latter informant is considered by villagers to be a local authority on history since he has considerable interest in historical events. No contrary opinion was elicited, that is, no one claimed that Atzompa had been Zapotec.

7. According to Burgoa (1934:I:397), when the Spaniards arrived, they found the plains around the future site of Antequera peopled with Mixtec hamlets. It is possible that one of those hamlets was Santa María Atzompa, called "Dzinimini" in the Mixtec language (Salazar 1962:40).

8. A term used disparagingly by Malinowski to emphasize his anti-historical view of culture (Malinowski 1938:xviii).

9. There has been no excavation of the village itself, but a site just south of it has yielded materials ranging in time from the Early Formative, tentatively dated as early as 1400 B.C., to the Post-Classic. See Winter, in Flannery *et al*, 1970.

10. The figure 2,025 was reported informally by the mayor at the time of the 1970 national census. As of the time of writing, the census has not yet been published.

11. There was a slight decrease in population between 1930 and 1940, greater outside the *cabecera* than within it, very probably reflecting the dissolution of the *haciendas* in the previous decade. This decrease was compensated by a fairly large increase between 1940 and 1950 (15%); but the rate of growth decelerated during the 1950's, possibly due to temporary emigration as villagers sought work as *braceros* in the United States. The increase in the growth rate has been sporadic.

12. The government provides food for the workers on village projects. Villagers are unaccustomed to most of these foods -- pressed meat, butter, wheat flour -- and eat little of them. For the construction of the church and the schoolhouse a Oaxaca mason was employed.

13. "Virilocality" means residence on the house lot of the groom's family of orientation; "uxorilocality", residence on the house lot of the bride's family of orientation. It should be emphasized that there are no rules of village endogamy or virilocality. Virilocality is preferential, but uxorilocality and neolocality occur. There is some "marrying in" and "marrying out" of the community, but endogamy prevails since there is no rule against it, and young villagers are more likely to meet other villagers than outsiders.

CHAPTER II

PROGRESSIVISM AND CONSERVATISM IN POTTERY PRODUCTION AND SALE

THE ECONOMIC ROLE OF THE CERAMICS INDUSTRY

There were 348 households engaged in pottery production in early 1968, 88.8% of the total household in the village. Involvement with the craft was variable. Only 21 had no other source of income; 41 more supplemented pottery income only with irregular work as farmhands during the cultivating season.

Most pottery-making households complete a kilnload once every two weeks and a kilnload is usually worth between 200 and 300 pesos. With more than one pot former, a household can produce a kilnload weekly. If the household engages in other economic activities, it may fire only once every three or four weeks. The size of the kiln relative to the size of the pots, the number of pot formers, and the intensiveness of production all play a part. Table 1 shows gross and net income from pottery production for each of the pottery-making households in the sample. Numbers 25, 30 and 48 are based on averages of monthly records of income and expenditures over periods of six, nine and eight months, respectively. The remainder are based on informants' estimates of income and expenditures. In these discussions, \$ refers to pesos. At the time of the field work, one Mexican peso was equivalent to U.S. 0.08 (U.S. 1.00=12.50 pesos). In a few cases the informants may have intentionally underestimated their incomes. However, in addition to a question about gross income, a question dealing with daily production and unit price was inserted as a cross check, and a question about seasonal price fluctuations served as a cross check on unit price. From this evidence it appears that while some households can subsist on pottery income alone, others must supplement it.¹ In some instances, pottery production is practiced as a secondary economic activity.

Some potters sell all ware crude (unfired) to fellow potters. This income must be supplemented in an average-sized household. For example Household 25, consisting of a widow and four children, adds to its small pottery profits in minor ways. One son earns \$1.50 daily as a cowherd, and burro rental to other potters yields at least twice as much. On the other hand, Household 62 can get along without supplementing its income. It consists of only two members, an elderly widower and his daughter. However, this household not only has low income but owns no house lot and was forced to move twice during the period of the study.

In households with no alternative resources, income from sale of finished ware usually provides at least the necessary minimum income of \$10.00 a day. There are exceptions in the sample (see Table 1), e.g. household 49, consisting of husband, wife, and four children. In 1968 this household was selling part of its production crude but grossed about \$2 40 a month from fired ware. The husband worked at least two days a week elsewhere. He earned \$4.00 a day digging tempering material to sell and \$10.00 a day for cutting maize stalks. During the cultivating season he worked more frequently and later in the year, he obtained a well-paying, full-time job in a factory in the Etna district, living much of the time with cousins there. His wife remained in Atzompa with the children, making pottery to sell crude.

Household 66 consists of husband, wife, and two small children. This family cannot long survive on the income it has as the children grow. Fortunately, it lives on the husband's father's house lot, where aid is near at hand in case of emergency. The husband is capable of greater production on the kick wheel but is limited by the quantities of clay he can buy from re-sellers.

Household 43 lives on the edge of what villagers would call poverty. The husband has been employed from time to time in regular wage work but had no steady job at the time of the interview. He worked irregularly as a farmhand, and had a one-day-a-week job working his father's lands in return for use of his father's maize supply. He and his brothers rotate this work. In 1968 he requested, and received, an *ejido* parcel.

Table 1
Pottery Production Costs and Income for 69 Potters' Households, 1968

Household	No. of potters	Weekly Use	Glaze	Weekly Use	Firewood	Weekly Use	Clay	Other Materials, Weekly	Total Weekly Materials Cost	Weekly Gross Income	Weekly Net Income	Other income sources ^c
		Kg.	\$ ^a	Ca. ^b	\$	Ca.	\$					
1	2	3.0	19.50	1.5	12.00	2.0	30.00	---	61.50 ^d	126.00	64.50	2
2	1	1.75	11.40	1.0	0.75	0.75	5.00	---	17.15	148.50 ^e	131.35	1
3	1	2.0	12.00	1.5	12.00	0.5	7.50	1.00	32.50	90.00	57.50	1
4	2	4.5	27.00	2.5	18.75	1.5	22.50	6.00	74.25	225.00	150.75	0
5	1	3.0	18.00	2.5	18.75	0.5	7.50	10.00	54.25 ^d	180.00	125.75	1
6	2	4.0	24.00	3.0	22.50	0.5	7.50	6.00	60.00	186.00	126.00	0
7	1	2.3	13.70	1.1	8.00	0.6	9.00	7.10	37.80	124.50	86.70	2
8	2	1.5	9.00	1.0	1.00	1.0	3.00	---	13.00	90.00	77.00	0
9	3	2.0	13.00	1.0	6.00	1.5	18.00	---	37.00	160.00	123.00	1
10	1	2.0	10.00	1.5	15.00	1.0	5.00	1.25	31.25	108.00	76.75	1
11	1	9.0	58.50	3.0	26.25	1.0	3.00	2.25	90.00 ^d	210.00	120.00	0
12	1	2.25	14.60	1.4	10.50	0.75	9.00	1.25	35.35	146.25	110.90	3
13	1	2.3	14.00	1.0	7.00	0.7	10.50	1.70	33.20	90.00	56.80	1
14	2	8.0	48.00	5.0	50.00	2.0	6.00	8.00	112.00	262.50	150.50	1
15	1	2.0	13.00	2.5	30.00	1.5	7.50	2.00	52.50	150.00	97.50	2
16	2	0	0.00	0	0.00	2.0	6.00	7.00	13.00	58.00 ^e	45.00	1
17	1	0	0.00	0	0.00	1.0	10.00	4.00	14.00	43.75 ^f	29.75	2
18	2*	3.0	12.60	1.0	7.50	0.5	7.50	2.35	29.95 ^d	81.00	51.05	1
19	1	1.5	7.50	3.0	22.50	1.5	5.00	0.75	35.75	122.10	86.35	0

Household	No. of potters	Weekly Use Glaze		Weekly Use Firewood		Weekly Use Clay		Other Materials, Weekly	Total Weekly Materials Cost	Weekly Gross Income	Weekly Net Income	Other income sources ^e
		Kg.	\$ ^a	Ca. ^b	\$	Ca.	\$					
20	2	0	0.00	0	0.00	0	0.00	---	0.00	36.00 [*]	36.00	0
21	1	2.0	12.00	2.0	11.00	1.0	5.00	---	28.00	125.00	97.00	1
22	2	1.5	9.75	0.75	7.50	2.0	10.00	---	27.25	96.00 [*]	68.75	1
23	1	3.3	20.00	0.7	5.60	0.3	1.00	---	26.60	120.00	93.40	1
24	1	1.5	9.75	1.0	9.00	1.0	0.00	---	18.75	76.50 [*]	57.75	1
25	1	0	0.00	0	0.00	0.7	2.10	---	2.10	42.00 [*]	39.90	0
26	1	8.0	48.00	4.0	28.00	3.0	30.00	---	106.00	312.00	206.00	2
27	1	3.0	15.00	2.0	15.00	1.0	15.00	6.80	51.80	180.00	128.20	2
28	2	3.5	18.00	2.5	20.00	1.0	3.50	3.25	44.75	137.50	92.75	1
29	1	2.5	15.00	1.0	10.00	1.5	6.75	2.00	33.75	120.00	86.25	0
30	3 [*]	9.0	58.50	2.0	20.00	1.5	22.50	7.00	108.00	185.50	77.50	1
31	2	2.0	13.00	0.8	5.80	1.7	5.00	---	23.80	100.00	76.20	1
32	1	0	0.00	0	0.00	0	0.00	---	0.00	54.00 ^f	54.00	1
33	2	0	0.00	1.25	4.50	1.5	9.75	---	14.25	110.00 ^f	95.75	2
34	1	0	0.00	0.7	5.60	1.4	0.00	1.40	7.00	110.00	103.00	0
35	1	3.25	17.10	1.0	10.00	0.5	2.00	3.25	32.35	112.80	80.45	1
36	2	3.0	18.00	2.0	15.50	1.0	15.00	6.00	54.50	150.00	95.50	2
37	4	3.5	22.75	1.25	12.50	1.5	18.00	6.00	59.25	159.00	99.75	0
38	2	10.0	60.00	5.0	35.00	1.0	15.00	2.00	112.00	400.00	288.00	0
39	2 [*]	1.25	7.50	0.75	6.00	0.75	7.50	---	21.00	82.50	61.50	1

Household	No. of potters	Weekly Use Glaze		Weekly Use Firewood		Weekly Use Clay		Other Materials, Weekly	Total Weekly Materials Cost	Weekly Gross Income	Weekly Net Income	Other income sources ^c
		Kg.	\$ ^a	Ca. ^b	\$	Ca.	\$					
40	2	0	0.00	0	0.00	1.0	15.00	12.00	27.00	137.50 ^f	110.50	0
41	4	1.5	9.75	1.0	8.00	0.5	6.00	---	23.75	108.00	84.25	2
42	2	3.0	19.50	1.5	13.50	2.5	12.50	2.00	47.50	156.00	108.50	0
43	2	4.0	13.00	1.5	13.50	2.0	24.00	4.00	54.50	126.00	71.50	0
44	3 ^a	8.0	52.00	3.0	24.00	1.0	12.00	6.00	94.00 ^d	216.00	122.00	2
45	1	4.0	26.00	2.0	15.00	1.0	15.00	6.00	62.00 ^d	120.00	58.00	1
46	1	2.5	16.25	1.0	7.00	0.5	1.50	3.00	27.75	135.00	107.25	0
47	1	2.0	13.00	0.7	6.00	0.25	3.75	2.50	25.25	101.25	76.00	1
48	1	4.0	22.00	1.0	9.70	0.5	1.85	3.00	36.55	136.40	99.85	0
49	1	2.5	16.25	0.7	7.50	1.5	4.50	1.00	29.25	84.00 ^e	54.75	0
50	2	4.0	24.00	1.0	7.50	0.5	7.50	5.00	44.00	150.00	106.00	1
51	1	4.0	26.00	2.0	16.00	1.0	13.50	---	55.50	168.00	112.50	1
52	2	8.0	48.00	6.0	60.00	2.0	28.00	---	136.00	285.00	149.00	1
53	1	1.25	8.00	1.0	9.00	0.25	1.25	---	18.25	85.50	67.25	2
54	1	3.0	19.50	1.5	12.00	1.0	5.00	---	36.50 ^d	90.00	53.50	1
55	2	4.0	26.00	1.25	12.50	1.0	5.00	2.00	45.50	132.00	86.50	1
56	1	1.25	7.50	0.6	5.00	0.25	0.00	---	12.50	108.00	95.50	0
57	1	1.25	7.50	1.25	9.40	1.0	12.00	2.00	30.90	75.00	44.10	1
58	1	0.75	4.90	0.6	5.00	1.5	4.50	2.25	16.65	62.00 ^e	45.35	1
59	3	0	0.00	0	0.00	4.0	0.00	2.00	2.00	115.00	113.00	1

Household	No. of potters	Weekly Glaze Use		Weekly Firewood Use		Weekly Clay Use		Other Materials, Weekly	Total Weekly Materials Cost	Weekly Gross Income	Weekly Net Income	Other income sources ^c
		Kg.	\$ ^a	Ca. ^b	\$	Ca.	\$					
60	1	1.0	6.50	0.75	6.40	0.75	1.90	---	14.80	33.00	18.20	1
61	2	0	0.00	5.0	40.00	2.0	30.00	4.00	74.00	216.00	142.00	1
62	1	0	0.00	0	0.00	1.0	5.00	---	5.00	45.00 ^e	40.00	0
63	4 ^a	6.0	39.00	3.0	22.50	3.0	6.00	8.00	75.50	228.00	152.50	0
64	2 ^a	5.0	32.50	1.5	12.00	2.5	37.50	---	82.00	172.80	90.80	1
65	1	2.0	10.00	0.7	4.90	0.3	3.30	3.00	21.20	50.00	28.80	3
66	2	4.0	24.00	5.0	35.00	1.0	10.00	---	69.00	133.20	64.20	0
67	1	2.5	16.25	1.7	17.50	1.5	7.50	2.00	43.25	127.50	84.25	1
68	3	4.0	26.00	4.0	28.00	2.0	23.00	6.00	83.00	288.00	205.00	0
69	1	4.0	26.00	3.5	35.00	0.5	0.00	---	61.00	136.40	75.40	1

^a Mexican pesos. Figures rounded to nearest \$0.05

^b "Ca." - *cargas* (burro loads)

^c Includes major income sources only: cultivation of at least .5 hectares of land, storekeeping, pottery dealing, regular wage work. Minor activities such as finishing crude (unfired) ware bought from others, cattle herding, and burro rental are not included.

^d Includes costs of glaze and firewood for finishing ware bought crude from other sources.

^e Some or all of income obtained from sale of crude ware to fellow potters, who finish and resell it.

^f Part or all of production is glazed and fired on half shares. The potter who provides the glaze and firewood keeps half of the ware as payment; the former is free to sell the other half at full price.

^g Older woman who works little

Some other households, with low pottery income but fairly regular wage income (counted as one point under "Other Income Sources" in Table 1), lose or leave their employment from time to time. In this category are Households 32, 58 and 69. Their financial situation is precarious for this reason, but there is often day-labor available -- substituting for villagers assigned to communal labor, shelling maize, helping with house construction, cultivating, grinding glaze, bringing in clay and temper to sell, etc.

A young man and wife have minimal consumption needs. As the family grows, the number of pot formers usually grows also. A couple that is left alone in old age, because they are childless or because all the children have married out, again have minimal needs, but due to their age their production is diminished. There are exceptions, e.g. one widow over 80 years old was still quite a vigorous pottery producer, although she was able to supplement pottery income with returns from land cultivation and moneylending. Thus, income requirements, as well as the household's resources in personnel and energy level, fluctuate during the life span. Diligence in pottery-making is also a factor in income. For example, Household 4 has at least as much earning capacity as Household 38, but Household 4 has only two members to support. It can get along with much less income than Household 38, with 10 members, and usually does not work to capacity. The requirement for child care might have had the effect of lowering production in Household 38. However, the eldest child is a girl who does not work pottery but does help to look after her siblings.

The marriage of a son in this ideally virilocal community usually brings an additional producer into the household, at least temporarily. Most sons live on the paternal house lot and remain in the family budget at least for the first few months of the marriage. If a son brings in a girl by elopement, he remains in his father's budget until the expensive wedding can be held, sometimes two years or more later. On the other hand, the loss of a daughter through marriage or elopement reduces a household's pottery income.

If newlyweds are neolocal rather than virilocal, and occasionally even when their residence is virilocal, a choice is made between the wife's pottery form and the one her husband's family produces. They weigh the advantages and disadvantages, that is, the cash and effort inputs for each type.² Never was consumer demand for a specific form given as a reason for selecting it; potters assume that one form sells as well as another. One villager, however, indicated that the fact that she and her daughter-in-law produce different forms is helpful for sales, since if one type does not "move" quickly, the other may. The head of Household 26 expressed satisfaction with the large casseroles and bowls his wife produces, because the unit price is high.

During her lifetime a woman may learn other forms if she is interested, chiefly from relatives, and her husband's family may wish to learn her specialty.³ Village potters are even glad to teach immigrant women, whether their purpose is casual or a matter of necessity. The informant's wife in Household 53 was formerly a tortilla vendor from one of the hamlets of the Atzompa *municipio*. She learned pottery-making in a village home where she sold tortillas, and while still living in the hamlet she sold a basketful of her pots. This woman is technically a potter, but her primary economic activity now is selling flavored ice water in the small Atzompa marketplace, while her daughter-in-law works pottery at home. Before the All Saints holiday, however, she turns to pottery-making to take advantage of the seasonal high demand and high prices, as does another Atzompera who normally makes her living by marketplace vending.

In such cases, pottery production is the ancillary activity which provides supplementary income for luxuries, and even at times for necessities. In 1968, when drought was responsible for an exceptionally poor harvest, the daughter-in-law of one of the village's full-time farmers reverted to pottery-making to compensate for reduced farm income. The wife of a schoolteacher, who also was born in a hamlet, learned pottery-making in her youth. When there is a need for extra money she sometimes buys a burro load of clay from a re-seller and makes pots to sell unfired to other potters. A butcher's wife, who married into Atzompa from another *municipio*, alternates between tamale-making and pottery-making to provide supplemental cash for her household of nine. When one of her sons brought home the unwelcome news that the secondary school he attended had assessed each pupil \$200 for a special building fund, a kilnload of pots was hurriedly produced and sold to cover the assessment.

It is the consensus of informants that more pottery is produced in the village now than in the last generation. A 48-year-old woman recalled that the Atzompa pottery *puestos* in the Oaxaca Saturday market occupied part of one street near the church of San Juan de Diós, whereas they now fill most of a street that is assigned to ceramics vendors and overflow onto two other streets.⁴ This growth is attributed to natural population increase. However, increased pottery production may have something to do with the alleged decline in farm yields,

and consequently in farm income in recent years.⁵ It is also possible that increasing amounts of cash are needed to satisfy the growing demand for modern consumer goods (see Chapter VI).

PRODUCTION PROCESSES AND TECHNIQUES

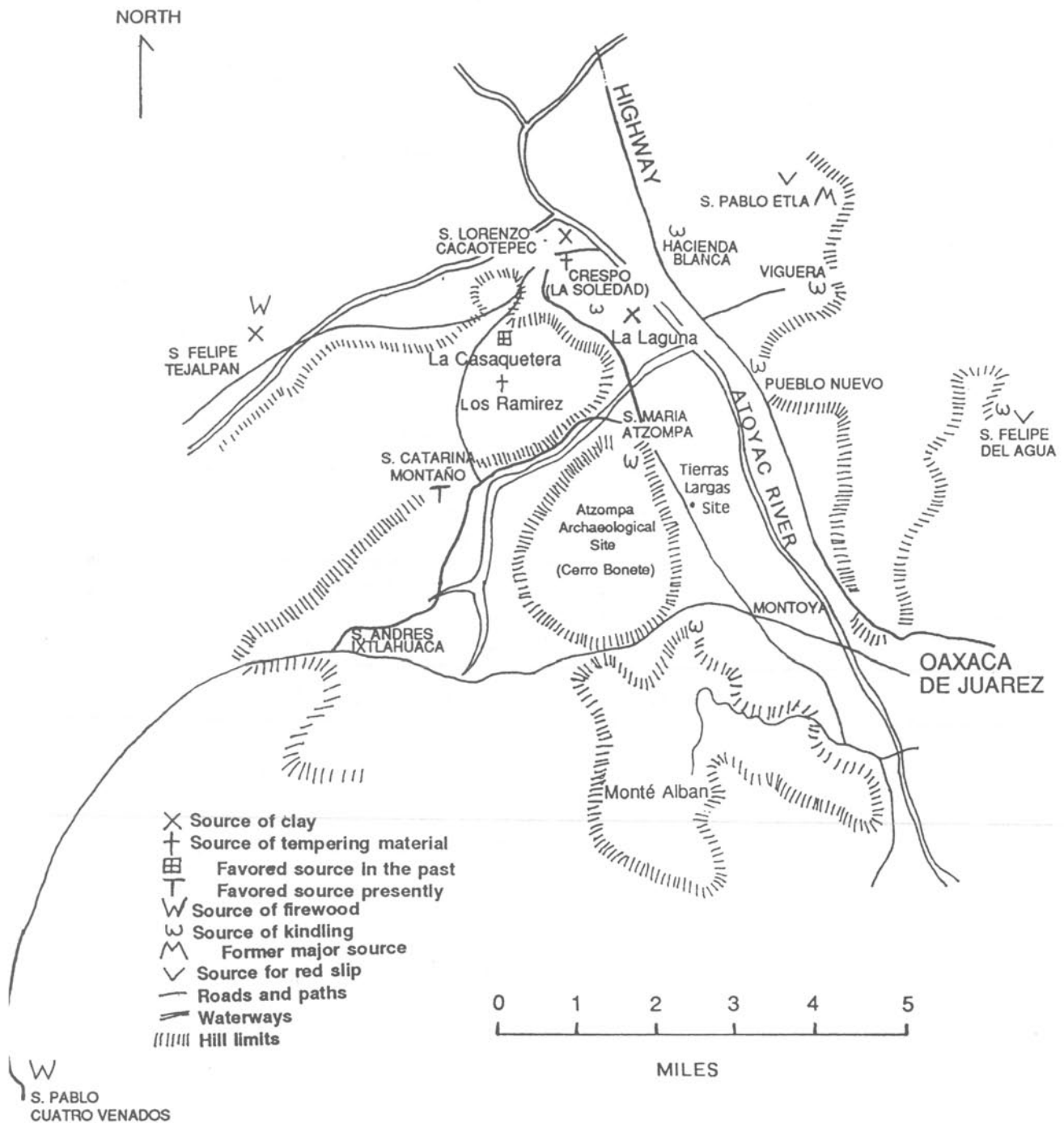
In many households a daily production quota is set. A young woman with no children to care for can complete three dozen small jar bodies in a half day, for example, but the tasks of scraping and applying necks and handles usually occupy half of the following day. The casserole, one of the simplest forms to make, can be produced at a maximum rate of five to six dozen per potter per day, and the open form is easy to scrape.

The base of the pot is shaped by pounding a lump of clay onto a pottery platter (*molde*), which is free to rotate on the bottom of an up-ended *olla*. The *molde* is concave or flat depending on the shape of the pot being formed. The sides of the vessel are built up with coils which are flattened and scraped, and the rim is finished by holding a piece of felt lightly over the spinning rim, a technique identical to the one described by Foster (1959a) for nearby Coyotepec. The production of pot bodies by coiling is rapid: about 10 minutes for a medium-sized casserole, or a little more than a half hour for an *olla* approximately 1-1/2 feet high. The *olla* requires another half hour to scrape. However, the largest *ollas*, about 3 feet tall, require several hours to form. Even without scraping, the rate of production is only two per potter per day, but each one is worth about \$30 when finished. The last step in forming utilitarian ware is the polishing of pot exteriors with a smooth stone, considered men's work. This task involves a time input of one to one and a half hours per dozen vessels of medium size.

The division of labor is traditionally established, but not immutable. It is expected that men will dig the clay and tempering material; pulverize the temper and sift it (although women may do the sifting); spread the clay to dry and later mix it with water; fetch the glaze and grind it, if grinding is done by the household; fetch kindling for the bisque firing; load the kiln for firing; glaze, fire, pack and transport the ware for sale. In addition, some of a man's free hours are spent polishing pot exteriors and stamping or incising designs or names in them if such are used. When the household has only one pot former, the chores of getting materials and firing usually are performed bi-weekly. However, clay is increasingly purchased from re-sellers, most of them village potters who need to supplement pottery income. Some potters buy tempering material also, although the source is only a half hour's walk from the village. Glaze, already ground and fully prepared with water and copper oxide, is available in Oaxaca and is resold at five village stores. Increasingly, potters buy wood and glaze from local re-sellers on credit. In 1968 these vendors were marking up firewood from their purchase price of \$7.50 a burro load to \$10.00, and the prepared glaze from \$6.00 a kilo to \$6.50.⁶ Those potters who were poorest were most inclined to use credit arrangements.

Men's roles in pottery-making have diminished. They currently have the option of buying all the materials and spending no time preparing glaze. However, a growing number of men are engaging in the pot-forming process. In addition to techniques considered normal for men to use, nine men work utilitarian pottery, principally tubs and flowerpots by the traditional coil method. Three of these men were seen working casseroles. One head of household in the sample assists his wife in forming *ollas* and casseroles when extra money is needed. Another, raised in a farming community, learned to make *ollas* when he married into Atzompa. However, the household has become quite prosperous and now only his daughter-in-law works pots. On the other hand, women sometimes pound temper, a strenuous task, and one woman over 80 claims to have mined clay herself. The ethnographer saw this woman load a large kiln with casseroles and drag long bundles of kindling from the house to shove in the firebox in preparation for the bisque firing. She fired, and afterward unloaded the fired pots. She said that she would be unable to perform the glaze firing without help, as unloading must be carried out rapidly to prevent the glazed pots from sticking to each other as they dry. Also, chopping firewood for the hot glaze firing is extremely heavy work for a woman.

The changes that have reduced the time input traditionally required of men have been largely in the utilization of intermediaries in materials procurement, not in technical innovation. The availability of prepared glaze, eliminating about four hours of arduous labor before each firing, is the major recent technical innovation. It dates only to 1966 for most Atzomperos. Prepared glaze was introduced not by a villager, but by a retailer in Oaxaca, who for many years has supplied glaze to almost all Atzompa potters, directly or indirectly through village stores. Prepared glaze had been available from a small-scale dealer since 1953; however, very few Atzomperos



Map 3. Sources of Pottery Materials

2. Making Pottery



A carga of clay



Children Practicing

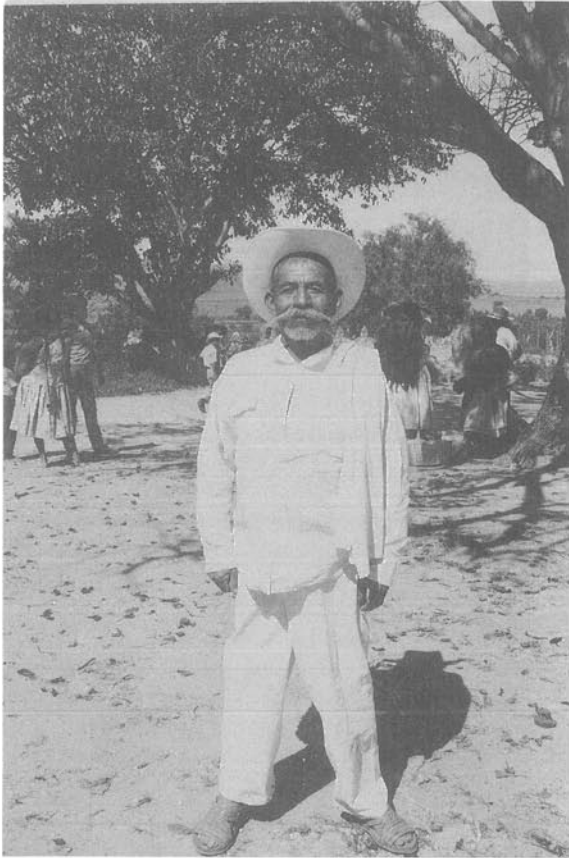


Making Casseroles

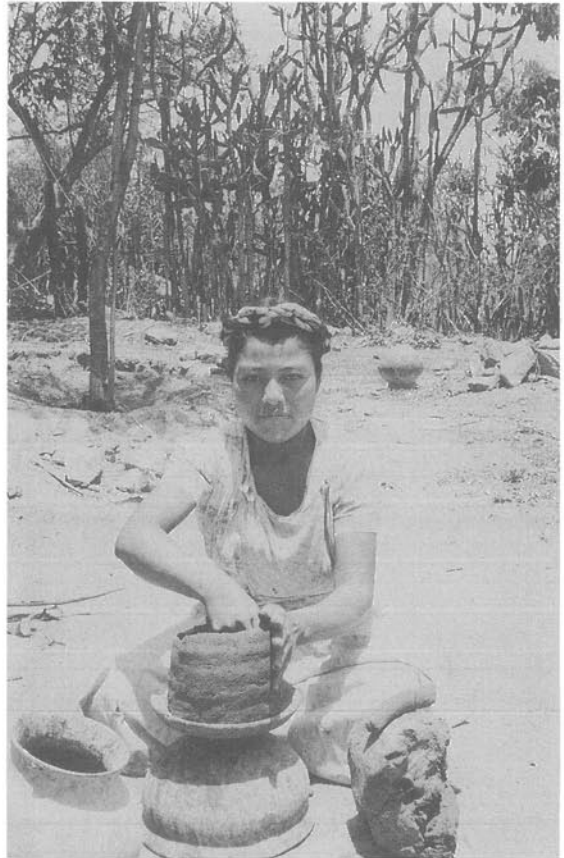


Finishing the rim of a griddle

3. Pottery Making



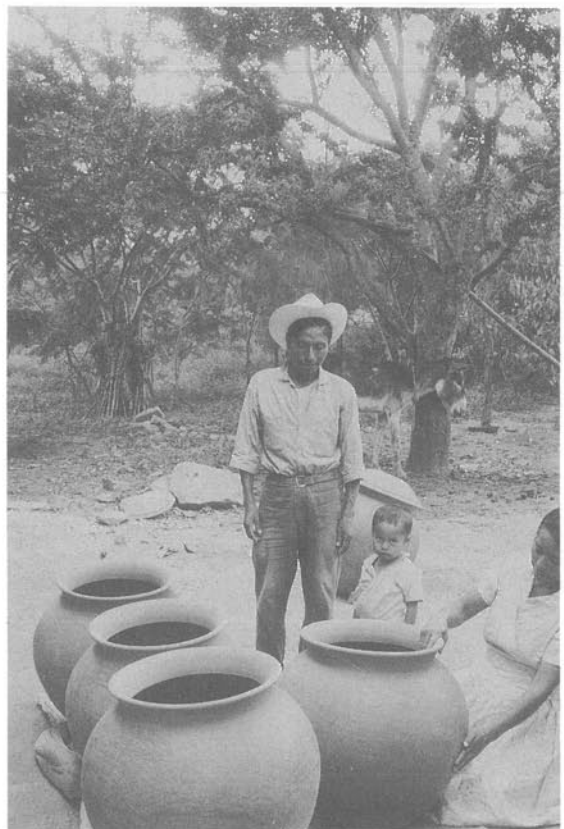
Traditional Clothing - Calzones



Forming an Olla - Coiling



Smoothing an Olla



Large Ollas

(three in the sample) used that source. The reasons they gave for this were the shop's distance from the bus stop and the poor quality of the glaze. However, it is also likely that the confidence of the potters in the Oaxaca retailer promoted the ready acceptance of his glaze preparation, confidence which the less known dealer failed to gain. The retailer performs favors for the potters in a patron-client type of relationship, and readily replaces faulty batches of glaze. However, his monopoly, and stated intention to maintain it, are resented by a number of villagers. Glaze grinding is now an activity in only a minority of potters' households. Only 17% of the glaze users in the sample continue to mill it themselves, in order to obtain a thicker mixture than that which can be purchased.

The only other generally accepted technical innovation has been the replacement of twig sieves with metal mesh for the sifting of temper. This dates back several generations. The tempering material is a gritty earth obtained in the *municipio*. The major source has changed, but the geographic shift is a minor one (see Map 3), and probably the content of this "*barro áspero*" (literally, "gritty clay",) is substantially the same.⁷ However temper is obtained from different mines within the area presently exploited, and the various kinds are said to be suitable for different types of pots.

Many processes have not changed. The tempering material is still pulverized by beating with an elbowed tree branch. This procedure may require more than an hour a day in a multiple-potter household and might be improved by mechanization. Another technical aspect that has remained unchanged over the centuries is the firing process. The kiln is a cylindrical above-ground structure with a subterranean firebox. The size varies, depending on the quantity and size of the pottery fired. Traditionally, light wood or *acahual* (Mexican sunflower) stalks are used for the bisque firing, and heavy wood is used for the hot glaze firing. However, the ecology which has supported wood firing is changing. Both heavy and light wood are becoming scarce, as the *municipios* in the foothills of the eastern Sierra suffer deforestation and are closing, one by one, to outside wood seekers. Within memory, there has always been a more or less steady supply of heavy wood from San Felipe Tejalapan to the northwest. Wood is brought by the San Felipe villagers, who sell it to Atzompa households or to village dealers. However, the supply dwindles when there is a fiesta at San Felipe, or when heavy rains cause the streams between Atzompa and San Felipe to rise. For a time even San Felipe residents were forbidden to cut wood in their *municipio* and the activity was surreptitious. Moreover, Atzompa dealers have taken advantage of wood scarcity to raise prices. During the flood conditions of 1969, the wood supply was cut off for some time. Dealers' prices rose from \$10 the burro load to \$15 and, in at least one case, to \$18. A meeting of the village council was called to deal with the situation. It was decided to remonstrate with the dealers, particularly the one selling at \$18. Whether this would have been effective is not known, as supply conditions returned to normal before it could be carried out.

In 1968, a self-styled ceramics manufacturer from Mexico City indicated that kerosene firing would be possible. One household in the sample offered to risk a kilnload of pots in a kerosene firing experiment, but the visitor from Mexico City did not return with the equipment as he had promised. Firing with natural gas, a method used in Oaxaca City by at least one ceramics factory, appears to require equipment that would be prohibitively costly for household production. It is possible that wood will prove to be the only feasible fuel. Also, any change of fuel would penalize the San Felipe Tejalapan wood vendors. Although Atzompa is not their only market for the wood, it is their major one. However, although a few Atzompa potters travel to Mexico City with some frequency, no effort has been made to investigate other firing methods.

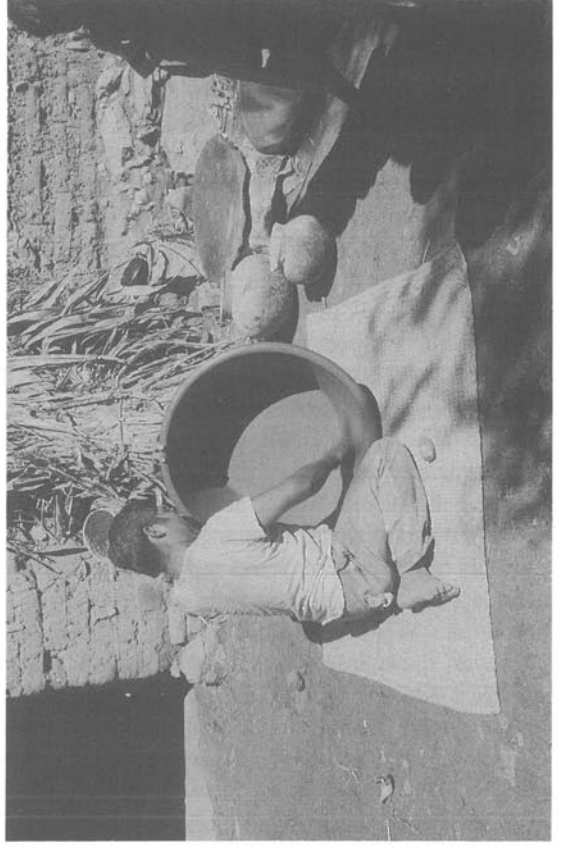
Non-traditional pot-forming techniques have not changed appreciably since Hendry's 1955 study, but it is well to review their diffusion or failure to diffuse. The press mold, which Hendry found some potters using, albeit with some diffidence (1957:166), probably has less currency now than formerly.⁸ Only two villagers were observed producing mold-made ware on a regular basis in 1967-1970. One man in the sample had used molds in the past but no longer does. However, molds are still often used to fashion the Easter "*chitas*." These animal forms have striated backs which are planted with *chita* grass seeds. The hollow bodies are filled with water which seeps through the porous clay, causing the seeds to sprout.

A small rotating table or disk, serving in lieu of the up-ended olla to facilitate rotation, was observed by Hendry in the home of a male pot-former. It is now also used by his son, and by two sisters-in-law unrelated to these men. The kick wheel was introduced to Atzompa in the early 1940's by a boy from Cuilapan who lived there for a short time. Two Atzomperos, brothers, had been working with kick wheels in a Oaxaca pottery shop and taught the technique to a third brother at home. All three improved their skill under the tutelage of the boy from

4. Making Basins



Finishing the Rim

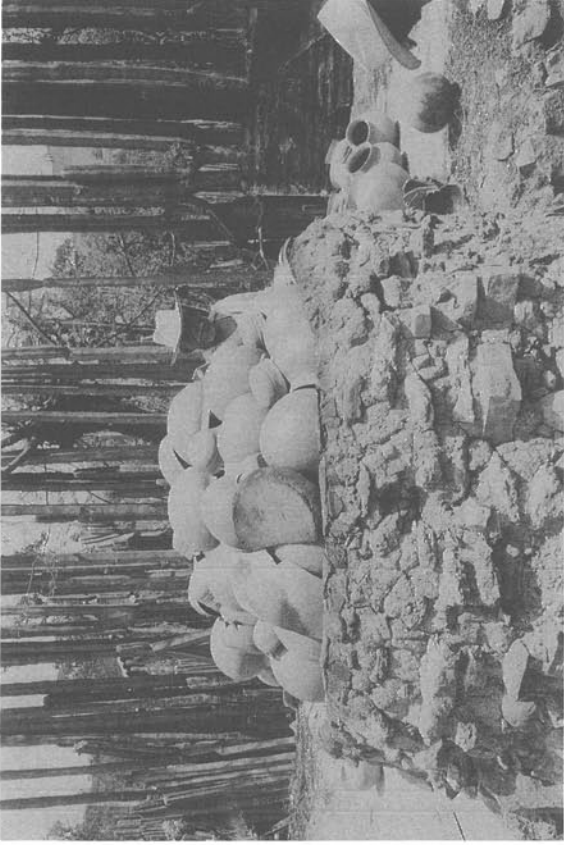
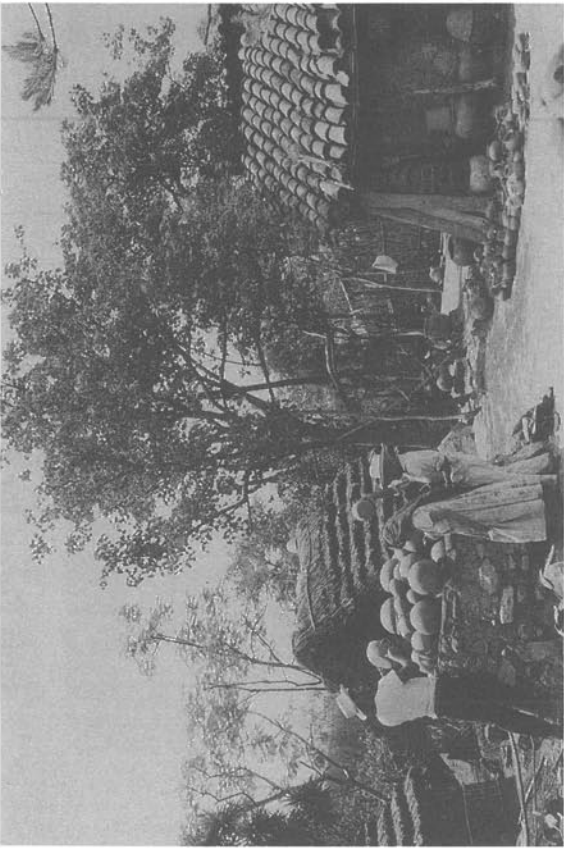


Scraping

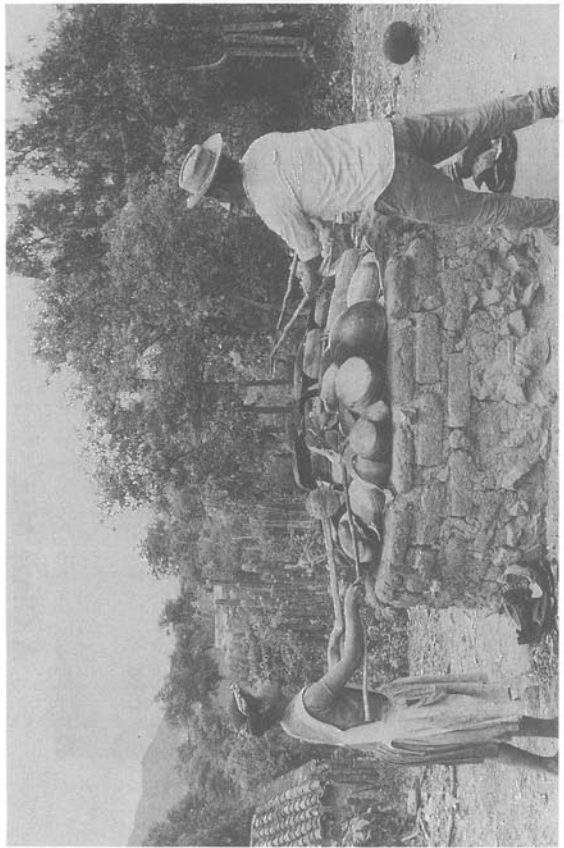


Smoothing the inside

5. Firing

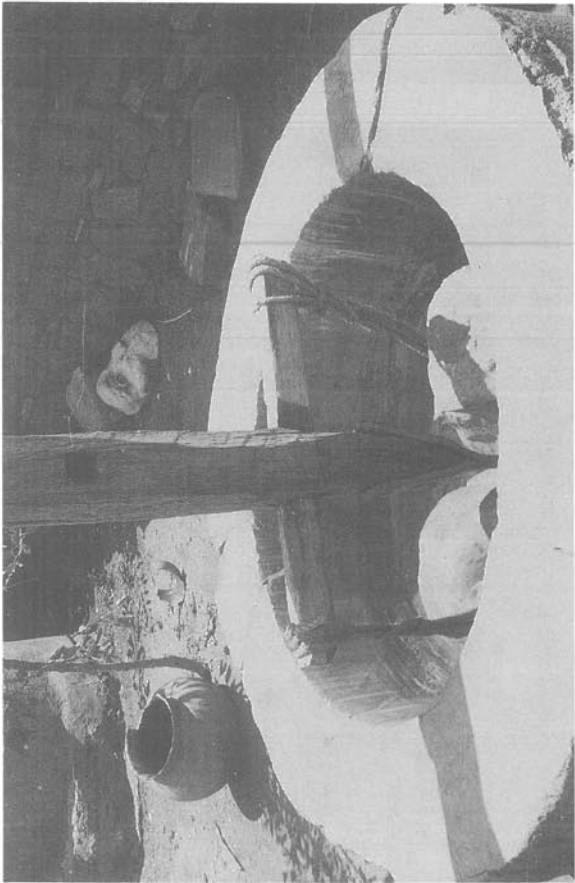


Loading the Kiln

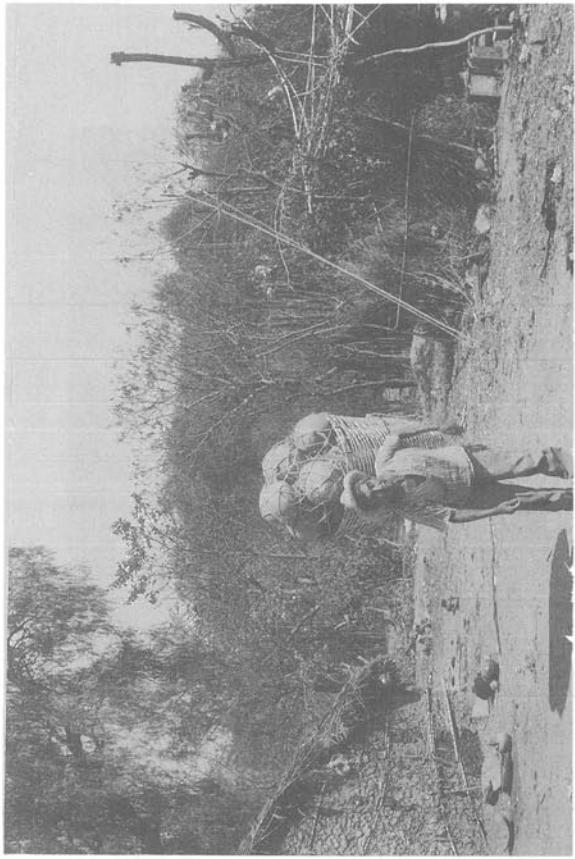


Unloading the Kiln

6. Completing Production



A Glaze Mill



Hauling the Pottery



Chía Forms for Easter

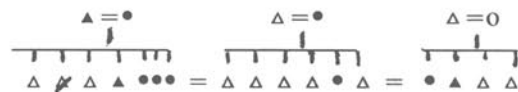


The Bus

Cuilapan, who was hired as an instructor by other men of the village also. Several of his pupils bought wheels and began to work. After the outsider left, wheel users continued to teach others when requested, particularly their relatives and friends. A few sought instruction in Oaxaca city. The benefit of owning a wheel is that it utilizes the free time of males, but in most cases it leaves them with too little time for fetching materials, resulting in the need to buy clay from re-sellers, and women find wheel use too strenuous.⁹ A gross of jars could easily be produced by one potter daily, but this would require a constant flow of clay and tempering material. Thus, most kick wheel users produce only three to six dozen jars or cups daily. The poverty of kick wheel users has had a negative effect. Wheel-made pottery is small and said to be thick-walled, and prices for it in Oaxaca are low.¹⁰ In addition, learning to use the wheel entails unaccustomed motor habits and pot forming is generally regarded as women's work. All of these factors have discouraged its spread.

In a sample of 69 potters' households, three had used the wheel and given it up. In 1969 three were using it regularly and two occasionally, and two had tried to learn but failed. Only nine men in the village were using a wheel regularly in 1969. Of these, six had the family name "Olivera", five through the father and one through the mother. Nine Olivera heads of households were interviewed, out of fifteen in the village. The eldest was 66 years old. All said that their fathers had worked pottery by hand. Of the eight households in the sample that had used the kick wheel at some time, six were from families in which men worked pottery by hand. Two were Oliveras and a third had been an Olivera son-in-law. A seventh was the household, mentioned above, where the elder male had worked with molds. However, it is his son who uses the wheel. Evidently, familiarity with pot-forming encourages men to learn to use the wheel, either due to a willingness absent in the general population, or because they already have some skill in pot forming. The only member of the sample who was a wheel user but not a pot former said that it had been difficult for him to learn. However, a male producer of animal figurines also said he found it difficult to learn to use the wheel. The two men who had failed to learn were not previously pot formers.

More successful than the kick wheel was the introduction, in the late 1800's, of the freehand technique for small decorative figures. A priest who had learned the craft in a seminary taught it to his Atzompa cousin, Lorenzo Aguilar, a poor man working in the city as a day laborer. The little animal figures sold well. By the next generation the Aguilar family had improved its economic status considerably, acquired lands, and was selling surplus farm products to fellow villagers. The production of the animal figures, called "toys" because of their small size, was taught to the sons as well as to the daughters of Lorenzo. They transmitted it to their sons and daughters. At the request of his brother-in-law, Lorenzo showed his nephew how to make the figures, and the nephew, in turn, passed on the craft to his children. Today the great-great grandchildren of Lorenzo are learning the technique. A member of this family taught toy-making to the Lávida-Blanco family. Avelino Lávida stood as surrogate grandfather to the present Blanco generation, which has brought decorative ware to its highest development and elaboration.¹¹ There is some evidence that the Blancos' dedication to, and success with, toy-making aroused resentment on the part of the original toy-makers. The "invention" and production of applique decoration by both families, the Aguilars and the Blancos, was a cause of contention, and a complaint was lodged by the descendants of Lorenzo Aguilar with the village council. The Blancos claim that, whereas a member of the Aguilar family did originate a type of applique in which flowers and leaves were used exclusively, Lávida's principal urban buyer had specifically ordered another type of applique ornamentation, probably earlier than the Aguilar invention. The use of applique has spread largely, but not entirely, through family lines. A typical diffusion pattern is the following.



Blackened symbols represent potters using applique designs:

Meanwhile, a member of the aforementioned Olivera line began to produce modern container forms, such as liqueur and coffee urns. This man married a granddaughter of Lorenzo Aguilar, and the container forms are now produced by the Aguilars, while the sons of the deceased Joaquín Olivera have turned to new forms such as the decorated ashtray. The main virtue of decorative ware is the appeal it has to the tourist market. This market has

been considerably enlarged since the opening of the Pan American Highway stimulated increased export traffic. There is high demand for the miniature pots, decorated ashtrays, animal "musicians", anthropomorphic forms, etc. produced in Atzompa. Large, unglazed female figures, elaborately ornamented with applique designs of birds, fishes, frogs, etc., are created by Teodora Blanco, a potter who enjoys some renown nationally and even abroad. They command \$700 to \$800 each in the Oaxaca tourist shops. Blanco sells them for \$250, and says that she has heard that they resell for as much as \$1,000 in the United States, equivalent to 80 dollars. At least four households have tried, unsuccessfully, to duplicate these figures.

The decorative ware, appealing primarily to a sophisticated, largely urban and tourist market, is exempt from the seasonal fluctuations in demand that affect the utilitarian-ware market. The latter suffers a decline in demand, and therefore in price, during the cultivating season. Farmers come to the city marketplace less frequently, have the least surplus cash, and defer their pottery purchases until the All Saints season in October when it is common to replace kitchenware. There is no "poor season" for decorative ware, but there is increased demand just before Easter, and a secondary sales peak during the Christmas season.

Decorative ware production has other advantages. A toy-maker whose wife produced 15 animal figures in an hour, each approximately 3 inches high, pointed out that these figures require very little temper and less clay than the same number of medium-sized casseroles. Yet they sell wholesale for the same price as the casseroles. Also, freehand production utilizes the pot-forming potential of males in the household, and the technique has been used by men as well as women since its introduction. This is also true of wheel use, but returns from the latter are much lower. Household 4 (in Table 1), a man and wife, can produce 10 dozen tiny casseroles a day. They sell for slightly less than \$5.20 the dozen and gross income is approximately \$26 per potter per day of work. In contrast, a wheel potter in the sample produces 6 dozen cups each day and they must then have the word "Oaxaca" incised in thick letters. He sells them for only \$2 the dozen, earning \$12 per working day. His wife works tiny cups by hand, but her low production contributes little to total income. The toy-making couple in Household 38 grosses \$80 per working day and nets almost \$60 from production of decorated ashtrays, probably the highest pottery income of any household in the village.

The freehand technique appears to encourage a good deal of flexibility. For example, on the request of a Mexico City buyer, Household 4 copied a large baroque urn with elaborate handles. This involved ascertaining the correct clay thickness and the amount of temper required for the size, both arrived at by trial and error. The urns were built by coil technique, and diameters were carefully measured at every stage of the pot forming. The wife contributed virtually all the labor for the urns, which sold for \$100 each. During the field study, another toy-maker filled an order for a bust of Benito Juárez, working from a picture. One potter in the sample claimed that he once modeled a whole company of traditional dancers, even to the bells on their ankles. However, he had given up toy-making because of its tediousness, a common complaint about this type of production. Since the introduction of decorative ware, both the number of producers and the number of forms have proliferated. In 1968 twelve households were producing the small animals, ten produced other types of ornamental ware, and a number of others used non-traditional decoration, mostly applique, on utilitarian ware.

Orders from buyers are a major source of innovation. Teodora Blanco claims to have gotten her inspiration for her first anthropomorphic figures during a visit to the Oaxaca museum many years ago. Her small female figures in traditional dress were said to be entirely her own invention ("*de mi puro pensamiento*"). However, subsequently, a North American buyer based in Oaxaca ordered large ones. Thus began the production of the 3-1/2 foot female forms, elaborately decorated with appliqué designs of birds, fish, frogs, etc. In 1968, another village potter was producing quantities of angel figures with striated skirts, initially copied from a drawing given her by an urban buyer. In some cases, urban and foreign buyers have introduced non-traditional materials. A North American gave Teodora Blanco a coloring element for glaze that fired yellow; another gave her a cobalt coloring element. Both fired well, but the potter thought it would be too expensive to buy these materials regularly.

Like the inspiration afforded by the museum pieces, other ideas are traceable to indirect outside influences. For example, Teodora has tried sand temper, which gives bisque-fired pots a "mica" finish. She says she discontinued the practice when a sand-using potter from San Juan Chapultepec wrote that his own sales had declined because of her competition. On his own initiative, Felipe Aguilar, the late son of Lorenzo Aguilar, experimented with various "glassy" glazes used in the city, but they crazed in firing. A great-grandson of Lorenzo glazes his miniature vessels in several colors. He learned to use an assortment of mineral oxides in Mexico City. Presently

a resident of Oaxaca City, he takes his clay from Atzompa and brings the pottery back to the village for firing. A minor invention, attributable entirely to an Atzompero, was a device invented by Lorenzo Aguilar to facilitate loading and unloading the kiln when firing toys. Unloading is traditionally accomplished with long-handled hooks and paddles. Lorenzo fired nails into the bottom of a medium-sized tub so that the nail heads protruded perpendicular to its floor. Then he hung the hollow toy forms securely to the nail heads by holes punched through their exterior surfaces. This method is used by toy-makers today. The Aguilars of the present generations are still innovative. Felipe Aguilar, Junior, makes black ware that looks similar to the pottery of San Bartolo Coyotepec, covering the kiln tightly by piling earth over the usual cover of shards. He makes it only for export. He would not sell it locally because he does not want to antagonize the Coyotepec potters. His brother, Tomás, related his ideas of setting spigots in large ollas bought crude, and painting the bisque exteriors. However, he feels that the *olleros* would resent others' modifying their products and would refuse to sell to him.

The introduction and diffusion of decorative ware production is a major innovation in terms of technique, division of labor, and financial results. However, the vast majority of Atzompa potters have not veered from traditional forms or processes, with the one generally accepted exception of purchasing prepared glaze. The basic stability of the coil method and the utilitarian forms is matched by the persistence of the diminutive production unit, the household. Hendry points out (1957:194) that, given the limited potential of the market for utilitarian ware to expand, production in Atzompa operates with "almost maximum efficiency". Also, Diaz's study at Tonalá, Jalisco, indicated that an experiment in assembly-line pottery production there was unsuccessful (1966:171-172). In traditional pottery-making, the individual as well as the household is a production unit. Each pot former completely molds her own pot. It is not uncommon for mother and daughter, or daughter-in-law, to work two different forms, or two different sizes of the same form. In one household of the Atzompa sample, the only daughter worked small *ollas* while her mother worked jars. She even polished the ollas, usually a man's task, and although her father furnished the glaze and wood and fired the pots, she kept most of the proceeds of the *olla* sales. Such generosity with daughters is rare, however, and was reported in only four households of the village.

There are some exceptions to the lack of assembly-line features, e.g., the Olivera households where men participate in pot forming. In one of these households, the father works with a wheel while the daughters form and apply handles to the jars he produces. In another, the son works with a wheel and the daughters by coil technique. The father produces and applies the jar handles. In still a third, one spouse forms the saucers for ashtrays while the other forms and inserts the decorative elements. However, in the great majority of households one person forms an entire pot. In the case of jars, the potter forms a set of bodies, perhaps three dozen, allows them to dry overnight, scrapes them and applies collars the next day, then applies handles to all. The resulting pots are so distinctively hers, so it is claimed, that if one potter gives a few of her pots to a relative or *compadre* to fire with his ware, though his pots be of the same type as hers, she can distinguish her own from the rest. She is adept at all procedures from start to finish, and there is nothing but boredom to be gained from assigning the various steps to the various women of the household who form pots. As we shall see, most men find it more rewarding to engage in other economic activities rather than intensify their role in pottery-making.

SELLING

Selling pots crude or unfired is very common. It is most common with households that can least afford it, those that are in constant need of ready cash to buy the day's food. One informant of the sample reported regularly buying *ollas* for \$15 and \$20 the dozen and reselling them, after glazing and firing, for \$36 and \$50 the dozen, respectively. His supplier asks for cash advances and is constantly in debt to him. A popular producer of decorative ware regularly buys unfired *ollas* for \$7.50 the dozen and resells them, finished, for \$18 the dozen to buyers from other villages passing through Atzompa. Although she pays the cost of glazing and firing, the transactions are still profitable. Another type of crude-ware transaction is the half-shares system. The potter who pays for the glaze and firewood and performs the work of firing keeps half of the seller's pots as his payment. In a few instances the respective inputs vary from this standard, e.g. one potter provides the clay and the bisque firing only. The half-shares system is also used for mining clay, one "partner" providing the burro. Sometimes it is used

for raising animals and at least in one household, for preparing tortillas, one "partner" providing the maize. Possibly it developed from agricultural sharecropping.

There are a few Atzompa women who work in other potters' households for meals and a daily wage, ranging from \$1.50 to \$5.00 per dozen pots produced, depending principally on the size of the pots. If small children accompany the potter, they also are fed. Seven women were observed working on this basis, only two of them with any regularity. One elderly widow was employed fairly regularly by several households, most recently in a home that was preparing for a large first communion party. As one informant pointed out, she has no worries about materials procurement or breakage of pots in the kiln or in transport. At the end of the day she simply collects her pay and goes home. This works very well for one person but supports two with difficulty. For example, the female head of Household 20 was working on a modified employee basis in her own home with materials supplied by the buyer. She was barely able to support herself and her younger daughter when the older daughter, also a potter, married out in 1968. She became ill, and the daily wage did not provide enough money for medical treatment. She died in December of 1969.

Sales of finished ware within the village are minimal. Imperfect pieces can be peddled in the Atzompa Tuesday market to vendors mostly coming from other villages. Broken griddles can be sold for a few centavos to fellow potters who use the shards to cover the kiln in firing. A large amount of Atzompa production, almost half in 1968, is sold to *regatones* (re-sellers) who may be local or urban (see Table 2). The other half is sold in the *plazas* or cyclical markets of the Valley, mainly the Oaxaca City Saturday market. Small-scale *regatones* from the neighboring village of San Lorenzo Cacaotepec usually buy a few pieces at a time in Atzompa. A few deal in larger lots. These they peddle in their own *municipio* or carry to still remote corners of the Cañada, to the north, where they can sell the pots dear and buy local products cheaply. Household 43 sells the bulk of its pottery to an Atzompa dealer who resells in the Mixteca, but it also has a steady customer from San Lorenzo, from whom it purchases black beans brought back from the Cañada. An elderly Lorenzana regularly visits Tomellín and Chilar in the Cañada to sell Atzompa pots and other Oaxaca products, and to buy mangoes. One resident of San Felipe Tejalapan buys griddles from a steady supplier, to sell between San Felipe and San Pablo Cuatro Venados. There he purchases vegetable products to resell in the lowlands. These buyers make the trip to Atzompa to pick up their orders and are sometimes frustrated by the erratic behavior of the potters, who may stop work for several days to attend a fiesta, or may sell to someone else the lot promised to the dealer. Nevertheless, dealers always return, since this pottery is an article of high demand, and there is profit in reselling it. Much of the small-scale trade has a long tradition, but bulk buying by Lorenzanos has increased. Each buyer usually visits the same suppliers, whether or not there is a formal contract. As one potter commented, "Everyone has his buyers" ("*Cada quien tiene sus marchantes*").

In 1968, 48% of the sample was selling finished ware to re-sellers, 39% exclusively to re-sellers. This compares with 31% for their fathers. The latter figure is based on recollections of sons whose fathers were potters and whose sales were remembered by the sons.¹² In 1969, however, there was a net decrease in the number selling solely at wholesale. Two of the eight potters who reverted to selling in the *plaza* stated that their request to their buyers for higher prices had been refused. Another remarked that the middleman's buying prices were too low. A fourth said that he decided to take the middleman's profit himself. These potters chose the alternative of cash increments over time savings. This usually means a difference of 20% or 25%, and in the case of Household 30 it reached 28%.¹³ Nevertheless, when a personal dispute between Household 30 and its dealer, a relative, was resolved, they commenced to do business together again.

Table 2
Principal Sales Outlets of 69 Potter's Households in 1968 and 1969
and of Respondents' Fathers

Household	Informant's Age	Dealer?	Type and Size of Ware	Informant's Principal Sales Outlets in 1968	Informant's Principal Sales Outlets in 1969	Father's Principal Sales Outlet
1	59	yes	jars, med.	Ocotlán <i>plaza</i>	Ocotlán <i>plaza</i>	Ocotlán <i>plaza</i>
2	42	no	ollas, med.	Oaxaca, <i>regatón</i> ^a	Oaxaca, <i>regatón</i> ^a	Oaxaca, <i>regatón</i> ^a
3	68	no	jars. small	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i>
4	26	no	dec. ware	Oaxaca, <i>casetas</i> ^b	Mexico City, Folk Arts Museum; Oaxaca <i>regatón</i>	Oaxaca, <i>plaza</i> and tourist stores
5	39	no	dec. ware	Oaxaca, tourist stores	Mexico City, Folk Arts Museum; Oaxaca tourist stores	Same father as for #4
6	50	no	decorated casseroles, plates, dishes	Oaxaca <i>plaza</i>	Oaxaca, <i>casetas</i> and peddling in <i>plaza</i>	Ocotlán and Mixteca <i>plazas</i>
7	66	yes	jars, med.	Ocotlán <i>plaza</i>	Ocotlán <i>plaza</i>	Ocotlán <i>plaza</i>
8	46	no	ollas, med.	Ocotlán <i>plaza</i>	Ocotlán <i>plaza</i>	Ocotlán <i>plaza</i>
9	43	no	casseroles and tubs, med	Atzompa, <i>regatón</i>	Atzompa <i>regatón</i>	Etla <i>plaza</i>
10	47	no	casseroles and ollas, med	Ocotlán <i>plaza</i>	Ocotlán <i>plaza</i>	Oaxaca <i>plaza</i>
11	40	no	casseroles, med.	Oaxaca <i>plaza</i> ; Atzompa <i>regatón</i> ^d	Oaxaca <i>plaza</i> ; Atzompa <i>regatón</i> ^d	Atzompa <i>regatón</i>
12	37	yes	casseroles, lg.	Oaxaca <i>plaza</i> ; extra-regional distributors	Oaxaca <i>plaza</i> ; extra-regional distributors	same father as for #11

Household	Informant's Age	Dealer?	Type and Size of Ware	Informant's Principal Sales Outlets in 1968	Sales Outlets in 1969	Father's Principal Sales Outlet
13	41	no	casseroles and jars, med.	Etla plaza	Etla plaza	Oaxaca plaza
14	43	no	casseroles, med.	Oaxaca plaza	Oaxaca plaza	(does not remember)
15	49	yes	ollas, lg.	Tlacolula and Mitla plazas	Tlascalula and Mitla plazas	Tlascalula and Ocotlán plazas
16	41	no	casseroles, med.	°	Oaxaca plaza	Oaxaca, regatón
17	64	no	casseroles, med and small	Oaxaca, peddling in the plaza ^f	Oaxaca, peddling in the plaza ^f	(parents were not potters)
18	61	no	ollas, small; jars, med.	Oaxaca, regatón; Oaxaca plaza	Oaxaca plaza; Atzompa and Oaxaca regatones	(parents were not potters)
19	30	no	tubs, large and med.	Oaxaca, regatón ^o	Oaxaca, regatón ^o	(parents were not potters)
20	51	no	casseroles, med.	°	(died in 1969)	(parents were not potters)
21	28	yes	ollas, med.	Oaxaca plaza	Oaxaca plaza	Atzompa, regatones
22	31	no	ollas, med.	Regatones of San Lorenzo Cacaotepec ^h	°	Atzompa, regatones
23	44	no	casseroles, med.	Atzompa regatones	Oaxaca plaza	(parents were not potters)
24	26	no	ollas, med.	Atzompa, regatón ^c	°	Oaxaca, regatones
25	40	no	tubs, med.	Oaxaca plaza ^h	Oaxaca regatón ^{a,h}	Oaxaca plaza
26	41	no	casseroles, vats and bowls, med. and large	Oaxaca, regatón	Oaxaca plaza	Atzompa, regatón
27	51	yes	casseroles, med.	Oaxaca plaza	Atzompa, regatón	(parents not potters)

Household	Informant's Age	Dealer?	Type and Size of Ware	Informant's Principal Sales Outlets in 1968	Principal Sales Outlets in 1969	Father's Principal Sales Outlet
28	48	no	ollas, small; jars, med.	Atzompa, <i>regatón</i>	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i>
29	29	no	casseroles, med.	Oaxaca, <i>regatón</i>	Oaxaca, <i>regatón</i>	Oaxaca, <i>regatón</i>
30	52	no	casseroles, dec. plates and dishes, small and med.	Atzompa <i>regatón</i> ^d Oaxaca tourist store	Oaxaca <i>plaza</i>	Oaxaca and other regional <i>plazas</i>
31	36	no	jars, small and med.	<i>Regatón</i> of San Lorenzo Cacaotepec	<i>Regatón</i> of San Lorenzo Cacaotepec; Oaxaca <i>regatón</i>	Oaxaca <i>plaza</i>
32	52	no	flowerpots, med.	Oaxaca, peddling in <i>plaza</i> ^f	Oaxaca, peddling in <i>plaza</i> ^f	Oaxaca, <i>plaza</i> ; Atzompa <i>regatón</i>
33	33	no	griddles and casseroles, med.	Oaxaca, peddling in <i>plaza</i> ^f	Oaxaca, peddling in <i>plaza</i> ^f	Oaxaca <i>plaza</i> ; Atzompa <i>regatón</i>
34	24	no	griddles, large and med.	Zaachila <i>plaza</i>	Zaachila <i>plaza</i>	Zaachila <i>plaza</i>
35	50	yes	casseroles, med.	Oaxaca <i>regatón</i>	Oaxaca <i>plaza</i>	Oaxaca <i>regatón</i>
36	66	no	decorated ware	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i> <i>Regatón</i> and <i>casetas</i>	Oaxaca <i>plaza</i>
37	40	no	jars, small; casseroles and ollas, med.	Atzompa <i>regatón</i> ; Oaxaca, peddling in the <i>plaza</i>	Oaxaca, <i>plaza</i> and <i>caseta</i>	Atzompa <i>regatón</i>
38	38	no	decorated ware	Oaxaca <i>plaza</i>	Oaxaca, <i>plaza</i> and <i>casetas</i>	Oaxaca <i>plaza</i>
39	52	no	ollas, med. and large	Oaxaca <i>regatón</i>	Oaxaca <i>regatón</i>	(parents not potters)

Household	Informant's Age	Dealer?	Type and Size of Ware	Informant's Principal Sales Outlets in 1968	Sales Outlets in 1969	Father's Principal Sales Outlet
40	61	no	casseroles and tubs, med.	Oaxaca and Zaachila <i>plazas</i>	Tlacolula and Zaachila <i>plazas</i>	Oaxaca <i>plaza</i>
41	63	yes	tubs, small	Tlacolula and Zimatlan <i>plazas</i>	Tlacolula and Zimatlan <i>plazas</i>	Southern Valley villages and <i>plazas</i>
42	49	no	casseroles, med.	Oaxaca <i>plaza</i>	Oaxaca <i>regatón</i> and <i>plaza</i>	Same father as for No. 41
43	37	no	casseroles and tubs, small and med.	<i>Regatones</i> of Atzompa ⁱ and of San Lorenzo Cacaotepec	<i>Regatones</i> of Atzompa ⁱ and of San Lorenzo Cacaotepec	Tlacolula and Zimatlan <i>plazas</i>
44	56	no	decorated plates and casseroles, med.	Oaxaca <i>regatones</i> and <i>plaza</i>	Oaxaca <i>plaza</i> and <i>casetas</i> ; Atzompa <i>regatón</i> ⁱ	Oaxaca <i>plaza</i>
45	37	no	casseroles, med.	Atzompa <i>regatón</i>	Oaxaca <i>plaza</i>	Atzompa <i>regatón</i>
46	34	no	jars, med.	Oaxaca <i>regatón</i>	Atzompa <i>regatón</i>	Ocotlán <i>plaza</i>
47	19	no	jars, med.	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i>	(parents not potters)
48	29	no	casseroles, med.	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i>
49	32	no	ollas, med.	Oaxaca <i>plaza</i> ^h	e	Peddled in Valley villages and <i>plazas</i>
50	63	no	casseroles, small	Oaxaca <i>plaza</i> ; Atzompa <i>regatón</i>	Oaxaca <i>plaza</i> and <i>casetas</i>	Peddled in Valley villages and <i>plazas</i>
51	32	no	casseroles and tubs, med.	Atzompa <i>regatón</i>	Oaxaca <i>plaza</i>	(does not remember)
52	42	no	jars, med. and large	Atzompa <i>regatón</i>	Oaxaca <i>plaza</i> and <i>casetas</i> ; Atzompa <i>regatón</i>	Oaxaca and Tlaxiaco (Mixteca) <i>plazas</i>

Household	Informant's Age	Dealer?	Type and Size of Ware	Informant's Principal Sales Outlets in 1968	Sales Outlets in 1969	Father's Principal Sales Outlet
53	41	no	ollas, small and med.	Atzompa <i>regatón</i>	Oaxaca <i>plaza</i> and <i>casetas</i> ; <i>regatones</i> of Atzompa and San Lorenzo Cacaotepec	Oaxaca <i>plaza</i>
54	71	yes	tubs, small	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i>
55	46	no	jars, small and med.	Oaxaca <i>casetas</i>	Oaxaca <i>casetas</i>	Oaxaca <i>regatón</i>
56	31	no	ollas, med.	Atzompa <i>regatón</i> ⁱ	Oaxaca <i>regatón</i> ⁱ	(parents not potters)
57	81	no	casseroles, med.	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i> and <i>casetas</i> ; Atzompa <i>regatón</i>	(parents not potters)
58	36	no	ollas, med.	Oaxaca <i>plaza</i> ^h	°	(parents not potters)
59	39	no	griddles, various	Oaxaca <i>casetas</i>	Oaxaca <i>casetas</i>	Oaxaca <i>plaza</i>
60	45	no	flowerpots, med.	Oaxaca <i>plaza</i>	Oaxaca <i>casetas</i> , <i>plaza</i> , extra-regional distributor	Oaxaca <i>plaza</i>
61	54	no	tubs, large	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i> and <i>regatones</i> ; Atzompa <i>regatón</i>	Oaxaca <i>plaza</i>
62	68	no	ollas, large	°	°	Oaxaca <i>plaza</i>
63	47	no	ollas, large and med.	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i>
64	44	no	jars, med.	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i> ; Atzompa <i>regatón</i> ⁱ	Oaxaca <i>plaza</i>
65	56	yes	casseroles, small	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i> and <i>casetas</i>	Oaxaca <i>plaza</i>
66	30	no	cups, small	Oaxaca <i>casetas</i>	Oaxaca <i>casetas</i>	Oaxaca <i>casetas</i>

Household	Informant's Age	Dealer?	Type and Size of Ware	Informant's Principal Sales Outlets in 1968	Principal Sales Outlets in 1969	Father's Principal Sales Outlet
67	39	no	ollas, large	Oaxaca <i>regatón</i> ^a	Oaxaca <i>regatón</i> ^a and peddling in <i>plaza</i>	Oaxaca <i>plaza</i>
68	44	no	ollas, large and med.	Oaxaca <i>plaza</i>	Oaxaca <i>plaza</i>	Oaxaca and Ocotlán <i>plazas</i>
69	26	no	flowerpots, large	Oaxaca, peddling in <i>plaza</i>	(left the village)	peddled in Oaxaca <i>plaza</i> and in north Valley

^a*Regatón* resells at Ejutla.

^b*Caseta*: small shop in Oaxaca marketplace district.

^c*Regatón* resells at Ocotlán.

^d*Regatón* resells in Oaxaca *plaza* and to extra-regional distributors.

^eAll ware sold crude to fellow villagers.

^fGlazed and fired on half shares.

^g*Regatón* resells at Tlacolula and Ocotlán.

^hMost production sold crude in Atzompa.

ⁱ*Regatón* resells in the Mixteca.

^jBuyers resell in Mexico City and Tehuacan.

As commerce intensifies in the Oaxaca region due to improved communications with other parts of the country, both the number of dealers and the amount of merchandise they handle is increasing. Because of the growth of bulk transport, there is no longer much profit in selling small quantities at a distance. The San Lorenzo buyers of Household 43 resell at San Juan Tonaltepec near Cuicatlán because the transportation is so poor that there is virtually no competition. However, they remarked that a highway was about to link that area with Tehuacán. Only eight of the sampled households regularly travel beyond Oaxaca City to sell their wares now, whereas fifteen reported that their fathers did. Five potters and potter-dealers, who regularly sell outside Oaxaca City, cover Tlacolula. One of them also covers Mitla, and another Zimatlán. Five sell in Ocotlán, five in ETLA, four in Zaachila, one in Nochixtlán, and recently one in Teposcolula. The latter two towns are in the Mixteca. The decline in traveling was emphasized by one of the five who currently sells at Ocotlán. In the past, this informant said, approximately 40 Atzomperos sold pottery there. Older people who traveled in the past and enjoy traveling still make occasional long trips. All travel now is by bus or truck, with the exception of some griddle makers who travel with burros from village to village, peddling a fragile product that buyers dislike to carry home from the marketplace.¹⁴

The proliferation of middlemen renders the chain of disposal more complex. For example, Household 17 gives its ware for glazing and firing to Household 11, where the daughter of No. 17 lives. Household 11 keeps half of those pots as payment, and in turn, sells some of its finished ware to Household 12. The co-*regatones* in Household 12 sell most of their purchased ware at a *puesto* in Oaxaca City. However, they also fill orders for a number of extra-regional buyers, including a distributor in Mexico City who supplies four stores. Therefore, some of the production of Household 17 passes through four intermediaries before reaching the consumer.

Some of the buyers who patronize the potters' stands in the *plazas* may be *regatones* who sell to consumers; others may be distributors or agents of distributors. In general, extra-regional buyers are not recognized as such. Local *regatones* who resell in Valley *plazas* are generally known, and after a number of sales the potter may also become familiar with buyers from a distance. Household 63 can say only that its customers at the Oaxaca *puesto* are mainly *foráneos* ("foreigners" or outsiders), but Household 14 knows that its two principal buyers at the *puesto* are from Ixtepec and Salina Cruz in the Isthmus. Decorative ware has the greatest external market. Felipe Aguilar ships about once a year to each of three distributors in the United States, and has furnished a Boston distributor with a total of more than 2,000 glazed frog figures over the years. In 1968 he secured orders for three other potters from a Mexico City dealer. In addition to direct shipments, there are sales to extra-regional truckers who visit Atzompa before Easter. Household 38 is visited annually at this time by a trucker from Morelos. In 1968 he ordered four gross of ashtrays and two gross of decorative plates, paying \$5.20 the dozen above the Oaxaca *plaza* price for the ashtrays. Household 44 receives orders every year from a Mexico City distributor who has been shipping some of the ware to Germany. Also, tourists come to Atzompa seeking the unglazed anthropomorphic figures of Teodora Blanco, although there is no organized tourist solicitation, such as there has been at the workshop of Rosa Nieto at San Bartolo Coyotepec. Teodora Blanco was also one of the two potters, both of the Blanco family, who regularly supplied the *Museo de Arte Popular* in Mexico City in 1969.

Atzompa decorative ware has competition locally from Coyotepec, where potters have rapidly adapted their black ware to the tourist market. Atzompa utilitarian ware, too, has more competition than formerly. A brown ware from Puebla is said to be just as efficient for cooking as Atzompa pottery, and is more attractive if more expensive.¹⁵ In 1969 one Atzompa potter expressed dismay because so much extra-regional pottery had entered the market during the All Saints season. In the past, there was less export for Atzompa ware, but there was also less competition. Improved communications have greatly benefitted the Atzompa potter by opening new markets for his product, but the advantage has been somewhat mitigated by increased competition.

SUMMARY

Despite the over-all stability of pottery-making technology, the household production unit, the coil technique, and the utilitarian forms, there have been some noteworthy changes. The Pan American Highway was extended from Mexico City in 1943, and subsequently through the Isthmus. Expansion of the road network both within the region and with the outside has opened new markets for Atzompa ceramics, especially the decorative

ware. Middlemen, locally and externally based, have proliferated. Improved communications have had the further effect of promoting bulk transport to communities at a distance, and potters have found extensive travel less profitable. Increased export and external consumer demands have undoubtedly affected decorative ware production, contributed to the introduction of new forms, and in one case, to the use of a firing technique (oxygen reducing) not formerly practiced in Atzompa.

External factors have had varying degrees of influence. The principal technological innovations -- the kick wheel and the elimination of glaze grinding -- had wholly external origins. Although Atzomperos had worked with kick wheels in the city, they had not considered buying wheels for use in the village. Even the introduction of the animal figures is attributable to an external source. Non-traditional oxides for glaze coloring have been directly and indirectly introduced, but only one Atzompero continues to use them. Other potters show little interest.¹⁶ One of the households in the sample was about to experiment with iron oxide in 1970, to fill an order which required brown glaze, but was not able to do this without outside help.

Spontaneous transference of ideas from external sources is present but not common. One of Teodora Blanco's anthropomorphic forms was inspired by a Pre-hispanic idol seen in the Oaxaca museum. Household 30 was given an interior decorating magazine published in the United States and copied two container forms pictured in it. The Aguilar experimentation with "glassy" glazes constituted an adaptation of external materials to local production. The much earlier substitution of metal mesh for twig temper sieves was a similar transfer phenomenon. On the other hand, Lorenzo Aguilar's invention of the nail-studded tub for firing small figures appears to have been an adaptation of materials at hand in an entirely new configuration. The use of different glaze colors and of the disk turntable have not been generally adopted. Indeed, most potters are unaware of their presence in the village. The kick wheel has enjoyed limited diffusion. It has been adopted by a few young men, mostly relatives and friends of the Oliveras, but this technology is rarely adopted by older men and never by women. The freehand technique of pot forming has diffused primarily along family lines. If buyers continue to introduce new forms its spread could be accelerated.

There have been changes in labor patterns. These include a gradual increase in the number of men engaged in pot forming, as decorative ware diffuses. Clay is more often purchased, and the elimination of glaze grinding in the majority of households has resulted in a decrease in male labor input for production, approximately four hours per firing. Also, as local facilities for obtaining glaze and firewood on credit increase, more potters are extending their credit buying (see Chapter IV). Finally, as sales to middlemen increase there has been reduction of selling time.

On the whole, Atzompa potters are reluctant to veer from known forms, known technology and production processes, for they know that they have a ready market for what they presently produce. If the annual crests and troughs of demand be leveled, every piece can be sold, eventually, at a profit. Barring unusual circumstances, such as curtailment of production due to illness, an increased need for cash in the household can be satisfied by increased production in any season except the summer months.

Notes to Chapter 2

1. In 1967-1968, the minimum daily budget required to feed a family of five or six was 10 pesos (\$10.00). Half of this went to purchase the staple maize, if one did not grow it, and to have it milled.

Some considerations mentioned were: the amount of clay and glaze required for jars, the tediousness of forming and firing small ("toy") figures, and the heaviness and fragility of griddles, which makes them difficult to handle and difficult to sell, unless one carries them to consumers' villages.

3. In one household the ethnographer noted that the family used a stamp for decorating pottery, something that had been observed only in the homes of the daughters of one Ricarda Ruiz. When she expressed her surprise, the wife of the head of household laughed and explained that a granddaughter of Ricarda Ruiz had recently entered the family as a "stolen" bride, bringing the technique of the stamp decoration with her.

4. The *puesto* is a location on the sidewalk in the Oaxaca street market where the market administration allows a vendor to sell his specific goods for a fee. The Oaxaca Saturday market and other weekly markets are known as *plazas*.

5. Recollections of the inception of arid conditions, that is considerable diminution of rains, ranged from 1910 to 1967. Eleven of fifteen informants placed it in the late 1950's or early 1960's.

6. Throughout, "\$" denotes pesos.

7. Mineralogist Anna Shepard found that diorite tempering material similar to that found in Monte Albán I and II, but not later Monte Albán shards is used in present-day Atzompa (Shepard 1967:479, 483-484), and that diorite temper is highly associated with a buff-firing clay at Monte Albán. Present-day Atzompa uses a buff-firing clay mined in the San Lorenzo Cacaotepec *municipio* (Map 5). A low association of the diorite temper with café or red-firing clay in the Monte Albán shards is congruent with Atzompa's use of a dark-red firing clay, principally for ollas and jars that are not given exterior glaze, mined at San Felipe Tejalapan farther to the west. Whether these same clay mines were worked in ancient times is a moot question. The San Felipe mines are deeply worked, giving evidence of long use.

While Shepard's data suggest that pottery may have been produced in the Atzompa area in Preclassic times, they do not tell us anything about the site of production or the ethnic affiliations of the producers. However, there have been recent excavations near the southeast entrance to the village, at a site identified as "Tierras Largas" (see Map 3). "A small clay cup full of red pigment, and a large pearl oyster 'scraper' possibly used for finishing and decorating pottery," as well as "thick primary deposits of shards" have been found in pits that appear to be of the Formative period (Winter, in Flannery et al., 1970:65). One notes that red pigment is used as slip for unglazed tubs in present-day Atzompa. It has two sources: near San Pablo Etla and near San Felipe del Agua, to the northeast and southeast of Atzompa, respectively. The latter source was said by one potter to have been used by his ancestors (*bisabuelos*). Also, Ceramicist William O. Payne has found that the same elements of clay and tempering material have been used in the Atzompa area as far back as 1400 B.C. (personal communication from Dr. Flannery).

8. Although press molds may be given to villagers by commercial buyers (cf. the diffusion of the technique at San Bartolo Coyotepec to comply with modern demands for figures [Van de Velde and Van de Velde 1939:40]), their use has pre-Hispanic antecedents; as molds were used to stamp out parts of elaborate figures in the Monte Albán IIIB period (Paddock 1966a:128, 193n). A form related to molds which also has pre-Hispanic antecedents, the crucible (Vaillant 1950:149), was produced by a household of griddle makers in Atzompa in 1969 for a special order from a jewelry manufacturer.

9. Foster suggests that studies of energy input requirements for kick wheel operation might shed some light on the resistance of women potters to the wheel (1959b:117).

10. It appears that the consistency of the clay with which Atzompa potters are familiar, when wetted for use on the wheel, cannot be molded successfully into large forms. One former wheel user stated, "The wheel cannot make large pottery like ours. The clay -- clay suitable for dishes -- is more watery, and the body collapses." ("*El torno no llega a hacer loza grande como de nosotros. Es mas aguado el barro, barro de plato, y el coco cae.*")

11. This account of the genealogy of toy-making differs slightly from Hendry's.

12. In Hendry's 1955 sample, 26% regularly sold to dealers, 24% regularly sold only to dealers (1957:173).

13. However, when selling in lots of a half dozen or a dozen at the *plazas*, potters do reduce their prices from retail. One reported that sale by the dozen warrants a reduction of 20 *centavos* the piece on a dozen worth \$14.40 retail; another said that a dozen worth \$24.00 retail sells at a discount of 33 *centavos* per piece, for

\$20.00. In a series of observed sales by one vendor, a buyer who bought a half dozen pots valued at \$10.50 received a discount of \$0.50, and another who purchased a half dozen worth \$5.40 paid only \$5.00.

14 . Even pilgrimages are now of short duration, due to modern transport. Several Atzomperos have even made the popular December pilgrimage southward to Juquila by airplane.

Hendry apparently heard that the Puebla ware was not as fire resistant as Atzompa ware (1957:124), but an Atzompera not engaged in pottery-making, who owned Puebla pots, said that they are comparable to Atzompa pots in this respect.

16. The producers of utilitarian ware claim that buyers seek the green color with which they are familiar and would not easily accept other colors. They also claim that ollas must be made of the red-firing San Felipe clay (which is the most expensive and costs the greatest effort to mine), less because of the superiority of the clay than because the buyers believe that a buff color indicates insufficient firing. Whether these preferences and beliefs that Atzompa potters attribute to their customers have any validity has not been demonstrated, since the potters have not departed from their traditional practices in these respects. One *ollero* in the sample mixes clay and a red-firing earth, both obtained at no cost from the Atzompa *municipio*, to fool the customer.

CHAPTER III

PROGRESSIVISM AND CONSERVATISM IN FARMING

LAND: ITS MEANING AND UTILIZATION

Land is important to both farmers and non-farmers. When questioned about their criteria for wealth 24 out of a sub-sample of 36 specified land as one of the criteria. Of these, 18 mentioned land first. When asked what they would buy if they had more money, 34 of 80 respondents mentioned land. Of these, 15 mentioned land as their primary want (see Table 13), among them the schoolteacher in the sample and a storekeeper-wage earner who had spent his childhood in Oaxaca City. For non-farmers as well as farmers, land-holding represents capital. Usually this does not mean *ejido*, but privately-owned land which can be pawned or sold in case of need. Land is both a liquid asset, quickly convertible to cash, and productive capital. The same is true of oxen and burros, whereas as pigs and fowl are regarded as purely liquid assets, despite some income from broods and by-products. Without land or animals a household might have to pledge the house lot in order to meet emergency needs. An additional point is made; farm products can always be used to maintain the household, a special advantage in times of maize scarcity. Thus, land is a liquid asset and also provides subsistence security, and perhaps a cash crop. In the eyes of his fellow villagers, a landowner is a person of substance.

Even before land reform, there was private farmland in Atzompa. There were three *haciendas* in the environs, and two large *fincas* or estates which are essentially unchanged. It is said that the residents of the *Barrio Grande* opposed expropriation of the *haciendas* because they had their own lands, whereas the largely landless residents of the *Barrio Chico* were the activists in the post-Revolutionary agitation for dismemberment of the *haciendas* and distribution of their lands. Currently, when requests for *ejido* parcels are received from residents of the *Barrio Grande*, it is recalled that most of that ward somewhat arrogantly declined *ejido* shares in the original distribution of 1925.

Theoretically, *ejido* is available to all villagers, and there is still a good deal of unassigned land.¹ However, prime lands with high water table are kept in the family, transmitted to heirs by the official procedure of *sucesión*, while only poor lands, usually at a distance, are relinquished for reassignment. In the process of reassignment, the local *ejidatarios'* administration requests that the new parcel holder pay back fees for the time the land was vacant. In several cases, this amounted to exactly \$50 for a hectare, rather a high figure considering that the annual fee was reported by a local *ejido* official to be \$1 per quarter-hectare for hill lands and \$2 for bottom lands. Those who paid it considered the \$50 to be a pay-off ("*mordida*"). A few villagers claim that their requests for *ejido* parcels were refused, with the explanation that there was no land available.

The *ejidatarios* of Atzompa continue to sue for expropriation of the two *fincas*. They continue to contribute money to wage the legal battle and to send representatives to the Department of Agriculture in Mexico City. The Department temporizes, and on one occasion an "engineer" came to mark off the land to be expropriated, but the expropriation was never consummated. Atzompa *ejidatarios* feel sure that the *finca* owners are "paying off" officials. One owner, however, has quietly divided his lands among his sons in order to disqualify those lands for expropriation.

Plots of communal land may be granted in usufruct by the mayor for a one-time fee of \$50 for 50 square meters, or \$100 for 100 square meters. The land is poor and serves primarily for house lots near the village. However, parts of the communal lands are cultivated for the municipal coffers by sharecroppers of the hamlets. In 1969 some of this land was in tobacco, and the *municipio* also collects fees from outsiders who pasture animals in the *comunal*.

Those who hold private land (*propiedad*) are pleased with the inflation of land values. It confirms their traditional belief that land ownership is the primary route to wealth. The prevailing price range for a hectare in 1967 was \$4,000 to \$6,000. One full-time farmer reported receiving an offer of \$10,000 in 1967 from a non-villager for a hectare of land which cost him \$600 in 1945. A villager, who already has amassed considerable property,

also drove up prices by bidding high, \$1,500 for less than a quarter-hectare. It was more customary in the past than it is now to sell land outright in the event of need, even when the need stemmed only from a voluntary commitment to give a *mayordomía*. In the less-prosperous past, the buyers were often the affluent farmers of the neighboring *municipio* of San Jacinto Amilpas. Atzompa lost so much land to San Jacinto that such sales have been discouraged by municipal edict, but as one former mayor pointed out, it is not legally possible to forbid a landowner to sell his land to whomever he wishes.

Twenty-eight respondents in the sample of 80 owned unmortgaged land in 1968. Nine inherited their lands, seventeen bought them, one both bought and inherited, and one married a woman who owned a small plot. The wife of one owner brought one-third hectare as a wedding gift at the time of her marriage. Land inheritance is probably the principal source of family disputes, primarily over privately-held lands, but also over *ejido*. Litigation is costly, and those without funds are not likely to engage in protracted suits. Thus, usurpation is not uncommon.

Data on landholdings ascertained from the field census and interviews in the sampled households in early 1968 are shown in Table 3. This does not take into account lands in pawn.² In 1969 twelve pieces of land were held in pawn by six respondents in the sample. One held four pieces, pledged by four households, totaling 2.4 hectares. The largest landholding in the sample was 8 hectares, held by two households. One of these holdings was cultivated by the landholder and his son. They had, in addition, a hectare to sharecrop and in 1969 acquired another hectare of *propiedad*. Thus, the two men were cultivating 10 hectares without any plowing help. The minimum holding in the sample was one "back-yard *milpa*" of one-eighth hectare. Two others were one-quarter hectare. The total number of hectares declared by the households sampled was 92.1 -- an average of 2.1 hectares for the 44 landholders. The sampled households drew income from 98.0 hectares of farmland, according to their declarations. This figure includes the sharecroppers' portions of the lands they work. It excludes 50% of the landholders portions, that is the portions that were let out to sharecroppers, from which the latter drew income.

The quality of land contributes to its value, and the kind of land held by a household is a consideration in assessing its land wealth. "*Humedad*" land has a high water table. "*Temporal*," is dependent for productivity entirely on rains. "*Loma*," hillside land, is always dry and sometimes stony. While *humedad* land will produce a fair crop even in the absence of rainfall, *temporal* and *loma* land will produce virtually nothing but stalks and leaves. The rains are not dependable. At the inception of the field work, yields were much reduced by arid conditions, whereas in 1969 unremitting rains caused so much damage that one informant estimated a crop loss of seven-eighths for the village. For this reason, farmers say that cultivation is a gamble. Because the interval between sowing and harvest is three to six months, some complain that it is "*trabajo fiado*," literally, work done on credit, for deferred payment.

The irrigation techniques practiced by villagers depend largely on rainfall, ditching and pumping water from the streams. When there is no rain, the streams dry up. One Atzompero sharecrops a small vegetable and flower garden in which there is a well used for pot irrigation. He is the only villager who practices horticulture. Another well, recently deepened to provide the community's potable water supply, was an inexhaustible source of water for a sugarcane field. A deep well was dug in a privately-owned maize field, with the understanding that the landowner would allow contributors to the project to use the water. There are other wells on house lots, but they are not used for irrigation. No one in the village owns an irrigation pump, although several have hired pumps to utilize stream water. There were several complaints that some landholders near the streams will not enter into an accord to ditch irrigate, thereby preventing systematic use of stream water over a larger section of land.

Table 3
Number of Villagers Deriving Income from Cultivation, 1968
Number of Ox Team Owners

	Held some kind of land	Held <i>Propriedad</i>	Held <i>Ejido</i>	Entitled to income from land	Owned one or more ox teams
Number of village households in field census (total 392)	236	145	157 ^a	259	121
Number of pottery-making households (total 348)	211	126	144 ^a	230	105
Number of households in sample (total 80) ^b	44 ^c	28 ^d	29 ^e	46	27
Number of pottery-making households in sample (total 69)	36	20 ^d	25 ^e	38	21

^aSixty-six held both *ejido* and *propriedad*, of whom 59 were potters.

^b It should be remembered that the sample was stratified by occupation and not random.

^cSeven in the sample indicated increased landholdings in 1969, five of *propriedad* and two of *ejido*; both *ejidatarios* and one of the *propietarios* had declared themselves landless in early 1968. One, who declared an *ejido* holding in early 1968, later relinquished it.

^dOne holding was of less than one-quarter hectare.

^e Thirteen held both *ejido* and *propriedad*, of whom nine were potters.

The yield of land also is dependent upon the intensiveness of plowing. Yield reflects both the farmer's interest, the time available for farming, the use of manure for fertilizer, and the timing of the sowing activity to take fullest advantage of the rains. It is considered desirable to sow when the soil is neither too moist nor too dry. The *temporal* planting may take place any time between early May and late July. It is said that, in times past, the rains began as early as the beginning of May, but of late, May and June have been dry months, and those who plant too early are sometimes disparaged as too precipitous ("*muy violentos*"). At the very least, one should time the sowing so that the corn tassel appears when the plant needs rain most, after the potentially dry dog-days. Land preparation can be performed at will over a period of months, but once the time of sowing is decided upon, the farmer must adhere to a schedule. The first hilling and weeding takes place 20 to 22 days from the date of sowing, and the second hilling 20 days after that. An ox team must be obtained if one is not owned, and labor is usually hired for weeding. The maize is ripe in five months. It may be picked while the grains are still moist for eating on the ear. However, it is not considered suitable for grinding into tortilla dough until the grains mature, dry and hard with no further shrinkage, and thus resistant to insects.

On humid land, maize is sown and harvested earlier. A cash crop of chickpeas, sweetpeas, or *habas* (broad beans) may be grown after an early fall harvest, and/or a three-month maize can be sown in January to March. It is said that three crops, annually, are possible on *humedad* land, but few cultivate the year round. While maize is the staple crop, any of three kinds of squash or pumpkin may be planted with it. *Frijol* (kidney beans) and sometimes castor beans, a cash crop, are interplanted with the maize. If an ox team is owned, about one-quarter hectare of humid land must be planted to alfalfa, in order to avoid paying \$10 daily to feed the team in the dry season when there is no pasturage. Besides the above-mentioned crops, a few farmers plant peanuts or sugarcane for sale, and barley or sorghum for fodder. Kidney beans, too, may be planted alone, as a cash crop. On good bottom lands they will produce a *fanega per almud*, a yield of 24 to one.³

There is little thought given to the benefits of crop rotation, although it is known that leaves of the castor bean plant, for example, nourish the soil. Nor is there fallowing. Therefore, when farmers blame their reduced yields on diminished rainfall, one is inclined to question whether soil exhaustion might not also be a factor. There are a number of alternatives which involve time, cash and effectiveness as variables, and the farmers are very much aware of these. The choices result from what Edell (1969:424) has called "trade offs" in the preference system. Although tractor plowing is generally acknowledged to be desirable, Atzomperos hire tractors only when cash funds permit. Of the active cultivators in the sample, seven out of twenty-three potter-farmers, and four out of seven non-potters use tractors when they can (see Table 4).

Among the 19 active farmers in the sample who use only ox teams for plowing, estimates of time inputs per hectare, per sowing averaged:

for land preparation	16.5 man-days ⁴	(N=13)
for sowing for <i>temporal</i> lands	10.0 man-days	(N=17)
for <i>humedad</i> lands	13.2 man days	(N=14)
for first hilling and weeding	8.1 man-days	(N=18)
for second hilling	4.3 man-days	(N=18)
for harvesting	5.2 man-days	(N=18)

Costs vary considerably depending on the number of hands available in the household, whether a tractor is used, and whether the ox team is owned or hired. A minimal cultivation cost in the households sampled was \$240 per hectare. A maximum cost was between \$650 and \$700 per hectare. The cultivator in the latter household hires all hands and pays them well --they are his brothers. He uses both a tractor and hired ox team -- sometimes two teams, to halve the time input. These costs do not include the value of seed, food for workers, cutting and tying stalks, or hauling the maize ears and stalks. Both the household with minimal costs, and the one with maximum, economize their own time by contracting for the cutting and tying of stalks for fodder, at a cost of \$40 to \$50 the hectare. For the temporal harvest, the first household, having an ox team, need rent only a cart. This costs \$44 for 5 trips. The latter household hires a truck for \$80 for 2 trips. Weighed against the expense of ox team rental is the cost of feeding a team the year round. This usually precludes selling any of the maize stalks and necessitates planting or buying alfalfa. The value of maize stalks is minimally \$200 per hectare and may be two or three times that amount (see Table 5).

Table 4
Some Alternatives for Atzompa Farmers, 1968^a

	Potters	Full-Time Farmers	Other ^b	Total
Cultivation				
Active cultivators using ox-drawn plow for land clearing	16	3	--	19
Active cultivators using hired tractor for land clearing	7	3	1	11
				30
Landholders using own ox team for cultivating	14	4	1	19
Landholders using hired ox team for cultivating	4	1	--	5
Landholders using own ox team and hired driver	1	--	--	1
Landholders using sharecropper	14	1 ^c	--	15
Landholders using own ox team with hired driver plus sharecroppers	--	1 ^d	--	1
				41
Cultivators and/or landholders bringing in crops by oxcart or, in the case of small crops, by burro	26	6	.5 ^e	32.5
Cultivators and/or landholders bringing in crops by hired truck	9	1	.5 ^e	10.5
				43
Disposal of produce				
Sell in the village	10 ^f	2	--	12
Sell in the city (Oaxaca)	5	4	--	9
Sell both in the village and in the city	1	1	--	2
Claim they do not sell	19	--	1	20
				43

^aFor the households in the sample. Three held lands not under cultivation in 1968.

^bLandholding family combining blue-collar wage work with farming.

^cLandholder used sons as sharecroppers.

^dLandholder cultivated 67.5 hectares, using several sharecroppers.

^eWinter crop brought in by hired truck, summer crop by hired oxcart.

^fOne, a storekeeper, sold from his store, the others sold from their homes.

Table 5
Three Farmers' Estimates of Crop Yields Per Hectare, 1968^a

	AI ^b Potter-Farmer Working 4 Hectares	SR Full-Time Farmer Supervising 8 Hectares ^c	MG Full-Time Farmer Working 9 Hectares
Maize	Good crop, 12 <i>fanegas</i> ; poor crop, 2 to 4 <i>fanegas</i> .	1st class lands, 15 <i>fanegas</i> ; 2nd class lands, 10-12 <i>fanegas</i> ; 3rd class lands, 2 to 5 <i>fanegas</i> .	20 <i>fanegas</i> from 1st class lands with virtual certainty; potentiality of 20 <i>fanegas</i> from 2nd class lands.
Kidney beans, interplanted with maize	Good crop, 72-84 <i>almudes</i> ; poor crop, 2 to 3 <i>almudes</i>	Good crop on humid land, 120 <i>almudes</i> ; poor crop, 24 <i>almudes</i>	Good land, 96 <i>almudes</i> --up to 144 <i>almudes</i>
Squash, sown with maize:	200 small squash	2nd class land, 200 squash of assorted sizes	250 squash
Maize stalks: ^d	200 bunches ^e	8 cartful or 600 bunches ^e	4 cartful or 400 bunches ^e
Maize husks: ^d	1/2 cartful	2 cartful	3 cartful
Alfalfa: ^d	800 pesos' worth per cut ^e	No experience with buying or selling alfalfa	800 pesos' worth per cut ^f

^aAll three informants have both humid (*humedad*) and dry (*temporal*) land.

^bIn order to preserve anonymity of respondents, fictitious initials are used.

^cSR's lands are worked by his sons as sharecroppers; SR oversees the work.

^dFor cattle feed

^eA "bunch" does not have a standard weight, nor is there any standard relationship between carts and bunches. However, a bunch costs one peso.

^fAlfalfa normally is cut every 40 days when pasturage is scarce, about four times a year, although it may be cut all year round. Quantity usually is estimated by "furrows," a variable measure which depends on the dimensions of the field. Cash value is used here as a more reliable measure.

When the landowner has both an ox team and spare cash, but prefers to spend his time in pottery making or some enterprise such as storekeeping, he may hire a farmhand for the cultivating season to plow with his oxen. The rate is usually lower than that for day labor. The usual rate for plowing labor in early 1968 was \$5 per day and meals, but by late 1969 it was very difficult to find anyone who would work for less than \$10 and meals.

To be quit of the burden of preparing the land for sowing of the need to maintain ox teams, and to hedge one's losses in the event of crop failure, one may simply give the lands for sharecropping. Respective inputs for the partners are variable. Usually the landowner provides land, seed and non-plowing labor. The sharecropper provides the animals and the plowing in return for one-half of the harvest. A large-scale landowner may refuse to provide any labor, but with the growing demand for sharecroppers, this is changing. In 1967, a full man-day of farm work, from about 7 A.M. to 3 or 4 P.M., was worth \$10 and meals. By 1968, \$12 was not uncommon and at least one landholder had to settle for \$15. At harvest time in 1969, the majority of landholders were forced to give a harvest basket of maize ears worth \$20 to \$24 for each man-day of harvesting labor, in lieu of cash wages. Formerly, pay in kind was a favor accorded only to family and friends. Of 26 households in the sample that sharecropped others' land, or used sharecroppers themselves in 1968, nine shared labor costs. In all but one of the others, the landowner paid labor costs. In this instance the farmer required his sharecroppers to pay the laborers.

Unpaid reciprocal labor is rare. Usually relatives and friends are given priority as farmhands because it is to *their* advantage, a practice which assures them an income supplement every year. Twenty of a sub-sample of 33 used family or friends as farm laborers. While the family get-togethers at harvest time are said to be enjoyable, in practice the inclination toward festivity -- aggravated by the liberal flow of mescal -- is highly inefficient. Informants JV and MG, both efficient farmers (JV is also a potter), would not employ "*conocidos*" (familiar). MG even dislikes providing food and the traditional harvest-time refreshment, *tejate* (a maize drink); these are expected in Atzompa, but not in more acculturated communities; therefore he prefers to recruit his labor from neighboring San Lorenzo Cacaotepec.

Having made a decision with regard to inputs one year, the cultivator does not necessarily hold to it the following year. OJ once hired ox teams to cultivate his two pieces (one hectare) of land, but there was a heavy crop loss that year and he forfeited his investment in the teams. Thereafter he used a sharecropper. JV had to sell his ox team in 1969, so hired a tractor and teams but was able to sell the maize fodder after the harvest. A neighbor, CP, had given his land for sharecropping in 1968 but in 1969 was again able to buy a team, which was fed with maize stalks purchased from JV. MC gave his land for sharecropping in 1968; in 1969 he was a sharecropper himself but did not retrieve his own land from his sharecropper. SM was a sharecropper in 1968, but the landowner's son, a retired career soldier of some means, took over the administration of the lands and hired a full-time plowhand. SM found that he and his wife, both 67 years old, not only could make do without this income but that they could live on less than the full income of their own two hectares of land and gave part of it to a sharecropper. In other words, the input factors are fluid in any household.

Yields are also very variable, depending on land quality, rainfall, and intensiveness of cultivation. Several informants (7 of a sub-sample of 28) reported yields of only four to six *fanegas* per hectare. Ten claimed yields of 15 *fanegas* or more. Two of these, reliable informants, reported yields of 24 or 25 *fanegas* per hectare; another claimed to have gotten 28 *fanegas*, but he is inclined to boast and may have been exaggerating. Table 5 represents opinions of one potter-farmer and two experienced full-time farmers concerning optimum yields obtainable by traditional methods. Estimates vary even between these experienced farmers, and the variability that SR attributes to land quality is substantial. Table 6 shows the prices then current for the traditional crops. They were given by the same informants, and indicate some of the sources of price variability. Using SR's yield and price figures, one season's income from a hectare of first-class or humid land would be:

from shelled maize, 15 <i>fanegas</i> at \$100	\$1,500
from maize stalks (fodder), 600 bunches at \$1	600
from maize husks (fodder), 2 cartful at \$150	300
from kidney beans, 120 <i>almudes</i> at \$8	960
from squash, 200 at an average of \$0.50	100
Total	\$3,460

Not only do second- and third-class lands yield less maize, but they also are not generally sown with beans, which require a good deal of moisture. The cultivator's household has first call on both food and animal feed. SR reported the following household consumption requirements. They are given here by day and year and are related to production per-hectare.

	Daily Needs	Annual Needs	Land Required
Maize, consumed by family	1 <i>almud</i>	15.2 <i>fanegas</i>	1 hectare
Maize, consumed by animals (SR raises pigs and fowl)	2 <i>almudes</i>	30.4 <i>fanegas</i>	2 hectares
Maize stalks for one ox team	6 bunches	2190 bunches	3.6 hectares
Maize husks for one ox team	2 basketsful worth about \$2 each	730 basketsful worth about \$1460	4 to 5 hectares
Kidney beans		26 <i>almudes</i>	About 1/5 hectare
Squash, optional for animal feed (except for the seeds, which are toasted and eaten or sold for food)	4 squash	1,460	7.3 hectares

Table 4 gave a summary of sales outlets for those in the sample with income from farming. At harvest time, bulk sales can be made in the city, either to urban marketplace retailers or to wholesale agencies who pay a bit less. Some farmers keep more than they will need. They usually can sell at the higher village retail prices to fellow villagers. Some do this with speculation in mind, e.g. a full-time farmer with a household of only three members was charging \$5.00 the *almud* for maize during a brief period of scarcity in 1968, giving the impression that he was unwilling to part with it even at this exorbitant price. On the other hand, those who have no surplus usually will not consider selling any part of a subsistence crop, and tell inquirers they have none left.

Never is a bulk sale more necessary than when there is a pressing need for a large amount of cash, but time pressure often deprives the seller of a potentially higher return. JV generally stores a large portion of his crop for the consumption needs of his household of nine and sells some of it locally at retail. He was forced to dispose of his 1969 harvest quickly in order to cover expenses for an infant's funeral and his wife's illness. In December he sold it at \$4.00 the *almud* to a neighboring storekeeper, who in January was reportedly reselling it at \$4.60.

Table 6
Prices for Farm Products, 1968^a

	According to AI	According to SR	According to MG
Maize:	\$3.50 the <i>almud</i> when there is a lot on the market; when there is scarcity, \$4.50 or \$4.60 the <i>almud</i> , even \$4.80 for maize that is not insect-eaten; \$4.00 for the spring crop, grains not thoroughly dry.	\$100 the <i>fanega</i>	\$4.50 for 4 kg. or \$1.125 per kg. -- \$90 for a <i>fanega</i> of 80 kg. ^b -- for spring maize, which is not the best quality.
Kidney beans:	When beans are scarce, \$12 the <i>almud</i> at wholesale; dealers in the city currently are selling for \$14 the <i>almud</i> .	\$8 the <i>almud</i> for <i>frijol grueso</i> large beans, \$10 the <i>almud</i> for <i>frijol delgado</i> thin beans), less at harvest time	\$12 the <i>almud</i> when sold to wholesalers, \$14 the <i>almud</i> sold at retail in the city <i>plaza</i>
Squash:	For small <i>quiche</i> type, \$0.50 each	\$0.25 for small squash, \$0.50 for medium-sized squash, \$1.00 for large size.	\$0.75 for <i>quiche</i> type, which is small; \$1.50 for <i>chompa</i> type; and \$2.50 to \$3.00 for a <i>támala</i> , which is large
Maize Stalks:	\$1.00 the bunch	\$1.00 the bunch	\$1.00 the bunch
Maize husks:	11 basketsful per cartload ^c at \$2 per basketful	\$150 the cartload	\$200 the cartload

^aInformation from three informants, one potter-farmer (AI) and two full-time farmers (SR and MG), in July and August of 1968, see endnote 3, this chapter.

^bAtzompa maize weighs less than 4 kg. per *almud* (see endnote 3). Here, MG is estimating spring maize at 3.3 kg. the *almud* (80 kg./24 *almudes*).

^cAn improbably low estimate

INNOVATION AND RISK TAKING

It is common sense, and commonly stated (Belshaw 1965:139), that there is a relationship between wealth and experimentation. This is borne out in the Atzompa sample by the relatively high correlation between wealth and progressivism in farming (see Appendix E). The statement is particularly relevant to farming innovation, inasmuch as "modern" technology consists of such things as tractors, chemical fertilizer, irrigation wells and pumps, which require fairly heavy cash outlays. In 1968, tractor hire cost approximately \$150 per hectare for a single plowing; chemical fertilizer cost approximately \$45 for a field of one hectare; and an irrigation pump cost \$50 to \$80 per day to rent and about \$5,000 to purchase. A mechanical maize sheller cost \$1,150 in 1970, and there was only one in the village. Crop innovation could be risky financially, for not only must the farmer learn how to sow and cultivate a new crop, but also he needs to know market prices and their fluctuations. If he guesses wrong about the market, sugarcane or peanuts would make little contribution to his household's diet.

Substituting tractor plowing for lengthy ox-team plowing, effects a time saving of at least 9 to 12 man-days. It reduces time investment at the expense of higher cash input, an attractive resource allocation for cultivators with other occupations.⁵ In addition to the time saving, it is recognized that the tractor plow is more efficient in turning up the soil. The only objection to it was expressed by the 67-year-old full-time farmer, SM, who said that the large clods harden and are difficult to break up if left unbroken very long. Of the sample of 30, 11 active cultivators hired tractors for plowing whenever there was enough cash on hand and two villagers, brothers-in-law, planned to buy the village's first plowing tractor but had not been able to do so because of crop losses in 1969, and an expensive family funeral. Tractors are not used for cultivation in Atzompa, as they are in some other parts of the Oaxaca Valley. The main reason is that Atzomperos have never seen one used for this purpose. However, AG, an older full-time farmer, thought that tractor cultivation would be impractical, since a tractor cannot turn at the end of a furrow without either missing the edge of the field or trespassing on the adjacent field. Because of the small size of Atzompa fields, the "missing" or trespassing would be considerable. JV had heard of this use of tractors and also of the facilities of the *Banco Nacional Agropecuario*, while visiting his sons in Puebla. He was eager to try such a machine but judged that it would cost a minimum of \$150,000.

The use of chemical fertilizer was begun on a small scale in 1968. By 1970 it was reportedly used by three villagers. There were two in the households sampled. Five others in the sample said they planned to try it, and five more were mildly interested. The main objection to using it is cost. However, it is widely believed that manuring is at least as effective as application of chemical fertilizer, and that the nutrients in the dung remain in the soil longer. Fourteen of a sub-sample of 20 reported using systematic manuring. It is also believed that unless moisture is sufficient, chemicals will be harmful rather than helpful. A further argument, put forward by two respondents, was that the earth becomes accustomed to the chemicals and one cannot then discontinue them. On the whole, respondents in the sample have been favorably impressed by what they have heard on the radio, the results they have seen, and word-of-mouth reports. There was, however, one expression of ultra-conservatism by the 67 year old full-time farmer, SM: "Sometimes I think, how can we do that when God made the land as it is?" ("*A veces me pongo a pensar, como vamos a hacer eso cuando Dios nos puso la tierra como es ?*")

Probably the most important technical need is irrigation. It is a need for which there is no substitute, and against which there can be no objection on the grounds of effectiveness. There is danger to crops, not only from drought conditions but also from flooding due to excessive rains. Channels for irrigation and flood run-off are of inestimable importance to the Atzompa fields. In 1953 a representative of the United States government offered a loan of \$100,000, at 3% per annum, with a down payment of 50%, to establish a system of channels. It was argued that most Atzompa land has a low water table, and well drilling would be costly. Approximately eight private landowners, as well as a few *ejidatarios*, opposed the project, and although a majority of the *ejidatarios* favored it, the offer was refused.

Several cultivators in the sample expressed interest in privately-funded irrigation. One had tried unsuccessfully to obtain a loan from a professional moneylender to buy a pump. Another, MG, who had *propiedad* worth at least \$20,000 was against seeking a loan for irrigation. He said that he does not want to leave his son in debt in the event that he should die while the collateral is in the hands of the bank. He estimated an expenditure of \$2,000 to \$3,000 for the well and \$7,000 for the pump, an over-generous estimate, from other reports. Another respondent was almost ready in 1970 to buy a pump for rental as well as for his own use.

Despite a great deal of talk about the lack of cooperation among villagers and evidence of failure of past cooperative efforts, discord is not a universal sentiment, nor even a majority sentiment,. VA was one of a group of 35 participating in a ditch-irrigation system from 1945 to 1955, when the *ejidatarios* diverted the stream to *ejido* land. A village official, the *síndico*, devised a schedule for the drawing of water, and for ten years the participants abided by it. VA now has the idea that with irrigation a farming project could be established in the communal lands. He envisages a group of about twenty, investing \$5,000 each, and already eight have expressed interest. However, he thinks it will not be possible until the villagers have finished paying their onerous assessments for the recently-introduced electric system.

There are other examples of successful cooperation. After the expropriation of the large landholdings in the *municipio* following the Agrarian Revolution, a landowner in the hamlet of Santa Catarina Montaña wished to sell his remaining lands. A resident of a neighboring *municipio* was ready to buy them, but Atzomperos protested and quickly formed a cooperative organization to buy the land, each contributing what he could and receiving land proportional to his contribution.

Nevertheless, when an official commitment is considered, there is a good deal of hesitation. Such was the case when the *ejido* Bank (*Banco Nacional de Crédito Ejidal*) offered to make a loan to furnish ox teams to a group of *ejidatarios* who had been using sharecroppers illegally (see endnote 1). Pessimists argued that the amount of fodder produced locally would not support the teams, and that some participants might default and throw an increased financial burden on the others. They could point to the example of a nearby village that had reportedly lost part of its *ejido* because of failure to repay a loan for ox teams. While Atzomperos will pledge lands to fellow villagers for cash to sponsor *mayordomías*, the idea of pledging one's goods or lands to a bank, even for the worthy purpose of enhancing village prosperity, is quite another thing. As JV put it, "The people around here don't understand. They think they are going to lose, so that the bank can profit. But the bank wants us to profit too."⁶ He said there were only four, including himself, who did not withdraw from the group of *ejidatarios* initially interested in the loan. There was the further point that the *ejidatarios* wanted "cash in hand," whereas the bank agents insisted on participating in the selection of the ox teams. Probably, the fear of a self-interested officialdom and opposition to interference in their personal affairs, i.e. selection of their cattle, were more important than the *ejidatarios'* distrust of one another.

The self-interest of banks, on occasion, proves to be less than the self-interest of private concerns. A farmer at Santa Catarina Montaña undertook to grow tobacco for a company based in Zimatlán and at the same time secured a loan from the Financiera bank (*Nacional Financiera*) for an irrigation pump. He found that in a year of crop loss the *Financiera* bank would allow a moratorium on payments, but the tobacco company would not.

The initial success of tobacco growing at Santa Catarina, in 1968, was very great. The above-mentioned informant, the head of a large household with no labor costs, cleared \$9,000 from three-sixteenths of a hectare, which would have returned about \$400 if maize had been planted. Another tobacco grower in the same hamlet netted \$1,000 from a piece of land which would have given only one *fanega* of maize worth about \$100. In 1969, 10 of 32 farmers in Santa Catarina were planting tobacco, although it was a year of crop loss due to excessive rains, when there was considerable disillusionment with the project.

Few Atzompa villagers had spoken with the tobacco company representatives who came to solicit participation - and did not return, probably because the response was less than enthusiastic. In a sense, an opportunity for increasing prosperity was lost. It is unlikely, however, that a tobacco growing project would have been successful in the pottery-making village, inasmuch as steady labor is required for harvesting the crop during three months of the year. In addition, it is necessary to irrigate and weed weekly during the growing season, and to string the leaves for drying after they are cut. The labor required is considerable, and in Atzompa steady day labor is scarce. For pottery-making, on the other hand, labor can be provided entirely from the household, and often there is surplus labor-time for a secondary occupation. Moreover, compared to the \$9,000 net profit reported by the Santa Catarina informant, pottery-making net incomes can reach more than \$14,000 annually (DV of the sample). Therefore, rejection of tobacco growing by Atzomperos, especially potters, would not be surprising. Yet, two villagers in the sample signed up to grow tobacco, one of them is both a potter and a pottery dealer. Three more villagers said they would have signed up had they been approached. One of them is a potter. Two more, both potters, said they intended to make a trial of tobacco growing on their own. Seven respondents were not interested in the project because of the labor involved, six because they believed their lands were unsuitable, one (a woman) because of the danger of *envidia* and nineteen because they had no knowledge of tobacco growing. A relatively

well-to-do potter-farmer-storekeeper expressed lack of interest on the latter grounds. He added, "I don't get involved in what I'm not familiar with" ("*en lo que no sé, no me meto*").

Other cash crops do not have the special disadvantage of intensive labor that tobacco requires and are more easily accepted, although the profits they render are much less. Thirteen of the cultivators and/or landowners in the sample, including 9 potter-farmers, had learned on their own initiative to grow cash crops not customarily cultivated in the village. Five had learned to cultivate peanuts and six sugarcane, although one failed in the attempt. Two were growing watermelon, and two sorghum. Two potter-farmers learned two crops each. One who learned a new crop was taught by a hired hand, and three others admitted to having been taught by outsiders. Nine claimed to have learned solely by observation and imitation. Experiments with watermelon have been discouraging, because of the attraction this fruit has for thirsty animals as well as humans. Two respondents said they would not plant it because they would be tempted to shoot at anyone who raided the watermelon patch. This would, of course, cause trouble for everyone concerned. A third had stopped planting it for the same reason. One villager incurred bad feeling by putting poison in the watermelon patch, killing a dog. This action comes under the heading, "*buscar dificultades con la gente*," (roughly, "to look for trouble"), a behavior which good Atzompesos avoid.

For the most part, subsistence crops are preferred to cash crops. One need not be concerned with the vagaries of market supply and demand, and in the event of scarcity one will not go hungry. A cash crop must be marketed under conditions that the peasant does not control, and the proceeds used to buy maize at a price that may be inflated due to scarcity.⁷

SUMMARY

It appears that the land available to the village could provide at least a year-round supply of maize and beans for the population if irrigation, and possibly commercial fertilizer, could be applied. The yield of some second- and third-class lands is presently so low in a dry year that they seem hardly worth cultivating and one wonders whether this land is held chiefly for collateral on loans. At times, modern technology is not adopted because of high costs, and one should not dismiss the objections posed by farmers who know their land well e.g. the objection to use of commercial fertilizer on the grounds that systematic manuring is at least as effective. Tractor plowing has been generally accepted in principle, the cost being virtually the only hindrance to its use. However, the use of chemical fertilizer has just begun.

While some cultivators and landholders have used opportunities to learn to plant new cash crops, less than 30% of the 1969-1970 sample have done so. The majority have not experimented. This may be for lack of opportunity or lack of enthusiasm, perhaps because they do not cultivate their own lands, or because the land is not suitable for non-traditional crops. Also, occasional scarcities of maize have confirmed the peasants' belief that it is good to be able to provide one's own minimal subsistence needs. Therefore they plant for subsistence security rather than venture into crops that might yield greater income. Nevertheless, there are a few pioneers, although not the same individuals in all instances. These villagers will risk experimentation with an unfamiliar procedure or technology. Some are willing to try a new crop, even one such as tobacco which promises to be difficult to cultivate. As with the tobacco growers at Santa Catarina Montaña, their success furnishes a favorable demonstration effect for others. The first requirement for acceptance of a new procedure is exposure to it; the second, the desire to emulate; the third, the financial ability to do so. As has been demonstrated in the learning of new crops, some villagers are not unwilling to emulate or even to solicit instruction. However, 230 of 259 Atzompes cultivators and/or landholders are also potters (see Table 3). They cannot give farming their undivided attention except where there is a division of male labor in the household that allows one man to attend to pottery-making while another devotes himself to agriculture.

In evaluating the reluctance of most Atzompes peasants to invest more heavily in modern technology, one also should keep in mind the contrast between the interests of a farm run for highest profit and the interests of the family farm (Chaíanov 1966). While the former is concerned *solely* with maximizing profit, the peasant household has other considerations, too. How much labor it is willing to invest, and what sacrifices in consumption it is willing to make for capitalization? How much of the family's short-term gratifications will it forego in the interests of long-term betterment? Farmers of the Atzompes *municipio* hamlets who do not participate in the expensive *mayordomía* fiestas, and who are rather restrained in their observances of life crisis rites, say that the villagers go to excess in their costly fiesta participation. In the village, a "good" fiesta is one that lasts the week around. However, the standard of living is not noticeably different in the hamlets, and it would probably be fair to say that social gratifications there are fewer than in the village.

Conservatism in capitalization also results from the fear of incurring indebtedness with officials who would have no compassion for the individual if there were cause to foreclose. While Atzomperos are aggressive in seeking personal loans, and casual about repaying them unless they have signed a note to which they can be held, they are extremely wary of incurring large-scale debts of an official nature. The sentiment is sometimes expressed: "We do not want commitments" ("*no queremos compromisos*"). Avoidance of a potentially dangerous obligation was shown in the rejections of the *Ejido* Bank loan offer for the purchase of ox teams, and the U.S. loan offer for an irrigation-channel project. Another example was MG's decision to wait a little longer and pay cash for well-and-pump irrigation rather than incur a debt with the Financiera Bank.

It is evident that Atzompa farmers are not rigidly conservative. They shift their farming inputs and vary their cash crops from one year to the next. They alter their selling strategies to favor speculation or to make a rapid sale for a lesser profit. In most cases, the individual is multifaceted in his behavior. That is, his progressivism is differential in different circumstances. LA, a potter-farmer who signed up to grow tobacco, used neither tractor plowing nor chemical fertilizer, nor does he have electricity in his home. SR, age 67, leaves the farming to his sons but is in the fields daily supervising them. He was among the first villagers to use chemical fertilizer, but he has no electricity in his home and uses traditional clothing exclusively. An unrelated informant suggested that one of the sons was responsible for the use of chemical fertilizer, but SR claims that it was inspired by radio advertising. SM, the informant who felt that it is best not to tamper with God's lands by using chemical fertilizer, appears to have a highly traditional world view. Yet, in the statistical analysis he is shown to be highly non-traditional with respect to community activities such as religious fiestas and civil service, and he also has a high score in the category of behavior dealing with non-traditional medical beliefs and practices (see Appendix D). The woman who expressed a traditional concern with *envidia* in regard to growing profitable cash crops, such as tobacco, has given two daughters a secondary education and tried to place one of them in city employment. Hers was the first household in the village to undertake dressmaking as a systematic secondary occupation, and her household produces "*loza fina*," fine ware, for the tourist market. In other words, the household shows many signs of progressivism, but there is still a conservative fear of other people's envy.

Notes to Chapter 3

1. Government documents give a total of 1,016.79 hectares. The last official list of *ejidatarios*, drawn up in 1942, shows a total of 387 *ejidatarios*, whereas the 1968 field census showed 157 households holding *ejido* land. A recent (1967) treasurer of the local *ejidatarios*' administration believed there were only 132, which perhaps represents the number paying annual fees. In some instances land whose yield did not justify the time and/or cash input has been relinquished. One household of the sample relinquished its *ejido* parcel because of the poor yield.

In 1968, sharecroppers challenged the rights of *ejidatarios* who were illegally using sharecroppers at the fairly distant location of Los Ibañez. The sharecroppers claimed the land for themselves. While the plaintiffs lost their suit, the federal agency (Department of Agriculture) warned the Atzompa *ejidatarios* against using sharecroppers, and a number of them gave up their parcels rather than cultivate the distant plots.

2. There is some reticence in declaring one's landholdings, not only because of conservatism in hiding one's wealth from fellow villagers, but also because *ejido* may be sharecropped illegally, or privately-owned land may not be properly registered for taxation. The writer estimates that approximately 9% of the sampled households declared themselves landless when they were not, and that another 2.5% understated their landholdings. Declared landholdings in the field census were reviewed with a key informant. Even so, there is undoubtedly some margin of error in the direction of understatement.

3. The local term "*almud*" refers both to a volume measure of four liters and to the land surface that can be sown with this amount of maize, usually one-quarter hectare. One hectare is equivalent to 2.47 acres. In Atzompa, but not everywhere in the region, 24 *almudes* or 96 liters comprise a *fanega* of grain. Especially in the case of maize, the weight is variable. For example, one non-local type of maize ("*arribeño*") weighed .75 kg. per liter or 3 kg. per *almud*. It is said that local ("*criollo*") maize weighs more, although less than 4 kg. per *almud*. While selling maize by the *almud* has been outlawed, this customary measure prevails in the

villages. As a measure of consumption requirements with relation to land surface, most households of 5 or 6 members consume one *almud* of maize daily or 365 *almudes* per year. The 15.2-fanega requirement can be provided by a good crop on one hectare of seasonal land or an average crop on one hectare of humid land.

4. The length of the work day varies. Sowing seasonal lands, for example, requires digging only a shallow hole and dropping in seed; work days are generally 5 or 6 hours. Sowing humid lands requires digging deep in order to place the seed in moist earth. This takes about 8 hours per working day, and sowers are generally paid at twice the rate paid for *temporal* planting.

5. After the tractor run, another plowing is given with the ox team for clod breaking, and at the time of sowing, the final plowing or furrowing is carried out. Those who do not use tractors plow three, four, or five times before furrowing -- usually four, but it varies. The number of days taken to plow a hectare also varies from two to five days, the time factor depending a good deal on the strength of the oxen. Even in techniques of plowing, there is variability. Some plow a field vertically, then horizontally, then diagonally, whereas others prefer to plow vertically only, moving over only slightly for each new furrow in order not to leave any strips unplowed.

6. *"Los de aquí no comprenden. Piensan que ellos van a perder para que el banco gane. Pero el banco quiere que uno gane también."*

7. A government warehouse sells maize at controlled prices, but the kinds of maize sold are from other regions, usually not the favored local varieties. Also, during the heavy rains of 1969, supplies did not reach the warehouse for a time because the railroad line was flooded out.

CHAPTER IV

ECONOMIC AND EDUCATIONAL MOBILITY

As in more advanced societies, mobility in Atzompa is of two types: purely economic advancement, and status advancement. Status advancement usually is achieved through higher education. Occupation confers prestige, primarily insofar as it enables a person to give up pottery. This traditional activity is held in low esteem, not only because it is dirty and costs much physical effort, but also because it is repetitive and boring. Farming is not regarded with such low esteem, although it, too, involves manual labor and physical discomforts. In discussing possible careers for their children, however, villagers appear to give more consideration to potential income and working conditions than to prestige. In fact, children who attend secondary school often are left to decide for themselves what careers to follow, and the usual motive in sending them to school is to give them a springboard for a better life, wherever it may lead.

This chapter deals with the traditional pressures toward economic homogeneity, with villagers' versatility in manipulating local economic alternatives and the fairly recent enlargement of economic opportunities in the region, villagers' exploitation of those opportunities. In addition, the aspirations engendered by the new view of opportunity, and some of the social repercussions will be addressed.

CONSERVATISM WEALTH, LEVELING, AND *ENVIDIA*

In addition to the leveling mechanism of the fiesta system, and the fear of resentment and even witchcraft resulting from the envy of the less fortunate, fatalism has probably been a factor in limiting upward mobility and the appearance of mobility in the village. For example, two elderly villagers said that God gives each family the talent for its particular pottery form, although even in the past it was common for households to practice more than one *oficio*.¹ Indeed, one of those who expressed the fatalistic philosophy reversed himself when it was suggested to him that a potter might learn other forms. "Wanting to, one is able," he said ("*Querer es poder*"). Related affinally to a leading family of extremely versatile toymakers, he has had ample exposure to the possibilities for form diversification, but this was not expressed in his traditionally held views. Even among younger people, a question concerning the possibility of changing the household's pottery form may elicit the phrase, "Everyone has his own form" ("*Cada quien con su oficio*"), expressing the attitude of non-change or conservatism. Extreme conservatism, however, is encountered only among the older villagers, e.g. these negative reactions to suggestions for material improvement: "I'm used to being poor" ("*estoy hecho a ser pobre*"), "We are going to die soon anyway" ("*ya vamos a morir*"), or "What for?" ("*pa' qué?*"). The wealth status of the individual has little to do with this attitude, and such remarks are heard from the relatively well-to-do, as well as from the poor.

The system of *cargos* (religious offices) and associated ritual feasting is blamed for inhibiting economic progress in Atzompa by observers from outside the village, and by the more progressive villagers. (Details of the system are given in Chapter V.) Most anthropologists acquainted with the effects of the *cargos* or *mayordomías* are of the opinion that they result in wealth leveling and economic homogeneity (Foster 1967:205; Nash 1966:35, 1967:99; Wolf 1955:458, 1959:216).² In contrast, Cancian (1965) reported that in the Mayan town of Zinacantán, the poorer stratum of the village could not afford to give the more expensive fiestas, while the wealthy, who did give them, enhanced their status and maintained their wealth. Tax (1953:206-207) pointed out that whereas a Guatemalan village as small as Panajachel required the participation of all households in order to keep offices filled, even at the highest ranks, the large town of Chichicastenango had too great a population for everyone to undertake all the *mayordomías*. As a result, the most prestigious feasts were always given by the wealthy. In Atzompa, poorer households sometimes do undertake the important *mayordomías*, usually in fulfillment of a vow, but the capital they spend is modest. Such families live from day to day. They normally do not save wealth. When they plan to give a *mayordomía*, they put aside a few pesos from each pottery firing during the course of about a year. They invest

the money immediately in goods which can be stored for the fiesta, so they will not be tempted to spend it for other things. Pottery production is increased during this period. When the fiesta is over, the low-income family is no worse off than before. A wealthy *mayordomo* must sell several animals -- pigs, goats, even cattle -- and slaughter others to feed guests, but he does not exhaust his capital. The households that suffer most from the fiestas are middle-income families that normally have a reserve of animals and even cash, but must spend it all to give a fiesta in keeping with their wealth status. Such conspicuous consumption is shunned by those intent on economic advancement, such as JV, who ranked eighth in wealth among the 78 households in the sample. "These fiestas are bad traditions that impoverish the village," he said. "They are ruinous expenditures" ("*son gastos que dejan a uno en la ruina*").

Expenses for three *mayordomía* fiestas during the period of the study were \$2,129, \$1,622, and \$5,386.³ The latter figure represents the expensive Easter celebration. This *fiesta* is the responsibility of the *alcalde*, a civil official, and \$400 was covered by public collections.⁴ A *cofradía* (religious brotherhood) feast, hosted by a potter-farmer who ranked 55th in wealth status in the sample of 78, cost a total of \$7,543. \$1,485 was contributed by other members of the brotherhood.⁵ In addition, the host incurred \$800 to \$1,000 in *guelaguetza* (reciprocal aid) debts.

Other occasions for festive spending are the life crisis ceremonies, namely, baptisms, first communions, weddings and funerals. In the case of a wedding, the groom's family bears most of the financial burden, including the cost of the bride's clothes and minor celebrations for the engagement party and the civil ceremony. However, the bride's parents also entertain guests at their home at the time of the church ceremony. In addition, there are godparental responsibilities. The *sacada de misa* is offered by the baptismal godparents to celebrate the termination of the mother's postnatal confinement. It is sometimes combined with the baptism to spare the godparent the fiesta costs. A traditionally large fiesta is given by the marriage godparents at the time of the godson's church wedding, and if the godchild dies before reaching maturity, the burial expenses are shared by the baptismal and confirmation godparents.⁶

Outlays for life crisis ceremonies are variable, depending upon the family's resources. Costs for baptismal fiestas given by the sampled households in 1967 were estimated retrospectively. They ranged from \$200 to \$1,500 and averaged \$517. Expenses for one very modest first communion party were \$200. Recorded costs for a three-day *sacada de misa* party in 1968 totaled \$723.50, including clothing gifts for the infant. Wedding expenditures ranged from approximately \$300 to \$2,500, but these estimates probably omitted some household-produced goods. Recorded costs for a wedding given by a family ranking 46th in wealth status among 78, totaled \$3,335. This figure included the outlay for the bride's outfit and the value of the household's maize and animals, but excluded reciprocal aid. A wealthy family may spend as much as \$2,000 for a first-class funeral. This includes nine nights of prayer following burial, climaxed by the execution and "burial" of a colored religious picture, an elaboration of the simple lime cross used elsewhere in the region. For the latter ceremony, guests pass the night at the home of the deceased and are fed dinner, breakfast and a good deal of mescal, supplied by two "godfathers of the cross".

It is generally recognized that prolonged feasting is wasteful, particularly in the case of funerals. It adds a burden of exhaustion to a family that already may be emotionally spent, and it dissipates resources that may not be replenished if the deceased was an important breadwinner for the household. However, the household that tries to minimize the observance learns, to its chagrin, that "people criticize" ("*la gente critica*"). In all of these traditionally obligatory celebrations there is a fear of criticism that drives the feast-giver not only to recognize the event by inviting guests, but also to lay on all the food and drink he can. This includes an expensive breakfast of chocolate and sweet bread every day of the fiesta. At the larger feasts, for weddings and religious observances, usually there is so much food that time is taken for the women guests to carry home their portions and those of their husbands.

Fear of envy, like fear of criticism, continues to be a wealth-leveling factor, but a much diminished one. In one case, an informant was one of four heads of households sharing the paternal house lot. His visible material improvement through factory employment aroused the hostility of his brothers' families. However, he did not hesitate to buy new clothes and a new radio. Even stronger than envy of the economic advancement of others are evidences of professional or occupational jealousy. Examples include the first toymaker's anger when an unrelated family adopted toymaking; a storekeepers' refusal to sell to customers who also shop elsewhere, and the negative reactions of buyers of unfired pottery when they discover that their suppliers are also selling to others. These

examples may indeed represent a "limited good" concept in the form of refusal to share clientele. Nevertheless, there is a form of professional jealousy which appears to have nothing to do with limited markets. One constantly hears deprecating statements about the work of other potters, especially about those who have achieved some success in the lucrative tourist market. In one instance the competition between brother and sister, both toymakers, has led to considerable personal animosity. Yet, there is no limit at present to potential profits from pottery sales in the expanding tourist markets. Indeed, both last-mentioned potters have more orders than they can fill. In their case, professional jealousy acts as a spur to greater achievement, rather than as an inhibitor.

Because of the fear of vindictive envy, wealth was concealed in the past by minimizing investments in its visible forms, such as housing, clothing and other material possessions. Even today, landholdings may be hidden, but this is difficult to do in a village where gossip is rife. Family histories are virtually public knowledge, and the landowner must at times appear on his property, if only at harvest time.⁷ Forms of material wealth, and some idea of their rate of accumulation, are discussed in a later chapter. Such accumulation is indicative of the waning of wealth-concealment attitudes. Half of a sub-sample of 60 heads of households stated that they enjoyed a higher standard of living than their fathers had at the same age.

EXPANSION OF THE ECONOMIC BASE

The opening in 1943 of the section of the Pan American Highway connecting Oaxaca with Puebla and Mexico City had the effect of expanding markets for Oaxaca products, as well as intensifying imports. In some cases such as pottery, these imports were competitive with local goods. This main artery, and the later extension of the road system into formerly isolated areas, promoted increased vehicular traffic and bulk transport. It ultimately resulted in the leveling of prices throughout the region.

As external markets grew, pottery dealing surged. In 1967-1968 34 households were engaged in pottery dealing to some degree. Eleven were large-scale dealers in village terms, investing \$300 to \$500 a week in pots for resale, and up to \$1,000 for the heavy buying of the All Saints season, when it is customary to buy new kitchen equipment. Most of the growth occurred in the 1950's. There were only some five dealers of this magnitude in the 1930's, although at that time profits in the distant towns, (e.g. Santa Ana Tlapacoyan) were great -- up to 100%.

Gross profit on pottery resold by Atzompa dealers is now about 33% in the Valley marketplace towns of Ocotlán and Tlacolula, as far south as they travel nowadays. Two go to the Mixteca regularly, and one travels to Mexico City occasionally, to supply a distributor there. The latter dealer is the most sophisticated of the village. He is the only one who has a number of extra-regional buyers, and the only one, presently, who stores ware for fairs and for seasons of high prices in Oaxaca. Before Easter of 1968, however, he had no pottery in reserve for a buyer from Amecameca, who visits every year at this time, and had to order 10 gross of pots on behalf of the buyer, receiving no profit himself.

Expansion of the market for Atzompa pottery, and the consequent growth of pottery income in the village, have increased possibilities for developing working capital. In 1964, the transport of pottery from Atzompa to the Oaxaca City *plaza* became a village industry, and by 1969 was exclusively so. By 1970, six Atzomperos had secondhand trucks of various sizes, the largest one representing an investment of \$30,000, half of this paid in installments. The first trucker had two vehicles in 1968 and paid each of his drivers 25% of gross income. He paid the four loaders (*macheteros*) \$12 each daily, and meals for four days of work per week. One of the trucks grossed a little more than \$300 weekly, the other about \$490 weekly. Maintenance costs can be formidable. In 1970 two partners gave up a truck that had been in an accident rather than repair it, and the owner of a small pick-up was in the process of liquidating a repair bill of \$4,000.

Corn mill enterprises in Atzompa date back to the 1930's. Apparently there was no resistance to machine-milled maize, probably because the time saved was profitably applied to pottery making. Today, many Atzompa households buy small tortillas of non-local maize fashioned with a press, even though large, hand-made tortillas of the local varieties of maize are preferred. The time pressure of pottery production forces such compromises.

One of the earliest millers was an emigrant villager living in Oaxaca. He was the only Atzompa-born miller of the four who operated in the village before 1940. Of six mills operating in the 1940's four were village owned, and all four operating after 1950 had village-born owners. Many Atzomperos were attracted by the

economic possibilities of corn milling. In 1946 ten villagers established a corn mill cooperatively, and two years later another mill cooperative was founded by 42 *ejidatarios*. Both cooperatives ran into difficulties. Returns for each shareholder were small, accusations of pilfering followed and in both cases members refused to contribute to expensive repairs for which no contingency fund had been set aside. Of the two enterprises, only the *ejidatarios'* mill still functions. The membership is reduced to four who were willing to forgo profits while paying for a new motor. Motors are expensive. One of the two functioning in 1968 cost \$27,000 in installments. The other cost \$18,000, plus 5% per month interest on the borrowed principal, which was paid from profits. However, a properly run mill is a very profitable business. Gross returns were approximately \$40 daily for one of the two mills serving the village in 1968. Each of two partners, brothers, received about \$300 per month, after deductions for labor and maintenance. There were only two mills at that time because a legal limit had been placed on the ratio of population to mills. This was rescinded in 1969, whereupon one of the brothers withdrew from the partnership and established his own mill. It is unlikely that more will be established, since the introduction of electrical power has brought with it talk of a tortilla factory. Two villagers, one a Oaxaca-born storekeeper, the other an Atzompa-born potter, were separately investigating the cost of setting up such a factory, each unaware of the other's plans. One of the shareholders in the *ejidatarios'* mill expressed a certain nervousness at the inevitable prospect of competition from a tortilla factory.

There have been stores in Atzompa as far back as memory reaches, but before 1930 only half of them were owned by persons born in the village. During the period of the study, the number of major stores increased from 12 to 16. All but one were owned by individuals born in Atzompa. The investment in a store is variable. A cane hut, built for a kitchen, can be converted for use as a store, a shelf or two added, and a very small stock acquired with a view to reinvesting the profits and expanding gradually. A small *jacal*-type store, established in 1967, cost approximately \$2,000 to build, furnish and stock. A phonograph and loudspeaker, a common adjunct to storekeeping, cost another \$1,000.⁸ The \$3,000 investment was raised by selling two cows and a calf.

By comparing prices of products in the Oaxaca market district with Atzompa store prices, the mark-up was found to be 30% of cost on the average. It was somewhat less for soft drinks after the wholesale cost rose in 1969. Some items had extremely high mark-ups: kerosene yielded 60% of cost, and charcoal purchased from itinerant vendors, about 100%. A normal investment of \$300 to \$500 weekly for a well-stocked store returned profits of approximately \$90 to \$150, respectively. Storekeeping provides supplemental income for potters (four households of the sample), potter-farmers (three households), and wage workers (one household). No full-time farmer operated a store in 1967-1970, but one small-scale farmer with a large family to support was considering the possibility. One new storekeeper was also a potter, mason, landholder, and sometime farmer, but for him, storekeeping was a minimal operation. Nevertheless, he had perhaps over-extended himself as did toymaker OV. In 1968 OV began to resell glaze, firewood and groceries, and invested in a cow almost simultaneously. The following year he was obliged to retrench. He discontinued the sale of glaze and firewood, which he had been selling almost entirely on credit at a loss, put the grocery store on a cash-and-carry basis, and gave his cow to a farmer to maintain on half shares. This man is a very successful potter, with maximum income from that occupation. The motive for his economic expansion appears to be the desire to give his boys a secondary education, particularly as his brother, another storekeeper with whom OV is in competition, has already registered his elder child in a secondary school.⁹

Not only has enterprise increased appreciably, but strong competition has become a feature of it. Until 1968 a store that was, for many years, the largest in the village closed for the lunch hour. Now the storekeeper, finding himself with four major competitors close by, no longer allows his family the luxury of an uninterrupted lunch hour. That store formerly sold \$100 to \$150 worth of chocolate tablets each week. Now chocolate sales are down to about \$5 a week. The budding competition is ill received by villagers who are unused to and unprepared for it. MG, holding a quarter interest in the *ejidatarios'* corn mill, had been taking home up to \$100 a week before mill earnings were channeled into the purchase of a new motor. When the third mill opened, he complained that earnings no longer provided a living, although in his case they were merely a large supplement to an already substantial income from farming. Moreover, he thought it unfair that the new miller gave free service for the first two days to attract customers and thereafter set his rate below his competitors'. Resentment of competition is perhaps a new form of the traditional *envidia*. Village services do, indeed, have a limited market, and the greater the number who compete, the less profit there is for all. Nevertheless, with increasing prosperity and rising

aspirations, surplus cash is likely to be invested in those enterprises which have proven successful. Hence the proliferation of pottery dealers and storekeepers.

Somewhat more risk-taking is involved in establishing economic activities that are new to the village, such as the planned tortilla factories and the plowing tractor (see page 52 above). Even greater risk attends the establishment of an electric glaze mill. This would involve competing with the wealthy glaze dealer in Oaxaca. The urban dealer enjoys a monopoly on glaze sales to Atzompa potters and has threatened to counter any competition by reducing his prices to cost for a year. In 1970 a villager with access to a glaze source in Mexico City stated his intention to electrify his manually-operated mill at a cost of \$12,000.

Astute individuals take advantage of opportunities to maximize their gains, as the following examples illustrate.

1. LB practices the lucrative craft of toymaking, which she has taught to her husband, and the secondary occupation of pottery dealing. She took two pieces of land in pawn and gave them to a sharecropper to farm. Because of illness in her father's household, she was able to buy cow and its bull calf from him at a very reasonable price. In time, the bull represented half of an ox team. The cow was bred again, but subsequent calves were female. Finally a second bull was bought to complete the team. Now the husband and sons work the land. In this household the wife is the more aggressive spouse, the dominant actor in its economic activities.

2. MG, a former *hacienda* peon, came to the village in 1938 with his wife and child, dressed in rags, with only an ox team as capital.¹⁰ He worked as a sharecropper, acquired *ejido* parcels, and over the years purchased more than six hectares of his own land by watching for indications of others' need to sell or pawn.¹¹ He made special efforts to acquire contiguous land which would facilitate farming and, in the future, irrigation. Capital for land purchases was raised by fattening animals for sale and paying part of the cost in installments. Now, in addition to his lands, he holds a quarter interest in the *ejidatarios'* corn mill. He has only one child, and his estate will remain intact in the next generation. His elder grandson is in the preparatory school of Benito Juárez University in Oaxaca. Yet this highly mobile man retains a degree of conservatism, manifested in his reluctance to seek loans for improvement (page 52).

3. The history of the wealthiest Atzompa family, once among the poorest, can be summarized roughly as follows: Pottery-making household acquires *ejido* parcel circa 1925.

First son completes primary education in Oaxaca and enters secondary school with the objective of becoming a schoolteacher.

Husband takes position as caretaker of *Bonete*, the archeological ruins in the hills above Atzompa. Caretaker's wages rise under the *Instituto Nacional de Antropología e Historia*.

First son becomes a schoolteacher.

Second son and first daughter become schoolteachers.

Third son takes white-collar position in Oaxaca.

Second daughter becomes a secretary in Oaxaca.

Third daughter establishes a store with a considerable sum. Household gives up pottery-making.

Husband dies, and a substantial sum in federal life insurance becomes payable to widow.

Fourth son replaces him as caretaker.

Household buys real estate in and near Oaxaca City.

Fourth daughter attends sewing academy and engages in occasional dressmaking for profit.

Third son receives diploma in accounting.

The sons ceased to contribute to the household when they married, and only one, a white collar employee, does so now. The store is located at the bus stop and is the only large one in the neighborhood. It provides an income that is more than adequate to sustain the widow and two resident daughters. The widow has stated that she is not interested in acquiring more land, either private property or *ejido*, expressing a highly non-traditional attitude in this respect.

4. The first truck owner had been a potter, pottery dealer, and a large-scale landowner before he established a store in 1963. In 1964 he invested in one second-hand truck and bought another the following year. He sold this truck in 1969 because he believed the employees were cheating him. In 1969 he set up a pool hall next

to his store with three tables bought second-hand. The tables were refurbished in 1970, and the admission fee was raised.

5. The second truck owner, *consuegro* (co-father-in-law) of the first, is one of the millers. He bought the truck on half shares with his non-resident son who is a pottery dealer.

As pottery-making usually is not a full-time activity, other occupations can be carried on simultaneously. If successful, they may reduce or eliminate the need for pottery-making. Informant VA of the sample paid \$60 monthly to the daughter of a fellow villager, for her to give sewing lessons to two of his three daughters. He did this partly to produce extra income to put his only son through secondary school, and partly to provide his unmarried daughters with an alternate occupation which could be pursued without male assistance in the event of his death. During the period of this study their sewing was still quite crude, but improving. Every dress they made was quickly sold.

LS, an informant not in the sample, named the following income sources of his household with their respective profits: from resale of clay, tempering material, and firewood, \$68 net profit weekly; from sale of kindling, \$24 net profit monthly; from tortilla sales, \$4 gross profit weekly; from dressmaking, \$50 to \$90 gross profit monthly; and from pottery-making, \$100 to \$110 gross profit weekly. Two of his four daughters divided their day, one between pottery-making and dressmaking, the other between pottery-making and tortilla preparation for consumption and sale. In addition, the only son worked his grandmother's (MM) land, for which he earned approximately \$50 a year. In 1967-1968 he worked about 135 days or part days as a farmhand during the cultivating season, earning an approximate total of \$1050 plus meals. LS bends every effort to augment his pottery-making income, but probably none of his secondary activities will provide mobility in the next generation. When the dressmaker eloped with a neighbor's son in 1969, her family sold the sewing machine rather than give it to her. It is likely that LS's wife will inherit some or all of her mother's land, but during a severe illness in 1969, the mother sold her ox team. This deprived LS's household of the plowing job and its maize supply.

There are a number of ways to learn new economic activities at little or no cost. A village butcher and a baker, Atzomperos by birth, learned their trades by working for professionals in Oaxaca City. EM, a potter in the sample, has worked as a miller in a number of communities and also worked for a short time as a butcher's apprentice in Oaxaca City. Some of the kick wheel potters learned the use of the wheel working in Oaxaca pottery shops. A young man who helped to build the village's parish house applied what he had learned to building his own house. Built entirely by himself, the house has a cement floor with a raised platform at one end, a side window and a skylight. These are forms of apprenticeship. Alternatively, one may pay for instruction, as did several kick wheel users and VA, the informant who paid a fellow villager to teach his daughters dressmaking. Income from most village occupations is limited, so several economic activities are often combined in a single household, much as potters in some households specialize in a particular form or size of pot.

However, few activities render enough income to shield the household against severe economic stress. A particular activity may have to be curtailed because the practitioner falls ill or is lost through outmarriage or death. Even the larger enterprises, such as a store or a corn mill, can be decapitalized rapidly in the event of a prolonged family illness, a lawsuit or, in the case of machinery, heavy repair costs. Sixteen men in the households sampled had worked as braceros in the United States. Only half had improved their status with the earnings. The others either dissipated their money or spent it to cure an ailing family member. The only path to permanent mobility is seen in education leading to urban white-collar or professional employment.

Table 7
Occupations of Atzomperos, 1970

Productive Occupations	Transforming Occupations	Service Occupations	Service Occupations - Rental	Wage Earners
Farmer	Baker	Barber	Burro rental	Schoolteacher
Potter	Beekeeper	Butcher for fiestas	Glaze mill rental	White-collar employee in city
Animal raiser	Butcher	Curer, traditional	Ox team rental	Blue-collar worker in city ^a
Egg vendor	Cheese vendor	House builder (mason)	Phonograph rental	Public service employee in city ^b
Milk vendor	<i>Chocolatera</i>	Injector of medicines	Reselling	Day laborer, city (<i>peon</i>) ^c
	Pottery finisher	Kiln builder	Storekeeper	Day laborer, village ^d
	<i>Tamalera</i>	Laundress	Vendor in Atzompa marketplace	Mill employee, village
	<i>Tortillera</i>	Marriage broker	Reseller of:	Water pump operator
		Midwife	clay	Caretaker at archaeological site
		Miller	temper	Farmhand, regularly employed
		Moneylender	firewood	Farmhand, occasional
		Musician	red dye (slip)	Truck driver, village
		Plow assembler	pottery	Truck loader
		Pool hall owner	soft drinks	Seasonal (emigrant) laborer
		Pray-er at funerals	groceries	
		Singer, religious		
		Seamstress		
		Sharecropper		
		Teacher of housekeeping arts (<i>mejoradora</i>)		
		Trucker		

^aIncludes employees with bus companies, factories, mechanic's shop, corn mill

^bPoliceman, fireman

^cUsually mason's helper

^dOdd jobs; corn husking and shelling, portorage at village marketplace, mason's helper, etc.

EDUCATION AND MOBILITY

Compulsory education at the primary level was little enforced in former days, and it is still incompletely enforced. The village primary course was not complete until the sixth grade was added in 1958. Hence very few Atzompa children were even eligible for secondary school unless they had been sent to primary school in the city. In late 1967, 34 children attended fifth and sixth grades combined, still a very small number, but attendance at school and, consequently, literacy, were rising (see Table 8). Enthusiasm for education is traceable to the 1940's.

In 1941 a teacher in the Atzompa primary school encouraged five boys to train for teaching and convinced their parents to allow them to do so. The boys completed primary school in the city, went on to secondary school, and all five completed their three-year teacher training by correspondence after beginning to work. Four were self supporting even during their early training. One was supported by his father. The visible success of these first Atzompa-born schoolteachers, two of whom ultimately returned to teach in the village, served as a stimulus to others. By 1969, the village had produced fourteen teachers. In that year twenty children, fifteen boys and five girls, were in secondary school and higher education in the city. Most of them aspired to be teachers. Teachers' salaries, for those without federal accreditation, began at \$804 monthly. The salary for fully-accredited teachers ranged from \$1,275 to \$1,800 monthly. Fringe benefits include free medical service, retirement pension, a Christmas bonus equivalent to a month's salary, and hardship premiums in certain areas.

Education is prestigious as well as instrumental in occupational mobility, and there are few villagers who would not put their children through secondary school if they could. Aside from losing the services of the child, however, education requires the household to meet expenses. Registration fees for those in the sample range from \$25 to \$66, depending on the school, and monthly charges range from \$10 to \$80, most commonly \$40. Other expenses include books, meals, and sometimes lodgings in the city. In addition, there are other special charges, e.g. a levy of \$200 per student by one of the schools in 1969 for a building fund. The training school for engineers charged a fee of \$750 per year. The registration fee for preparatory courses at Benito Juárez University was raised from \$400 to \$600 in 1969, plus \$125 per year. Sending several children through secondary and professional schools entails considerable sacrifice even for the wealthiest families. In addition, there are not enough places in secondary schools for all who apply. Competition is quite intense at the higher levels, particularly in the teacher training school.

Nevertheless, in 1969 two households in impecunious circumstances each had a son in secondary school. Two boys in the households sampled had won part scholarships to secondary schools. A potter and part-time hog butcher planned to give all of his eight sons at least a secondary education. His elder son, in engineering school, had already qualified as an instructor in engineering subjects. No one in the village, however, has sold lands or house lots as part of the sacrifice, although in a few cases lands have been pawned. Largely, parents have channeled into their children's education capital that would otherwise have been invested in material, income-producing goods. For example:

"We would have bought land, we could have had another ox team. We could have fixed up that piece of land that is our house lot, built a better house."

"We might have had two ox teams, four or five cows -- both of us working the fields. But he wanted to study, and I did what I could.... He went through the sixth year in Oaxaca, to learn better, in order to be better prepared when he entered secondary school."

Very frequently, the decision to educate a child is motivated by the success of such endeavors in the extended family. The student of engineering mentioned above was encouraged to pursue that career by his mother's cousins from another village who are engineers. WB, an affinal relative of the very successful household described on page 60, tried to emulate its example, but was able to send only one of six children through secondary school. The other sons resent the fact that the results of their labor, including *bracero* earnings, were used for this purpose.

Table 8
 Formal Education of Individuals 16 Years of Age and Over,
 Members of the Sample of 80 Households

Level of Education Attained

Age Level	No. of persons	Yrs 0		% of Total	Yrs 1-2		% of Total	Yrs 3-4		% of Total	Yrs 5-6		% of Total	Some Secondary		% of Tot.	Completed Secondary		% of Tot.	Higher Education		% of Tot.
		M	F		M	F		M	F		M	F		M	F		M	F		M	F	
71-81	6	4	2	100.0																		
66-70	8	4	1	62.5	1	0	12.5	2	0	25.0												
61-65	14	1	8	64.3	3	1	28.6	1	0	7.1												
56-60	6	0	3	50.0	1	1	33.3	1	0	16.7												
51-55	12	0	5	41.7	3	1	33.3	2	1	25.0												
46-50	12	0	2	16.7	4	1	41.7	4	0	33.3							1	0	8.3			
41-45	26	3	7	38.5	4	4	30.8	7	0	26.9	1	0	3.8									
36-40	29	1	7	25.0	2	6	28.6	5	3	28.6	2	1	10.7	2	0	7.1						
31-35	19	2	5	36.8	1	4	26.3	4	2	31.6	1	0	5.3									
26-30	25	0	6	24.0	3	5	32.0	5	1	24.0	1	3	16.0							1	0*	4.0
21-25	25	1	2	12.0	1	3	16.0	5	5	40.0	4	0	16.0				1	2	12.0	1	0	4.0
16-20	46	1	4	10.9	5	6	23.9	3	6	19.6	7	7	30.4	2	0	4.3	2	2	8.7	1	0	2.2

*Two daughters of one respondent, who were not listed as members of the household, also fall into this category ("higher education"). Both completed secondary school and professional studies. One is a nurse in Oaxaca, the other a sewing instructor in Mexico city.

A child's education does not necessarily benefit either the family that made the sacrifice, or the village. The only lawyer the village has produced lives in Oaxaca City but owns many hectares of land in the Atzompa *municipio*. He refused to contribute to the construction of the new bus route. "What did the village ever do for me?" he countered when approached for a contribution. The above-mentioned engineering student earned good wages as a mechanic's assistant and butcher's assistant in Oaxaca while attending school. He bought a watch, an expensive radio and a jacket for himself but reportedly has given his parents nothing. The boy who was educated at the expense of his brothers secured a white-collar job in Oaxaca City with the dominant political party, *Partido Revolucionario Institucional*, but he is the only one of three non-resident sons who contributes nothing to his parents' household.

Moreover, educated boys tend to become aloof from their fellow villagers and desist from greeting people when they meet them in the village streets. The young people of these families have begun to organize social gatherings of their own, where *guelaguetza* and other traditional features are absent. Such parties may include guests who are not in the educated segment of the population, but who have some social sophistication. Educated adults tend to avoid traditional fiestas. Their social gatherings are subdued and limited in number of guests. They feature wines and liqueurs, as well as beer and soft drinks, in preference to mescal, and they are held with the modern accoutrements of tables, chairs and eating utensils. Aloofness is not unusual in the second generation of a successful family, even among the relatively uneducated. In part, this attitude may stem from the fear of being approached for loans or for sponsoring children as godparents. Such families avoid the traditional fiestas, not only because they do not like the unrestrained drinking and the traditional custom of seating women apart from men, on floor mats, but also because the expected reciprocity involves an unwelcome drain on finances.

Besides leading to rejection of traditional social customs, education may lead to emigration. Teachers, for example, are assigned to remote areas during their first years of service, although they may obtain permission to return to the Oaxaca area when they have some seniority. Two of the fourteen Atzompa-born primary school teachers live in the village now. Most white-collar and professional workers become residents of Oaxaca or Mexico City. However, it is likely that in the future, as Atzompa's relationship with Oaxaca City becomes increasingly that of a suburb, some of those who migrated to the city may return to take advantage of the lower living costs. One white-collar employee commutes daily to Oaxaca. Another divides his time between the city and the village. Of fourteen individuals in eight households of the sample who had completed secondary school by 1969, nine were still living in the village. Four were continuing their studies. Among those remaining in the village were two young women, sisters, who were unable to find positions in the city suited to their qualifications. A young man wanted to become a teacher but was rejected by the teacher training school as being too old for admission. They have been absorbed by the village economy. The sisters are dressmakers, the boy a farmer and occasional butcher, but their parents are disappointed that the investment in education did not bear fruit.

WAGE LABOR

The development of Oaxaca City as a hub of marketing activity has not been matched by its industrial development. Urban wages are modest, and jobs are relatively scarce. Following are the types of city employment held in 1968 by Atzomperos still considered to be residents of the village. Most of them, however, have lodgings in Oaxaca.

Musician in a mariachi band¹²

Porter

Public works (blue-collar) employee

Policeman

Fireman

Blue-collar worker in an ice-making factory

Blue-collar worker in a mineral lime factory

Blue-collar worker in a wood-cutting factory¹³

Blue-collar worker in a soft-drink bottling plant

White-collar employee, political party

White-collar employee, Oaxaca museum ¹³
Secretary for bus company
Bus driver
Bus fare collector
Corn mill employee
Mechanic's assistant

In 25 of 392 households there were regular wage earners in Oaxaca. A sampling of wages reported in 1968 shows that most do not compare very favorably with the higher pottery incomes:

Fireman: \$15 per day, 7-day work week.
Employee in Pepsi-Cola plant: \$150 per week, 6-day work week.
Employee in ice-making factory: \$130 per week and breakfast, 7-day work week
Employee in wood-cutting factory: \$18 per day, 6-day work week.
Secretary to bus company: \$500 per month, 6-day work week.
Bus driver, long distance: \$100 for a 3-day trip.
Bus fare collector, long distance: \$50 for a 3-day trip.
Bus driver, local: \$25 per day of work.
Bus fare collector, local: \$15 per day of work.

Day labor as a mason's helper, the type of work most easily obtained, paid from \$8 to \$12 daily. In Mexico City wages are higher; a respondent in the sample earned \$25 daily as a house painter in the capital in 1967 over a period of a month and a half.

Some villagers go to Mexico City only for the experience. A few go there to work in order to raise cash for investment in the village. One young man went to work in Mexico City in 1969 as a delivery boy for a water bottling plant. He intended to invest his earnings in a truck to haul Atzompa pottery to the capital. Parents are reluctant to see their children go off, no matter how many remain at home. In this case, and another which occurred in 1969, the mothers said that their husbands wept inconsolably when their sons left home, although in both instances there were still a number of children at home. In the second instance, the child lived in nearby Oaxaca and visited frequently.

In 1968 only one of the 80 heads of households in the sample worked in Oaxaca, but two others were regularly employed for wages. One was a schoolteacher in another village, the other a truck driver in Atzompa. Fifteen others had been engaged in urban work at one time or another, and eleven had children or stepchildren working in Oaxaca or Mexico City. Other than the one currently employed in the city, only eleven respondents had any interest in urban employment for themselves. The main reasons informants gave for their lack of interest in urban work were: lack of familiarity with types of city work; the need for connections or "pull" in obtaining employment, or the need to put up a cash bond. This is said to be the case in the lumber mill, and for bus fare collectors. Additional reasons were the relatively low salaries versus the high cost of living in the city; and most importantly, a preference for self-employment. One informant, for example, replied proudly to a question on this subject, "I have never worked as a *mozo!*" Then, realizing that two of his harvesters were present, he courteously turned to apologize to them.¹⁴

Despite the attitudes of their elders, the younger men are turning increasingly to wage work as opportunities in Oaxaca widen. In early 1968 one Atzompero was employed at the lumber mill. In late 1968 another entered the factory branch near Etla. Only three households reported having employees in ice-making factories in 1968. In 1969 there were seven. The sole mechanic's assistant of 1968 found himself in jail in 1969, but three other men had entered this trade, one of them to earn money toward his secondary education. In 1969 the son of a schoolteacher, also working toward his further education, was employed as a shop clerk in Oaxaca. Another boy had been placed as a butcher's apprentice. However, of the 1968 wage workers, two brothers employed by the Pepsi-Cola plant had left the Oaxaca work force, transferring to the more industrialized city of Puebla, where wages

and prospects are better. They are aiming for a salary of \$1,000 per week as drivers of distribution trucks, said their father, and will not marry until they are well on their way to that goal.

Salaries are usually supplemented by other income. The urban wage, like pottery-making income, will feed a family of moderate size but generally is inadequate to provide an over-all comfortable standard of living. The head of household in the sample who is a factory worker supplements income with his wife's pottery production. The truck driver supplements his with storekeeping. The unmarried workers generally contribute part of their salaries to their parents' households. As with white-collar workers, improved transportation to the city and increasing opportunities probably will attract increasing numbers of laborers to the city as commuters. It may resolve dilemmas. An urban letter carrier, formerly a resident of Atzompa, is engaged to a village girl. He had not yet decided whether to continue to live in Oaxaca, where he paid a high rent of \$150 per month out of a salary of \$500, or move back to the village and take his chances with undependable transport.

VALUES AND ASPIRATIONS

The pottery-making occupation has little prestige in the village. The work is not only repetitive and boring, but dirty as well. Manual labor has low status in Mexican society generally, and the more prestigious trades and white-collar or professional work are seen as far superior. Potters seek to maximize income within the craft, but ideally would prefer to exchange their pottery work for other self-employment, such as storekeeping.

The farmer enjoys considerably more prestige than the potter. Firstly, his work is less routinized. Secondly, with two or three hectares of reasonably good farmland, he need not be afraid of going hungry, barring unusual drought or floods. Thirdly, farming is related to landholding. Even *ejido* land is regarded as productive capital and may be passed on from generation to generation. Privately-held lands are not only productive capital but also assets which can be sold or pawned in emergencies. Animal ownership is esteemed for the same reason. In a peasant village, where there is little spare cash and few bank accounts, land and animals are virtually "legal tender." Requiring emergency medical services, one commonly rushes out to sell a chicken, a pig, a goat, or even a bull, depending on the extent of the need.

In the ranking of wealth by five members of the sample, four gave priority to landholding. Only one, BA, gave priority to the financial security afforded by steady wage work, particularly the high wages of schoolteachers. He lives comfortably on pottery income alone and has pursued modern material and educational goals.

The 80 heads of households in the 1968 sample were asked to express career aspirations in retrospect (see Appendix A). Ten preferred farming. Of these, nine were, or had been, farmers and enjoyed working in the fields. Some were also potters. A potter-farmer who keeps a small store also expressed contentment with his lot. Six potters could think of no occupation they would have preferred to pottery making. Eight respondents mentioned storekeeping or pottery dealing. Four of these were already merchants (*comerciantes*), of whom one would have preferred a larger scale of activities. EM, who aspired to pottery dealing, but whose brother-in-law is a bus driver, gave truck or bus driving as an alternative. However, in 1969 he had changed his mind and planned to set up a bakery. EM has also worked at maize milling and butchering, but has been unaggressive in maximizing his skills. Eleven respondents would have preferred blue-collar work in the city, chiefly that of shop clerk. Of these, two gave white-collar alternate choices, accountant and secretary. Twenty-one others would have wanted white-collar or professional work; one, a woman, gave "servant" as a minimal alternative. Of the 21, 15 mentioned teaching specifically. Those who mentioned teaching included the schoolteacher in the sample. He enjoys his work, yet wants land to farm when he retires. Others gave other white-collar and professional preferences. Two chose accountant, and both were educationally well advanced before abandoning the goal. One chose notary, one secretary, and two engineer. In addition, two respondents wanted to be musicians, one a radio repairman, one a seamstress, and one a professional soldier. His cousin is a soldier. Two said they preferred to work "where earnings are better," and the remainder claimed that they had not thought about a career or had not been in a position to consider such things.

When asked what careers they would like for their children or, if the children were grown, their grandchildren, replies were as follows:

Pottery making	4
Blue-collar work, including that of shop clerk	7
Blue-collar work or profession (teaching)	2
White-collar employment	5
White-collar or professional employment	4
Profession	20
Child's choice	19
No definite idea	10
"Children want no career"	3

Four heads of household were childless, and two declined to express preferences for grandchildren on the grounds that it was not their place to do so.

All who confined their choice to pottery making were themselves potters. This reply was, in effect, a refusal to aspire. Farming was not mentioned specifically, but several respondents indicated that if the child had no ambition for a career and/or there was no money to send him to school, the alternative would be to carry on the work of the household, including farming. Of those who preferred professional careers for their progeny, 20 mentioned schoolteaching, 13 times as the only choice and 7 times in combination with other choices. It will be recalled that before 1941 no village youngster had ever set out to become a teacher. Other professions mentioned were: doctor (5), lawyer (1), priest (1), engineer (2), and agricultural engineer (1). Slightly more than 25% of those responding, 19 out of 74, said that the choice of a career was up to the children. They used such phrases as, "It is better that they choose," or "I can't force them." This permissiveness with regard to so important a decision probably is motivated, in part, by the risk of losing the investment in education, usually made at considerable sacrifice, if the youngster later refuses to continue. In part it may result from ignorance of the possibilities. How much is due to permissiveness in childrearing generally, or to disinterest on the part of the responding parent, is difficult to ascertain. In four interviews where the wives of respondents interjected their own choices for the children's careers, their aspirations were consistently higher than the husbands'.

While 20% (16 out of 80 respondents) were content with traditional occupations, only a little more than 5% (4 out of 74) wanted and expected their children or grandchildren to continue in the same path. While 29% (23 of 80) wished that they, themselves, could have pursued white-collar or professional careers, even as alternatives to other choices, 42% (31 of 74) wanted such careers for their children, provided that there was money for schooling and the child desired it. Thus, aspirations were somewhat higher for the children than for the respondents themselves. For the 69 potters of the sample, the respective percentages were: 22% traditional preferences for self versus 6% traditional preferences for children and 32% professional or white-collar preferences for self versus 40% professional or white-collar preferences for children. Eliminating the 11 households of wage earners and full-time farmers makes scarcely any difference in the figures.

Aspirations do not necessarily lead to action. One of those who wanted to be a musician, and whose first desire under the heading of "material wants" was a new trombone, rejected an opportunity to audition for the Oaxaca State Band. He felt that the salary of \$16 per day to \$21 per day was not worth the exigencies of attending so many practice sessions, or domination by a band leader known to be temperamental. EM, referred to above as "unaggressive in maximizing his skills," had received and refused an offer from a reliable, fairly well-to-do Atzompero to participate in a mill venture. One might say that there are several levels of aspiration: a "zero level," at which mobility is seen as impossible or undesirable; a second level, at which mobility is considered desirable but involving too much risk-taking or sacrifice of capital, leisure, independence, village residence, etc.; a passive aspiration level, at which plans are made but never realized; and an action level, characterized by the exertion of effort and acceptance of risk and/or sacrifice.

Most Atzomperos today recognize that an individual can make his way in the world by learning new work, exerting himself, and resisting the temptation to dissipate his resources. "*Suerte*" (luck) is a factor, but not an important one. An allied concept of far more importance is "the will of God," constantly invoked by such phrases as "*si Dios me acompaña*" and "*si quiera Dios*," especially when expressing an ambition. Nevertheless, one seldom hears blame for lack of advancement laid to "luck" or "God". Failure to progress generally is blamed on "*arosas*" (setbacks) such as illness, an expensive funeral, a costly legal entanglement, crop losses due to drought or flooding,

and other such events of an uncontrollable nature. *Atrasos* usually are seen as temporary, except in cases of permanently disabling illness. While most villagers live, economically speaking, from day to day ("va uno con el día"), they have faith that provision will be made for the morrow. Despair is not a natural condition in Atzompa.

SUMMARY

Several trends toward upward mobility have been observed in the sample, as well as in the village as a whole:

1. Approximately half of the respondents feel that they have surpassed the wealth status their fathers had attained at the same age.
2. There are more persons engaged in service occupations in the village now than formerly, and in recent years service occupations have been controlled almost exclusively by village-born personnel.¹⁵
3. There is a trend toward regular urban employment on the part of younger people.
4. The educational level of Atzomperos is rising; increasing numbers of village children go on to higher education.
5. Aspirations for children's careers exceed career levels that their elders, in retrospect, would have wished for themselves.

Perhaps the most important point concerning mobility in the village is the fluidity of the economic structure, exemplified by instances of rapid economic advancement. The second striking feature is the ability of individuals to learn and incorporate new types of activities. Some villagers have accumulated gains by using profits from current activities as capital for others of a higher order, although to do this they sometimes must use a time payment plan as well. While Atzomperos are cautious about large-scale investments and eschew formal commitments, the history of corn mill cooperatives and of storekeeping, milling, pottery dealing, trucking, etc., demonstrates that the opportunities have been exploited, particularly since 1940.

Envy of others is not necessarily based on a "limited good" concept. On the contrary, it may serve as a stimulus to competition and promote the gain of all competitors in an open market. With very few exceptions, villagers acknowledge that the increasingly complex economic world about them is fraught with opportunities which can be manipulated to improve financial status, and that several of the alternatives are possible for them if they are willing to make sacrifices and take risks. In only one case did a tale of the discovery of "buried treasure" serve partially to explain the mobility of a household (cf. Foster 1967:145 ff.), and in fact there was some truth in the story. This tale was related by a number of sources, but this case was the only one for which such an explanation for economic advancement was given.

Status advancement as well as economic advancement through education has become a *desideratum* of village parents. Professional and white-collar work attained through higher education usually leads to emigration. However, this is less of a problem in a village that is only five miles from a city than it might be for a remote community and will continue to diminish as communications with the city improve. Education is increasing, in part due to the rounding out of the primary curriculum in the village, in part due to the emergence of education as a new path to prestige, and in part for the practical motive of ensuring a decent livelihood for one's children. As the level of education in the village increases, it brings with it not only increased literacy, but also a more realistic knowledge of the world and higher aspirations.

Although the social structure is becoming more differentiated, the upper level is permeable. It would be difficult to assign village households to an upper, middle or lower class, even though some families are recognized as "wealthy" and some as "poor."¹⁶ One additional economic activity may make the difference between "poor" and

"moderately well off." Such was the case with RA, the potter who went to work for the lumber mill near Etlá. EM said of him "*Se está poniendo bien*," (roughly, "he's improving his situation").

The educated tend to withdraw from the traditional fiesta system. Such persons, if called upon for a *mayordomía*, usually request the alternative of service on a village committee where their services are more useful. Some of the older villagers, who are mobile economically but not educationally, also tend to avoid the traditional large-scale fiestas and criticize this type of conspicuous consumption. Nevertheless, they may retain traditional life styles -- sleeping on floor mats, sharing food bowls at meals, wearing traditional clothing, etc. Finally, there are a few young men who would be considered progressive because of their interest in material acquisitions, their knowledge of the world, their maximization of time in pottery production and sales methods, and their aspirations. Yet, they remain enthusiastic about traditional fiestas. Outstanding among these is a young toymaker who is an eager adopter of "modern" paraphernalia and is also an avid fiesta-goer. He averages four days per month in fiestas, partly because he is very fond of mescal, partly because he has spare cash with which to participate in the *guelaguetza* system, and partly because he is still receiving return invitations from the guests he invited to his large *mayordomía* in 1967. One might say that he is making the best of both worlds, the traditional and the modern.

Notes to Chapter 4

1. The term "*oficio*" has both a general and a specific meaning in Atzompa. In the region generally it means "occupation;" in Atzompa it also refers to a potter's specialty.
2. The term *mayordomo*, meaning "manager" or "steward," is applied to the caretaker of a particular figure in the church, said caretaker serving a one-year term. The "saint" figures include several of the Christ and the Madonna in particular attitudes or dress which are standard for the region. For Iberian origins of the saint cult, see Foster's *Culture and Conquest*, 1960, pp. 158-166.
3. All costs are given in Mexican pesos. It is misleading to translate these costs into U.S. dollar values. Rather, they should be measured against the cost of living in the village. As indicated earlier (chapter 2 note 1), at the beginning of the study \$10 was considered the minimum daily food budget for a family of five or six with two or more adults. By early 1970 the figure had risen. For example, in 1967 an *almud* (4 liters) of the local maize cost \$4.00 to \$4.20. By January 1970, \$4.60 to \$4.80 was normal. In addition to maize costs, production of tortillas from one *almud* of grain required approximately \$0.15 for mineral lime and \$0.60 for milling. Since the family of five or six consumes about one *almud* daily, costs for this staple alone amounted to more than \$5.00 in January 1970. A fiesta outlay of \$2,000 was equivalent to approximately 200 days of food for a family in modest circumstances. That amount of money would buy 40 simple but durable women's dresses, 100 pairs of men's work trousers or 125 pairs of men's sandals. In 1967 it represented wages from 200 days of local farm labor.
4. The position of *alcalde* carries with it the obligation for two fiestas at Easter time and three optional minor feasts on other occasions. The *alcalde* is appointed for one year by the village council. By accepting the *alcaldía* a man obligates himself for the major fiestas, but in the recent past a relatively wealthy *alcalde* refused to give them. This association of a civil official with a religious *cargo* is a vestige of a formerly interwoven civil-religious hierarchy. See Chapter V.
5. *Cofradías* are religious brotherhoods, dedicated to particular saints. They exist for the purpose of giving feasts for the saints on their respective name-days. These feasts are even more elaborate than those of *mayordomos*. While the *presidente municipal* (mayor) recruits *mayordomos* and often is refused, members of *cofradías* usually are vowed to service by parents in their childhood. Thus, when one's turn falls, compliance is mandatory. Nevertheless, during the period of the study one *cofradía* member defaulted, pleading poverty.

6. While the confirmation godparents pay the nominal confirmation fee, make minor gifts to the child at the time, and must present a storage trunk to a goddaughter at her wedding, they have no festive costs other than this possible funeral expense -- a remote possibility in these day of reduced mortality.
7. The concealment of landholdings probably results as much from non-registration of lands for tax purposes as from fear of *envidia*.
8. The loudspeaker is rented for official and personal announcements. Phonograph music is charged for by the half hour or the hour. The sets are also rented out for parties, with records and the services of an operator. See page 95.
9. Sibling rivalry is sometimes intense and is exacerbated in inheritance fights. The rivalry is not entirely economic, however.
10. Always ambitious, MG was not a docile *hacienda* peon. He relates: "At 13 years of age I was without support, and I became a goatherd, responsible for looking after 400 goats in the hills for the *patrona* Doña María Figueroa. When I reached the age of 15 I didn't want to herd goats any more. I wanted other work, and the *patrona*, Doña María of the San José (Atzompa) *hacienda*, disowned me. She refused to give me work. She refused to give me food. She refused to give me a place to live, and seeing that I didn't want to leave, she punished me harshly. I went to seek work on the Crespo *hacienda*.... In 1915 I was working there, during the famine and the typhoid epidemic and the revolution. I and my mother and my brothers, we were five. There we were working, making 25 *centavos* a day -- that is, I did, because the others....were little. And from that 25 *centavos* we got an *almud* of maize to eat, for us all.... And there were the rich men with their big shoes. We carried the crop to the door of their *hacienda*, and if they were eating, sometimes they set the dogs on us. And we, the poor, were eating nopal cactus, chile and water.... They didn't let us go to school, only work. I became a member of the Party; that's why I was punished. We were trying to get a minimum wage or a piece of land. They said there was nothing for us.... While I lived on the *hacienda*, I used to get up at two in the morning to milk cows -- ten cows, for 10 *centavos*. Every day. That's why we hated the rich -- we were exploited."
11. In contrast to the village studied by Erich Fromm and Michael Maccoby (1970), Atzompa *ejidatarios* are generally in the lower economic strata, as there was already a propertied class at the time of the *ejido* distribution in 1925. Then as now, it was the poorer villagers who requested *ejido* parcels, and the amount received by each *ejidatario* was small compared to some of the private holdings. However, even a hectare of good land releases for capital the cash which otherwise would be spend for maize. Thus the availability of *ejido* has contributed to mobility.
12. Employment discontinued in 1969.
13. Personal connections are known to have been instrumental in obtaining these positions.
14. The term "*mozo*" connotes "servant". Cf. Munch's statement concerning the attitude of the inhabitants of Tristan de Cunha with regard to wage employment: "...Contract labor with its implication of a subordination to a boss was not considered by the islanders as entirely compatible with the dignity and integrity of a free person, although in practice this was a value that could be bent a little on occasion in order to make a little money for luxuries" (1970:1311). The Atzompero's statement, above, represents this attitude, but apart from resentment of authority, there is the practical rationale, prevalent in Atzompa, of not liking to be hustled.
15. Fromm and Maccoby (1970:104) see the entrepreneur in the Mexican village as exploitative, increasing his prosperity at the cost of his fellow villagers and intensifying class differences. It has been noted, above, that in Atzompa some of the successful families, particularly the well-educated families, reject traditional activities and values and tend to isolate themselves socially from fellow villagers. Socio-economic heterogeneity is indeed

intensified. However, no one forces a villager to buy from the village storekeeper, or to sell pottery to the village middleman, or to ship his wares by truck rather than by the public bus. He still has a choice of shopping at the city marketplace for lower prices, as before, or selling his pottery in the city *plaza* for a higher income, but he now has new alternatives offered by the new entrepreneurs, whereby he can save time and increase his own production. Without a village corn mill, housewives would have to grind maize themselves or carry it to another community for milling. When a third mill opened in 1969, waiting time for the women was reduced and, since the miller forced his competitors to cut their rates by setting his rates lower, cost to the consumer was reduced also. Such services can hardly be seen as detrimental to the village.

16. Village custom requires that both parties treat each other with respect in interpersonal dealings, regardless of economic status. The formal "*Usted*" is consistently used as a form of address, except with relatives or close friends. The familiar form "*tu*" generally is not used with adults, even by the more affluent villagers who are themselves addressed with the respectful title "*Don*". An exception was observed: while visiting village homes with a village-born schoolteacher in the course of the 1970 census, the writer noted that he addressed most people with the familiar pronoun, even those too old to have been his pupils.

CHAPTER V

PROGRESSIVISM AND CONSERVATISM IN COMMUNITY ACTIVITIES

In advanced societies it is expected that those who serve in offices of government be paid for such services, and that material improvements be supported by public taxation. In Atzompa, as in most peasant communities of Mexico, it has been customary for service to be assigned to community members as a matter of duty or obligation, with no remuneration offered except the honor of having been chosen and the satisfaction of serving. Religious service has been seen in somewhat the same light since it contributes to "religious insurance" for the village.

As values shift toward material progress, the responsibilities of local government for community improvement have grown. In addition, increasing numbers of individuals are more interested in their own material advancement than in the honor and prestige of office-holding. While progressive individuals do not begrudge their contributions to the material betterment of the community, the requirements for time inputs in civil service conflict with their desire to get ahead economically. Religious service is seen, increasingly, not only as a drain on time but often, where festivities are involved, as a needless expense that does not contribute to tangible civic betterment.

This chapter discusses changes in traditional patterns of community service. Current attitudes toward office holding demonstrate the conflict between the old and new values. The village is making some adaptations to non-traditional goals. There is new emphasis on civic improvements, and these receive varying degrees of support. In addition, the degree to which villagers interact and cooperate for their mutual benefit will also be discussed.

THE CARGOS

In the village, opportunities for public service are referred to collectively as *cargos* (offices). They include both civil and religious posts. Traditionally men served in ascending order in these posts, alternating between the religious and civil.¹ Never was it possible for all males to reach the top of the civil-religious hierarchy, that is, to serve the most important *mayordomías* and also to serve as *presidente municipal* and *alcalde*. However, any male, no matter how poor, ideally would have served a number of years in the local police force and possibly as a messenger in the council hall. He would have volunteered as *mayordomo* for one of the less important saints, exerting himself to offer a minimal feast on the name-day of the saint. Even persons in very modest circumstances may undertake one of the more important and traditionally more elaborate *mayordomías* in fulfillment of a curing vow, incurring a debt to do so. In the past, the *mayordomía* responsibility often was discharged by pawning and even selling land. Today sponsors of feasts still pawn land but no longer sell it. Land is more highly valued than before, given its inflating cost, and religious service appears to be less valued. However, the wealthier the villager, the greater is the expectation of an outstanding feast, lasting perhaps a week, with as many as 200 guests and abundant food.

The civil posts begin with the police force (five ranks), and the *topiles* (council hall messengers) headed by a supervisor or *topil mayor*. At the highest level, the *ayuntamiento* (village council) consists of the *presidente municipal* (mayor); the *síndico*, traditionally the supervisor of public works but increasingly involved in judicial matters; three *regidores* (councilmen); and five alternates. A secretary and a treasurer are appointed by the council for its term of office, presently three years. The *presidente municipal* is ideally an *ejidatario*, but during the 1950's and 1960's two were not. It is said that in alternate terms the *presidente* is "nominated" from alternate *barrios*, and in any one term both *barrios* are more or less equally represented on the council. However, these "rules" are often breached.²

Service as *alcalde*, an appointive post, follows service as *presidente*. Traditionally, the responsibilities of this post have been judicial. Currently, the office is losing this role to the *síndico*, but it still functions in taking testaments and presiding over land transfers, taking measurements and carrying out traditional transfer ceremonies when these are desired. Land disputes are now resolved at the state level. The principal function of the *alcaldía*,

at present, is to provide a sponsor for the elaborate Easter festivities, the last major link between the civil and religious hierarchies (see chapter IV, endnote 4).³ The office warrants two alternates, one secretary, and four *topiles*.

The local *ejido* organization is the second most important civil institution. Every three years a chairman (*comisariado ejidal*) and assistant (*vigilante*) are chosen in accordance with national law. The group names a secretary and a treasurer. Another important man in the village is the PRI representative. He participates in, and has sometimes dominated, the selection of the PRI slate for village council. Party pressure in the selection of the slate is non-traditional and dates back to the 1920's.

Several committees have been established in modern times. The oldest and most important of these is the committee of fathers (*Padres de Familia*) for the school. This committee is largely responsible for defraying minor school expenses from the cultivation of 4.5 hectares of common lands assigned to the school. Since 1968 when construction of a new schoolhouse was undertaken, there has been a committee to deal with plans and finances for that project. A subcommittee is in charge of house-to-house calls to collect assessments. For each village project there is a work committee. Each has a leader, often its own secretary and treasurer, and a group of assessment and/or fee collectors. In 1969 these included the committee for the public water system, a committee for electric services and the committee for the construction of the new school.

There are several minor civil *cargos*. They include the collecting of municipal fees from vendors in the Atzompa marketplace, taking ballots during elections, and organizing holiday events, particularly the games for the day of the patron saint which are attended every year by a number of outsiders. One man reported as his *cargo* the care of trees planted at the borders of a new road constructed by village labor. Formerly, serving in a local band or orchestra that played for religious feasts was considered a *cargo*. The remuneration demanded for musical services has gradually become substantial, so that this is no longer considered a *cargo*, and there is resentment against musicians who claim it as such.

The major form of religious service is the one-year *mayordomía*. In 1968 there were 26 images in the church, of which 18 traditionally require fiestas. In the past there were at least 30; some say 35. Except for the Christmas and Easter *mayordomías*, the *cargos* also require such housekeeping labors as dusting the saint's niche, polishing the brass candlesticks, and most important, providing candles and flowers for Sunday mass. A generous *mayordomo* may refurbish some item belonging to the image, for example, the cruciform standard. *Mayordomías* are ranked from the minor offices (*ministros* or servants to other *mayordomos*) to the *regidores*, the most important *mayordomos*. The one responsible for the patron saint (*regidor primero*) is in charge and keeps the church door keys. One of the four major holiday feasts is the responsibility of a *mayordomo* of the subordinate rank of *mayor*, while two *regidores* sponsor celebrations which are no longer considered among the most important. Apparently, there has been a shift in the importance of some images. This is probably related to the influence of the four religious brotherhoods (*cofradías*) extant in the mid-1960's.

The *cofradías* provide another avenue of religious service. Each member enters a four-level hierarchy, culminating in the one-time sponsorship of the annual feast for the saint to whom the *cofradía* is dedicated. The traditional requirement for elaborate fireworks adds to the financial onus of the feast sponsor (*comisionado*). By adding their own festivities to those of the *mayordomos*, these *cofradías* enhanced the prestige of the saints they served.

There are five *hermandades* (altar societies). Only women participate, but such participation is not considered a *cargo*. *Hermandades* sponsor masses and provide flowers for their respective images. They defray the costs by paying dues and taking up small collections in the village, usually 50 *centavos* per household. Occasionally a society provides new clothing for one of the images or takes up a collection for a project of the parish priest. In the past the *hermandades* have offered lures such as sweets to increase attendance at catechism classes and organized fairs to raise money and stimulate interest in church affairs among the young.⁴ The *hermandades* never lack for members. Women are more devout than men, as is apparent to anyone observing the male-female ratio of those attending Sunday mass. The pious and sober efforts of the *hermandades* are appreciated by the priest, who deplors the drunken gatherings of the *mayordomos*.

There are also lesser religious *cargos*, e.g. the office of *sacristán*, and the *posadas* (inns) or open houses held each year during the Christmas *novena*. On the nine nights preceding the holiday nine households successively receive the images of St. Joseph and the Virgin and offer a maize drink to all who accompany them. Another

assignment that some claim as a *cargo* is the representation of an Apostle in the reenactment of the Last Supper during Easter week.

ATTITUDES TOWARD SERVICE

The ideal of service to the community was expressed emphatically by 18 of the 78 respondents in the 1969-1970 sample. It was implied by others. Just as potent as this imperative is a fear of the bad opinion of others if a request for service is refused. "*Cumplir*" the term for "fulfill" -- to satisfy a requirement or obligation connected with one's status -- is fraught with significance. MG, who considers himself a devout Catholic, roughly chided the priest for refusing to baptize his grandchild. It appeared that the priest was sulking over some inconsiderate treatment he had received from villagers. The peasant's argument -- we must all fulfill our obligations, and a priest is no exception. Some say that if a man repeatedly refuses assignments, public opinion would force him to leave the village, but there are men who have refused and have not left. For those who accept *mayordomías*, public opinion usually, but not always, acts to enforce the giving of the expected fiesta. One man, a relatively wealthy villager, was named *alcalde*. He refused to give the traditional fiesta and was much maligned. The incumbent in 1968 was unhappy about his appointment but would not consider defaulting. "If I don't give it," he said, "they'll fall on top of me" ("*me caen encima*").

Conformity to the ideal of service is shown in Tables 9, 10 and 11. A few have avoided civil service through their 20's and 30's, and a considerable number have avoided religious service. However, only one young man has never served in any major capacity, not even in the police force. If 18 is taken as the average age when a man takes a spouse and becomes eligible for service, the number of years he would, theoretically, be obliged to serve *cargos* is age minus 18 divided by 2, service being required in alternate years. After 50, service is no longer required, again, theoretically. Therefore, the maximum service required is 50 minus 18 divided by 2, that is 16 years. Very few serve that number of years, although the current *stndico* was 67 at the time of his nomination. However, if the minor *cargos* are taken into account, and they are by those who make the assignments, the total years of service for some villagers would increase slightly. In a few cases, they would increase considerably. For example, for seven years one *carguero* held the responsibility for arranging to have village cattle inoculated when the federal government requires it, which is about once a year. Some manage to evade major *cargos* by pleading poverty, or by having an occupation that precludes service on crucial days, such as barbering, which is largely a Sunday occupation. But even these men may be called upon for night service in the police force. Some serve for many years as policemen in order to avoid other *cargos*.

Table 9
Civil and Religious Service Given By 69 Male Heads of Households^a

Number of Years Served	Age						
	Under 20	20-29	30-39	40-49	50-59	60-69	70-79
0	-	1	-	-	-	-	-
1-5	1	6	3	7	-	-	1
6-10	-	-	13	9	6	2	-
11-15	-	-	1	7	1	6	1
16-20	-	-	-	-	-	2	-
21-25	-	-	-	-	1	1	-
Total of men	1	7	17	23	8	11	2

^aCivil service includes service on the village council, as messenger for the council, as officer for the *ejido* organization, as a member of the police force, as party representative for PRI. It does not include vote-taking at election time or arrangement of holiday celebrations, which required limited time inputs.

Religious service includes all *mayordomías*, major and minor; the two higher levels of the *cofradía* hierarchies which require cash outlays for feasting and time for collecting alms. Service as *alcalde* is included, even though this is considered a civil post by villagers, because of its responsibility for the Easter feast. Not included are the Christmas open houses, *cofradía* service in the lower levels of the hierarchies, or service as collector of alms for the Easter celebration, which are minor *cargos*.

Table 10
Civil Service Given By 69 Male Heads of Households

Number of Years Served	Age						
	Under 20	20-29	30-39	40-49	50-59	60-69	70-79
0	-	1	2	-	-	-	-
1	-	1	-	2	1	-	-
2	-	2	2	-	-	-	-
3	1	2	1	3	-	-	-
4	-	-	-	2	1	1	-
5	-	1	2	3	-	-	1
6	-	-	3	2	1	-	-
7	-	-	2	3	-	1	1
8 or more	-	-	5	8	5	9	-
Total of men:	1	7	17	23	8	11	2

Service in higher civil office is prestigious, but particularly in the case of the *presidente municipal*, it entails a great deal of time loss and many frustrations. It may even entail physical danger in dealing with recalcitrant villagers, such as those who refuse to pay assessments or fees. A number of households are categorically opposed to contributing for such village projects as road improvement, utilities, and new public buildings. However, since one *presidente* instituted a project to rebuild the village church in 1945, each *presidente* is expected, at least by the progressives, to initiate one project for village improvement.⁵ Therefore, the *presidente* is caught between the progressives who demand improvement and a conservative faction that refuses to pay for it. Thus far no one has been jailed for non-payment of assessments, but there are minor ways to put pressure on non-payers. Sooner or later the villager must go to the village council to ask a favor, and he may be caught at that point. For example, one *presidente* exacted an assessment from a reluctant villager when the latter came to the council hall to ask permission to toll the church bells and bury a deceased family member in the village cemetery. The fees he was required to pay were several times the normal amount and were channeled into the assessment fund for the rebuilding of the council hall.

It takes a strong *presidente* to impose his will, especially as there is no precedent of incarceration for non-payment. The incumbent in 1967 was strong, and he had widened the main street despite vociferous opposition from households that lost frontage. One day the machinery was brought in and the job was performed, however, the *presidente* had first consulted the state government and was assured that he had the right to do this. Where drunkenness is endemic and every household owns a machete, such imposition of will is physically risky. Years later, such a *presidente* is remembered for his forcefulness in the cause of village betterment. Nevertheless, the risks loom greater than prestige and future glory to a man considering such service.

Table 11
Religious Service Given By 69 Male Heads of Households

Number of Years Served	Age						
	Under 20	20-29	30-39	40-49	50-59	60-69	70-79
0	1	5	7	7	-	-	1
1	-	2	4	6	2	1	-
2	-	-	4	4	2	5	-
3	-	-	1	2	1	2	-
4	-	-	-	2	1	1	-
5	-	-	1	1	2	-	1
6	-	-	-	-	-	1	-
7	-	-	-	-	-	1	-
8 or more	-	-	-	1	-	-	-
Total of men:	1	7	17	23	8	11	2

At one time, the office of *presidente municipal* was attained by virtue of having served a range of *mayordomías*, including the more important ones, as well as the full range of civil posts. Since the early 1920's the participation of a local PRI representative in the selection of the council slate has tended to stress competency over prior religious service, thus reducing and almost eliminating the close connection between the civil and religious hierarchies. However, there is a vestigial expectation that the *presidente* should be a man who has demonstrated a traditional civic spirit and acquired stature by undertaking several *mayordomías*. In 1969, the *presidente* was a man of relatively low economic status who had sponsored a *cofradía* fiesta but had never undertaken a *mayordomía*. He was criticized by some older villagers for his lack of religious service, even though this was no longer a requirement for the office. The progressives criticized him because his finances did not permit him to set an example in the paying of assessments, and because he was not forceful enough or shrewd enough to enforce compliance.⁶

Also, as far as the state government is concerned, a municipal official who breaks the law in the performance of his duties is subject to heavy fines. One *presidente* was twice apprehended in the 1940's, once for failing to report a murder promptly, the second time for falsification of a birth record. Total fines amounted to more than \$5,000. In the second instance the municipal secretary who abetted the forgery was also apprehended and fined. The burden of paying the fines fell entirely on the families of the culprits. Other villagers offered no help.

The *alcaldía* is feared almost as much as the office of *presidente* because of the requirement to sponsor the Easter fiesta and related ceremonies. In 1968, the *alcalde* spent almost \$5,000. Formerly this was the final grade of the civil-religious hierarchy, always filled by an *ex-presidente*. However, in the 1940's the village council terms were lengthened from one year to three years in the interests of continuity and efficiency. The *alcaldía* remained a one-year post, appointive by the council on January 1, like the *topiles*. As there are no longer enough *ex-presidente* candidates, former alternates are also considered. Hence, at the end of every year there is considerable anxiety among these former *alcalde* alternates, each of whom glumly contemplates the possibility of having to raise some \$5,000 for a fiesta in a few months. There is a growing sentiment against tying the *alcaldía* to the Easter feast.

Only a few officials are paid: the *presidente*, the municipal secretary and treasurer, and the *alcalde* and his secretary. However, payment is only a gratuity, \$15 each per month in 1967, raised to \$25 in 1969. For the *presidente* this is very little recompense for the time spent in regular weekly meetings, in special meetings, in dealing with villagers' petitions and complaints, and the many problems referred by the committees. He must also

make himself available to messengers from the city or from other villages who are requesting or delivering information.

One Atzompero, who is considered a good citizen today, fled to Mexico City in 1943 when he heard that he was to be nominated for *presidente municipal*. Two ex-presidentes, and the incumbent, told the writer that they had consulted lawyers as to whether they could refuse the nomination. They were advised that they could not. Recently a villager under consideration for the office learned of it in time to excuse himself on the grounds of his wife's prolonged illness. As so many are opposed to serving, the caucus usually agrees on the PRI slate and submits it to party headquarters in Mexico City without notifying the nominees. There is no machinery for withdrawing once the slate is approved at headquarters.

Of 69 male heads of households in the sample, 25 said that they would not accept the office of *presidente municipal*, and six more said they would accept only if they were forced to, e.g., if their nomination were endorsed by PRI headquarters without their knowledge. Eight believed it was mandatory to accept the nomination, and eighteen stated that it would be their duty as citizens of the village to accept whatever post they were called upon to fill. Three had no particular objection to serving or having their sons serve. Other replies were non-committal or equivocal. Some respondents indicated that they might consider serving were it not for poor health, advanced age, lack of knowledge, etc.

In the religious sphere, the *mayordomías* are increasingly eschewed, mainly for economic reasons. In 1969 there were only three volunteers. Twelve more *mayordomos* were recruited and coaxed into service by the *presidente* and the volunteers, in part attracted by the prospect of heavy drinking at *mayordomos'* gatherings. In addition, there was a volunteer for the Christmas *mayordomía* and a council-appointed *alcalde* for the Easter observance. Nine *mayordomos* were lacking for a full complement. It is said that the rising cost of living discourages the acceptance of *mayordomías* requiring fiestas. However, a rough comparison, offered by one informant, of pottery income against maize and bean prices, the main items in the cost of living, in 1958 and 1968, showed that this ratio has not changed appreciably:

	Cost of very large olla	Cost of 4 liters of maize	Cost of 4 liters of beans
1958	\$10.00	\$2.00	\$ 5.00
1968	\$25.00	\$4.50	\$12.00

Possibly some reduction of farm income due to diminished rains in the recent past may have contributed to increasing reluctance to undertake *mayordomías*. As a result of the efficacy of modern medicine, there has been a decline of sickness vows whereby a religious fiesta is offered for a particular saint in return for a cure. This and the pursuit of new consumer's goods and other modern goals, such as higher education have probably had more effect than price inflation on the waning of enthusiasm for *mayordomías*.

Yet, there is a fading belief, expressed most frequently by older villagers, that if one does not show devotion to the saints by sponsoring *mayordomías*, the saints - and through them God - will not allow him to accumulate wealth. To maintain the household's well-being, one must please God by demonstrating religiosity, sacrificing one's wealth in the process. BE is a 68-year-old traditionalist who had reached the peak of the civil-religious hierarchy. He remarked ruefully that for those who serve no *cargos*, life is "*puro progresar*" (just getting ahead). Such a statement recognizes that there are those who do avoid these expenses, not because they have insufficient wealth to undertake them, but because they do not value them. Yet BE found it difficult to visualize himself in this role of "just getting ahead." He said with regard to wants, "There are things I would have liked.... a piece or two of land, a nice house, a cart, a horse, an ox team, even a tractor, but God would not have allowed it. If I hadn't taken the *cargos*, the money would have been wasted, perhaps on clothes."

There are other reasons for choosing religious service. Before there were so many committees on which to serve, many young men chose to give *mayordomías* in order to avoid night duty in the police force. This service

was not only uncomfortable but also dangerous before street lighting was installed. Almost all houses are guarded by underfed dogs which sometimes roam the street in packs. Even now, some men prefer the alternative of the *mayordomía* because in civil posts one risks unpleasant encounters with fellow villagers. Collectors of assessments may be attacked by dogs which are sometimes set on them by the owners. Another reason for preferring religious service is that fiestas are the principal source of entertainment in the village. They provide opportunities to gossip, joke, drink, eat plentifully, and usually to dance. Having invited one hundred couples to his fiesta, the *mayordomo* can look forward to one hundred return invitations in the future, and the custom of *guelaguetza* borrowing makes it possible to defer at least some of his own fiesta expenses, repaying the loans at comfortable intervals.

Of sixty-nine male heads of households in the sample, thirteen were opposed to giving large *mayordomía* feasts, although some of them already had done so. Seven said they would accept a *mayordomía* only if they could afford it when called upon to serve. Six stated that they would accept *mayordomías* with the proviso that they would give no feast and only provide candles and flowers for the image on Sundays. Twenty-six were quite willing to serve if requested. Of these, nine indicated that they owed such services to the community. Thirteen gave excuses for not serving, including age, involvement with Sunday economic activities, having semi-permanent committee *cargos* which they obviously preferred, etc. The remainder were non-committal.

Reluctance to undertake expensive religious service is traced to the 1940's and apparently accelerated in the 1950's. One informant reported that in 1957 there were only five *mayordomos* who provided flowers and candles for all the images in the church. Two posts were formerly filled by women, the *mayordomías de común*. They served maize gruel and other foods to everyone coming from church on Good Friday eve, at an expense that sometimes amounted to \$3,000 each. These *cargos* were discontinued about 1955.

The *cofradía* celebrations are more expensive than *mayordomías*, and the long interval between entering the brotherhood and reaching the top of the hierarchy gives time for second thoughts. A man pledged to service by his father in childhood may be loath to sponsor the fiesta when the moment arrives. It is said that, in some cases, the newly-chosen *comisionado* hid when the messenger arrived from the fiesta of the outgoing *comisionado* with the gift of a turkey, a symbol of the transfer of office.

The decline of the *cofradías* has been dramatic. There were ten at the turn of the century, with a total membership that may have reached 150 according to reports. Only four were functioning in 1968, and by 1970 three of these were terminating. After enforcement of the Constitutional injunction against landholding by religious bodies, the farmlands which had been used to defray some of the costs of *cofradía* fiestas were relinquished. Thus a heavier burden has fallen on the *comisionados* since about 1920. Also, as with the *mayordomías*, the decline of *cofradía* membership probably is related to declining mortality rates. It is increasingly rare for a father to enter his young son in a *cofradía* "*para que crezca*" ("so that he will grow up").

One *cofradía* celebration that probably will not be relinquished in the near future is the one dedicated to the patron saint, *Santa María de la Asunción*. This fiesta takes place during the two weeks beginning August 15, along with the *mayordomía* and the secular festivities. When the *cofradía* member who had reached the top of the hierarchy was financially unable to sponsor the event in 1966 a village-wide collection netted \$3,000, making it possible for this phase of the patron saint observances to be held. The *cofradía* is not defunct, but the village as a whole probably will continue to sponsor at least the mass and fireworks, giving rise to yet another committee of organizers and collectors. Despite an increasing disinclination to spend large sums on religious events, villagers still cling to the more popular images, including the patron saint and others considered to be more supernaturally potent ("*más milagroso*"), such as the Infant Jesus of the Christmas *mayordomía* and the *Divino Señor del Coro*. The only active *cofradía* in 1970 was dedicated to the latter image, which also never lacks a *mayordomo*.

COMMUNITY INTERACTION AND COOPERATION

The cohesive effect of these various institutions is considerable. Most villagers serve in some capacity, at least in alternate years, and serve in several different capacities in a lifetime. Other integrating forces are the school, the marketplace, the church, and religious events not directly connected with the church, such as the well-attended Good Friday procession and the commemoration of the Good Samaritan. The religious fiestas also have an integrative effect. Although attendance at the fiestas is by invitation, the guest lists are so long that one guest

is likely to interact with a number of people he does not see frequently under normal circumstances. Even use of the same bus is a cohesive factor. Individuals from opposite ends of the village may sit next to one another and gossip. Traditional communal labor (*tequio*, from the Nahuatl *cuatequitl*), also brings people together. *Tequio* is a work assessment levied equally on all households with males under 50 years of age. As with the *cargos*, the ideal is to conform, and as the time requirement is not excessive, there is virtually no resistance. Some villagers hire day laborers to serve their *tequio*, in order not to lose time from their productive activities, but the majority, 75% of 60 heads of households questioned on this point, go themselves or send a member of the household. This not only imparts a sense of participation in what the village accomplishes but also provides a point of contact for individuals, although it is usual to call up households from one *barrio* at a time.

There are a few voluntary activities organized for the purpose of recreation which draw on the village population as a whole. One such activity is participation by young men in masquerades and mimes during All Saints week. In return for unsolicited performances in homes where plentiful refreshments are anticipated, the masked and costumed dancers demand food from the altars where symbolic offerings have been left for the deceased. They usually receive modern bottled drinks, hurriedly obtained from the nearest village store. In 1969, a traditional reenactment of the Conquest requiring expensive costumes was revived after a lapse of ten years. A teacher was hired from the town of Cuilapan by 36 young men, and the group afterward received invitations to perform in the city and elsewhere. It is possible that with the advent of television, and the fairly recent possibility of renting phonographs for parties, these traditional social forms of recreation may wane.

Atzompa is not an agglomeration of strictly self-interested household units. There is a disinclination to be helpful to others if this means meddling, and sympathy for an unrelated villager who has gotten into trouble usually leads to no action to alleviate his lot. However, the Atzompa setting cannot be described as having the "amoral familism" and lack of solidarity Banfield (1958) found in a Sicilian village, and that Diaz (1966:194 *et passim*) finds reflected in Tonalá in the Mexican state of Jalisco. Hostility appears to be most common among family members, e.g. between brothers who have disputed an inheritance, or between a dominating older woman and her unsubmitive daughter-in-law. Animosity between non-kin sometimes result from defaulting on debts, from refusal to withdraw from a borrowed house on request, for failure to repay *guelaguetza* loans on demand, from competition over a girl, etc. Insults traded by drunken men in a village bar can end in a wounding or murder, although this is rare. Relations between neighbors usually are amicable but on occasion may become hostile. The residents of two streets decided among themselves to install a neighborhood water tap and each household contributed an equal amount of labor and cash for purchase of pipes to draw water from the public system, concrete, and other equipment. They worked together, crowning each day's labor with a great deal of mescal drinking, as is usual in cooperative work endeavors. After a year, several of the households began to default on their weekly use fees, and the new faucet became a source of contention. In 1970 the man who had headed the project was threatening to move the faucet into his own house lot.

Individuals are bound together not only by dyadic relationships based on respect (*respeto*) but also by shared public service, shared sodalities and institutions, and interaction in recreational customs. Such relationships have been called singlestranded, polyadic, horizontal relationships (Wolf 1966:82 ff.)⁷ In the 1940's, two corn mills were established cooperatively, one by a group of 42 *ejidatarios*, the other by 10 private landowners. The results were not encouraging (see page 59 above). The *ejidatarios'* mill lost membership only gradually until 1966. Then the need to replace the motor, and a strong suspicion that the treasurer was embezzling the funds caused mass defection, leaving only four members. Nevertheless, in 1969 a question concerning interest in forming a glaze-milling cooperative elicited affirmative replies from 43 of the 67 potters in the sample, and outright refusal from only 17. Comments demonstrate that the expressions of interest were not perfunctory, e.g., "if I had the money to get in," "if the group isn't too large," "if it is well organized," "if you don't include trouble makers," "if they are people I know," etc. There are a number of other examples of cooperation, e.g. the *ejidatarios'* unremitting efforts to have two estates in the *municipio* expropriated for *ejido*. The many public works completed by communal labor include the rebuilding of the church, the new village council hall and *ejido* hall, the marketplace shed and the road through Montoya. This road, cut in 1961, at the urging of one of the school-teachers, gives villagers direct access to Oaxaca City in all seasons. These examples attest to the fact that concerted action exists. It is not enough for the progressives, however. They point to more acculturated villages, such as San Jacinto Amilpas where, they

say, cooperation is complete, unanimous, whereas in Atzompa there is a minority reluctant to cooperate, particularly in the matter of cash assessments.

One informant estimated that about 25% of all villagers are entirely uncooperative in complying with *cuotas*, while another 25% are completely cooperative. Some households that refuse to pay assessments may still spend money for fiestas, mescal, children's treats and other non-essentials, but others live close to the margin of subsistence. This makes it difficult to establish a standard of sanctions for non-compliance. Part of the problem lies in distrust of the collectors, some of whom have been known to record less than the sums received.

Out of a total of \$15,000 assessed for the establishment of the public water system in 1967 (\$50 per household), \$6,000 or 40% remained uncollected a year and a half later. Of 450 heads of families, assessed \$100 each for construction of the new school building in 1968, 89 (almost 20%) had paid \$90 or more by late 1969; 212 (47%) had paid half or more. Of the 47 who had paid nothing, many considered that they were not eligible for assessment as they shared a budget with another member of the household who did pay. Several were non-resident sons of villagers, who should not have been assessed. Of the total assessment of \$45,000, 46% had been collected, exclusive of gifts and additional sums contributed by emigrants to Mexico City. The names of 101 heads of families were on the list of those who had not begun to pay their *cuotas* of \$3 monthly for the newly-installed public street lighting by late 1969.⁸ A number of these claimed exemption by virtue of sharing the household with a payer, although some claimed this falsely as they were living in separate structures on separate budgets. At least six were non-resident sons of villagers. Probably about 87 of the 101 non-payers listed are eligible for the tax, 22% of the 1968 field count of 392 households. At least two of these, whose financial status is known to the writer, are probably financially unable to meet even this small expense.

SUMMARY

It is evident that community solidarity is not likely to disintegrate as religious service declines. There are a number of new avenues of community service that afford common goals and similar opportunities for interaction. Some form of service in alternate years is theoretically obligatory, and the ideal of community service is frequently expressed. The vast majority feel compelled to render service in minor *cargos*, as well as communal labor, but there is resistance to large expenditures of time and money. Atzomperos increasingly shun higher public office, not only because of the time requirements connected with the office of *presidente municipal*, and to a lesser extent other offices on the village council, but also because of the growing responsibilities and risks. More than one-third of the 69 males questioned would refuse the office of *presidente*.

Structural changes have virtually eliminated religious service as a prerequisite for higher civil office. There is, however, still some feeling, especially among older people, that status conferred by religious service ought to have some bearing on a man's fitness for the office of mayor. In modern times, other factors have become more important, especially the *presidente's* ability to initiate a material community improvement and his forcefulness in carrying it out and collecting assessments for it.

Although the negative aspects of certain forms of public service now far outweigh any prestige that may accrue from office holding, civic obligation may still be important. The *mayordomías* still are considered a form of religious insurance for the community, even by many of the more progressive individuals. Such sentiments dictate that some villagers must take the *cargos*, and men may accept from a sense of duty, although several respondents in the sample stipulated that their concept of the obligation did not extend beyond the caretaker function. Also, a person may have special reasons for participating in the fiesta system. Entertainment or fulfillment of a curing vow can outweigh the desire to "get ahead" economically. For the higher civil offices, a sense of obligation to the community may override the desire to advance economically. Here, there are much weightier responsibilities and fewer side benefits than in the case of religious service. However, there are ways for a dishonest mayor to "line his pocket" by appropriating fines and revenues from the cultivation of common lands. Greater cash compensation probably will have to be offered. While traditional civil service was based on time inputs, modern usage has introduced the concept of payment and this trend is likely to increase. One of the newer civil needs, that of pumping water for the public water system once a day, was handled as a remunerated post and not as a *cargo*. On the other hand, time inputs required for communal labor generally are not avoided, largely because they are seen

as a sacrifice of leisure time rather than work time in most cases. Many individuals who are progressive in other areas continue to render this service personally rather than pay substitutes.

Notes to Chapter 5

1. A female head of household is expected to fulfill these obligations. No females have sat on the village council, but widows do sometimes sponsor *mayordomías*. For both civil and religious office, the woman head of household sends a male of the household to represent her in activities considered unsuitable for women, largely because heavy drinking is involved. In one recent instance, the *mayordoma* sent her 12-year-old son. A girl who joined a *cofradía* sent her brother to take up the public collection when her turn fell.

2. While elections are open in theory, the nominating caucus's PRI slate presently is unopposed. Therefore, nomination to the council is tantamount to election. The caucus consists of the outgoing council, *ejidatarios'* representatives, and the local PRI representative. In past years the *propietarios*, referred to as "*el grupo agrario*," offered a separate slate for consideration during the caucus. The PAN party, the only political party of any substance opposing the dominant *Partido Revolucionario Institucional* in Mexico, has a few adherents in the village, but they are not active campaigners.

3. There are some minor links also. The village council is responsible for the annual appointment of *mayordomos* and is present at their installation. The council is present, too, at *cofradía* fiestas, especially to participate in the election of the new feast-giver or *comisionado*, and also to witness a ceremony several weeks later when the outgoing *comisionado* delivers to his successor the wax remaining from the production of candles during the term of office just completed. The *mayordomía* and *cofradía* fiestas are thought of as public celebrations, although attendance is by invitation. The village council is also considered ultimately responsible for debts incurred outside the community. One *comisionado* bought fireworks from a producer in another village. He was unable to complete the payments in the time agreed upon and felt obliged to report this to the council as well as to the vendor. The vendor, he said, would be entitled to submit his claim to the council.

4. Regular attendance at catechism classes has fallen off, one informant estimates, from about 300 in 1952 to about 30 presently. One class had only 12 participants, including the leader and her two helpers. The learning of the catechism usually is accomplished hurriedly, beginning a few weeks before the first communion, and often the first communion is delayed until just before marriage. Atzompa is 100% Catholic.

5. There is no local dichotomy of "progressives" and "conservatives". It is simply recognized that certain households support the village council's efforts toward material improvements and that certain others do not.

6. His predecessor suggested to the writer that before a collection is undertaken, a delegation from the council should visit each household to soften resistance by explaining the need for the project.

7. For elucidation of dyadic contracts among Mexican peasants, see Foster, 1961 and 1963. *Respeto* is the glue of satisfactory dyadic relations. Its antithesis is *desprecio* (contempt). For a guest not to eat food that is offered is a widely recognized mark of *desprecio*. To refuse reciprocation of a favor, for example a counter-gift, is also considered insulting. There are special *respeto* expectations in particular relationships. A godchild greets his godparent by kissing his hand symbolically with the words, "*La mano, padrino*." Each time mescal is offered to individuals at a fiesta, as it is constantly, and the drinker ritually asks permission to imbibe, he singles out his co-godparents. The same respect relationship applies to co-in-laws, the respective parents of bride and groom. Such a relationship is formally established on a particular occasion with mutual declarations of respect.

8. Not considered here is compliance with the new assessment of \$225 per household as the village's portion of installation costs. Households have two years to complete payment of this *cuota*.

CHAPTER VI

PROGRESSIVISM AND CONSERVATISM IN MATERIAL POSSESSIONS AND DESIDERATA

POSSESSIONS, WANTS, AND CHANGING PATTERNS

Traditionally, a household's possessions consist of the house itself, often of adobe but more usually of cane, and the house lot; palm-leaf mats for sleeping and sitting on the floor; blankets; a hanging cradle slung from roof poles; a small low bench or two; small, pliable baskets for carrying maize to the mill and for carrying and storing tortillas; assorted pottery vessels for cooking, water storage and laundering; a wooden ladle and a wooden chocolate beater; chinaware eating bowls, usually one for every two family members; the all-purpose machete; and vessels for carrying water from the well. Formerly these were ceramic pots but more recently they have become tin cans slung together with a yoke. A *metate* (stone quern) and *mano* (grinding cylinder, also of stone,) for grinding maize and other foods and a trunk for storing clothing and documents are traditionally wedding gifts from the bride's godparents. If there has been no formal wedding, and the household has no trunk, a harvest basket is often used for storage, or clothing and blankets may be slung over a rope line.

For pottery-making, a few additional implements are required: several clay platters on which new pots are molded and set aside to dry; a palm-leaf mat in which to haul the clay and tempering material; a crowbar, pick, and shovel to dig these materials and a burro on which to cart them; the bent tree branch and metal screens used to pulverize and sift the tempering material; long-handled hooks and paddles for removing fired pots from the kiln; the kiln itself, a cylindrical above-ground structure of stone bonded with clay, with the firebox below ground; and large baskets or nets for carrying the finished ware to market. In recent years, a common addition has been a galvanized metal pail for storing the tempering material. The farmer needs, in addition, a sickle to cut grass or alfalfa for fodder; a *coa* (aboriginal-type spade) to dig seed holes in humid lands; and harvest baskets. The ox team and plow may be owned or hired. The plow is included in the hire price for the team. A wooden plow, favored for cultivating is always included, and usually a steel plow, preferred for land preparation. The latter was reported to cost from \$300 to \$500 and may be hired separately. Ox carts for hauling were owned by only eight households of the sample - 27% of the active cultivators. Carts are expensive items. A good new one cost about \$2,500 in 1968, and most farmers prefer to hire them from the few people who have them. In recent years many farmers have been hiring village-owned trucks to haul the harvest. The trucks have a greater capacity than the carts and require fewer trips, an economy in time and usually in hire price as well.

Probably the first luxury the household permits itself is a table or shelf for an altar. On it a glass-enclosed candle may be burned, flowers offered in vases, and a picture or two of saints hung on the wall above. The relative wealth of an Atzompa household may be gauged by the elaborateness of its altar -- the number of saints' pictures and of the more expensive figurines, the presence and size of vases, the frequency with which flowers are purchased to fill them, and the covering of the altar table. The altar assumes increased importance during the All Saints season when it receives the food symbolically offered to the deceased. At this time, and at Christmas, the altar may be further decorated with figures and other ornaments bought in the marketplace.

Beyond the minimum, acquisitions depend not only on financial ability, but also on desire. Proposals for house improvement may meet with an unenthusiastic "*pa' qué?*" ("what for?") even in the wealthiest families. One land-wealthy family lived in a cane hut with a minimum of furnishings because it chose to, not because it had to. This household was notorious for its avoidance of material improvement and its aloofness. It was one of the few that initially declined to give any information concerning economic activities. Several times it was cited by informants as an example of wealth hoarding. MG remarked in this connection, "Some people leave their children to live under a tree when they are gone." Nevertheless, the family was one of 64 in the village that paid its \$100 assessment for construction of the new schoolhouse in a lump sum, not only supporting a non-traditional cause, education, but also advertising its wealth in a very non-traditional manner. Another land-wealthy household in the village was also uncommunicative and wealth-hoarding. However, one of its members had been to the United States

as a *bracero*. He subsequently sent a child to secondary school in Oaxaca and was recently appointed to head the community committee for potable water. In this capacity, he would oversee a modern public utility and interact with more progressive villagers. In 1970 the family constructed an adobe house, thereby making a small beginning in conspicuous consumption. These few pockets of conservatism, characterized by distrust and consequent concealment of wealth, are disintegrating and will probably disappear in the next generation.¹

On the other hand, the household whose mobility was described on page ? (ch IV, page 7), once at the bottom of the economic ladder now has more modern possessions than any other village household, including a radio-phonograph, a sewing machine, mattress beds, and with the installation of electricity, a television set and a blender. In 1968 the household effects included a second-hand automobile owned by one of the sons, who has since married out of the village and taken the automobile with him. In dress, the two daughters who tend the store would be indistinguishable from the women who operate permanent stalls in Oaxaca City's main market buildings. The sons, employed as schoolteachers and white-collar workers, dress as such, and enjoy a standard of living associated with white-collar employees rather than peasants.

Between these poles allocation of resources to non-traditional material goods varies greatly. In all societies decisions as to whether to invest in traditional status or in material goods or enterprise are made in accordance with the prevailing social and cultural values (Firth 1964:21, Belshaw 1965:111-112). These values are changing in Atzompa. A major factor in bringing about value change is the village's proximity to Oaxaca City. Many families of San Jacinto Amilpas and San Lorenzo Cacaotepec, neighboring villages that lie along the Pan American Highway, supplement farm income with wage work in the city. The result is greater prosperity and exposure to urban ways of life. Atzomperos note that the way of life in these more acculturated villages is "more civilized" than their own, that is, the people have more of the accoutrements of city life. In Atzompa, because of the possibility of pottery-making income and the greater difficulty of commuting to the city, fewer men work in Oaxaca. Nevertheless, the neighboring communities provide examples of what once-traditional villages can become, and these changes are valued by many Atzomperos, who try to emulate them. Another factor in value change has been Atzomperos' experience as *braceros* in the United States. They were exposed to modern goods and acquired capital which some invested to improve their economic situation when they returned.

Also, the federal and state governments offer encouragement and financial aid for the establishment of potable water systems and electrical services in the villages. Even for lesser community projects, such as road building, food is provided for the workers. Significant, too, is the greatly increased availability of manufactured goods since the extension of the Pan American Highway to Oaxaca in the early 1940's. Availability has been accompanied by greater sales promotion for those goods, and the possibility of installment buying. Finally, local innovators adopted modern dress, improved their homes with cement flooring and private water faucets, and began to acquire chairs, tables, transistor radios, etc. Their example invited emulation. Although the more expensive goods are not in general use, today the majority of Atzomperos wear more modern clothing and own radios.

DRESS

Traditional clothing for males consists of loose trousers of a coarse white cotton held at the waist with a fabric belt, and a loose, high-collared jacket of the same material. Modern dress is characterized by tighter, factory-made trousers and a sports shirt worn outside the trousers. In either case, *huaraches* (leather sandals with cross straps) are standard footgear, the two-thonged sandal or *cactli* having been discarded about 40 years ago. Men desirous of approximating urban styles wear shoes, tuck in their shirts, and avoid wearing palm-leaf hats. Shoes, however, are inappropriate to wear in the unpaved streets of the village. Encounters with mud, cattle dung and the outcroppings of bedrock are hard on them.

Women's traditional dress consists of a long, billowing cotton skirt, a blouse of coarse white cotton, and sometimes a kerchief over the front of the blouse, knotted at the back of the neck and tucked in at the waist. The more modern type of women's attire, now the most commonly used in the village, consists of a cheap cotton brocade dress of dirndl type falling below the knees, an apron, and a shawl thrown over the head when walking outdoors. For visits to the city, most women don cheap plastic shoes. A few young girls have adopted the most up-to-date urban styles, discarding the shawl, bobbing their hair, and wearing skirts shorter than knee length. However, narrow, short skirts are uncomfortable for the kneeling position used in pottery-making and cooking.

Table 12.
Use of Traditional and Non-Traditional Dress
By 78 Heads of Households and Their Spouses

Men												
Age group, 1968	Uses traditional dress only	Uses both traditional and non-traditional dress	Discarded Traditional Dress							Never used traditional dress	Total	
			at age 60-69	at age 50-59	at age 40-49	at age 30-39	at age 20-29	at age 10-19	before age 10			
Under 20	-	-	-	-	-	-	-	-	-	-	1	1
20-29	-	-	-	-	-	-	-	-	1	2	4	7
30-39	-	-	-	-	-	-	-	-	8	4	5	17
40-49	2	-	-	-	-	-	-	4	8	8	1	23
50-59	1	2	-	-	-	2	2	2	-	-	1	8
60-69	5	2	-	-	2	-	2	2	-	-	-	11
70-79	1	1	-	-	-	-	-	-	-	-	-	2

Women												
Age group, 1968	Uses traditional dress only	Uses both traditional and non-traditional dress	Discarded Traditional Dress							Never used traditional dress	Total	
			at age 60-69	at age 50-59	at age 40-49	at age 30-39	at age 20-29	at age 10-19	before age 10			
Under 20	-	-	-	-	-	-	-	-	-	-	1	1
14-27	-	-	-	-	-	-	-	-	1	-	13	14
30-39	3	-	-	-	-	-	-	1	8	1	14	27
40-49	3	-	-	-	-	1	1	1	3	-	4	12
50-59	8	-	-	-	1	-	-	-	-	-	1	10
60-69	8	-	-	-	-	2	-	-	-	-	-	10
70-79	-	-	-	-	-	-	-	-	-	-	-	0
Over 79	1	-	-	-	-	-	-	-	-	-	-	1

Table 12 indicates the influence of age and sex in the shift from traditional to more modern styles of dress. The data pertain to the heads of households in the sample and to their spouses. Slightly more than 60 % of the women over 39 still wore traditional dress in 1969, whereas only 20 % of the men over 39 had never used modern dress. Most of the change from traditional dress occurred when persons were in their teens. Comments in the questionnaire responses indicate that marriage was sometimes the occasion of change, especially for women. Only one woman had changed from traditional to modern dress after age 39. Among the men, however, two had changed after age 39 and five more, all over 50, alternate between traditional clothing in the village and modern dress for going to the city. Thus the women appear to be more conservative in changing their style of dress than men. On the other hand, two-thirds of the women under 40 had never worn the long, wide skirts (*enaguas*) whereas only 40% of the men in that age group had never worn the loose trousers (*calzones*). This suggests that dresses were accepted as suitable for young girls earlier than modern trousers and shirts were considered acceptable for boys. In seven households women had not "modernized" their attire, although their husbands had. In one case the wife had changed, but not the husband. In all households the youngsters used the more modern styles.

Two influences contributed to the change of dress for men: the distribution by the government of overalls to boys attending the public schools in the 1930's, and travel to the United States as *braceros*. Not all ex-*braceros* retained the "new" styles. Men who changed when no longer young were sometimes ridiculed and reverted to traditional dress. Likewise, one woman who wears urban styles when working in Mexico City as a servant changes to the intermediate style of dress in the village for fear of ridicule. Some older men wear *calzones* for village chores simply because they are loose and comfortable, especially in summer. AG, age 71, not only changes from *calzones* to modern shirt and trousers for the city but also uses shoes and a sweater of good quality.

HOUSING AND EQUIPMENT

The shift from cane huts to adobe houses is less a reflection of an individual's or a household's preference than is change in dress. Economic resources play a greater role. Most neolocal newlyweds, for example, cannot afford anything better than cane. Their housing may be less substantial than that of their parents, or what they themselves will have after a few years of marriage. Secondly, houses are heritable. A young son who has never left the paternal home may find himself upon the death of his father the owner of a very substantial dwelling, beyond his needs or even his desires. Many informants mentioned the increase in adobe housing as a major improvement in the village in recent years; 21 of 67 heads of households questioned on this point had moved from cane huts to more durable housing, either adobe or mud-bonded stone. In fact, a well-made cane house is light and airy compared to the usual windowless adobe dwellings. It is safer in earthquakes, and the thatched roof usually is less penetrable by rain than the tile roof of an adobe house. Housing is a preoccupation of Atzomperos. In 1968, when the 80 heads of households in the sample were asked how they would invest surplus cash if their financial resources increased, 44 listed new or improved housing or lots on which to build homes (Table 13).

Modern furnishings and equipment are also found in the list of wants, although they do not compete with the peasant's traditional desire for land. Some are desired as income-producing capital, e.g., sewing machines and trucks. Others are wanted simply to provide a more enjoyable standard of living. Among the latter are transistor radios. By 1969, radios were present in 73% of the households sampled.

The radio has significance for change apart from its status as equipment identified with modernization. As a medium of mass communication, it brings to the village national and international news, advertisements for other modern goods such as chemical fertilizer, and educational programs. It also brings soap operas which some women listen to as they make pottery, and these give villagers a view of another way of life. However, two older men who had no radios expressed active dislike of radio programs and had no intention of buying sets.

Table 13
Wants, Expressed as Ranked Choices
(by Sample of 80 Heads of Households)^a

Consumption Items	Total	Choices				
		1st	2nd	3rd	4th	5th
Buy new house and/or lot	36	21	13	-	1	1
Improve house	8	5	2	1	-	-
Buy radio	4	-	2	1	-	1
Buy bed	5	1	1	2	1	-
Buy chairs	1	-	-	1	-	-
Buy wardrobe closet	1	-	-1	-	1	-
Electrify house ^b	1	-	-	1	-	-
Buy electric iron ^b	2	-	-	2	-	-
Buy kerosene stove	2	-	1	1	-	-
Buy more food	2	1	1	-	-	-
Buy clothing	2	2	-	-	-	-
Buy kerosene lamp	1	-	-	-	1	-
Replace musical instrument	1	1	-	-	-	-
Buy bicycle	2	1	-	-	1	-
Buy motorcycle	1	1	-	-	-	-
Buy automobile	1	-	-	1	-	-
Accumulate cash reserves	2	-	1	1	-	-
Investments for Personal Use						
Land, or more land for cultivation	34	15	11	4	4	-
Irrigation pump	3	2	1	-	-	-
More pottery supplies	1	1	-	-	-	-
Repair defunct kiln	1	-	-	-	1	-
Buy animals to fatten for sale or consumption	20	4	10	6	-	-

Investments for Personal Use, Also Utilizable for Income Producing Services

Ox team ^c	12	6	4	1	1	-
Oxcart ^c	5	-	2	3	-	-
Burro (pack animal) ^c	5	2	2	1	-	-
Steel plow ^c	2	1	-	-	-	1
Sewing machine	3	1	1	-	-	1
Cow (milk sale in view)	10	4	3	3	-	-

Investments in Income-Producing Services

Buy transport truck	6	2	1	3	-	-
Become a storekeeper	5	3	1	1	-	-
Become a pottery dealer	3	1	2	-	-	-
Buy tractor	1	-	1	-	-	-
Become a sharecropper	3	1	1	1	-	-
Become a dealer in local crops	2	-	2	-	-	-
Expand pottery dealing	1	-	-	1	-	-
Establish bakery	1	-	-	1	-	-
Establish electric glaze mill ^b	1	1	-	-	-	-

^aThree older respondents declined to name wants.

^bEstablishment of electric service in the village anticipated.

^cCan be rented out.

In 1970, during the first year that electricity was available in the community, seven households acquired television sets on installments - large, new ones in every case. Several of these households promptly set up viewing areas where outsiders were welcome to watch the programs for a small fee, usually half a peso. There was somewhat more opposition to television than to radio. One objection was economic, based on the non-negotiability of an expensive receiving set. Another, voiced by several women, concerned the effect of programs on children, although programs received in Oaxaca in 1969-1970 had little violence or sexual display. "*Es un vicio*," said one woman. "*Despierta la juventud*" ("it is a vice, it puts ideas into young people's heads").

Private installation of the public services, water and electricity, is far more advantageous than acquisition of most material goods. These utilities promote efficiency in the pottery-making industry, in addition to providing a more comfortable standard of living. Unfortunately, the public water system did not yet extend to the northern *barrio* in 1969. Also, the proximity of some houses to public faucets and wells made the installation of private faucets unnecessary in specific cases.

Table 14
 Non-Traditional Possessions of 78 Households and
 Their Dates of Acquisition; Private Use of Public Utilities

ID	Age	Radio	Bed	Bicycle	Stove	Sewing Machine	Other	Cement Floor	Private Water Faucet?	Electricity?	Electric Appliances
BA	26	1963	1963	1959	1968	-	Radio/ phono	1969 ^a	Yes	Yes	TV
GA	49	1964	C ^b	-	1969 ^f	-	-	-	c	Yes	iron ^f
JA	31	-	-	-	-	-	-	d	No ^d	No ^d	-
LA	59	1967	-	-	-	-	-	-	e	No	-
PA	61	1961	-	-	-	-	-	-	e	No	-
RA	32	1969	-	-	-	-	-	-	c	No	-
TA	50	-	-	-	-	-	-	-	e	No	-
VA	52	1962	-	-	-	-	-	-	c	Yes	-
GB	30	-	-	-	-	-	-	-	e	Yes	-
VB	39	1963	-	1968 ^f	-	-	-	-	No	No	-
MC	66	1961	-	1965	-	-	-	-	e	Yes	-
OD	44	-	-	-	-	-	-	-	No	No	-
BE	68	-	-	-	-	-	-	-	e	No	-
CE	41	-	-	-	-	-	-	d	No ^d	No ^d	-
GE	52	1955 ^f	-	-	-	-	-	1969	No	Yes	iron
OE	66	1924	1930	-	1940	-	-	1968	e	Yes	-
PE	21	-	-	-	-	-	-	-	e	No	-
JF	45	-	-	-	-	-	-	-	No	No	-

ID	Age	Radio	Bed	Bicycle	Stove	Sewing Machine	Other	Cement Floor	Private Water Faucet?	Electricity?	Electric Appliances
PF	56	1964	W ^b	-	-	1960	-	-	No	No	-
AG	71	1950	1968	-	-	1964	-	1967	No	Yes	-
CG	43	1960	-	-	-	-	-	-	e	Yes	-
MG	68	1968	W ^b	-	-	-	-	-	e	Yes	-
TG	61	1963	-	-	-	-	-	-	e	Yes	-
AI	42	1968	-	-	-	-	-	-	e	Yes	-
DJ	68	-	-	-	-	-	-	d	d,e	No ^d	-
EJ	47	1965	C ^b	-	-	-	-	-	No	No	-
GJ	26	-	-	-	-	-	-	d	No ^d	No ^d	-
LJ	29	1969	-	-	1968	-	-	-	No	Yes	-
MJ	36	-	-	-	-	-	-	-	No	No	-
OJ	48	1966	-	-	-	-	-	-	No	No	-
PJ	34	1965	C ^b	-	-	-	-	-	No	No	-
TJ	45	1969	-	-	-	-	-	1969	No	Yes	-
VJ	44	1969	-	-	-	-	-	-	No	Yes	-
EL	37	1966	W ^b	-	-	-	-	-	c	Yes	-
GL	47	1948	1952	-	1952	1954	Camera	1954	No	Yes	iron
LL	40	-	-	-	-	-	-	-	No	No	-
OL	49	1968	-	-	-	-	-	-	No	Yes	-
PL	63	-	-	-	-	-	-	-	No	Yes	-
VL	36	1966	1938	1969	-	-	-	-	e	Yes	burner
CM	46	-	-	-	-	-	-	-	e	No	-

ID	Age	Radio	Bed	Bicycle	Stove	Sewing Machine	Other	Cement Floor	Private Water Faucet?	Electricity?	Electric Appliances
EM	40	1951	-	-	-	-	-	-	c	Yes	-
GM	64	1954 ^f	1967 ^e	1959 ^f	-	1967 ^e	Radio- phono, truck, motor-cycle	1958	No	Yes	-
LM	52	-	-	-	-	-	-	-	e	No	-
OM	24	1965	-	-	-	-	-	-	No	No	-
RM	45	1944	1944	-	1948	1944	-	1967	Yes	Yes	iron, TV, blender
SM	66	-	-	-	-	-	-	-	e	Yes	-
TM	81	1965 ^f	1967 ^f	-	-	-	-	-	No	Yes	blender ^f
JO	44	1964	-	1962 ^f	-	-	-	-	No	No	-
LO	51	1963	1969?	-	-	-	-	-	No	Yes	-
RO	63	1961	1966	-	-	1960	-	1968	Yes	Yes	-
TO	71	-	-	-	-	-	-	-	No	No	-
VO	41	-	-	-	-	-	-	-	e	Yes	-
CP	44	1963	-	-	-	-	-	-	No	Yes	-
EP	43	1957	-	1965	-	-	-	-	No	Yes	-
JP	40	1964	1961	-	1967	-	-	-	e	No	-
VP	56	1965	W ^b	-	1968	1949	-	1968	Yes	Yes	iron
ER	32	-	-	-	-	-	-	-	No	No	-
GR	39	1967	-	-	-	1954	-	-	No	Yes	-
HR	29	-	-	-	-	-	-	-	No	Yes	-
IR	54	1962	-	-	-	1964	-	-	c	Yes	iron

ID	Age	Radio	Bed	Bicycle	Stove	Sewing Machine	Other	Cement Floor	Private Water Faucet?	Electricity?	Electric Appliances
JR	61	1955	1935	1964	1960	1910	-	-	No	Yes	-
LR	30	1968	-	-	-	-	-	-	No	Yes	-
PR	37	1969	-	-	-	-	-	-	No	No	-
RR	19	1963	1957	1963	-	-	-	-	No	Yes	-
SR	66	1965	W ^b	-	-	-	-	-	No	No	-
TR	42	1956	-	1959	-	1957	-	-	No	Yes	-
VR	47	1964	-	-	1967	-	-	-	No	No	-
GS	41	1962	-	1965 ^f	-	-	-	-	e	Yes	-
OS	31	1961	-	-	-	-	-	-	No	Yes	-
TS	36	-	-	-	-	-	-	-	e	No	-
HT	28	1968	-	-	-	-	-	-	No	Yes	-
NT	39	1961	-	h	-	-	-	-	Yes	Yes	-
CV	50	-	-	-	-	-	-	-	No	No	-
JV	41	1964	1964	1964	-	-	-	-	No	Yes	-
MV	33	1967	-	-	-	-	-	-	e	Yes	-
OV	38	1963	-	-	-	-	-	1965	No	Yes	iron, TV
TV	46	1956	-	-	-	-	-	-	e	No	-
VZ	37	1968	-	-	-	-	-	1969	i	Yes	-

^aSection of house set aside for a store has been floored.

^bC: raised bed of cane; W: raised bed of wood planks

^cContributed to construction of neighborhood water tap

^dRespondent did not own dwelling.

^eDistance from public water system would make extension of tubing to the home unreasonably expensive

^fBought by respondent's son

^hBed and sewing machine are in apartment in Oaxaca city which the family rents.

ⁱBicycle received as a gift

^jSemi-private faucet, shared with brother

Far more advantageous than acquisition of most material goods is the private installation of public services, water and electricity. In addition to providing a more comfortable standard of living, these utilities promote efficiency in the pottery-making industry. Installation of water service in one case cost \$88 for the permit, materials and labor. The use fee had just been raised to \$15 weekly, as against \$1 for use of public faucets. This was done, by suggestion of the Health Department, in order to offset a deficit due to failure of some households to pay their \$50 assessments for establishment of the village service. Unfortunately the public water system had not yet extend to the northern *barrio* in 1969. Also, the proximity of some houses to public faucets and wells made the installation of private faucets unnecessary in some cases. Electricity, on the other hand, is equally available to all, and except for the fact that non-potters usually have no night work, is equally useful to all. The use fee of \$9.25 monthly for electricity compares not unfavorably with the monthly cost for candle lighting - \$6 for one candle nightly, \$12 for two. The installation fee for electricity - \$78, including the price of two bulbs, approximated the cost of installing a private water faucet. Added to the use and installation fees for electricity was the per-household assessment of \$225 for the village service, payable in installments, and a minor monthly charge of \$3 for street lighting. Nevertheless, while only 6 of 54 households in the sample within reasonable reach of the water system had installed private or semi-private faucets, 46 of the 78 households in the sample had electric lighting in the first year that service was offered, and 10 of these had already bought one or more appliances.

In the case of electricity it is possible to look at the relationship of attitudes to overt behavior, taking into account the unexpectedly high cost. Thirty-five heads of households in the sample were questioned in 1968. They expressed a desire for electricity immediately under certain conditions stipulated in the question: first, that the per-household assessment would be \$100, and second, that this cost might be reduced in the future, an inducement to delay. Although the per-household assessment proved to be more than twice that amount, of the 35 who had wanted electricity in 1968, 26 installed electric service in their homes almost immediately when it was offered in 1969. Of 39 who had said in 1968 that they preferred to delay, 19 installed electricity in 1969 and 20 did not. Of the four who had said they did not want electricity, one did have it in 1969, at his wife's urging.

DIFFERENTIAL ACQUISITION

The dates of acquisition of specific modern goods by the sample are shown in Table 14, together with household investment in public utilities for private use. The acceleration of the rates of acquisition is indicated in Table 15. While in most instances the proportion of these non-traditional items to total population is still insignificant, the accelerated purchase of radios in the 1960's is striking.

Except for radios, there is little scaling. Sewing machines may be owned by households whose members still sleep on floor mats, although, in most cases, owners of sewing machines had at least plank or cane beds if not mattress beds. However, the sewing machine may be an income-producing investment, whereas beds are strictly luxuries. This fact offsets the price difference. A double bed with mattress costs about \$800, a new sewing machine \$1500 or more. Likewise, kerosene stoves may be owned by families who still sleep on floor mats. Of the 11 households that had bought sewing machines 7 did not have stoves, and 6 of the 10 households that had stoves had not bought sewing machines. OV had a fine adobe house with cement flooring, divided for a store in 1969. He was the first villager to buy a television set, but he had no beds. All ten family members slept on floor mats. One of the millers found it convenient to install a water faucet in his patio, incurring costs for pipes and labor and increased monthly use fees. Yet, he did not have electricity in his house or mill because he feared that electric service would be cut off if the village did not complete its assessment for the service. He continued to use more primitive means of lighting, after the majority of Atzomperos had electricity in their homes.

Table 15
 Dates of Earliest Acquisition of Specific Goods
 (By 78 Households)

Year of First Purchase	Goods Purchased				
	Radio	Bed with Mattress	Sewing Machine	Bicycle	Kerosene Stove
Before 1930	1	-	1	-	-
1930-1934	-	1	-	-	-
1935-1939	-	2	-	-	-
1940-1944	1	1	1	-	1
1945-1949	1	-	1	-	1
1950-1954	3	1	2	-	1
1955-1959	5	1	1	3	-
1960-1964	22	3	4	4	1
1965-1969	24	5	1	5	6

An important reason for the failure of acquisitions to fall neatly into a sequential scale is that villagers are not exposed to the various items in a uniform way. BA's wife's sister begged her parents for a kerosene stove after BA and his wife had bought one. LJ's wife, whose mother owned a stove, likewise convinced her husband to buy one. Neither of those households had beds or sewing machines. The purchase of phonographs with loudspeakers began with a village-wide "demonstration" in 1956, when the *presidente municipal* hired a set for a school event. The first villager to own such a set bought his in 1958, and two others followed in 1959. In 1969 there were eight sets in the village for hire, and a number of others in private use. The latter item has altered village life to some extent. Dedications of recorded music have replaced private serenading. Public announcements over the loudspeakers serve, in lieu of town criers and the ringing of church bells, to convey information from public officials or to call people to meetings. Pressure is exerted on those who avoid paying for water and electricity by announcing the names of payers and non-payers on the loudspeaker systems. Butchers announce their readiness to sell fresh meat. A resident about to travel to Zaachila advertises that she will take orders for items desired from the marketplace there, and individuals ask for help in finding lost animals. The phonograph-loudspeaker systems have raised the noise level in the village considerably. Music blares from several systems simultaneously from early morning to late evening, emanating from the *cantinas* and from private households that hire phonographs for fiestas.

A person's age also appears to be a factor in the desire for material goods. Some of the younger generation have a high degree of acquisitiveness. In some cases, modern goods are acquired at the behest of children, or resident sons who have income may make such purchases without consulting their parents. GM, age 64, feels strongly that it is improper to go into debt by buying on credit, and that landholdings which appreciate in value and are easily convertible to cash locally are more desirable than goods that depreciate in value. His resident sons, however, had bought, and were buying on installments, a pick-up truck, a sewing machine for their sister, a radio-phonograph, and a motorcycle. In fact, the elder son had already forfeited a second-hand truck that he could not afford to repair. This son's purchases have been made, too, at the expense of some more basic wants. His wife did not even have a pair of shoes. To some degree, a modern concept of prestigious consumption is involved. One young villager in the sample boasted to a relative of the material possessions and utilities he had acquired, saying, "And what have *you* got to show for yourself?" The relative felt that, having land, she was better off than he, but did not risk his anger by saying so. Older people may also acquire modern goods but do not flaunt them. The interior of AG's house, in 1969, had cement flooring, a sewing machine, a new double bed with mattress, and even an elegant lighting fixture, but AG was not one to discuss his possessions and sometimes feigned poverty.

The ease of installment buying makes large-scale acquisition of goods possible for villagers. They need only save for the down payment and then meet the moderate monthly payments. If payments cannot be made, the goods are repossessed by the vendor, as has happened with two village trucks. This is similar to the procedure for buying smaller articles from vendors who peddle clothing, saints' pictures, pails, and other items on installments. The purchase of a truck involves a larger sum and a longer term of payments, but it is comparable to the installment-purchase system widely used since the 1940's. There is only a difference of scale. There is no need to pledge one's land, as in the case of bank loans. Only the equity is lost if payments are not completed. Despite this facility, a certain amount of wealth is needed to make a down payment on an expensive piece of equipment and to meet monthly payments. One might anticipate that the possession of modern equipment would correlate at a significant level with wealth, and that wealth would have some bearing, too, on installation of electricity in the home. One might further surmise that the conspicuous consumption by some young people, based on values which they do not share with their elders, may have its genesis in education or, alternatively, in cosmopolitanism, that is, exposure to other ways of life.

SUMMARY

In recent years, Atzompa has seen a significant shift toward non-traditional styles of dress, and an increase in the acquisition of non-traditional types of furnishings and equipment, primarily of transistor radios. The discarding of traditional dress is shown to be inversely related to age. To some degree, there is a difference between the sexes in adoption of more modern dress. Women are more conservative than men in this respect, but more young women than young men have never worn traditional attire. In housing too, there is evidence of change, namely, the replacement of cane huts with adobe houses, or at least with mud-bonded stone dwellings. These are considered more substantial and therefore more desirable than cane housing. With the installation of electric service in the village in 1969, the majority of the villagers had service extended to their homes, despite high initial costs.

Rates of acquisition of various items have increased, particularly in the decade of the 1960's. In 1969 more than 70% of the sample owned transistor radios. While the radio is the first item of modern equipment most families buy, other items usually are not acquired in any systematic order. The sequence of acquisition depends more on the individual's exposure to the various types of equipment. Some younger people have demonstrated considerable and conspicuous acquisitiveness, indicating that they may be motivated by prestige considerations as well as by the usefulness of the articles purchased.

Notes to Chapter 6

1. Distrust, particularly viewing unfamiliar people and phenomena as threatening, was manifested only a few decades ago in the fear that strangers would kidnap children; in the belief that bus passengers would be kidnapped and melted down for fuel, when bus travel was introduced; and in a similar belief concerning the fate awaiting *braceros* who went to the United States. These fears have largely, but not entirely, disappeared. Witchcraft was also feared and still is given credence by a considerable number of villagers (see Chapter VII).

CHAPTER VII

PROGRESSIVISM AND CONSERVATISM IN BELIEFS AND PRACTICES CONCERNING ILLNESS

This chapter deals with traditional views about the causes, prevention and treatment of illness, and with the change or lack of change that occurs when these views meet the principles and practices of modern medicine. In Atzompa, as elsewhere in peasant Mesoamerica, many ailments are considered to have supernatural causes, and all are thought to be amenable to supernatural measures. Illness usually has been dealt with by petitions and propitiations directed to supernatural agents, and by the services of traditional curers who are skilled in the appropriate procedures. While the villagers increasingly resort to urban doctors with medical degrees, most continue to rely on the traditional curers also, particularly for relief of sicknesses considered outside the province of medical doctors. Of a sample of seventy-eight respondents, fifty-two said that they use both medical doctors and a type of traditional village curer called *curandero*.¹ Twenty-two claimed that they do not use the *curanderos*, only doctors, although some of these do use village midwives. Four said that they consult only *curanderos*. Of these, two cannot afford doctors' fees, and the other two have sons in urban employment who use doctors only.

TRADITIONAL CURERS

Curanderos perform three main types of services. (1) They extract from the patient's body the *aire* (literally, "air") which causes the illness, and they propitiate the *chaneques* (goblins) who live underground and project *aire* into the bodies of human victims. (2) They administer traditional herbal remedies and give rub-downs with table oil. (3) They administer simple modern remedies, mostly ointments and fever-reducing medicines, which they obtain at pharmacies. Sometimes a *curandero* uses both traditional and modern methods in the same case, and the patient, if he mends, can conclude for himself which was the one that worked. Often the *curandero* removes the identification from the modern remedy, preventing the patient from seeking the medication for himself the next time he has the same symptoms. The *curandero* is also called upon in cases where the body is believed to be "open" as the result of a blow (*abrimiento del cuerpo*). In addition to other measures taken to relieve the discomfort, the *curandero* wraps the patient very tightly in a *rebozo* to "close" the body.

In Atzompa there are three women regarded by most villagers as professional *curanderas*. One charges \$3 for three curings, the others charge \$5 for three curings. It is generally believed that complete recovery requires more than one treatment, usually three, especially in the case of fright sickness (see below). The best known *curandera*, Raimunda Ramírez, was taught by her mother, who thought it would be good for her to know how to minister to her own family. She has been practicing for 25 years. It was the opinion of one knowledgeable informant that there are fewer *curanderos* in the village now than formerly, first, because many patients do not pay their fees, at least not promptly, and also because fewer women are interested in learning the traditional methods. The fact that medical doctors are sought more and more frequently, and by increasing numbers of villagers, may discourage recruitment to traditional practices (see Table 16). However, *curanderos* are still much in demand in Atzompa.

Another method for alleviating sickness requires a human sponsor who appeals to a particular saint on behalf of the patient, usually a child. The youngster's parents generally select the saint and seek the sponsor. The latter is usually, but not always, of the same sex as the child. After a ceremony conducted by the priest, in which holy water is sprinkled on the child and a scapulary, bought by the sponsor, is hung round its neck, the sponsor raises the child before the saint's image while uttering a prayer for its cure.² Then he strokes its limbs with a candle to draw off the illness from the body and leaves the candle burning before the image. He becomes the child's godparent of the raising-up, "*de la levantada*."³ The parents of an ailing child may prevail upon someone

who plans a pilgrimage to rub the youngster's limbs with a candle before leaving on his journey. He then carries the candle to the shrine, makes his request to the saint for the child's recovery, and leaves the candle.⁴

These curers deal with supernatural agents in at least some of their practices.⁵ A type of healer who may be traditional, but does not profess supernatural powers, is the bonesetter. Parsons (1936:128) mentions one for Mitla in the early 1930's. In the late 1960's one was reported in Atzompa. He appears to work chiefly by massaging the affected limb. The midwife is another traditional type of practitioner without supernatural pretensions and there are three in the village. One, a woman over 80, is considered especially skilled and is much in demand.

Following this brief overview of the traditional curers and practitioners used by Atzomperos is a summary of the kinds of illnesses of supernatural origin which villagers have recognized traditionally, their causes and their treatment. These range from beliefs concerning goblins, sorcerers and witches as perpetrators of illness and death, to beliefs about the avoidance of specific categories of food under specific conditions, and the use of herbal remedies and the sweatbath.

Aire - airs

The nature of *aire* is not entirely clear. There is an ordinary *aire*, a draft of air which causes illness by chilling. "Evil air" (*aire malo*), on the other hand, is said to be a whirlwind or commotion of air caused by the devil ("*un remolino que hace el diablo*"). Of the 78 respondents in the sample, 22 said that *aire* is contracted at the time of fright (see *susto*, fright sickness, below), and 17 of these believed that this is "*aire del lugar*," airs projected from the ground at the place where the victim is frightened. The *aire del lugar* is believed to be projected by the *chaneques*, the goblins dwelling underground, who are thought to be malevolent.

However, it appears that *aire* does not always cause illness. One woman commented that her husband is full of airs ("*muy airoso*"), by nature. Once, after massaging his arm which ached from a muscle strain, she complained of discomfort from the airs that had passed from his body into hers. Yet the husband was considered to be *airoso* by nature without suffering from it. In fact, he is generally quite healthy and uncomplaining.

Where an illness is diagnosed as due to *aire*, either by the victim or by the *curandero*, the sufferer may be said to have a greater or lesser degree of *aire*. When one is convinced that the discomfort he suffers is produced by *aire*, a *curandero* is called upon to extract the airs by stroking the patient's limbs with an unbroken egg, much as the candle is used in the *levantada* described above. More rarely, the limbs may be rubbed with a leaf believed to be effective, such as *pirú* (*árbol del Perú*) or rue. In the most common form of curing, the *curandero* rubs the patient's limbs with the egg on three occasions. Then the egg is buried in the home of the sufferer, together with gifts of propitiation to the *chaneques*, sweets, cigarettes, tiny tortillas, a small amount of maize gruel or mescal, a tiny cross, and sometimes red flowers, identified by an informant as geraniums.⁶ A respondent in the sample described the onset of the illness and treatment thus:

"Fright starts with fatigue, laziness of the body, faintness. One has no desire to work. With others, it comes on with a rash, or with a feeling of coldness. That's what the *curandera* is for. She rubs, she draws out the air. With a cigarette.... for the *chaneque*, to get him to let go of the patient, offering him his cigarette."⁷

If the egg sounds watery when shaken afterward, the patient is assumed to have had a great deal of *aire* extracted. One informant reported that she saw a *curandera* break the egg after the rubbing and smear the contents over the body of the patient, in this case a child. Another said that a curer broke the egg afterward and "read" the yolk for signs of the cause of illness, then tossed the contents away.⁸

Drawing out *aire* may be effected by means other than stroking. A man with a coin sticking to his forehead probably is suffering from headache. The coin is expected to draw out the *aire* which causes it. A mother reported that when a doctor repeatedly failed to cure her infant of an upset stomach, her parents applied leaves to both sides of the baby's stomach. When the leaves came off the body dry, they declared that it was *aire*. The child promptly recovered.

Susto or Espanto - Fright sickness

Fright sickness is believed to be characterized by an eruption of the skin, listlessness and depression, and sometimes by sharp pains, revealing dreams, and insomnia. Some of the causes mentioned were: a sudden meeting

with a snake, being attacked or struck by an animal, seeing a man shot, and having to handle a corpse. Opinions of the 78 respondents concerning the nature of *susto* were as follows:

Airs projected from the place of fright enter the body	17
Airs projected from the animal that causes the fright enter the body.	2
Airs enter the body, and the circulation is paralyzed	3
The blood becomes paralyzed with fear	16
The nerves are affected	1
The body as a whole is affected by fright	7
Anger causes the symptoms	3
Respondents believe in fright sickness but do not know the cause	16
Respondents not sure that fright sickness exists	5
Respondents believe that fright sickness does not exist	8

To ward off *susto* after an occurrence that is likely to precipitate it, one may blow on the frightened person, preferably with water or alcohol, or give him water to drink. By such means one hopes to drive the *susto* away before it has taken hold. Treatment is that for *aire*, above. Some believe that, for the propitiation ceremony to succeed, the victim should be treated at the place where he became frightened, or at least that the earth from the place should be used in the curing procedure.⁹ There is also a procedure for dipping a baby upside down in water containing a red flower (probably the same geranium flower used in connection with propitiation of the *chaneques*), in order that its organs may fall back into place after an attack of fright sickness.

Muina - Anger

This is anger tinged with frustration, from the Spanish *mohina*. When brought on by such events as the loss of a valuable possession, anger is said to cause an outpouring of bile and symptoms of stomach ache, vomiting, and twisting of the mouth. In one case, a man from another village died after losing a valued cow. It was rumored that he became so angry that his gall bladder burst. *Muina* may bring on the symptoms of *susto*, according to two villagers who suffered attacks of *muina* as the result of falling into wells while drawing water. It is cured in the same way as *susto*. In one of these cases, the victim's sister believed that her brother had become irrational as the result of bile reaching the brain. A doctor was consulted, as well as a pharmacist, but the treatment believed to have been the most effective was a cure for fright sickness carried out at the place where the incident befell. The victim's clothing was "treated" in lieu of his person, as he himself was bedridden and unable to walk.

Mal de ojo - Evil eye sickness¹⁰

This illness is most often visited upon children, usually unwittingly on the part of the perpetrator. *Mal de ojo*, literally, "illness from looking", is projected by a woman who is hot and perspiring. Her glance can also affect food, such as tamales and eggs. A pottery kiln, or animals will not behave or function properly when afflicted with *ojo*. E.g. the eggs won't froth when beaten and the kiln will not fire properly. A child who has been looked upon by such a woman develops a stomach ache, vomiting and fever. Some of the cures mentioned are: rubbing with the leaf of the soap plant (*pipe*), with *hediondillo* (*L. Cassia occidentales*), with a napkin dipped in maize gruel, or with the dress or apron of a pregnant woman. Broth of *barba de viejo* (*L. Clematis dioisia*) may be given. What the baby spits up will contain the illness, and vomiting will bring it all up. As a preventive, the deer's-eye stone (*ojo de venado*) is hung around a child's neck.

Chizo - Sorcery

Chizo comes from the Spanish *hechizo*. It is malicious projection of an object, particularly a pin or pins, into the body of a victim.¹¹ The symptoms of the victim of *chizo* are lethargy and pain, especially pain in the calves of the legs. Practitioners who specialize in projecting objects, or in curing this type of affliction, are called *chizeros*. The *curandero*-like *chizero* simply rubs the patient with an egg, then breaks the egg and pretends to extract the foreign object from the yolk. This is repeated in several sessions. A *chizera*, who lives in Oaxaca City

and visits Atzompa occasionally to sell bolt cloth, practices curing as a sideline. She is reported to insert thorns or spines of the *diente de víbora* (*L. Serjania mexicana*),¹² obtainable in Oaxaca City pharmacies, into the patient's flesh preparatory to extracting the foreign object. Sometimes she strokes the patient's body with a turkey egg, uttering incantations meanwhile. She then rubs the egg with her hands to warm it, blows on it, and finally sucks from the patient's body the needle, bone, coin or other object supposed to be causing the pain. Some *chizeros* even bite the flesh of the patient's arm, wetting their lips first with alcohol, to suck out the object. The informant who related these procedures thought the alcohol served as a disinfectant.

This informant was, herself, cured of *chizo* by a city curer. She was stroked with an egg, then with *pirú* leaves, rue leaves, and the leaves of a plant called *albaca*. Then a black hen was waved over her body. Its throat was slit, and it was buried. An emetic was given the patient, and the vomit was shown to contain little rolls of hair and worms. This cure cost the patient only \$20 in 1953, probably a minimal cost, since the curer was godmother to the patient. She claims that her husband admitted, long afterward, that before they were married he had hired a woman to perpetrate the *chizo*. While there are clearly different ways of "curing" *chizo*, most are involved with egg rubbing, some involve extraction of objects from the body by sucking. Another involves the drawing out of noxious elements by inducing regurgitation. They all have as their purpose removal of foreign objects from the body of the patient.

***Brujería* - witchcraft**

There is a thin line between *chizo* and *brujería*. Parsons (1936:137) considered *chizo* to be an aspect of witchcraft. In Atzompa, however, a *brujo* (witch) is an incarnation of evil who can transform himself into a human or animal at will. While at least one type of *chizo* is referred to as *brujería*, never is the perpetrator of *chizo* called a *brujo*. The witch *par excellence* is a person who changes at night into an animal form and goes abroad to harm people, or at least to molest them. If the animal is shot, the next morning the human form of the witch will be found to have a bullet hole. One who suffers the attentions of a *brujo* dreams that he is being crushed, or beaten, or bitten, as by a mosquito, and his blood sucked. The *brujo* can cause death by breaking a person's neck. These deaths are sometimes said to have been preceded by "signs" such as a whirlwind or the falling of a building. If a person dies suddenly and inexplicably, villagers search their memories for such "signs". Curiously, while the witch's evil activities are said to be nocturnal, two village deaths, suspected by the families involved to have been caused by witchcraft, occurred during the day.

Atzompa mothers take great care to protect their children from witches.¹³ If an infant rests on a mat, at its head one may find a pair of scissors open in the form of a cross, and a small mirror. Older children may wear black beads or bracelets for this purpose. More rarely, they wear amulets containing pins, mustard seed, a squirrel bone, a tiny cross, a bit of chile, or two tiny mirrors. Adults may ward off witchcraft by crossing themselves three times upon awakening, by putting a cross of garlic or of lime, or the skull of a dog, on the outside of the house door, or by setting a bowl of water in the doorway. The acrid smoke from burning a bull's horn or chile drives the witch away. If one suspects a person of being a witch, one may test the supposition by putting a pin in the mat on which he, or she, is invited to sit. A witch will be unable to rise from the mat. However, only the practices involving children seem to be observed to any extent, and even those are far from universal. In no case did questions about the purpose of the scissors, mirrors or beads elicit these reason for them. The above information was obtained from a key informant. The practices are found in households with radios and other modern equipment, and in those with members who have urban relatives or who have traveled to the United States as *braceros*.

The casting of spells is also called *brujería*. It is aimed at specific individuals, and its motive usually is revenge. This type of witchcraft is perpetrated by an individual who has learned how to induce sickness in others, usually by uttering incantations over something belonging to the intended victim - a hair ribbon, hair clippings, or even the remains of a meal eaten by the person. Hendry (1957) thought that copies of her photographs requested by people other than those appearing in them probably were desired for purposes of witchcraft. The only instance of this type reported in detail had taken place more than 15 years before. It was recounted by both the daughter of the victim and by the sister of the perpetrator. The latter said that her brother had wanted to marry a girl who was indifferent to him. When he tried to "steal" her one night, her father had him thrown in jail. Upon his release, the boy began to learn *brujería* in other villages, where he went to play basketball. He would pray in the four

corners of the house. He used *baraja* cards (described below), taking care that no one should see him. The girl's father soon fell ill and no one could cure him. He succumbed and the perpetrator of the black magic also died soon after, reportedly from heavy drinking.

Brujería is also performed with Tarot-like picture cards known as *barajas*. It is the work of specialists in the *chizero* category. A well-known *chizera* from the town of Cuilapan, who practices this specialty, charges \$5 a session. If a reading is desired, the *chizera* turns up cards and interprets the pictures. If witchcraft is desired, a fetish or "doll" of cloth is made and needles, pins or chile are placed inside. The "doll" is wrapped round with thread and placed on a cross made of the *barajas* while an incantation is chanted. Then it is buried. The intended victim's body will ache from the objects "projected" into him. Two instances of *baraja* sessions were reported during the period of the study, but neither was for the purpose of projecting sickness. One was a reading. A girl wanted to know what were her prospects for marriage. The other was held for the purpose of projecting thoughts into the mind of a landlord who was attempting to evict his tenants.

Gangrena

Gangrena is the exudation of a corpse which may infect the body of someone who comes near. The people most likely to be infected are those who are already somewhat ill and therefore vulnerable, or one who is caring for a sick person. It is said that an individual having a swollen place on the skin incurs a risk of being infected with *gangrena* by the corpse of a child. No cure was suggested for illness caused by *gangrena*, which was said to be fatal in many instances. No case of illness was identified as due to *gangrena* during the period of the study, but the possibility of an infection of this sort was sometimes mentioned when wakes were held.

These traditionally defined illnesses, with their respective "causes" and "cures", are part of a system of beliefs tenaciously held by the majority of Atzomperos, almost all of whom consult medical doctors for illnesses considered properly within the province of modern medicine. The belief in fright sickness is particularly pervasive, although not universal. The various beliefs are reinforced by the prompt recovery of some patients who undergo traditional cures, or as in the instance of *brujería* described above, by the unexplained sickening and death of a person known to be the probable object of someone's revenge. For example, a man who suffered what appeared to be a minor stroke visited the *chizera* in San Lorenzo Cacaotepec and was cured. He had consulted doctors to no avail. Similarly, an elderly man failed to respond to the efforts of a medical doctor who insisted that he could not be cured without an operation. The patient called in a local *curandera* and soon recovered. Possibly specialists in psychosomatic causes of illness might suggest logical explanations for such recoveries.

"Hot" and "cold" foods

Another set of traditional beliefs is concerned with the supposed properties of foods, and the way these affect the human body under certain physical conditions. The belief that certain foods are "hot" and others "cold", without reference to their temperature, is of European origin (Ingham, 1970,) and is widely held in Mesoamerica.¹⁴

There is general, but not total, consensus concerning the classification of foods as "hot" or "cold". For example, almost everyone agrees that *frijol* beans, especially *frijol delgado* are "hot" while leafy vegetables, peas and broad beans are "cold" or "cool". Most use the term "*fresco*" ("cool") for the antonym of "hot"; others say "*frío*" ("cold"). There is lack of consensus concerned chickpeas: 8 respondents classified them as "hot," while 13 thought they were "cold;" the remaining respondents did not mention chickpeas in connection with the dichotomy. The terms are sometimes associated with temperature, even by those who also hold the more traditional concepts of them, indicating a possible breakdown in the concepts of classification as compared with other places (e.g., Lewis 1963:200-201; Foster 1967:184-188). Most respondents said that foods are simply "hot" or "cold" by nature, or that they did not know the criteria for classification. Some specific opinions concerning the meanings of the terms were as follows:

	Number of Respondents
"Hot" foods are those which are (internally) irritating.	5
"Hot" foods are those which cause illness if eaten "out of time" or if eaten by a pregnant woman.	2

<i>Frijol</i> beans are "hot" because they contain iron.	2
"Hot" foods have more nutritive substance than "cold" foods.	2
"Hot" foods are dry.	2
"Hot" foods are those which can be grown on drier types of land.	1
"Hot" foods have a strong taste.	1
"Hot" foods are mature (not unripe).	1
"Hot" foods are heavier than "cold" foods.	1
Green vegetable foods are "cold" foods	Virtually all respondents
"Cold" foods are those grown with a lot of water.	7
"Cold" foods are immature (" <i>tierno</i> ").	2
"Cold" foods are juicy foods.	1

These definitions show some similarities of concepts, but none account for such things as the classification of chile sauce (*mole*) as "cold" or for the contrast between goat meat (hot) and mutton (cold).

Five respondents equated "hot" with "irritating" ("*inconoso*" or "*irritante*"). Foods that are *inconoso* are not to be eaten by persons with wounds, sores or pimples about to burst. Everyone questioned about this believed pork and chile to be *inconoso*. Some included *frijol delgado*, *chepiles* and *chepiches* (wild greens), fish, cooked squash and toasted squash seeds, *ejote* beans, or grasshoppers. The list of "irritating" foods is far shorter than the list of "hot" foods. That list contained twenty items, and appears to constitute a different category. One woman insisted that "irritating" foods are not the same as "hot" foods, pointing out that *chepiles* are "cold" yet "irritating".

Opinions vary too concerning the significance that these categories have for illness. In the greatest show of consensus, 39 respondents said that it would be dangerous for persons having a fever or a cough to take "cold" foods, but when they were questioned as to what particular foods should be avoided, the foods mentioned were most often cold in temperature.¹⁵ It is believed that such foods, if taken when one is feverish, may chill the lungs and bring on pneumonia. People who are hot and perspiring also are cautioned against taking cold foods. In one instance, a woman who was grinding chocolate at a fiesta fell ill that day and died not long after without recovering. The fatality was laid to her having taken a cold soft drink when she was hot and perspiring. But the term "cold" may also be used in the traditional sense in such cases. For example, I once remarked to an Atzompera that after my last visit to her house, I went on to a fiesta and felt ill afterward. She exclaimed that it was only to be expected as I had taken milk (boiled directly before drinking) at her home, and chile sauce at the fiesta, both "cold" foods, before and after walking in the hot sun.

There is lack of consensus with respect to the application of the hot-cold categories. Four respondents thought that cold foods slow body activity and therefore are dangerous to take when one is ill. Two believed that they could cause or aggravate diarrhea, and another added that they are not to be taken after a purge. On the other hand, one respondent said that *frijol*, a "hot" food, is not to be taken after a purge, and five said that *frijol*, especially *frijol delgado*, which is considered especially "hot", should not be taken by anyone who has a stomach complaint such as diarrhea. But nine respondents insisted that *frijol* can be eaten at any time. It is indeed an almost indispensable component of the village diet.

In one case, a respondent thought that his father-in-law, suffering from erysipelas, should eat only "hot" foods because an illness of swelling is "cold." However, his wife contradicted him, saying that the illness was "hot" and required "cold" foods. This was the only time during the questionnaire interviews that it was explicitly stated that "hot" illnesses should be counteracted with "cold" foods and vice versa. Yet, there was disagreement within the same household as to whether the illness under discussion was a "cold" one or a "hot" one.

The main concerns expressed in these discussions were that feverish persons should not eat "cold" foods, those mentioned as "cold" being most often cold in temperature, and that people with sores or wounds should not eat pork or chile. However, individuals who had been inpatients in Oaxaca City clinics noted that those institutions observed no such dietary restrictions and concluded that they were not necessary after all. Of the 78 respondents, 9 declared themselves quite willing to let the doctor stipulate the appropriate diet in the event of illness.

Herbal Remedies

Traditional curing also includes the use of herbs. This is the least expensive type of remedy, as herbs usually are gathered in the fields or are bought for a few *centavos* from villagers who grow them. Therefore, they are often the first recourse in case of sickness, especially for stomach upsets. Undoubtedly a number of the herbs do have curative properties.

Most Atzompa families use herbal remedies. In the sample of 78 households, only 6 claimed to have discontinued their use, although a number of others deprecated the effectiveness of herbs. Some of the more common herbal remedies, and the ailments for which they are used, are as follows:

Ailment	Remedy
Baby's stomach upset	Tea of mint with small amounts of pepper, clove, oregano and sugar.
Older child's stomach upset	Enema of camomile, <i>rosa de Castilla</i> (<i>L. Lippia umbellata</i>) and <i>palo mulato</i> (<i>L. Bursera gumifera</i>). ¹⁶
Chest pains	Poultice of <i>Sampablo</i> leaves (<i>L. Wiganda cara-casana</i>) and pinewood chips with heated ointment of camomile and balsam of rosemary.
Child's fever	Tea of <i>barba del viejo</i> plant (<i>L. Clematis dioecia</i>).
Chills	Application of warmed kerosene with a branch of <i>pirú</i> (<i>árbol del Perú</i>).
Diabetes	Tea made of the <i>Sampablo</i> leaf, taken daily
Menstrual pain	Tea brewed with avocado pit and mugwort flower. External application of heated alcohol and a salve of <i>altea</i> (marsh mallow) and belladonna.
Foot spasms	<i>Alcancer</i> (<i>L. Cuphea Aequipetala</i>), applied to the foot.
Earache	Myrtle leaves, applied to the ear.

There are other types of home remedies. To withdraw fever through the feet, one bathes them in water heated with ashes and salt. Some add orange peel. Lemon is also used to draw heat from the body and it is applied externally to cure stomach spasms (*latido*). To relieve pain from a blow, a draught is brewed of avocado leaf, corn husk of purple hue, and vinegar, also recommended is the application of modern ointments, such as "Vaporub",

which probably have greater effect. "Mejoral", another modern pharmaceutical product for reducing fever, was also included among the home remedies.

CHANGING BELIEFS AND PRACTICES

The incorporation of modern medical preparations into the recipes for home remedies, and into the repertoire of the traditional *curandero*, is one effect that modern medicine has had on traditional practices. There have been two further effects. The use of the traditional sweatbath was completely relinquished about 25 years ago, and there has been a decline of vows made to saints to sponsor their name-day feasts in return for cures¹⁷, as mentioned in Chapter V in connection with the decline of the *mayordomías* and *cofradías*. However, another religious practice, the *levantada*, appears to continue unabated. This practice often has the ulterior motive of acquiring a desirable sponsor for a child, in addition to the godparents for the recognized life crisis rites, and an additional *compadre* for the parents.

Another effect has been the attenuation of beliefs in the dichotomy of "hot" versus "cold" foods. Even fright sickness is not perceived by most Atzomperos from an entirely traditional point of view. Only 22 of the 78 respondents thought of it as supernaturally caused. The 24 who characterized fright only by its effects on the circulation, the nerves, or the body generally, were describing common sensations of fright. Eight respondents said they did not believe that there is such a sickness, and five others were skeptical.¹⁸ Here, too, there has been some erosion in traditional beliefs, although from the data it is not possible to tell when it occurred. Nevertheless, the disbelievers and skeptics constitute less than 20% of the sample. The majority continue to believe that fright precipitates an illness of recognizable symptoms. The beliefs in *chizo*, *brujería*, *muina*, *ojo* and *gangrena* are also generally held. Even some fairly sophisticated households continue to seek a *chizero* to cure a family member who has not responded to medical treatment or egg rubbing.

One woman potter is aware that there may be harmful microorganisms in food as well as in the air. She has many urban connections and several *compadres* from the United States. She uses medical doctors and was assisted by a doctor the last time she gave birth. But she has been cured so often of *aire* that, according to her own statement, there are a large number of eggs buried with offerings under the earthen floor of her house and in the patio. Accounts of witch activity were given by the head of a household that not only has more modern equipment than most, but also has two sons who are schoolteachers and two more in secondary school in Oaxaca City. In the same household the contraction of *gangrena* during a wake was mentioned as a possibility. A man who had been in the United States eight times as a *bracero*, and has a son attending Benito Juárez University, spoke of *aire* and *chaneques* with conviction. He judged a recently-deceased villager foolish for having derided the concept of *susto*. The man who died had been present at a shooting, and he wrested the pistol away from the assailant. Said the ex-*bracero*:

"Then he began to dry up. His eyes dried up first. They said he had *susto*. 'What *susto*!' he said. 'How would I get fright sickness?' In a year he was dead."¹⁹

The only households that appear not to subscribe to these beliefs are those of the village schoolteachers, all of whom are giving their children professional training in Oaxaca City schools.

Although traditional and modern medical practices generally do not conflict, when they do, the modern practice usually prevails. For example, a woman who inquired about birth control methods was told that there is a traditional preparation in the form of a bath, as well as some modern methods. She replied that she would not be interested in the traditional method since "it is not like a researched medicine" ("*no es como una medicina estudiada*"). Yet this was the woman who believed that erysipelas, a "hot" illness, should be counterbalanced with foods that are "cold" in the traditional sense. Apparently her belief in the hot-cold dichotomy has not been shaken, but when given a choice between traditional and modern medical practices, she opts for the latter.

While medical doctors are held to be ignorant of the traditional maladies discussed above, there is general agreement that for fevers, such as those brought on by "*la gripa*" (grippe or influenza), there is no efficacious traditional remedy. In such cases, they say, only the doctor's medicines will work, although they may put off the

treatment as long as possible. Many respondents said that they began to go to medical doctors when their children were born.

Although the sickness of a child usually is a spur to seek modern medical services, adults often continue to medicate themselves, using herbs, "Vaporub", and a variety of aspirin-type fever-reducing remedies obtainable in the local stores, rather than go to the doctor. The main consideration is cost, not distrust of doctors. In 1967 the minimum cost reported for examination by a licensed physician was \$15 and often charges were higher. For special medications cost can be prohibitively high. A young girl, who suffered partial paralysis of a leg as the result of a fever, required medication costing \$60 to \$65 a week. She was on the road to recovery when her father was forced to discontinue the treatments due to lack of funds, and consequently she grew up lame. Doctors usually administer medicines by injection. To minimize costs, one may purchase the medicine at a pharmacy and seek an "injector" in the village.²⁰ Also, a number of villagers reported that they consult pharmacists who prescribe as well as dispense medicines, and who charge less than the doctors.

Villagers usually meet a crisis such as illness by selling the animals they raise. In large part, animals are raised for this purpose, but an emergency sale puts one at a disadvantage in the market, particularly when trying to sell in the village where the emergency circumstances are known. One man sold three burros to cure his young son. Another father paid \$600 to send his wife to a maternity clinic to deliver a child. He raised the money from the proceeds of the sale of five pigs, his share of the litter of a sow he was maintaining on half-shares. Another informant had, at various times, paid \$900 for doctors and medicines to cure himself; \$300 to cure a child who died; \$800 to cure another child, and \$1,400 to cure his wife. During her illness there was no income from pottery-making. He sold two pigs, a burro, 22 turkeys and chickens, and borrowed money from a buyer of his pottery against future production. In another case, a father decided against an operation which might have saved his son's life, because he would have had to impoverish his large family to pay for it.

There was, however, one potter-farmer who had ready cash for an essential operation. His only son had been working in Mexico City for about a year, and with one daughter at home, he and his wife were able to bank what his son sent home, and more besides. This man developed a "tumor," possibly a stone in a urinary duct, requiring surgery. Before acquiescing to the operation, he spent some \$600 for medicines, vainly hoping for a quick cure. The operation cost \$1,500, and hospital care cost \$150 a day. This wiped out the bank account but left the ox team and other possessions intact. Such financial preparedness is exceptional, however.²¹ Despite the expense, Atzomperos are increasingly turning to doctors, as shown in Table 16.

TABLE 16
Decade in Which 78 Respondents First Consulted
Medical Doctors for Themselves or for Household Members^a

Decade when doctor was first consulted	No. of Respondents
1960's	23
1950's	28
1940's	10
1930's	6
Since childhood	7
Never consulted a doctor	4

^aData collected October 1969 through January 1970.

Those who have used doctors "since childhood" were first taken by their parents. They themselves did not make the decision to shift from traditional to modern practices. Obviously the younger respondents necessarily began to use doctors more recently the later years, but the majority of the older respondents also reported making this decision in the later years, as is shown in Table 17.

TABLE 17
Decade in Which 78 Respondents First Consulted
Medical Doctors, By Age Group

Age Group	Decade					
	1960's	1950's	1940's	1930's	Since Childhood	Never
Under 20	-	-	-	-	1	-
20-29	5	1	-	-	1	-
30-39	4	7	3	-	3	1
40-49	5	13	3	2	1	2
50-59	3	4	2	1	-	-
60-69	4	2	2	3	1	1
70-79	1	1	-	-	-	-
Over 79	1	-	-	-	-	-

Of the fourteen respondents 60 years or older who began to consult doctors, 9 did so only in the last two decades. Two things might be observed in this connection. First, except for times of heavy rain when the Atoyac River could not be forded, it was always possible to walk to the city in about an hour. Now of course, there is vehicular traffic. Second, doctors were available in Oaxaca long before any of the respondents were born. It should also be noted that among the younger age groups some respondents reported that they began going to doctors before they were 20 years old. The sickness of his child was often the occasion of a parent's first visit to a doctor, and this sometimes occurred before the parent was 20.

The concept of disease transmission by microorganisms is also gaining ground, although not as rapidly as the use of doctors. Of the 78 respondents, 7 said that the way in which disease enters the body is by transmission of *microbios* (germs or microorganisms). Two of them had seen *microbios* under a doctor's microscope.²² Two more thought that *microbios* were responsible only in the case of direct transmission between individuals. Eight believed that the causal factor of such disease was transmitted through the air by an infected person, but they had not heard of, or thought of, microorganisms. Others had little idea of what causes such illness, but three believed that when a person is exposed to a contagious disease, fear of contracting it renders him more vulnerable.

SUMMARY

In the past two decades Atzomperos, have come to place great reliance on modern medical practice. It is likely that in the next generation, with increasing prosperity, all Atzomperos will use the services of medical doctors. Almost all do now, despite the heavy cost.

Although for most Atzomperos modern medical services are an addition to the village's curing resources rather than a substitute for them, concepts of disease etiology and treatment have begun to change with increasing use of those services. These changes are reflected in the substantial minority that claim to have discontinued the use of traditional curers (28% of the sample); in the modest proportion of respondents who have some idea of the germ theory of disease (12%); and in the numbers who, according to their statements, no longer observe the traditional dietary restrictions with regard to foods defined as "hot" and "cold" (also 12%). The number of *curanderos* in the village is said to have declined, and those now practicing have found it expedient to incorporate some easily obtainable modern medicines into their pharmacopoeia.

These are indications of a movement away from traditional practices, and to a lesser extent traditional beliefs. However, they do not obscure the fact that the majority of villagers continue to patronize the local *curanderos* and continue to believe in traditionally defined diseases. Virtually all Atzomperos consult medical doctors for illnesses deemed to be within their province, particularly fever-associated disorders such as gripe, and particularly when it is their children who are sick. Yet, they continue to medicate themselves with home remedies and use traditional curers to alleviate symptoms perceived as those of *susto* (fright sickness), *mal de ojo* (evil eye), and *chizo* (sorcery).

With the increasing use and recognized efficacy of modern medicine, sickness vows to saints have declined greatly, and this has had a depressing effect on the religious fiesta system. However, the practice of the *levantada* is still prevalent. Both *levantadas* and pilgrimages often have motives in addition to that of seeking a cure. In the first case, acquisition of a desired *padrino* and *compadre*, in the second, the pleasure of a journey. While fatalism is often noted, as in the common phrase, "*Si quiera Diós*" ("if God wills"), this was not observed to prevent villagers from seeking professional curers or doctors. As is the case in societies said to be more "developed" or "advanced", medical recourse and religious recourse are not mutually exclusive in Atzompa.

Notes to Chapter VII

1. The terms for traditional curers are used here in the masculine gender, indicating that both males and females participate in these activities. In practice, however, traditional curers of all types are predominantly female, including the sorcerers believed to cause as well as cure illness by supernatural means.
2. A bit of fabric into which is sewn a prayer, "*la Magnificat*".
3. Also called "*padrino de limosna*" (godfather of charity) or "*padrino de la vela*" (godfather of the candle). The procedure is occasionally used to appeal for the cure of adults.
4. Pilgrimages are general occasions for seeking relief from illness. While some of the Valley shrines are considered to be very miraculous, particularly the *Virgin de la Soledad* in Oaxaca City, most peasants of this region put their faith in a shrine at Juquila, near the coast in the Mixteca Baja. Persons who make the pilgrimage to Juquila petition the Madonna for some favor, most often alleviation of an affliction.
5. Other classes of traditional curers are the *chizero* and the *espirituista*. The *chizero* cures a type of illness resulting from sorcery, but he may also be a perpetrator of such illness. A well-known *chizero* in San Lorenzo Cacaotepec is said to charge only \$5 per visit, but most ask several hundred pesos to effect a cure, and there are reports of charges up to \$2,000. There are no *chizeros* resident in Atzompa. Whereas *curanderos* are constantly in demand, daily or at least weekly, there are few illnesses for which a *chizero* is consulted, and these usually are cases in which medical doctors and *curanderos* have failed to effect a cure. The *espirituista* calls on spirits of the dead to effect a cure. Too little data were gathered concerning *espirituistas* to adequately define the role they play in the corpus of traditional beliefs and practices.
6. Although local interpretations vary, the concepts of "*aire*" and "*susto*" are very widespread in Mesoamerica (see Adams and Rubel, 1967). Parsons (1936:122) reported that in the Mixtec-speaking town of Cuilapan, fright sickness was referred to as *chaneca* -- but not, apparently, in the Zapotec towns she visited in the early 1930's. In Zapotec Mitla, this word was a little-used synonym for *chizo* or sorcery (Parsons:1936:137). The ceremony of burying an egg and tiny food items at the place of the fright is reported for Mitla (Parsons 1936:120-121), but there is no indication that the egg was used to extract *aire*, nor was there any concept of an "offering" in the rite. There was mention of calling to a spirit (*espíritu*), and this Parsons associated with the Aztec alter ego or *tonal*, which must be called back in order to effect recovery. The term "*chaneque*" probably derives from the Nahuatl word meaning "master of the house": *chane* plural, *chaneque* (*Dictionnaire de la Langue Nahuatl ou Mexicaine*, 1966). The belief is more explicit in highland Chiapas, where the Tzotzil Mayas believe that the *chauk* (translated into Spanish as "*maestros*") are those gods of the earth, inhabiting caves, who blow wind and cause rain (Holland

1963:93). Earth deities protect those living in their respective zones but may harm strangers by capturing the animal alter egos of the latter and torturing them, thereby causing torment to the human counterparts (Holland 1963:124). The "animal alter ego" is rendered "*animal compañero*" in Spanish and likened to the Nahuatl *tonal* (Holland 1963:100).

Northward at Tepoztlán, in the state of Morelos, *los aires* are "mysterious forces variously thought of as winds, spirits, or little people, who may cause sores, pimples, paralysis, and other illnesses. They are found in stream beds, ravines, in stagnant pools, and atop the highest hills" (Lewis 1963:280).

It would appear from the probable etymology of the word and the polytheistic implications of a similar term in the Maya region, that the concept of *chaneques* is of aboriginal origin.

7. "*Un espanto entra con sueño, desgansamiento del cuerpo, desmayo. No tiene uno ganas de trabajar. En otros, sale con granos, o con frío. Para eso sirve la curandera. Barre, saca el aire. Con cigarro.... para el chaneque, para rogarle que suelte al enfermo, dándole su cigarro.*"

8. This last example was reported by a woman whose sons are very well educated and who lives in a fairly sophisticated environment. The incident occurred a number of years ago and involved one of the sons, who was then a youngster. Although the woman mentioned that her son received injections by a medical doctor after the "treatment" dispensed by the traditional curer, she attributed his recovery to the latter and not to the medicine. She had been impressed by the accuracy of the *curandero's* "reading": he said that the boy had received the fright in a crowd of people, which was true.

9. In one case unique among those related, earth "of the place" was brought to the patient's home. It was boiled with water and the vapor was allowed to rise over the patient. The informant called the procedure "*báus*", probably from the Spanish *vahos* meaning "vapors."

10. The evil eye concept probably was introduced from Europe, where it has been widespread, especially in the Mediterranean region (see Krappe 1927:9).

11. The term is used by some as a verb to describe the projection of *aire*; for example: "*El lugar nos chiza.*"

12. Bennett and Zingg 1935:172.

13. It is generally thought that there are witches in Atzompa, but when questioned, informants could not, or would not, identify any.

14. As Ingham points out, the hot-cold dichotomy in Europe is traceable to the early Greeks. According to Hippocratic medical theory, there were four elements or humors - wetness, dryness, warmth and coldness - whose equilibrium was necessary for good health. Similar concepts are found in Asia (Ingham 1970:76-77).

15. Ices were very often mentioned as a "cold" food in this connection, whereas in the Tepoztlán and Tzintzuntzan lists ice appears as a "hot" food (Lewis, 1963; Foster, 1967).

16. Latin terms are from Santamaría's *Diccionario de Mejicanismos*, 1959.

17. Steaming baths are still taken by women after childbirth, about a week after delivery. These baths, prepared by the midwives, are said to be painfully hot.

18. However, one respondent who denied both belief in *susto* and use of *curanderos* was reported to have used a *curandero* about a year before, to cure a knife wound.

19. "*Entonces empezaba a secar. Los ojos se secaban primero. Dijeron que tenía susto. 'Qué susto!' dijo. 'Qué me voy a asustar!' Dentro de un año se murió.*"

20. In Atzompa as in other villages, there are girls who know how to give injections. One is a *mejoradora*, a government employee who is paid a small salary to perform this service and to teach girls this and other household skills.

21. Three other respondents in the sample admitted to having bank accounts.

22. Here, fever-associated diseases such as gripe and smallpox are meant, not traditionally defined illnesses of supernatural origin.

CHAPTER VIII
STATISTICAL ANALYSIS

A statistical analysis was applied to the responses of the 78 heads of households to selected questionnaire items (see Appendix A). The participants included those in both the 1968 and the 1969-1970 formal interviews. The method of analysis includes:

1. Zero-order intercorrelations of all items, both with each other and with the four descriptive variables referent to the head of household, namely, age, level of education, cosmopolitanism, and wealth status. For operational definitions of cosmopolitanism and wealth status, see Appendix B.
2. Zero-order intercorrelations of combined item scores in the categories of behavior discussed in the preceding chapters, namely, progressivism in pottery production and sale, progressivism in farming, economic and educational mobility, progressivism in community activities, progressivism in material possessions and desiderata, and progressivism in medical beliefs and practices.
3. Partial correlations for the intercategory relationships separately, holding constant each of the four descriptive variables, in order to ascertain the effects that their respective removal has on these relationships, (see Appendix C).

In addition, rankings were obtained of the scores of all respondents with respect to all variables, items, and categories of items.

Category 1: Progressivism in Pottery Production and Sale

The items used as criteria for progressivism in the ceramics industry have to do with openness to alternatives, namely: (a) minimization of time input in clay procurement - buying clay from resellers, (b) minimization of time input in sales - selling to middlemen, (c) the number of pottery forms produced by the household and (d) intended and actual experimentation with the kick wheel. The first two items refer to the activities that utilize the specializations of others, allow for more profitable time investment on the part of potters. The last item also implies a desire to maximize returns on time input. The intercorrelations of these criteria vary from slightly negative to moderate.

TABLE 18
Zero-Order Intercorrelations Of Criteria for Category 1

	(a)	(b)	(c)	(d)
(a)	---	.19	.23 ^a	.16
(b)	---	---	-.04	.18
(c)	---	---	---	.30 ^a

^ap < .05

Category 1 has a moderately high correlation¹ with Category 5 (progressivism in material possessions and desiderata) as shown in Appendix C, $r = .47$, $p = .001$.² By removing the influence of education by "partialing out," the correlation coefficient r is reduced to .37. This indicates a minor influence of this descriptive variable. None of the other variables examined has more than a small effect on the correlation. Interestingly, Category 1 also has a moderate correlation with Category 4 (progressivism in community activities). Here, the over-all criterion is reduction of time input vis-a-vis cash input, $r = .38$, $p = .001$. While none of the descriptive variables plays an important part in this correlation, the educational level of the head of household seems to have a slight influence. The correlation coefficient drops to .32 when it is "partialled out."

The zero-order correlation of Category 1 with Category 6 (progressivism in medical beliefs and practices) is fairly low, $r=.25$, $p=.02$. Again, only the factor of the educational level of the head of household appears to influence the relationship, as its removal drops the correlation coefficient to .13. The zero-order correlation of Category 1 with Category 3 (economic and educational mobility) is less than .20. Eliminating the influence of the education variable reduces it further, to .07. The correlation between Category 1 and Category 2 (progressivism in farming) shows results that are entirely non-significant. Category 1 has a moderate correlation with the education variable, but not with the wealth variable. However, Item 1a (the purchase of clay from resellers) shows a rather high correlation with wealth, $r=.51$ (Appendix E). One may speculate that having wealth facilitates the purchase of materials from resellers. On the other hand, the time saved by purchasing materials locally, rather than fetching them, might permit the potter to engage in economic activities which augment his wealth.

Some important points emerge. Firstly, none of the intercategory correlations discussed reaches .5. Secondly, for Category 1, the highest correlations are with Categories 4 and 5, the highest being with Category 5 (progressivism in material possessions and desiderata). Thirdly, the educational level of the head of household appears to promote the intercategory correlations more than any other descriptive variable, although it falls far short of fully explaining any of the correlations.

Category 2: Progressivism in Farming

The criteria used for progressivism in farming are: (a) tractor rental for plowing, both for current use, and for earliest use by the household, (b) a positive attitude toward, or actual use of, chemical fertilizer, (c) the number of new crops tried, and (d) an interest in experimenting with tobacco growing. It is not claimed that resorting to these practices would increase the household's income, only that positive behaviors and attitudes with regard to these *potentially* beneficial practices would indicate an openness to experimentation characteristic of progressivism. As shown below, none of the criteria has any significant correlation with any of the others.

TABLE 19
Zero-Order Intercorrelations Of Criteria For Category 2

	(a)	(b)	(c)	(d)
(a)	---	.02	-.01	-.04
(b)	---	---	.03	-.08
(c)	---	---	---	-.06

Progressivism in farming, as defined here, has no substantial correlation with any of the other categories measured (see Appendix C). The highest correlation is between Category 2 and Category 4 (progressivism in community activities), $r=.24$, $p=.04$. This is wholly "explained", that is, reduced to zero, by removing the influence of the wealth variable.

It appears that progressivism in farming has a fairly strong relationship with the wealth variable, $r=.49$ (Appendix E). All of its components are wealth related, except Item 2d, which deals with experimentation with tobacco growing. It should be noted that Item 2d is based on attitudes and intentions only. No villager is presently growing tobacco. If experiments were actually begun, the rate of discouragement among the lower-income households might be greater than in the higher-income households. Wealth status is the most potent variable in the intercategory correlations of Category 2, as shown by the relevant partial correlations in Appendix C. However, cosmopolitanism also plays an important part in its relationship with Category 5 (progressivism in material possessions and desiderata). "Partialing out" this variable reduces the relatively low intercategory correlation from .17 to .06. Thus, progressivism in farming is found to have the lowest relationships with other categories of progressivism and is also found to be more influenced by wealth than by any other descriptive variable.

Category 3: Economic and Educational Mobility

This category is defined by the following criteria. (a) perception of as-yet unexploited economic opportunities in the village, (b) past, present, or intended exploitation of the village's most obvious possible

enterprise, pottery dealing, (c) number of enterprises conducted by the household in 1968, (d) new sources of household income in 1969-1970, (e) willingness to engage in a non-traditional type of work, namely, urban factory work, (f) high level of career desires for self in retrospect, (g) high level of career aspirations for children, (h) higher education of the household's children and (i) respondent's assessment of his advancement, or non-advancement beyond the economic status his father enjoyed at the same age.

TABLE 20
Zero-Order Intercorrelations Of Criteria For Category 3

	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
(a)	---	.07	.03	.02	-.09	.14	.06	.08	.07
(b)	---	---	.30 ^a	-.18 ^a	.28 ^a	.02	.07	.11	.30 ^a
(c)	---	---	---	-.04	.00	-.04	.12	.45 ^a	.27 ^a
(d)	---	---	---	---	-.11	-.13	-.15	.12	-.07
(e)	---	---	---	---	---	.17	.22	.07	-.09
(f)	---	---	---	---	---	---	.35 ^a	-.02	-.01
(g)	---	---	---	---	---	---	---	.47 ^a	.09
(h)	---	---	---	---	---	---	---	---	.15

^ap = < .05

There are several item intercorrelations which show probable relationships. The outstanding instances are:

1. The intercorrelations between Item 3g (aspirations for children's careers) and Item 3h (children's higher education), are logically related.
2. The intercorrelation between Item 3c (household enterprises in 1968) and Item 3h (children's higher education).³
3. Item 3f (respondent's career aspirations for himself) with Item 3g (career aspirations for the children).
4. Item 3b (attitudes and behavior with respect to pottery dealing opportunities) with Item 3c (household's enterprises in 1968). There is some potential overlap between the two items, because pottery dealing is considered an enterprise.
5. Item 3b (attitudes and behavior with respect to pottery dealing opportunities) with Item 3i (whether the respondent has surpassed his father's economic status at the same age). Here there is also some potential overlap, through the wealth afforded by pottery dealing.

Category 3 correlates economic and educational mobility correlates highest with Category 5 (progressivism in material possessions and desiderata), $r = .49$, $p = .001$ (Appendix C). The educational level of the head of household is a significant linking factor. Its removal reduces the zero-order correlation to .35. The education factor is also influential in the correlation between Category 3 and Category 6 (progressivism in medical beliefs and practices), $r = .34$, $p = .001$. Its removal reduces the zero-order correlation to .21. The wealth variable appears to be the more influential link in the correlation between Category 3 and Category 4 (progressivism in community activities). "Partialing out" this variable reduces the correlation from .31 to .20. However, the criteria for progressivism in community activities emphasize a preference for cash contribution over time contribution, and this implies some dependence of this category on wealth.

There is no potential interdependence between Category 3 and the educational level of the head of household. Nevertheless, the intercorrelation is significant, $r = .40$, $p = .001$ (Appendix E), whereas wealth is a factor of far less importance to the category, $r = .28$, $p = .008$. The variable for cosmopolitanism influences Category 3 to a small degree through the criterion of urban work. It appears to have a slight effect on the correlations between Category 3 and Categories 4, 5 and 6 (Appendix C).

Category 4: Progressivism in Community Activities

The criteria for progressivism in community activities are: (a) compliance with assessments for material community improvements, namely, (i) the potable water system, (ii) school construction, and (iii) the public electric system, (b) avoidance of time-consuming civil office, (c) avoidance of traditional religious *cargos*, especially those involving fiestas, and (d) preference for cash-over-time inputs, that is, hiring substitutes for communal labor

assignments. Reduction of time inputs in community activities allows for a greater time investment in income-producing household activities. Avoidance of traditional religious fiestas indicates a desire to eliminate a type of cash input that yields no material benefit, whereas cash inputs in tangible community improvements benefit the community as a whole and, potentially, its component households. The intercorrelations of the component items show moderately negative to moderately positive relationships.

TABLE 21
Zero-Order Intercorrelations Of Criteria For Category 4

	(a[i])	(a[ii])	(a[iii])	(b)	(c)	(d)
(a[i])	--	.33 ^a	.23 ^a	-.15	-.20 ^a	.12
(a[ii])	--	--	.10	.13	.17	.16
(a[iii])	--	--	--	.06	-.08	.11
(b)	--	--	--	--	.08	.11
(c)	--	--	--	--	0	-.04

^ap = < .05

Only those intercorrelations among the payment-of-assessment items are especially significant. That between compliance with the water assessment and assessment for school construction intercorrelates at the .33 level (P=.001). Compliance with the assessment for school construction and with monthly charges for public street lighting intercorrelate at the .23 level (p=.02).

Category 4 has moderately high correlations with Category 5 (progressivism in material possessions and desiderata), r=.46, p=.001. It also correlates with Category 1 (progressivism in pottery production and sale), r=.38, p=.001, and with Category 6 (progressivism in medical beliefs and practices), r=.36, p=.001. In the first and third instances, partial correlations show that wealth is a factor of some influence. In the second, both wealth and education have a slight effect (Appendix C).

Category 4 correlates highly with wealth, r=.52, p=.001 (Appendix E). This is to be expected, as cash-over-time inputs require a degree of wealth. A particularly high correlation is observed between wealth and compliance with the household's assessment for construction of the new school, r=.58, p=.001. Avoidance of higher civil office has a moderate correlation with wealth, r=.33, p=.02 (Appendix E). Thus wealth, or the pursuit of it, appears to have some bearing on attitudes of avoidance. Avoidance of religious office, on the other hand, has a much lower correlation with wealth, r=.18, p=.06. Although still positive and well above zero, it is just beyond the established level of significance. In other words, wealthier respondents are more anxious to avoid the higher civil *cargos* than the religious *cargos*. The two types of *cargo* avoidance are also differentially related to progressivism in the occupational categories, as shown below.

TABLE 22
Intercorrelation Between Avoidance Of Civil and Religious Office
and Progressivism in the Occupational Categories

	Avoidance of higher civil <i>cargos</i>	Avoidance of religious <i>cargos</i>
Category 1, progressivism in pottery production and sale.....	.44 ^a	.02
Category 2, progressivism in farming.....	-.07	.38 ^a

^ap = < .05

The more progressive potters claim to avoid the more time-consuming civil *cargos* to a greater degree, whereas progressive farmers, who may also be potters, claim to avoid religious *cargos* to a greater degree. One might speculate, in the first instance, that maximization of production time is of primary importance, and in the second instance, that conservation of wealth for investment in farming improvements would be at issue in avoiding the expenditures of the religious *cargo* system. Other criteria of progressivism requiring cash inputs correlate at moderate levels with avoidance of religious *cargos*, e.g., the higher education of the household's children, in Category 3, and at a lower level with the number of "modern" possessions acquired by the household, in Category 5 (see Table 23).

TABLE 23
Intercorrelations Between Avoidance Of Civil and Religious Office and
(1) Higher Education of the Household's Children,
(2) Number of "Modern" Possessions Acquired

	Avoidance of higher civil <i>cargos</i>	Avoidance of religious <i>cargos</i> _
Higher education of the household's children...	.12	.29 ^a
Number of "modern" possessions acquired...	.01	.23 ^a

^ap = < .05

It appears that motivation to avoid higher civil office is not the same as that for avoidance of religious service. This is also indicated by the very low inter-correlation of these items, $r = .08$.

The hiring of substitutes for communal labor is included in Category 4. This is a measure of a preference for cash-input over time-input, or low cash input for higher return on the time saved. It is somewhat dependent on wealth for payment of labor, but the correlation is a very modest one: $r = .21$, $p = .05$. In fact, a head of household ranking 62nd out of 78 in wealth in the sample commented that he knew it was more profitable to pay a substitute to perform his *tequio* and devote his time to pottery making, and he acted accordingly.

TABLE 24
Intercorrelations Between Category 1 and Category 4
(Between Two Time-Maximizing Components of Category 1,
and Two Time-Maximizing Components of Category 4)

	Cash-over-time preference in communal labor	Avoidance of higher civil <i>cargos</i>
Buying clay, rather than fetching it oneself	.35 ^a	.33 ^a
Positive attitude and/or behavior concerning use of the kick wheel	.34 ^a	.37 ^a

^ap = < .05

Category 5: Progressivism in Material Possessions and Desiderata

The criteria used to define this category, progressivism in the material aspects of the culture, are: (a) non-traditional dress of the head of household, (b) possession or previous possession of various modern goods, namely, radio, mattress bed, kerosene stove, bicycle, and sewing machine, (c) early acquisition of a radio, (d) desire for electricity, 1968, (e) installation of electricity in the home after it became available in 1969, and the purchase or intended purchase of electrical appliances, (f) having or desiring cement flooring, and (g) the proportion of non-traditional wants to total wants of the head of household. The intercorrelations of these category components are given below.

TABLE 25
Zero-Order Intercorrelations Of Criteria for Category 5

	(a)	(b)	(c)	(d)	(e)	(f)	(g)
(a)	--	.04	.08	.17	.16	-.09	.19 ^a
(b)	--	--	.75 ^a	.38 ^a	.38 ^a	.39 ^a	.10
(c)	--	--	--	.22 ^a	.30 ^a	.41 ^a	-.02
(d)	--	--	--	--	.30 ^a	.30 ^a	.30 ^a
(e)	--	--	--	--	--	.34 ^a	.12
(f)	--	--	--	--	--	--	.13

^ap=.05

The only high correlation shown is between the number of non-traditional possessions of the household and early acquisition of radios, $r=.75$, $p=.001$, probably due to the fact that the radio is one of the items included in "possessions". The early purchase of radios also correlates at a fairly high level with having or desiring cement flooring, $r=.41$, $p=.001$. Conceptually, these items are quite independent. The number of non-traditional possessions in the household correlates at moderate levels with desiring electricity, $r=.38$, $p=.001$. It also correlates with having electricity in the home, $r=.38$, $p=.001$, and with having or desiring cement flooring, $r=.39$, $p=.001$. While items (f) cement flooring and (b) "modern" possessions correlate moderately with the wealth status of the head of household, Category 5 as a whole shows a high correlation with the education variable (Appendix E).

Most of the items in Category 5 show either low positive or negative correlations with age level. A negative correlation between non-traditional dress and age level ($r=-.63$, $p=.001$) confirms the earlier evidence for the conservatism of older people in this respect. Education also correlates at a fairly high level with non-traditional dress, $r=.45$, $p=.001$. Education also appears to have a moderately strong relationship with the desire for electricity and, to a lesser degree, with the number of non-traditional possessions. Wealth shows a moderate correlation with the possession or desire for cement flooring. It also appears to have some bearing on the installation of electricity. Cosmopolitanism is of some significance in the early acquisition of radios, and it also shows a moderate relationship with the desire for electricity. While the correlations suggest that the influences of education, and to a lesser extent cosmopolitanism, are greater than the influence of wealth in the desire for electricity, the first two correlations diminish, and the correlation with wealth increases when it is a question of actual installation with attendant expenses. Also, while the correlation of wealth to non-traditional wants is low, it rises considerably when correlated with ownership of non-traditional possessions.

There are three substantial and significant correlations between Category 5 and the other categories (Appendix C): with Category 1 (progressivism in pottery production and sale), the correlation is $r=.47$, $p=.001$; with Category 3 (economic and educational mobility), $r=.49$, $p=.001$, and with Category 4 (progressivism in community activities), $r=.46$, $p=.001$. Partial correlations show that in the first two instances education is a linking factor, although not a very strong one. In the third, wealth is a stronger link than education. However, in the weaker correlation between Category 5 and Category 2 (progressivism in farming), both wealth and

cosmopolitanism appear as very strong common factors, while education has a slight inverse effect. In the moderate correlation between Category 5 and Category 6 (progressivism in medical beliefs and practices), education is shown to be a strong linking factor.

TABLE 26
Correlations of Criteria for Category 5
With Age, Education, Cosmopolitanism, and Wealth

	Age	Education	Cosmopolitanism	Wealth
Non-traditional dress	-.63 ^a	.45 ^a	.18	-.20 ^a
Non-traditional possessions	.09	.35 ^a	.20 ^a	.31 ^a
Early acquisition of radio	.17	.25 ^a	.36 ^a	.21 ^a
Desire for electricity	-.22 ^a	.43 ^a	.28 ^a	.17
Installation of electricity	-.17	.29 ^a	.04	.24 ^a
Having or desiring cement flooring	-.15	.16	.21 ^a	.34 ^a
Non-traditional wants	-.13	.31 ^a	.06	.07

^ap = < .05

In summary, education as well as age is shown to be closely related to the wearing of non-traditional dress. However, since young people are consistently better educated than their elders, these are not independent variables. Education is a strong factor in the desire for electricity, for non-traditional wants, and for ownership of non-traditional possessions. While the relationship of wealth to non-traditional wants is almost nil, wealth is only a little less important than education for ownership of non-traditional possessions. Also, while education has a rather strong relationship to the desire for electricity, when actual installation is considered this strength declines, and that of wealth rises. Thus, education is significant in the desire for modernization, but wealth is important in its realization.

Cosmopolitanism has an important relationship to the early acquisition of radios and appears to be of some influence in the desire for electricity, although here it is of lesser importance than education. Progressivism in Category 5 has fairly high correlations with progressivism in the ceramics industry (Category 1), with economic and educational mobility (Category 3), and with progressive behavior in community activities (Category 4). Category 5 has substantially higher correlations with these categories than they have with each other. None of the descriptive variables reduces the correlations significantly when "partialled out," although education is a factor of some importance in the first two. However, education does account almost entirely for the moderate correlation between Category 5 and Category 6 (progressivism in medical beliefs and practices), and although the correlation

is fairly low, wealth is a very strong common factor in the correlation between Category 5 and Category 2 (progressivism in farming).

Category 6: Progressivism in Medical Beliefs and Practices

This category is defined by four items: (a) whether the respondent consults doctors and for how long he has done so, (b) whether the respondent has some awareness of the germ theory of disease communication, (c) whether he believes in fright sickness, and (d) whether the household consults *curanderos*. Following are the intercorrelations of these criteria.

TABLE 27
Zero-Order Intercorrelations Of Criteria for Category 6

	(a)	(b)	(c)	(d)
(a)	--	.23 ^a	.19	.09
(b)	--	--	.20	.20 ^a
(c)	--	--	--	.41 ^a

^ap = < .05

As discussed in Chapter VII, faith in modern medicine does not preclude faith in traditional curers. The zero-order correlation between use of doctors and non-use of *curanderos* is of a low order, $r = .09$. Belief in fright sickness and the use of *curanderos* who specialize in its cure have a fairly high intercorrelation, $r = .41$, $p = .001$. The correlation does not approach unity since one may believe that *susto* generates specific symptoms but may never have experienced them. Also, *curanderos* are sometimes used to cure other ailments. The use of medical doctors correlates at a moderately low level with the understanding of disease transmission by microorganisms: $r = .23$, $p = .02$. There are many villagers who have faith in medical doctors as a result of favorable outcomes without understanding the principles governing their work. Category 6, as a whole, is fairly strongly related to the education of the head of household: $r = .41$, $p = .001$ (Appendix E).

With regard to the correlations between Category 6 and other categories, it may be seen from Appendix C that progressivism in medical beliefs and practices correlates significantly with progressivism in community activities (Category 4), $r = .36$, $p = .001$. It also correlates with economic and educational mobility (Category 3), $r = .34$, $p = .001$; at a somewhat lower level with progressivism in material possessions and desiderata (Category 5), $r = .29$, $p = .006$, and with progressivism in the ceramics industry (Category 1), $r = .25$, $p = .02$. Progressivism in farming (Category 2) has virtually a nil correlation with Category 6.

Partial correlations with Category 4 (progressivism in community activities) show that the wealth variable has the greatest influence, although still minor, since its removal reduces the correlation from .36 to .27. However, in the case of Category 5 (progressivism in material possessions and desiderata), the educational level of the head of household is the overwhelming consideration. The removal of this variable by "partialing out" reduces the correlation from .29 to .07. In the relationship between Category 6 and Category 1 (progressivism in pottery production and sale), removal of the influence of the education variable reduces the correlation by almost half, from .25 to .13. In the relationship with Category 3 (economic and educational mobility), the influence of the education factor is again shown to be significant. Its removal reduces the correlation from .34 to .21. In the latter three correlations, the influence of the other descriptive variables appears to be negligible.

Only in the correlation between Category 6 and Category 5 is the relationship shown to be almost entirely "explained" by the partialing out of any of the variables, in this case education. In the other intercategory correlations in this set, there is a considerable unexplained residue.

Thus, progressivism in medical beliefs and practices appears to be influenced to a considerable degree by education. This conclusion is reinforced by the zero-order correlations between each of the components of the category and the four descriptive variables.

TABLE 28
Correlations of Criteria for Category 6
With Age, Education, Cosmopolitanism, and Wealth

	Age	Education	Cosmopolitanism	Wealth
Early use of doctors	-.03	.26 ^a	.29 ^a	.18
Understanding of micro-organismic cause of disease	-.01	.30 ^a	.25 ^a	-.01
Disbelief in fright sickness	.11	.30 ^a	.00	.21 ^a
Non-use of <i>curanderos</i>	-.03	.23 ^a	.00	.23 ^a

^ap = < .05

The zero-order correlations between the four components of Category 6 and the education variable are moderate and significant. Early use of doctors and understanding of micro-organismic causes of disease are also moderately related to the cosmopolitanism variable. This area of behavior shows the inconsistencies of a transitional situation, the combining of modern and traditional practices and beliefs in the same household. Yet there is a moderate consistency in the relationships between progressivism in medical beliefs and practices and progressivism in the other categories considered, with the exception of farming. It is probable, from the statistical evidence, that education has played a part in the promotion of non-traditional beliefs and practices and in the discontinuance of the traditional ones.

Notes to Chapter 8

1. The Pearson Product-Moment Correlation is used. Blommers and Lindquist (1960:403-404) emphasize that the classification of r-values as "high", "medium" and "low" must take into account the types of variables compared. "Coefficients of correlation as high as .5 between measures of a physical and a mental trait are *extremely rare*, and a correlation of .6 between two such traits would be considered *phenomenal*. On the other hand, correlations of this magnitude between reliable measures of two mental traits are quite common, and hence would be considered as only 'medium' for most groups in which we are interested."
2. Convention dictates that the level of significance, p (the probability that the correlation is due to chance), may have three cut-off points: (1) .05, usually considered the highest acceptable; (2) .01; and (3) .001, considered highly indicative of a non-chance relationship between the variables. *An a priori* decision was made to consider significant results where p is equal to or less than .05.
3. Both of these items correlate at less than .30 with the wealth variable (Item 3c at the .23 level, and Item 3h at the .27 level); therefore, it appears that the relationship is only mildly wealth linked. Another possible explanation for the statistical relationship is that both items represent the action level of progressivism, rather than simply

aspiration or intent: high scores in these items indicate that sacrifices have been made, and risks taken, in order to advance.

CHAPTER IX

REVIEW AND CONCLUSIONS

It is possible to make some generalizations concerning the nature of change in Atzompa and the factors which have affected the tempo of change. It is also possible to draw some inferences from the statistical data concerning consistencies in progressivism in the aspects of village life that were considered, and the influences that contribute to those consistencies.

REVIEW OF THE HISTORICAL AND OBSERVATIONAL DATA

We do not know at this time when the archaeological site of Atzompa was settled, but we do know that it has been geographically close to the center of the cultural cross-currents which penetrated the Valley. The present Atzompa settlement can be traced at least to the early 1500's. The introduction of the plow, draft animals, and new crops at the time of Spanish contact wrought a considerable change in the way of life in the Valley of Oaxaca (Taylor 1972:3-5), as it did throughout Latin America. However, changes that are probably as far-reaching have occurred within the last three decades with the opening of the region to nationwide commerce through the Pan American Highway and subsidiary roads. In Atzompa life ways have changed, not as rapidly or extensively as in those villages that lie along the Highway, but apparently more rapidly than in the more remote areas.

To a casual observer the continuities are more evident than the changes. Indeed, many households carry on their daily activities in much the same ways their ancestors did, especially in the pottery-making industry. The changes are less obvious, but important. Since 1965 a bus has made the round trip from Oaxaca City six times a day, hourly on Saturdays, over a road built by communal labor. It is no longer necessary to ford the river on foot or to transport pottery on burro back. More pottery is produced than in the previous generation. It is transported to market by public bus, and by trucks that are owned exclusively by villagers. About half passes directly into the hands of the growing numbers of dealers in village and city. Even some sold by the potters in the city *plaza* passes through intermediaries. Much Atzompa ware is shipped out of the region, some of it out of the country. Traditional utilitarian forms are still much in demand, and the expanding tourist market has encouraged increased production of the decorative ware. Although few Atzomperos support their households by pottery production alone, the expanded market for pottery, and the proliferation of forms in high demand, have brought greater prosperity to the village.

With the growth of commerce in the region, economic structure has widened and opportunity grown. There is increasing awareness of possibilities for personal advancement, and aspirations for children exceed what the fathers, in retrospect, would have wished for themselves. Perhaps the greatest impetus to this view of enlarged opportunity was the success in the 1940's of the first five village-born schoolteachers. Increasingly villagers become storekeepers, truckers, pottery dealers and urban workers, and growing numbers of village youngsters are training for white-collar and professional careers. Some villagers have invested their gains from one occupation in the establishment of still others, and in the higher education of their children.¹ Those who have accumulated gains in this way have widened the gap between the poorest and wealthiest village households, contributing to economic heterogeneity. The incipient economic "upper class" tends to avoid traditional fiestas and to withdraw from fellow villagers who might importune them for loans or godparent services. However, there is no lack of "room at the top," and as Atzompa becomes increasingly a suburb of the expanding city, educated and economically successful villagers are less likely to emigrate.

Both modern transport and increased prosperity have made it possible for Atzomperos to acquire a modest quantity of industrial consumer goods. Acquisition of such goods often leads to emulation by others, not only because of the utility of the item, but also because of its prestige value. The diffusion of the transistor radio was rapid, and it substantially affected the villagers' knowledge of the nation and the world. Farm technology has diffused to Atzompa, principally through the more acculturated villages along the Highway. Such equipment items

as irrigation pumps and plowing tractors are hired by some Atzompa farmers from individuals in those villages, especially San Lorenzo Cacaotepec. Ideas and equipment are also introduced by emigrants from the village who return to visit frequently, and through students attending schools in the city.

In some instances where perceived innovations or opportunities are rejected, there may be cogent reasons for holding back, as in the case of planting tobacco. In other instances, the reasons given for rejecting an opportunity are rationalizations. In the case of the Ejido Bank loan offer, fear of becoming indebted to impersonal, compassionless officials was an important factor. Too, there are some villagers who have skills, ambitions and access to resources, but seem insufficiently motivated to pursue their goals. Typical are the cases of EM, who has a number of skills and access to capital through his brothers, and the amateur musician who rejected a fellow villager's offer to sponsor him in the career he most aspires to (page 68).

Entrepreneurial possibilities are not recognized by everyone, and thus far only a minority of the villagers have exploited them. Some possibilities were mentioned in reply to the question, "Can you think of other businesses that could be established here in the village...?" (Appendix A). They were a restaurant, a refreshment stand to sell fruit juices, a tortilla factory (the most generally recognized village need), public baths, a carpentry shop and a forge. Since emulation of successful enterprises is common, those with capital tend to invest in services that already exist.² Nevertheless, not only is the number of economic alternatives constantly expanding due to the growth of commerce in the region and the increase of available capital in the village, but also the awareness of alternatives is growing. Within the ceramics industry the various sales outlets offer a wide range of opportunities calling for decisions among alternatives. In addition to sales by the potters themselves in the city *plaza*, these include village dealers, Oaxaca City dealers, extra-regional dealers, and city shops - both *casetas* and tourist shops. As has been pointed out with respect to the Ibo of Nigeria (Ottenberg 1959:139), the experience of making choices among alternatives facilitates the acceptance of new ways.

The adaptation of traditional services to modern needs is another demonstration of flexibility. The system of community services or *cargos*, once utilized exclusively for prestige-motivated, interwoven civil and religious assignments, has been adapted to the new view of village needs. These include school construction and maintenance, construction of public buildings and roads, and the establishment and maintenance of the new utilities.³ Religious service is still very much a part of village life, but the system of *cargos* is undergoing a gradual shift in emphasis from traditional to modern uses. This suggests that community solidarity and interaction may not decline with the falling off of the *mayordomías* and *cofradías*. Sentiments of community obligation and communal pride have not diminished, but the kinds of things considered worth doing have changed.

Change in the village is not entirely autonomous. The federal and state governments have provided encouragement and financial assistance in the establishment of water systems and electrical facilities. This is an important contribution to developmental change, and to the view of innovations as potentially advantageous. There is a hard core of "conservatives", comprising somewhat less than 25% of the population, who resist paying their household assessments for improvements. But the "progressives" that is, those who desire the innovations and are willing to pay for them, control the village council. Not only was the water system accepted in 1967, but the council insisted that a wider area of the village be served than that proposed by the Department of Health. When the well ran dry and the Department refused to excavate another, the council members themselves undertook to dig a well in terrain with a higher water table. The Department of Health finally agreed to provide equipment and engineering assistance, but only after the work was under way. The initial thrust had an external source, but it generated a momentum that appears to be ongoing.

Less than a year after the establishment of electric service, more than half of the households in the sample, and impressionistically more than half of all village households, had electrified their homes. The service was regarded with some pride. There is some prestige-motivated emulation in community improvements. For example, MG reported that when the proposal for construction of a new school was under consideration, the village council asked his opinion. His reply was that Atzompa should consider building a better elementary school because this is the trend in the region.

Some "progressives" complain bitterly that there are villagers who refuse to cooperate in projects. They point to the more acculturated communities of San Lorenzo Cacaotepec and San Jacinto Amilpas, where the progressive spirit is said to be more pervasive and cooperation much greater than in Atzompa. The lack of cooperation looms large to a farmer who cannot gain access to an irrigation ditch because the neighboring landholder

refuses to participate in a ditch-irrigation system. But in fact, cooperation and teamwork are not uncommon, even for irrigation (see page 53). It is possible that the half-shares system, used for sharecropping, animal raising, clay procurement and pottery firing may have helped pave the way for the partnerships and cooperatives which have been formed in recent decades to aggregate capital for land purchase, acquisition of trucks, and establishment of maize mills. The general willingness to cooperate is emphasized by the replies to the questionnaire item concerning attitudes toward participation in a glaze mill cooperative (page 81).

Indeed, cooperative activity does not require universal good will, but rather a confidence that one's rights will be protected. If it has not always been successful in Atzompa, the difficulty may lie in ignorance of procedures and lack of safeguards. The failure of one maize mill cooperative, and near-failure of the other, were due largely to ignorance of the legal and financial concomitants of cooperative or corporate activity. The treasurer probably would not have been suspected of pocketing funds illicitly if he had had to render frequent financial reports. The problems of machine failure could have been minimized if contingency funds had been set aside for repair and replacement of equipment. Also, at least one of the cooperatives exceeded the optimum number of shareholders that could profit from a single mill.⁴

In the past few decades there have been attempts at group cooperation, as well as partnerships in economic undertakings, but the major cooperative efforts essentially failed. The community is dominated by forces favoring modern improvements, but there is resistance to paying for the improvements. There exists a well-defined trend towards upward mobility through entrepreneurial activities and higher education, but thus far it has involved only a minority of the villagers. In sum, Atzompa is a transitional community, neither categorically conservative nor categorically progressive, as those terms were defined earlier. It is, however, demonstrably moving toward the adoption of new attitudes and behaviors at an accelerating pace.

Differential adoption of new attitudes and behaviors among individuals, and within the same individual, seems to be influenced in the main by the following considerations.

1. the household members' exposure to particular goods or procedures through education, intravillage contacts, mass media, demonstrations, or other sources of information
2. whether financial and manpower resources are available for adoption of the innovation
3. whether control of required skills is available through instruction or observation
4. the view of the relative efficacy of the traditional alternative
5. whether manpower resources are available for the traditional alternative, e.g., if there are many free man-hours as well as an ox team in the household, there is little profit in hiring a tractor for plowing
6. the view of pay-offs or benefits expected from adoption of the innovation
7. the view of risks
8. prestige considerations.

In a society where change is not directed by external forces, exposure is the *sine qua non* of innovation. The importance of the intensity of exposure is demonstrated in Atzompa by the pattern of diffusion of kick wheels through the families and friends of wheel users.

The individual's view of the pay-offs of a particular course of action is an important secondary consideration. A sanguine view of pay-offs can motivate a potential innovator to take considerable risk, and to make financial sacrifices. This is especially true of investments in higher education for children. For example, JF ranks fairly low in wealth status, and his educational level is average (Appendix D), but in 1969 his elder son was in secondary school in Oaxaca. JF's closest neighbor and *compadre* is the Atzompa school director, a man who is preparing his own children for white-collar and professional careers. JF and his son cannot help but observe the high financial and prestige pay-offs that resulted from the sacrifices that the school director's parents made for his higher education, and by the career goals of the children next door.

The example of the school director's household also contributed to the decision of PF, his cousin, to give her daughters a secondary education. The example of the Atzompa-born schoolteachers undoubtedly influenced all of those parents in the sample who named schoolteaching as a career desideratum for their children (page 67). Emulation of those who have achieved success through higher education does not necessarily have concomitants in other types of innovation. Education does not necessarily lead to innovations in farming, since agricultural techniques are not studied. However, it may promote a general conceptual acceptance of non-traditional behaviors. For instance, VL, a full-time farmer who almost completed secondary school, does not hire tractors for plowing

or use chemical fertilizer, but he has a fairly positive attitude toward the benefits of chemical fertilizer and is likely to adopt it sooner than would a farmer with less education, other things being equal. But SR, a full-time farmer with *no* education, is already using chemical fertilizer. He has a very high wealth status, and a household of only three to support, in contrast to VL's household of nine. Thus, SR can better afford to experiment. VL might have experimented had he given priority to agricultural improvement, since his wealth status is fairly high. However, he has given priority to the education of his children. SR's exceptional financial capability resulted in more tangible results in farming innovation than did VL's secondary-school conditioning. In fact, VL's education *retarded* his adoption of chemical fertilizer. It provided no motivation for agricultural improvement, but did provide a strong motivation for educating his children, and one child is within two years of obtaining the baccalaureate degree.

It should be remembered that acquiring higher education, and attaining professional or white-collar careers confer high prestige, whereas other types of innovative behavior are less prestigious. Storekeepers and other entrepreneurs command respect locally, but certainly not the degree of respect implied by the title "*Maestro*" ("Teacher"). The prestige factor may explain the preference for higher education over other types of innovation where economic pay-offs may be as high. In fact, the wealth status of GL, the schoolteacher in the sample, is not very different from that of OV, the artisan with highest pottery income, who also owns an *almud* of land. A schoolteacher's wage income, about \$18,000 a year including Christmas bonus, is lower than the income from the eight hectares of land that SR and MG each holds.⁵ Thus, the intensities and interaction of the various factors listed above contribute to determining priorities in a particular household.

REVIEW OF THE STATISTICAL DATA

It was hypothesized in Chapter I that, in a given society, the rate of change is different for the various aspects of village life within the community, and even within a single household or individual. This study examined change in various aspects or categories of life in Atzompa, in order to discover the consistencies and inconsistencies in attitudes and behaviors and the effects of several variables on those consistencies and inconsistencies. Empirical observations were followed by statistical analysis.

The statistical treatment of the data had the following limitations.

1. The sample used was a stratified random sample (Sellitz *et al.* 1964:526 ff.), stratified to include sufficient numbers in each of the principal occupations to permit generalizations about the conduct of those occupations for the purpose of the Oaxaca market study.
2. The items employed as criteria were selected by the writer as the most relevant and unequivocal criteria available, but other writers might have selected other items. Item scale analysis showed the items used to be, generally, related to their respective categories at significant levels.
3. The numbers of items for the different categories are unequal, since there are more sub-areas to be explored in some categories than in others.
4. The number of response divisions for the various items is also unequal, ranging from 2 to 6. This results from the nature of the questions. For example, where the year of a given change was ascertained, the scoring could be finely graduated, whereas a yes-no type of answer yielded only a bipartite possibility for scoring. The assignment of numerical intervals in the scoring was arbitrary in some cases, in accordance with the "equal-appearing intervals" method of differential scaling (Sellitz *et al.* 1964:359 ff.).
5. Not all respondents are included in all of the categories. For example, the full-time farmers are not included in the category dealing with the ceramics industry.
6. The questionnaire items included measurements of attitudes as well as overt behavior.

With these limitations, we proceed to analyze the relationships of the selected aspects or categories of Atzompa life: pottery production and sale, farming, economic and educational mobility, community activities, material possessions and desiderata, and medical beliefs and practices.

1. Zero-order correlations among the categories ranged from .03 to .49. Thus, the categories correlate with each other in the low and moderate ranges (see Notes to Chapter 8). In general, the lowest intercategory

correlations involve progressivism in farming, whereas the category with the highest correlations is that of progressivism in material possessions and desiderata.

2. The next step of the analysis involved examining, by the method of partial correlation, the influences of selected variables pertaining to the heads of households, namely, age, education, cosmopolitanism, and wealth. The more important descriptive variables in the intercategory relationships proved to be (a) the household's wealth, especially in correlations involving progressivism in farming and progressivism in community activities; and (b) the education of the head of household. The latter appears as an important common factor in inter-relationships among the categories dealing with economic and educational mobility, material possessions and desiderata, medical beliefs and practices, and to a lesser extent, pottery production and sale. The zero-order correlation between wealth and education is $-.05$; hence these variables are entirely independent in this sample. The education of the head of household has little to do with his wealth, but his wealth does influence the higher education of his children, although less so than his own educational level (see page 112).

a. The greatest influence of the wealth factor is reflected in the relationship between the categories of progressivism in farming and progressivism in community activities. The fairly low correlation of $.24$ is reduced to $-.03$ by removing the influence of wealth, indicating that wealth "explains" the relationship entirely. The cash-over-time input preference, used as a criterion for progressivism in community activities, accounts for the importance of wealth in that category. The wealthier household has the resources, if not the willingness, to pay its assessments for community utilities and projects, and it is in a position to pay substitutes for communal labor. In farming, the use of tractors and commercial fertilizer requires substantial cash inputs. Even experimentation with new crops appears to be wealth-related (Appendix E).

b. The influence of the educational level of the head of household's is somewhat more complex. The education variable is found to correlate with four of the six categories at levels higher than $.30$ (Appendix E). The higher correlations are with Category 5, concerning material possessions and desiderata, and Category 6, concerning medical beliefs and practices ($r = .58$, $r = .41$, respectively). In the intercorrelation of the two latter categories, "partialing out" the influence of education effects a substantial reduction in the correlation, from $.29$ to $.07$. Logically, education provides exposure to modern industrial equipment and modern medical theory. In addition, it may provide skills as well as motivation and introduce prestige considerations.

Within category 5, progressivism in material possessions and desiderata, we have seen that the education of the head of household is a factor of far more influence than wealth in non-traditional wants and the desire for electricity. However, the influence of wealth rises considerably when possessions and actual installation of electricity are considered. "Wanting" and "having" are not dichotomous components of change, and wealth is not the only factor that contributes to "having." A person with much ambition and determination may reach a particular goal sooner than one with greater financial resources but less ambition and determination.

Category 3, economic and educational mobility, correlates with the education variable at the $.40$ level. The education of the head of household appears to influence both the educational mobility of his children and his aspirations for their careers (Appendix E).

Category 1, progressivism in pottery production and sale, has a lower correlation with the education variable, $r = .33$, and this can be seen in examining the factors influencing the use of the kick wheel ($r = .25$, $p = .02$). It certainly is not exposure to education since one does not learn about kick wheels at school. Nor is it the prestige factor since regular wheel users have low economic status. It is probably motivation, either motivation to acquire modern paraphernalia or motivation to experiment, possibly both. This surmise is supported by the fact that in the intercategory correlation between Categories 1 and 5, the kick wheel item shows a closer relationship with "non-traditional possessions" than with any other item of Category 5: $r = .36$, $p = .001$.

c. Cosmopolitanism is another variable which has some effect on the relationships among the categories, but this influence is quite limited.⁶ Cosmopolitanism exerts a good deal of influence on the correlation between Category 2, progressivism in farming and Category 5, progressivism in material possessions and desiderata. In the latter category it especially influenced the early acquisition of radios (Table 26).

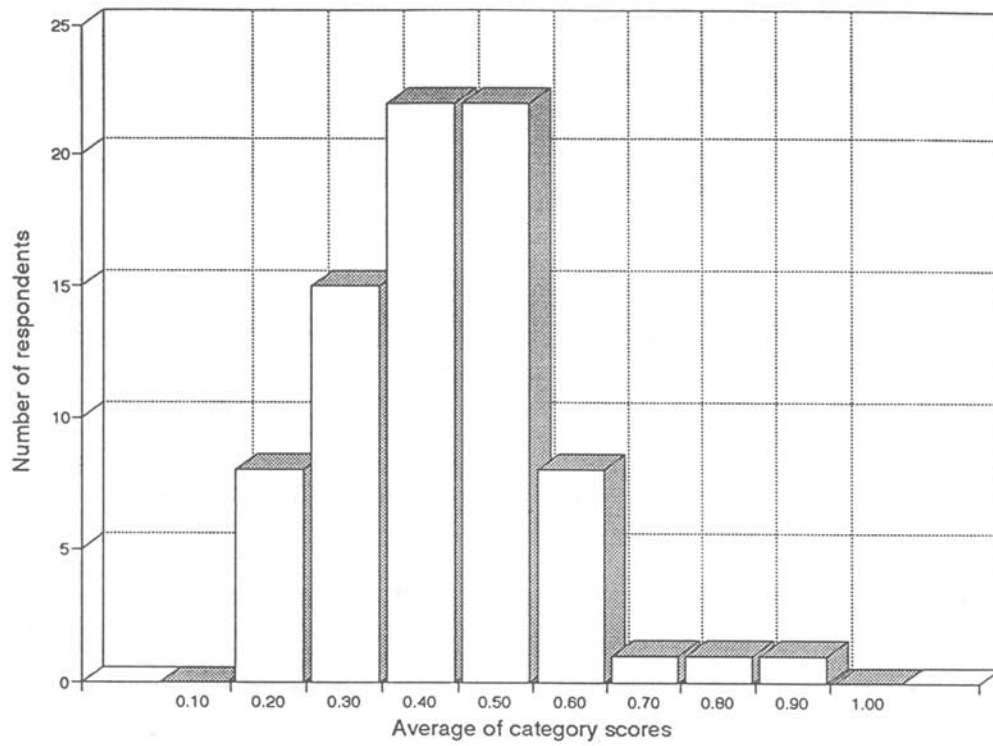


Figure 5. Averaged Category Scores of 78 Heads of Households, Categories 1 through 6.

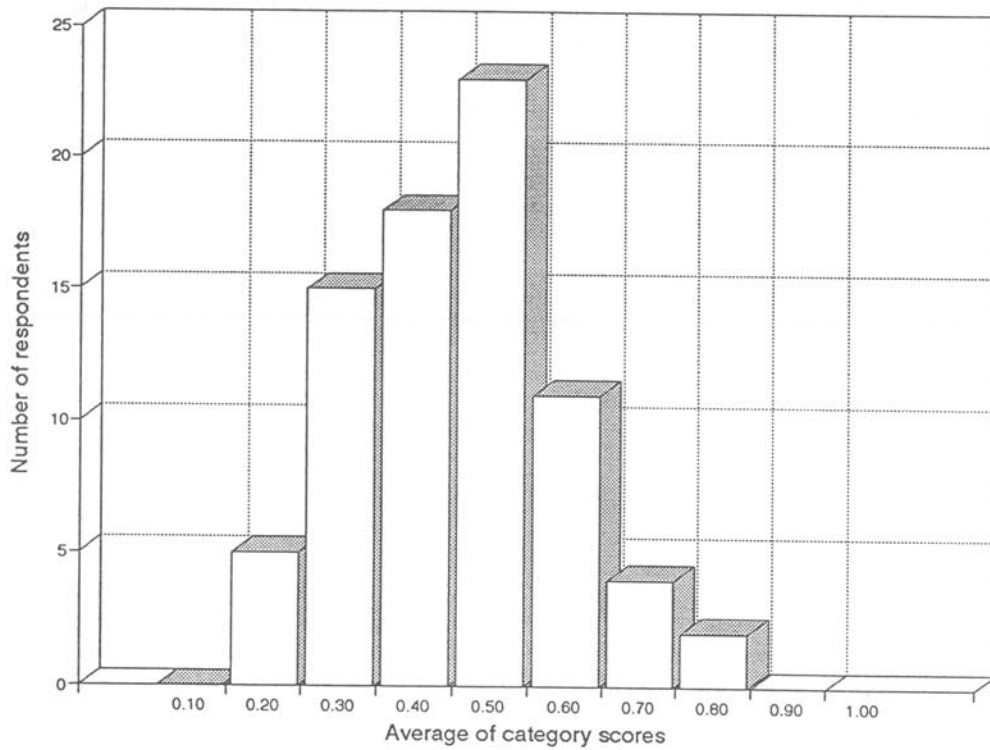


Figure 6. Averaged Category Scores of 78 Heads of Households, Categories 3 through 6.

d. Age appears to have little effect on the relationships among the categories. In one respect age abets innovation, through its moderate correlation with wealth, $r=.39$, $p=.001$. However, it has small inverse effects on some of the intercategory correlations (Appendix C), indicating that younger rather than older people are slightly more progressive in those areas. Age is a highly important factor in non-adoption of modern dress. In part, the correlation between age and traditional dress, and conversely, between youth and modern dress, results from the fact that in the years since the 1940's, traditional dress has not been always considered an alternative for young men.

3. In several instances, the replies to items in the questionnaire revealed the phenomenon of compartmentalization, that is, diverse behaviors by the same person in different situations. Some men alternate between traditional and modern dress. Villagers who consult doctors may also consult traditional curers in some circumstances.

4. Within categories, new alternatives with potentially higher pay-offs are not adopted uniformly by the same person. A potter may buy clay in the village rather than fetch it, yet may elect to spend his Saturdays selling his ware in the Oaxaca *plaza* to eke out a few more pesos than he would receive from a dealer. This is indicated by the low intracategory correlations for Category 1 (Table 18). The farmer who uses a tractor to clear his land does not necessarily try new crops or consider using chemical fertilizer (Table 19).⁷ One who buys a sewing machine does not necessarily buy a mattress bed (Table 14), although there are stronger interrelationships among items within the category of progressivism in material possessions and desiderata than there are in other categories.

5. Few villagers are thoroughgoing conservatives or thoroughgoing progressives, as these terms are defined by the questionnaire scoring. There are two heads of households in the sample whose averaged category scores are as low as .11 and .12, and two whose scores are in the .70's and .80's. However, neither .00 nor 1.00 is represented, and the majority of individuals in the sample fall between .30 and .50 (see Figure 1 and Appendix D). If the occupational categories, 1 and 2, are omitted, so that all respondents can be compared for the same categories (Figure 6), there is a minor shift from the lower end of the scale toward the higher ranges, .40 and above. This indicates a somewhat higher degree of conservatism in the occupational categories than in the other categories.

6. Comparisons of averaged category scores among the various occupational groups are also of some interest. They are summarized in Table 29.

In the group that has income only from pottery, both average educational level and average wealth of the head of household are low, 3 (in a range of 0-10) and 4.3 (in a range of 1.24-44.60), respectively.⁸ The reciprocal influences among the factors of poverty include low educational level and conservatism. The data also suggest that there may be a reciprocal influence between occupation and conservatism. However, the wealthiest family in the village today once had income only from pottery production. Some remain "potters only" while others advance.

Five respondents in the sample who were "potters only" in 1968 had acquired ejido, a business, or wage work by 1969. Their education and wealth levels were as follows:

Id.	New Income Source	Educational Level	Wealth Level (1968)
BA	Store	8	5.51
OM	<i>Ejido</i>	5	3.27
PA	Pottery dealing	0	2.09 ⁹
PR	<i>Ejido</i>	5	4.99
RA	Factory work	4	1.76

The average educational level of this small group is 4.4, and the average wealth level 3.5. Its educational level is slightly higher, and its wealth level slightly lower than those for the group of 17 "potters only," but the differences are not enough to explain why the former improved their incomes while the latter did not. The explanation may lie partly in exposure. BA's mother was once a storekeeper, RA's cousin works in a factory, and PR's father is a farmer. Yet other potters who have such examples before them do not emulate the examples. It is also noteworthy that the mean group score in progressivism for potter-cultivators approximates that of the full-time farmers.

7. Another possible comparison, based on the occupations, is the differential degree of innovation in farming among the potter-landholders who are not active cultivators, the potter-cultivators, and the full-time farmers.

TABLE 29
Grand Mean Scores in Non-Occupational Categories
For 70 Heads Of Households, By Occupational Group)

Occupational Group ^a	Grand Mean Score for the Group in Categories 3 through 6
Potters with no major secondary economic activity (N=17)	.32
Potter-landholders, not active cultivators (N=15)	.36
Potter-cultivators (N=24)	.44
Potters with major entrepreneurial activity (N=17) ^b	.46
Farmers (N=7) ^c	.46
Wage earners (N=3) ^d	.70

^a This represents the occupational pattern in the sample, as of 1969. It had changed somewhat since 1968. Eight potters with regular income from wage work are not included (see note d). There is some overlap between the potter-entrepreneur group and the potter-landholder and potter-cultivator groups.

^b Includes 7 pottery dealers, 6 storekeepers, 2 masons (one of whom is also a storekeeper), one miller, one dressmaker, and one Atzompa marketplace vendor. If scores of the 10 potter-entrepreneurs with the highest incomes from enterprise (4 storekeepers, 5 pottery dealers and one miller) are used, the mean group score in Categories 3 through 6 would be .50. For purposes of comparison, the farmer who holds a quarter-share in a maize mill, and thus qualifies as an entrepreneur, had an averaged category score of .52. His score is included in the farmers' group.

^c Includes the farmer who supervises the sharecropping of his land by his sons.

^d Includes non-potters who gain most or all of their incomes from wage work: a schoolteacher, a storekeeper-truck driver, and a farmer-factory worker. Potter-wage earners are not included because (1) the types of work are very diverse, and (2) usually it is not the head of household (the respondent) who works, but rather the son. In the two pottery-making households where the head of household held factory jobs in 1969, the mean score in Categories 3 through 6 was .43. The potter who held a regular farming job had the lowest score in the sample in these categories: .10.

TABLE 30
 Mean Group Scores in Category 2 (Progressivism in Farming)
 (for 45 Landholders and/or Cultivators by Occupational Group, 1969)

Occupational Group	Mean Score for the Group in Category 2
Potter-landholders who do not cultivate (N=15)	.01
Potter-cultivators (N=24)	.25
Farmers, Active cultivators only (N=6) ^a	.30

^aThe landholder who supervises the sharecropping of his lands by his sons is not included because *active* cultivation is the key issue here. However, his score in this category is high: .50, and if it were included, it would bring the mean group score to .33

The principal finding here is that individuals who do not cultivate their own lands have virtually no interest in farming innovations.¹⁰ It would be possible, however, for non-cultivating landholders to initiate innovations, particularly in the type of crop planted. For example, two landholders desirous of planting sugarcane sought out a fellow villager, known to be familiar with the cultivation of sugarcane, to cultivate it on shares. It would also be possible for a landholder to share the costs of commercial fertilizer with his sharecropper, to their mutual benefit. In fact however, neither landholder nor sharecropper usually takes any interest in improving the use of land cultivated on shares. Indeed, one woman, whose private holdings are sharecropped, said that she had used chemical fertilizer in the garden of her house lot but had not considered using it in the farmland. A difference exists between the mean group scores of the potter-cultivators and the full-time farmers, but that difference is minor.

Patterning

Although for most households the scores for progressivism in the various categories are often quite uneven, a few have consistently high scores, and only a minority are high in but a single category (e.g., have a score of over .50). Usually, adoption of non-traditional attitudes and practices in one sphere has some concomitants in other spheres. This is most often attributable to a common moderating variable, such as the anti-traditionalist conditioning provided by higher education. Thus, it is thus often not possible to establish primacy or direction of influence among the various categories.

Nevertheless, while the evidence of the foregoing discussions precludes gross generalizations, some probable linkages are discernible. For example, the relationship between economic and educational mobility, on the one hand, and progressivism in material possessions and desiderata, on the other, is not inconsiderable. Many individuals in the sample expressed the desire to live more comfortably. As they acquired the means to do so, they realized this aspiration to a greater or lesser extent. Admitting such aspirations is in itself indicative of the decline of the fear of *envidia*. Probably related to this phenomenon is the waning of the fear of retributive witchcraft. Attenuation of the fear of witchcraft, in turn, may be connected with the increasing efficacy of modern medicine. Where modern medical practice fails, villagers may attribute illness to supernatural causes and seek supernatural cures (page 101), but modern medical treatment seldom fails now. Thus, one possible sequence may be:

1. Decline of incurable illnesses, due to modern medical practices
2. Fading of the fear of witchcraft as a potential cause of illness and death
3. Lessening of the fear of antagonizing fellow villagers
4. Lessening of the fear of accumulating material goods which might evoke

the envy of fellow villagers

5. Uninhibited accumulation of material goods

6. Pursuit of wealth

A final link might be: "increasing reluctance to sponsor religious feasts." Such sponsorship dissipates wealth. However, there is a more direct link between the efficacy of modern medicine and the decline of religious feasts:

1. Efficacy of modern medical practices

2. Decline of vows made to saints to repay cures with religious feasts

3. Increasing reluctance to sponsor religious feasts

In the latter sequence, acquisition of material goods could follow from the not using capital to sponsor feasts. Probably both sequences are valid, each reinforcing the other. There is support for such a pattern in the correlations between Category 6, progressivism in medical beliefs and practices, and the following: Category 4, progressivism in community activities ($r=.36, p=.001$); Category 3, mobility ($r=.34, p=.001$); and Category 5, progressivism in material possessions and desiderata ($r=.29, p=.006$). The correlations are not high, but they are strong enough to indicate moderate positive relationships.

The series of influences suggested above would have repercussions in community activities, through (1) disinclination to participate in the religious *cargo* system, (2) increased dedication to the pursuit of personal gain, making time expenditures in community activities undesirable, and (3) increased wealth, facilitating compliance with cash assessments for community improvements. Those who have substantial scores in Category 4, progressivism in community activities, have reached levels of wealth and commitment to material improvements that imply a generalized progressivism. In fact, Category 4 has no low correlations with any other category (Appendix C). The correlation coefficients range from .24 to .46, all correlations being significant below the .05 level.

Wealth has many potential uses, traditional as well as modern. When it is allocated to an enterprise that prospers, the household's economic mobility advances, especially if profits are reinvested. When it is allocated to higher education, educational mobility intensifies in successive generations (page 63). Moreover, education is an important factor in promoting general receptivity to modern change. It provides prestige and motivation for specific types of change and potentially, raises income through white-collar employment. Therefore, a high score in Category 3 also implies generalized progressivism. However, it is evident from the intercategory correlations that those villagers in the sample interested in economic and educational mobility are not very likely to be innovative potters, and they are extremely unlikely to be innovative farmers. Significant mobility is associated with enterprise and higher education, not with the traditional occupations.¹¹

The various categories of behavior constitute an interacting, self-reinforcing system, but it is not a tightly integrated system with inescapable progressions.¹² The differential receptivity to specific types of change resulting from individual experience and perceptions, and the complex interplay of such moderating variables as the household's wealth and educational level militate against simple pattern analysis.

CONCLUSIONS AND OUTLOOK

The principal conclusion of the study is that there is no *necessary* connection among the categories investigated, although there are positive relationships of a moderate order suggesting some possible sequential patterns. Those individuals who have advanced farthest over the previous generation, in improving their economic status and educating their youngsters, are quite likely to have a number of modern conveniences in the home. However, the former does not make the latter inevitable. In a community remote from urban centers, where behavioral alternatives are limited, relationships among the various aspects of life may remain fairly stable for all individuals. But Atzompa is a transitional community, with a large number of both traditional and modern alternatives. A villager is free to select and adapt those which, from his experience and/or observation, he considers to be desirable for his household. A few modern innovations, such as the radio, have proven popular on a village-wide basis, but others, even in the category of modern material goods, are adopted in no particular sequence. Even a household that has acquired a full range of these modern accoutrements may continue to farm, or have its lands farmed in traditional ways, may succumb to pressures to serve *mayordomías* and continue to believe in witchcraft and *susto*.¹³ The closest approximation to a "necessary condition" is the importance of wealth for innovation in

farming (Category 2) and preference for cash-over-time in community activities and projects (Category 4). However, farming innovation is virtually independent of innovation in pottery production and sale, and equally independent of progressivism in medical beliefs and practices. The results of the study thus tend to support the findings of sociologists Kahl in Brazil and Mexico, and Schnaiberg in Turkey. There is no single unilineal process in modern change (Schnaiberg 1970:420), and it is possible for individuals to be modern on a few values and traditional on others (Kahl 1968:22).

Kahl found that traditional values fade substantially at the secondary school level, earlier among those who attend school in the city. He also found that the parent's socio-economic status is the most important influence on a child's education (Kahl 1968:45-70). This status (SES) includes the factors of occupation (i.e. occupational *status*), education, and self-identification. However, he did not further investigate which of the components of "SES" is the most influential in this respect. From the Atzompa study, it appears that the parent's education is the most important predictive factor. There is some overlap between education and the self-identification component of "SES".

It has been demonstrated that the influence of education stimulates non-traditional wants and promotes interest in higher education and higher career levels for children. It also influences the adoption of modern medical beliefs and practices. This suggests that education might also be put to good use for systematic indoctrination in farming innovations and possibly improvements in pottery production as well. For example, new crops usually are adopted when they are seen on other people's lands. However, MG undertook to plant sorghum after attending an agricultural exposition, and SR was influenced in his adoption of chemical fertilizer by radio advertising.

Although 36 were landless (see page 43 and Table 3 above), the total landholdings among the 80 households sampled in 1968 totaled 92.1 hectares, an average of more than one hectare per household. If this proportion is extrapolated to the general population, and if all lands were to yield the maximum of 15 to 20 *fanegas* of maize per hectare, village crops could easily provide sufficient maize for the population year round (excluding animal feed requirements).¹⁴ This assumes that some households would sell maize and some would buy. Nevertheless, with improved land use, the village as a whole could be self sufficient in maize. The potential for increasing agricultural production exists in the amount of land held, not to mention the large undeveloped tracts of dry common lands. There are techniques available, and financing offered through government agencies. If sufficient maize could be produced to feed the village year round, it might be possible to revive the *ejidatarios'* plans for a cooperative grain store (see endnote 4). Skepticism and pessimism could be forestalled by a presentation of information concerning the procedures of cooperative activity, including bookkeeping practices, accounting to members, maintenance of contingency funds, banking cash on hand, and possibilities of loans to members.¹⁵

In pottery making, increased profitability depends largely on the diffusion of the decorative ware, for which demand is increasing. Factory-type production methods are unlikely to be successful, given the declared preference for self-employment by the majority of Atzomperos interviewed, and the exploitative wages paid by the small-scale employers of potters. Some progress is being made. Producers of decorative ware have been quite innovative in altering the positions and sizes of the figures, introducing new animal forms, reducing the amount of temper to give a smoother glaze finish, varying the appliqué decorations, introducing unglazed ware, etc.

There is room for progress in glaze color variation. Only one Atzompa potter used glaze elements other than copper oxide in 1969. However, there is no lack of demand for green ware, and as the villagers point out, their color is known, like a trademark. The major innovations needed are first a local electric glaze mill, preferably several mills, each owned by two or three partners, so that glaze profits could remain in the village and benefit several households. Second, a better firing technique is needed, in order to reduce or eliminate the dependence on expensive and increasingly scarce wood fuel. The first-mentioned innovation depends largely on the villagers themselves. Some are well acquainted with methods for bringing in glaze and the requirements for mechanization. The success of glaze importation and electric milling by local initiative would require that the majority of Atzompa potters be loyal to village enterprise, even if the urban dealer cuts his prices. This possibility has existed only since electricity was introduced in the village in 1969. It will be interesting to see how long it will remain unexploited because of fear of risk, and lack of trust in fellow villagers. The capital exists, and one man has already expressed a desire to undertake such an enterprise. The informal monopoly of the Oaxaca retailer might be circumvented by the use of a village-owned truck to bring in the raw glaze.

It is an oversimplification to imply that behavior can always be accounted for by social factors. In Atzompa there is no social barrier to mobility, neither a class barrier nor a racial barrier. Fortunes change. Some of the "rich" become poor, and some of the poor become "rich". Nevertheless, given similar access to resources, similar education, or lack of it, similar exposure to innovations, and similar models of mobility, individuals react differently in seizing opportunities. The effect of social factors can be predicted only approximately. Psychological factors such as self-esteem, self-confidence, and possibly differential energy, also affect behavior, and these must be studied separately.

As Atzompa becomes increasingly a suburb of the fast-growing city of Oaxaca, economic patterns will gradually change. Oaxaca city now has a low level of industrialization compared to such cities as Puebla. Undoubtedly, it will undergo increasing industrialization and will absorb more villagers as wage workers. However, pottery making remains a viable alternative. Increasing demographic pressure on the farmland through natural population growth, and any shift of farmland to residential use, may intensify rather than reduce reliance on pottery production.

How the patterns of progressive change will shift depends to a considerable extent on rising levels of education and wealth. It would be interesting to ascertain to what degree the relationships among the various categories of progressivism will be affected. Possibly the differentials will be reduced and the tempo of change in the various categories may become more equal.

Notes to Chapter 9

1. Feldman and Hurn (1966:389) found in Puerto Rico that aspirations rise with status: "One possible interpretation of these findings is that mobility not only satisfies previous ambitions but generates new and primarily instrumental ambitions." "Instrumental", as against "consummatory", values are those which represent further advance, such as education and occupation.
2. However, the introduction of a pool hall in 1969 had no local model. It was emulated by one villager that year.
3. This is the salient example of adaptation in the village. Another example is the changing of the *presidente's* term of office from one year to three, after an interim trial of a four-year term which was found to be too long. This was an adjustment to the requirements of his growing responsibilities. We have mentioned the adaptation of new products to traditional customs in (1) the inclusion of some modern medicines in the *curandero's* resources, and (2) the replacement of serenading for special occasions, such as a *padrino's* saint's-day, by dedication of phonograph music. The writer took advantage of this readiness to accommodate familiar forms to new problems by contributing *guelaguetza* (reciprocal aid) cash for traditional feasts with the understanding that reciprocation would be in data about the costs of the event.
4. During the height of cooperative zeal in the 1940's, the *ejidatarios* planned to establish a cooperative store from which to sell their farm products to fellow villagers. Because of the discouraging experience with the corn mill cooperative, the project was not pursued.
5. See estimates of farming expenditures, page 46, and of gross income from high-yield land, page 49.
6. Redfield's (1939:54) comment is relevant here: "...Travel is a broadening experience only when one enters deeply into the minds of people different from oneself."
7. In fact, one of the two "pioneers" in the use of chemical fertilizer also owns a kick-wheel and uses ox team and plow for land clearing. One of the two farmers in the sample who undertook to plant sorghum uses neither a tractor for plowing nor chemical fertilizer.
8. For operational definition of wealth status, see Appendix B2. For individual scores in the categories and descriptive variables, see Appendix D.

9. It should be pointed out that PA, a widow, "teamed up" with a widower in 1969. His wealth enabled her to realize her ambition to buy pottery for resale. The union, from all indications, was a matter of business rather than sentiment.
10. It should be remembered that the scoring measures attitudes toward innovation, as well as overt behavior.
11. While even the well educated, e.g., the schoolteacher in the sample, may consider landowning and cultivation desirable for the security they confer, the use of a range of modern farming techniques is not thought of in connection with rapid economic advancement. For one thing, there are no local models. More important, full-scale agricultural modernization, including irrigation, use of chemical fertilizer, and tractor plowing, would be very costly. The Atzompero's fear of incurring bank loans virtually precludes such large investments. Enterprises, on the other hand, often can be undertaken with a minimal initial investment, and if equipment is needed, it can be obtained on installments from the vendor with a minimum of red tape.
12. The efficacy of modern medicine may have played a fairly important role. Modern medical practice also has contributed to population increase by reducing mortality rates. This results in increased land pressure, which, in turn, forces peasants to seek new ways of making a living.
13. However, no discarding of the modern innovations acquired in the previous generation was noted in Atzompa, unlike Bolivian peasant households in the years following the 1952 revolution (Patch (1960:146).
14. The percentage of households in the general population that declared landholdings during the field census was 60.2% - more than the percentage in the sample, which was 55.0% (Table 3).
15. A recent chairman of the potable water committee introduced the practice of banking cash on hand, in order that it might earn interest while not in use.

APPENDIX A
 QUESTIONNAIRE ITEMS USED FOR STATISTICAL ANALYSIS
 AND SCORING OF REPLIES

I. Occupational decisions: pottery production and sale

a. Procurement of materials:

"Where do you get your clay?"

Assumption: The higher specialization involved in buying clay from dealers, as against fetching it oneself, is progressive; buying clay frees the potter for more lucrative pursuits.

Scoring:	Fetches clay from the mine	0
	Buys from resellers when he has no time, or buys from mine owners at site	0.5
	Buys from local resellers	1.0

b. Distribution of finished ware:

"Where or to whom do you sell your ware?"
 "Do you sell to dealers?"

Assumption: The higher specialization involved in selling to dealers, as against selling retail, is progressive; the potter maximizes his production time.

Scoring:	Sells own ware at stand	0
	Has alternated wholesale and retail selling methods, in accordance with circumstances, or combines them	0.5
	Sells to dealers only	1.0

Experimentation in production:

c. Experimentation with forms:

"Since then, that is, since you were married, have you learned any new pottery forms?"

Assumption: Developing new, i.e., unaccustomed alternatives in order to exploit a wider range of opportunities is progressive.

Scoring:	No new forms	0
	1 new form	0.2
	2 new forms	0.4
	3 new forms	0.6
	4 new forms	0.8
	5 or more new forms	1.0

d. Experimentation with new methods:

"Do you know that some villagers work with kick wheels? Aren't you willing to try to learn or to have your son do so?"

Assumption: Utilizing new, i.e., unaccustomed techniques to maximize production is progressive.

Scoring:	Not interested	0
	Interested in trying	0.5
	Has learned to use kick wheel	1.0

II. Occupational decisions: farming

Technology:

a. "Have you begun to clear your fields by tractor plowing? When did you begin?"

Assumption: Using new, i.e., unaccustomed techniques to reduce time input is progressive. As more and more villagers have adopted the practice over the years, however, the less "new" or "unaccustomed" it has become.

Scoring:	Does not use tractor	0
	Uses it since 1968-69	0.2
	Uses it since 1966-67	0.4
	Uses it since 1964-65	0.6

Uses it since 1962-63	0.8
Uses it since 1960-61	1.0

b. "Have you begun to use chemical fertilizer in your fields?"

Assumption: Experimentation with unaccustomed techniques to attempt to increase production is progressive.

Scoring:	Does not use it and/or does not believe it would benefit	0
	Intends to try chemical fertilizer and/or believes it would benefit production	0.5
	Uses chemical fertilizer	1.0

Experimentation with new crops:

c. "Have you tried different crops for the first time, such as peanuts, watermelon, sugarcane, etc.?"

Assumption: Experimenting with new, i.e., unaccustomed crops which might yield greater market returns than those customarily planted, is progressive.

Scoring:	Tried no new crops	0
	Tried one new crop	0.5
	Tried two or more new crops	1.0

d. "Do you know that a tobacco company from Zimatlán was looking for people to sow tobacco? Would you take a chance on it?"

Assumption: Same as for 2c, above.

Scoring:	Would not risk sowing tobacco	0
	Interested in trying	0.5
	Gave the Zimatlán company an affirmative answer and/or will risk sowing some tobacco	1.0

III. Economic and educational mobility

Enterprise:

- a. "Can you think of other businesses that could be established here in the village, especially now that there is electricity?"¹

Assumption: Recognizing the possibility and desirability of broadening the village's economic base by adding new services is progressive.

Scoring:	No suggestions	0
	One suggestion	0.2
	Two suggestions	0.4
	Three suggestions	0.6
	Four suggestions	0.8
	Five or more suggestions	1.0

- b. "Have you ever been a pottery dealer?"
"Have you ever thought of becoming a pottery dealer?"

Assumption: Experimenting with economic options, as in buying the local product for resale, is progressive.

Scoring:	Has not considered attempting this kind of business	0
	Wants to be a dealer	0.5
	Has been a dealer	1.0

- c. Number of enterprises yielding income to the respondent in 1967-68.

Assumption: Individual economic advancement through providing services to the community is progressive.

Scoring:	No enterprises	0
	One enterprise	0.5
	Two enterprises	1.0

- d. Respondent's additional major sources of income in 1969-70.

Assumption: Individual economic advancement through the exercise of new options is progressive.

Scoring:	No new source of income	0
	One new source of income	0.5
	Two new sources of income	1.0

Mobility through non-traditional occupations:

- e. "Have you thought of seeking employment in the city -- in a factory, for example?" "Is it better to work here in the village than to go to work in a factory in the city?"

Assumption: Willingness to consider engaging in a non-traditional occupation which offers the possibility of economic advancement is progressive.

Scoring:	Has not considered engaging in steady urban work	0
	Has considered it, but believes that steady urban work would not improve his economic situation	0.5
	Household member has held steady urban job or has tried to obtain one	1.0

- f. "If there had been means to give you a good education, what career would you have wished for yourself?"

Assumption: Aspirations for economic and/or status advancement through occupation, even in retrospect, are progressive.

Scoring:	Has not desired any other occupation; has not considered alternatives	0
	Would have liked other village occupation	0.2
	Would have liked blue-collar work in city	0.4
	Would have liked white-collar work in city	0.6
	Would have liked to be a school-teacher	0.8

Would have liked to be a professional e.g., lawyer 1.0

- g. "Having the means to help them, what careers do you want for your children?"

Assumption: Aspiring toward the economic and/or status advancement of one's children is progressive.

Scoring:	No desires for the children other than the major occupations offered by the village, that is, pottery making or farming	0
	Service occupation in the village	0.2
	Blue-collar work in city	0.4
	White-collar work in city	0.6
	Schoolteaching	0.8
	Profession such as lawyer, doctor engineer	1.0

Mobility through education:

- h. "Have you sent children to secondary school? Beyond secondary school?"

Assumption: Same as for IIIg, above.

Scoring:	For each dependent who entered secondary or trade school ² but did not finish	0.5
	For each dependent who completed secondary or trade school	1.0

Additional weight for sending dependents on to higher education,³ as follows:

	For each dependent who entered a phase of higher education but did not finish	0.5
	For each dependent who completed a phase of higher education	1.0

Real economic mobility:

- i. "Do you think you have more wealth than your father

had at the same age?"

Assumption: Real economic advancement since the previous generation is progressive.

Scoring:	No economic advancement since the previous generation	0
	Economic advancement since the previous generation	1.0

IV. Community-oriented activities

- a. Compliance with assessments for installation of modern utilities, for the public welfare as well as for the individual's welfare:

- (i) "Have you already paid your assessment for the public water system?" "Have you put a water tap in your patio or house? Did you cooperate in the installation of a water tap on your street?"

Assumption: Raising the standard of living through the support and utilization of modern conveniences is progressive.

Scoring:	Has paid nothing	0
	Has paid part of assessment, and benefits ⁴	0.25
	Has paid part of assessment although he does not benefit	0.50
	Has paid entire assessment, and benefits	0.75
	Has paid entire assessment although he does not benefit; or has installed private water tap or has contributed to installation of neighborhood tap	1.00

- (ii) "Have you already paid your assessment for the new school?" Replies verified with committee's list of payments.

Assumption: Financial support of the village's educational institution indicates an interest in education, that is, maximizing opportunities for

village youth, and is progressive.

Scoring:	Paid nominal amount	0
	Paid part (\$10 to \$74) and benefits ⁵	0.25
	Paid part (\$10 to \$74) although household does not benefit	0.50
	Paid most of assessment (\$75 or more) and benefits	0.75
	Paid most of assessment (\$75 or more) although household does not benefit	1.00

(iii) Payment of street lighting charges
(committee's list of non-payers).⁶

Assumption: Raising the standard of living
in the community through the support of modern
conveniences is progressive.

Scoring:	Not paying monthly fees	0
	Paying monthly fees	1.00

Withdrawal from excessive time and cash expenditures
traditionally connected with the public welfare:

b. "Do you think that these days it is better to
to avoid the higher civil offices such as
presidente municipal and *sindico*, because
of the great amount of work involved?"

Assumption: Avoidance of the gross time
expenditures that higher civil office has
come to require, in spite of the prestige
that traditionally attaches to such office,
is progressive.

Scoring:	Would take such office if asked to	0
	Would take such office as a matter of duty, although reluctantly	0.5

Would try to avoid higher civil office 1.0

- c. "If they ask you or your son to serve as *mayordomo*,⁷ would you accept or agree to your son's accepting?"

Assumption: Avoidance of traditionally prestigious religious offices, which consume cash as well as time resources that might otherwise be invested in economic advancement, is progressive.

Scoring: Would accept, without reservation 0
Would accept, although reluctantly 0.5
Would try to avoid this type of service, or would serve but without giving a fiesta 1.0

- d. "Will you serve *tequio*⁸ for the construction of the new school or will you send a hired hand?"

Assumption: Maximizing one's own production time by paying substitutes to serve the communal labor assignment is progressive, as it contributes to economic advancement.

Scoring: Member of household serves 0
Substitute is paid to serve 1.0

V. Material aspects of village life

- a. Dress:

"When did the men of your family change from *calzones*?"⁹ or, for female respondents: "When did the women of your family change from *enaguas*?"

Assumption: Change to unaccustomed, non-traditional styles of dress, following the trend in urban centers, is progressive. However, as more and more villagers adopted non-traditional clothing styles over the years, the less different from customary usage they became, and less was the risk of incurring ridicule by "being different".

Scoring: Respondent continues to wear traditional dress 0

Respondent changed to non-traditional dress in the 1960's, or presently wears non-traditional dress only to the city	0.2
Changed in the 1950's	0.4
Changed in the 1940's	0.6
Changed in the 1930's	0.8
Wore non-traditional dress before the 1930's	1.0

b. Modern equipment:

"Do you have a radio? A bed?¹⁰ A kerosene stove? A bicycle? A sewing machine?"

Assumption: Acquisition of modern goods which provide non-traditional convenience and gratifications is progressive.

Scoring:	Household has never possessed any of these	0
	Household has acquired one of these ¹¹	0.2
	Household has acquired two of these	0.4
	Household has acquired three of these	0.6
	Household has acquired four of these	0.8
	Household has acquired all of these	1.0

c. Modern equipment:

"In what year did you buy your first radio?"

Assumption: Possession of a radio is a minimal indication of progress in the acquisition of modern goods; it is less expensive than most other modern equipment and provides considerable gratification of a non-traditional nature. Use

of the radio introduces the peasant to non-traditional ways of life. However, as increasing numbers of villagers acquire radios, they become more customary and less indicative of innovative behavior on the part of the purchaser.

Respondent does not have radio	0
Acquired radio 1965-69	0.2
Acquired radio 1960-64	0.4
Acquired radio 1955-59	0.6
Acquired radio 1950-54	0.8
Acquired radio before 1950	1.0

d. Modern equipment -- desire for electricity, 1968:

"If it were possible to bring electricity to the village by assessing each family 100 pesos, for example, do you think it would be worth while? Or would it be better to wait until it becomes cheaper?"

Assumption: The desire to raise both community and personal standards of living by acquiring this modern convenience, which also facilitates productive activities, is progressive.

Scoring:	Respondent feels he does not need electricity or does not want it	0
	Respondent would prefer to delay acquisition of electricity, hoping it may become cheaper	0.5
	Respondent favors acquiring electricity immediately	1.0

e. Modern equipment -- actual use of electricity and electrical appliances in the home, 1969:¹²

Assumption: Utilization of this modern convenience to improve personal standard of living and working conditions, is progressive.

Scoring:	Has not brought electricity into the home	0
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1	Has electricity, desires no appliances	0.25
	Has electricity, desires one or more appliances	0.50
	Has electricity and at least one appliance	0.75
	Has television set ¹²	1.00

f. House improvement:

"Does your house have a cement floor?"
If not: "Do you think of putting one in?"

Assumption: As flooring reduces dirt, dust and insects in living quarters, its installation constitutes a rise in the standard of living. It is a non-traditional, beneficial, and therefore a progressive measure.

Scoring:	Not interested in having cement flooring	0
	Would like to have cement flooring	0.5
	Has cement flooring	1.0

g. Want, general:

"If your income were to increase, what would you buy in addition to what you have?"¹³

Assumption: The desire for modern types of goods or investments for economic advancement is more progressive than the desire for traditional types of goods.

Scoring:	Respondent's desires are traditional, e.g., land and animals; or he professes no wants	0
	Respondent's desire for modern equipment or furniture or establishment of an enterprise, is at least one-third of total choices	0.5
	Respondent's desire for modern	

equipment or furniture or establishment of an enterprise, is at least two-thirds of total choices	1.0
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VI Beliefs and practices concerning illness

a. "When did you begin to consult doctors to cure illness?"

Assumption: Resort to modern medical practices is more efficacious than use of traditional curing practices and constitutes a departure from the traditional pattern, even if traditional practices are continued in some circumstances, and therefore is progressive. As more and more villagers resort to modern medical treatment, however, it becomes less representative of change from customary patterns.

Scoring:	Respondent has never consulted a medical doctor	0
	Respondent has consulted medical doctors since the 1960's	0.2
	Has consulted medical doctors since the 1950's	0.4
	Has consulted medical doctors since the 1940's	0.6
	Has consulted medical doctors since the 1930's	0.8
	Has consulted medical doctors since before the 1930's, or since reaching maturity, if this was later	1.0

b. "How does sickness enter the body? Is there something that enters the body materially?"

Assumption: Willingness to accept biological cause of disease, even if supernatural causes continue to be accepted in some circumstances, is non-traditional and progressive.

Scoring:	Respondent has no concept of the germ theory of disease communication	0
	Has some awareness of the germ theory of disease communication	0.5

	Has an understanding of the germ theory of disease communication	1.0
c. "How does fright enter the body?" ¹⁴		
Assumption: Rejection of traditional concepts of supernaturally-caused illness is progressive.		
Scoring:	Respondent believes that fright causes ongoing illness	0
	Respondent does not believe that fright is a cause of ongoing illness	1.0
d. "Do you still use the <i>curandera</i> sometimes?" ¹⁵		
Assumption: Rejection of traditional practices used to "cure" illness believed to be supernaturally caused, is progressive.		
Scoring:	Respondent uses traditional curers	0
	Does not use traditional curers	1.0

Notes to Appendix A

1. "Electric glaze mill" was not counted as a suggestion, since it was mentioned by the interviewer earlier in the questionnaire, except in one instance where planning for an electric glaze mill was already under way.
2. Trade school: e.g., sewing academy, nursing school
3. Higher education: e.g., normal school (teacher training), technical school (pre-engineering), preparatory school of Benito Juárez University. Here the scoring gives double weight for a household dependent who has completed both secondary school and one of the types of higher education.
4. Some locations in the village are not yet served by the water system. Financial support of the system in this case indicates interest in public welfare rather than one's own welfare, although there is some expectation that the system will be extended to the entire village eventually. The per-household assessment for establishment of the water system was \$50, but there are use fees as well.
5. Those who benefit personally are households having children or grandchildren who will use the school facilities. Those who are childless and support construction of the new school nevertheless, are assumed to do so for altruistic motives, that is, for the public welfare. The per-household assessment for new school construction was \$100; additional assessments were expected.
6. The per-household charge for street lighting was \$3 monthly.
7. *Mayordomo*: caretaker of a saint's image, a one-year responsibility usually entailing sponsorship of a fiesta as well as regular attendance at holy day ceremonies.

8. *Tequio*: obligatory communal labor for public works.
9. *Calzones*: traditional pajama-like trousers worn with loose, high-necked shirt; *enaguas*: traditional long, flowing skirt.
10. "Bed": that is, bed frame with mattress, as distinguished from a simple raised platform.
11. In some cases, households had acquired the item but had later been forced to sell or pawn it because of financial need.
12. Electric service was introduced to the village in 1969. The per-household assessment was established at \$225, payable in installments over a period of two years, and was theoretically obligatory for all households. For an additional monthly charge, service could be brought into the home for lighting and appliances. The most expensive electrical equipment found in the village that year was the television set, providing non-traditional gratification and information similar to, but greater than, those provided by radios.
13. Interviewer attempted to elicit three choices, but respondents sometimes gave more and sometimes less.
14. There is a traditional belief that fright sickness is supernaturally caused by the projection of evil airs into the body of the victim, which airs can be exorcised by rubbing the patient's limbs with an egg, then burying the egg which has drawn off the evil airs. This is discussed in the text.
15. *Curandera*: traditional curer considered qualified to deal with fright sickness and who also sometimes recommends modern medicines and ointments. Her specialty is the cure of supernaturally-caused illnesses, which are not amenable to the ministrations of medical doctors.

APPENDIX B
OPERATIONAL DEFINITIONS OF TWO DESCRIPTIVE
VARIABLES: COSMOPOLITANISM AND WEALTH STATUS

1. **Cosmopolitanism**

In general, the term "cosmopolitanism" is used in accordance with Webster's (Collegiate) dictionary definition of the adjective "cosmopolitan": Belonging to the world; not local," and refers to an individual's experience with non-local situations.¹ Specifically, each respondent's score for this descriptive variable was arrived at by awarding points for his personal experience with non-local situations or vicarious experience, through relatives, with such situations as follows:

For having worked as a <i>bracero</i> in the United States one time	3 points
Add, for each additional contract period	1 point
For having a close relative who worked as a <i>bracero</i> in the United States	1 point
For having worked outside the village but not as a <i>bracero</i> in the United States	1 point
Add, for working in the national capital	1 point
For each relative or family of relatives living outside the village with whom the respondent has contact	1 point
Add, for each relative or family of relatives living in the national capital with whom the respondent has contact	1 point

2. **Wealth status**

Income. In 1968 it was the opinion of several informants that 10 pesos daily was the minimum amount of money needed to provide a satisfactory diet for a family of four or five members, and that two hectares of land could furnish this minimum human consumption requirement. Since all families have additional expenditures at least for clothing and community assessments, it is assumed here that a household's minimum consumption budget comes to 4,000 pesos annually and that the two hectares would provide this amount through subsistence and/or cash-crop cultivation. However, it was found that four households in the sample live below this minimum; see Appendix D and Table 1 (chapter I).

Using a point system to arrive at individual scores for this descriptive variable, one point is given for each 2,000 pesos of income or for the product of each hectare of second-class or dry (*temporal*) land that requires rain in order to produce. Land with a high water table, "wet" (*humedad*) land, will produce more than *temporal* land, particularly in dry years, when the difference is intensified by the fact that the "dry" land will not only produce a smaller crop but also will produce only one crop, as against two for "wet" lands. There is, however, variability even in the yields of "dry" lands, depending on soil quality, amount of moisture received, and the care with which it is cultivated. A conservative factor of 1.5 was assigned for the product of one hectare of *humedad* land.

A factor of .5 was used for sharecropped land, whose product is shared on a 50-50 basis between landholder and sharecropper.

Assets. For each 2,000 pesos of assets, one point is given.

A hectare of second-class land is worth 4,000 pesos or two points. In late 1968 and 1969, the price of "wet" land rose to a maximum of 6,000 pesos per hectare; therefore an extra point (total: three points) is given for ownership of a hectare of such first-class land. *Ejido*, government-grant land, is not considered an asset as it may not be sold or rented out and may not even be sharecropped except in unusual circumstances and with the permission of the local *ejido* authority.

In accordance with the assignment of one point per 2,000 pesos of income and one point per 2,000 pesos of assets, the following table of values was devised:

Animals:	For a horse (worth about 600 pesos) ²	0.3
	For a cow (1,000 to 1,500 pesos, on the average), rendering an annual income of about 1,400 pesos	1.3
	For a team of oxen (about 3,500 pesos), whose value in cultivating is considerable but not exactly calculable	2.0
	And for one bull, half of a potential team	1.0
	For a goat (75 to 100 pesos), with limited possibilities for milk sale	0.05
	For a sheep (about 100 pesos), with income from wool (20 to 40 pesos annually)	0.07
	For a pig (about 400 pesos)	0.2
	For a burro (200 pesos), whose value for carting clay, wood, etc. is considerable (3 pesos per trip if rented)	0.2
Property and goods:		
	For a house lot (estimated value 1,500 pesos)	0.75
	For an adobe house (estimated construction cost 1,500 pesos)	0.75
	For an oxcart (1,500 to 2,500 pesos), with income from rental which is not exactly calculable (perhaps 100 to 200 pesos a year)	0.8
	For a large truck worth about 30,000 pesos second hand, whose income from pottery transport may come to 1,500 pesos per month net	24.0

Or a small truck worth about 15,000 pesos second hand, infrequently used for transport (the only truck in the sampled households falls in this category)	8.0
For a phonograph and records, worth some 1,000 pesos plus variable income from rental (up to 50 pesos a day)	1.0
For a sewing machine, worth 1,500 to 2,000 pesos plus variable income from dressmaking	1.5
For a bed, worth some 800 pesos with mattress	0.4
For a bicycle, ³ about 700 pesos, useful for effecting bus-fare savings	0.4
For a kerosene stove ³ (100 to 200 pesos)	0.08
For a radio ³ (300 to 400 pesos)	0.2

Endnotes Appendix B

1. Local situations include regular visits to the city of Oaxaca, whose population is almost one million.
2. Values given are for mature animals. In fact, values fluctuate widely, depending on the age and condition of the animal and on supply-and-demand conditions.
3. Bicycles, stoves and radios would cost more than the above-mentioned values if purchased on the installment plan. Sewing machines and trucks are always purchased on installments, and their assigned prices reflect the hidden installment interest.

APPENDIX C

CORRELATION COEFFICIENTS FOR CATEGORIES CONSIDERED

- Category 1 - Progressivism in Pottery Production and Sale
- Category 2 - Progressivism in Farming
- Category 3 - Economic and Educational Mobility
- Category 4 - Progressivism in Community Activities
- Category 5 - Progressivism in Material Possessions and Desiderata
- Category 6 - Progressivism in Medical Beliefs and Practices

Categories Compared	Zero-Order Correlations	Partial Correlations, Eliminating Separately Each of Four Descriptive Variables Referent to Head of Household			
		Age	Education	Cosmopolitanism	Wealth
1 and 2	.09	.07	.12	.09	-.02
1 and 3	.19	.19	.07	.18	.14
1 and 4	.38	.41	.32	.38	.33
1 and 5	.47	.46	.37	.48	.44
1 and 6	.25	.25	.13	.25	.21
2 and 3	.03	.03	.05	.01	.02
2 and 4	.24	.21	.26	.24	-.03
2 and 5	.17	.21	.24	.06	.03
2 and 6	.04	.04	.07	.03	-.08
3 and 4	.31	.31	.26	.26	.20
3 and 5	.49	.49	.35	.43	.45
3 and 6	.34	.34	.21	.30	.30
4 and 5	.46	.52	.43	.42	.38
4 and 6	.36	.37	.31	.34	.27
5 and 6	.29	.29	.07	.24	.24

Zero-Order Intercategory Correlations

	Category 1	Category .2	Category 3	Category 4	Category 5	Category 6
Category 1	--	.09	.19	.38 ^a	.47 ^a	.25 ^a
Category 2	--	--	.03	.24 ^a	.17	.04
Category 3	--	--	--	.31 ^a	.49 ^a	.34 ^a
Category 4	--	--	--	--	.46 ^a	.36 ^a
Category 5	--	--	--	--	--	.29 ^a

^ap < .05

APPENDIX D
DESCRIPTION OF 78 HOUSEHOLDS ON VARIABLES AND SCORES IN SIX CATEGORIES

			Description on Variables ^c				Averaged Scores in Each of Six Categories ^a						Mean Category Score	
ID ^a	Occ., ^b 1968	Occ., ^b 1969	Age	Ed.	Cosmo.	Wealth	1	2	3	4	5	6	1-6	3-6
BA	1	5	26	8	2	5.51	1.00	-	.44	.83	.85	.88	.80	.75
GA	2,3,5	2,3,5	49	3	6	17.06	.00	.17	.51	.70	.52	.32	.37	.51
JA	4	4	31	0	0	3.84	.22	-	.10	.10	.15	.05	.12	.10
LA	2,5	2,5	59	2	1	11.47	.40	.50	.24	.44	.37	.20	.36	.31
PA	1	5	61	0	2	2.09	.43	-	.32	.63	.23	.10	.34	.32
RA	1	4	32	4	7	1.76	.05	-	.34	.50	.33	.47	.34	.41
TA	2,3	2,3	50	3	0	8.20	.30	.38	.50	.46	.20	.05	.31	.30
VA	3	3	52	3	5	16.38	.57	.00	.47	.75	.35	.22	.39	.45
GB	1	1	30	7	1	2.23	.25	-	.11	.38	.43	.07	.25	.25
VB	4	4	39	0	4	7.81	.30	-	.21	.42	.41	.10	.29	.28
MC	2,3,5	2,3,5	66	4	0	19.60	.33	.25	.31	.54	.34	.45	.37	.41
OD	1	1	44	0	4	6.07	.13	-	.19	.50	.19	.05	.21	.23
BE	3	3	68	3	1	7.31	.25	.00	.20	.45	.00	.50	.23	.29

			Description on Variables ^c				Averaged Scores in Each of Six Categories ^a						Mean Category Score	
ID ^a	Occ., ^b 1968	Occ., ^b 1969	Age	Ed.	Cosmo.	Wealth	1	2	3	4	5	6	1-6	3-6
CE	3	3	41	0	4	2.71	.20	.00	.19	.31	.15	.13	.16	.19
GE	2,3	2,3	52	5	1	18.06	.50	.17	.22	.75	.46	.37	.41	.45
OE	2,3,5	2,3,5	66	5	2	15.13	.88	.17	.46	.75	.63	.55	.57	.60
PE	7	5	21	2	1	4.64	-	-	.37	.54	.10	.05	.26	.26
JF	2,3	2,3	45	4	1	6.40	.15	.30	.06	.60	.39	.72	.37	.44
PF	3,5	3,5	56	3	3	10.26	.60	.00	.70	.45	.33	.73	.47	.55
AG	6	6	71	1	2	14.35	-	.32	.46	.75	.66	.10	.46	.49
CG	2	2	43	4	0	8.40	.80	.25	.45	.63	.41	.60	.52	.52
MG	6	6	68	1	2	31.84	-	.25	.45	.56	.37	.70	.47	.52
TG	2,3	2,3	61	5	2	16.39	.38	.23	.26	.54	.41	.10	.32	.33
AI	2,3	2,3	42	3	5	12.56	.63	.17	.07	.65	.53	.35	.40	.40
DJ	1	1	68	0	0	1.24	.00	-	.00	.44	.08	.05	.11	.14
EJ	3	3	47	5	1	3.28	.27	.00	.33	.40	.31	.30	.27	.33
GJ	4	4	26	2	0	2.93	.13	-	.11	.40	.23	.05	.18	.20
LJ	1	1	29	3	1	2.02	.35	-	.40	.30	.36	.17	.32	.31
MJ	4	1	36	3	5	7.50	.63	-	.21	.60	.26	.15	.37	.30
OJ	3	3	48	5	1	6.99	.55	.00	.13	.63	.41	.30	.34	.37
PJ	1	1	34	3	4	4.17	.38	-	.10	.25	.41	.05	.24	.20

			Description on Variables ^c				Averaged Scores in Each of Six Categories ^a						Mean Category Score	
ID ^a	Occ., ^b 1968	Occ., ^b 1969	Age	Ed.	Cosmo.	Wealth	1	2	3	4	5	6	1-6	3-6
TJ	6	6	45	0	4	44.60	-	.45	.11	.83	.46	.35	.44	.44
VJ	2,3	2,3	44	4	2	11.59	.38	.17	.21	.60	.46	.35	.36	.40
EL	2,3,5	2,3,5	37	6	5	17.62	.67	.15	.69	.50	.63	.53	.53	.59
GL	7	7	47	10	4	13.40	-	-	.50	.96	.76	.85	.77	.77
LL	1	1	40	0	0	3.42	.30	-	.00	.50	.21	.22	.25	.23
OL	1	1	49	4	6	3.73	.47	-	.22	.75	.25	.20	.38	.35
PL	2,3,5	2,3,5	63	3	3	13.79	.33	.25	.40	.83	.25	.80	.48	.57
VL	6	6	36	8	3	23.25	-	.25	.57	.65	.65	.65	.55	.63
CM	3	3	46	4	1	3.10	.13	.00	.00	.45	.19	.05	.13	.17
EM	1	1	40	5	14	7.26	.13	-	.31	.54	.71	.50	.44	.51
GM	4,5	3,4,5	64	2	7	21.27	.33	.00	.65	.56	.61	.00	.43	.45
LM	4	4	52	3	3	2.64	.13	-	.15	.35	.15	.30	.22	.24
OM	1	3	24	5	4	3.27	.00	.00	.51	.40	.27	.40	.26	.39
RM	7	7	45	5	5	8.91	-	-	.82	.75	.80	.40	.69	.69
SM	6	6	66	0	3	18.70	-	.13	.13	.79	.04	.45	.31	.35
TM	4	4	81	0	1	7.09	.00	-	.14	.33	.41	.07	.19	.24
JO	4	4	44	3	1	9.15	.25	-	.10	.33	.19	.00	.17	.15
LO	2,3	2,3	51	2	7	21.11	.72	.40	.20	.75	.56	.13	.46	.41

			Description on Variables ^c				Averaged Scores in Each of Six Categories ^a						Mean Category Score	
ID ^a	Occ., ^b 1968	Occ., ^b 1969	Age	Ed.	Cosmo.	Wealth	1	2	3	4	5	6	1-6	3-6
RO	2,3	2,3	63	0	0	15.81	.42	.27	.30	1.00	.56	.05	.43	.48
TO	2,3	2,3	71	0	1	7.82	.00	.17	.27	.50	.07	.07	.18	.23
VO	2,3	2,3	41	5	1	9.43	.52	.13	.24	.50	.36	.10	.31	.30
CP	3	2,3	44	3	0	5.80	.50	.17	.09	.33	.44	.15	.28	.25
EP	2,3	2,3	43	3	5	9.19	.00	.22	.31	.70	.40	.35	.33	.44
JP	1	1	40	6	4	2.45	.95	-	.40	.58	.61	.15	.54	.43
VP	2,3,5	2,3,5	56	5	3	25.37	.30	.05	.81	.75	.64	.15	.45	.59
ER	3	3	32	4	1	5.10	.50	.00	.20	.50	.36	.30	.31	.34
GR	6	6	39	5	0	18.56	-	.42	.12	.63	.53	.35	.41	.41
HR	1	1	29	4	4	2.95	.00	-	.30	.63	.44	.47	.37	.46
IR	2,3,5	5	54	4	0	10.33	.50	-	.28	.88	.58	.22	.41	.49
JR	7	7	61	3	4	19.22	-	.22	.50	.75	.44	.90	.56	.65
LR	1	1	30	5	1	1.49	.75	-	.09	.50	.55	.75	.53	.47
PR	1	2,3	37	5	8	4.99	.72	.30	.48	.50	.29	.63	.49	.47
RR	4	4	19	7	2	8.64	.50	-	.40	.70	.44	.25	.46	.45
SR	^e	^e	66	0	0	33.18	-	.50	.15	.81	.20	.40	.41	.39
TR	2,3	2,3,5	42	5	10	16.91	.85	.38	.53	.75	.64	.22	.56	.53
VR	1	1	47	3	1	8.54	.40	-	.19	.60	.19	.05	.29	.26

			Description on Variables ^c				Averaged Scores in Each of Six Categories ^a						Mean Category Score	
ID ^a	Occ., ^b 1968	Occ., ^b 1969	Age	Ed.	Cosmo.	Wealth	1	2	3	4	5	6	1-6	3-6
GS	3,5	3,5	41	0	0	7.17	.65	.00	.21	.54	.40	.10	.32	.31
OS	3	3	31	4	0	4.32	.50	.00	.13	.50	.48	.13	.29	.31
TS	4	1	36	3	0	1.62	.00	-	.36	.50	.23	.00	.22	.27
HT	1	1	28	4	2	7.45	.00	-	.50	.63	.34	.57	.41	.51
NT	3	3	39	2	2	7.25	1.00	.00	.31	.75	.44	.38	.48	.47
CV	3	3	50	0	1	5.29	.38	-	.03	.65	.14	.10	.26	.23
JV	2,3	2,3	41	6	3	20.39	.40	.47	.44	.67	.66	.10	.46	.47
MV	3,5	3,5	33	4	0	9.22	.40	.00	.35	.55	.40	.10	.30	.35
OV	3	3,5	38	5	6	11.17	.38	.13	.31	.75	.66	.22	.41	.48
TV	4	1	46	3	1	5.23	.60	-	.26	.56	.34	.05	.36	.30
VZ	2,3	2,3	37	5	1	12.40	.42	.27	.30	.65	.67	.47	.46	.52

^aIn order to preserve anonymity of respondents, fictitious initials are used.

^bCode for occupations: 1 - Potter only, 2 - Potter-cultivator, 3 - Potter-landholder, 4 - Potter-wage earner, 5 - Potter with major secondary occupation, 6 - Full-time farmer, 7 - Non-potter wage earner (who may have secondary occupation; one farms).

^cRanges for variables, in the sample: age - 19-81, education - 0-10, cosmopolitanism - 0-14, wealth - 1.24-44.60. See Appendix B for operational definitions of cosmopolitanism and wealth. The level of education is arrived at by adding 1 point of number of years of formal schooling; individuals with 1 point are unschooled but literate. The data for the descriptive variables were taken in 1968.

^dFor identification of categories, see Appendix A.

^eLandholder who supervises the sharecropping of his lands by his sons.

APPENDIX E

SIGNIFICANT ZERO-ORDER CORRELATIONS OF TWO DESCRIPTIVE VARIABLES
WITH CATEGORIES AND WITH ITEMS WITHIN CATEGORIES
($r > .30$)

Correlations between head of household's education and:		Correlations between head of household's wealth and:			
	r	p			
Category 5, progressivism in material possessions and desiderata.....	.58	.001	compliance with assessment for con- struction of new school.....	.58	.001
use of non-traditional dress.....	.45	.001	Category 4, progress- ivism in community activities.....	.52	.001
desire for electricity...	.43	.001	purchase of clay from resellers.....	.51	.001
higher education of house- hold's children.....	.42	.001	Category 2, progress- ivism in farming....	.49	.001
Category 6, progressivism in medical beliefs and practices.....	.41	.001	early use of tractor for plowing.....	.47	.001
Category 3, economic and educational mobility...	.40	.001	respondent's opinion that he has pro- gressed beyond his father, economic- ally.....	.45	.001
high level of aspiration for children's careers	.36	.005	number of new crops tried.....	.43	.002
modern possessions.....	.35	.001	installation of, or intention to install cement flooring in home.....	.34	.001
history of willingness to engage in urban work (i.e. non-traditional work).....	.33	.002	avoidance of higher civil office.....	.33	.023
Category 1, progressivism in pottery production and sale.....	.33	.003	modern possessions.....	.31	.003
modern (as against tra- ditional) wants.....	.31	.003	willingness to try chemical fertilizer..	.30	.019
understanding of the germ theory of disease.....	.30	.004			
disbelief in fright sickness.....	.30	.008			

APPENDIX F
GLOSSARY OF SPANISH TERMS
USED IN THE TEXT

Aire. Draft; or evil airs, a supernatural cause of illness.

Alcalde. Holder of the office of *alcaldía* (q. v.).

Alcaldía. Traditional civil-religious office.

Almud. Local volume measure equivalent to 4 liters; also, the land surface that can be sown with this amount of seed.

Atraso. Setback.

Barajas. Cards (may be used to cast a spell).

Barrio. Ward or sector of a community.

Bracero. Farmhand.

Brujería. Witchcraft.

Brujo. Witch.

Cabecera. Head town of a *municipio* (q. v.).

Cantina. Bar.

Cargo. Public office. The term usually refers to religious office but also encompasses civil office.

Carguero. Holder of a *cargo* (q. v.).

Cofradía. Religious brotherhood.

Comerciante. Merchant.

Comisionado. Local term designating the current feast sponsor of a *cofradía* (q. v.).

Compadrazgo. relationship between child's parent and child's godparent.

Compadre. Term designating *compadrazgo* (q. v.) relationship.

Corredor. Porch.

Cuota. Assessment for public works.

Curandero. Traditional curer.

Chaneque. Goblin believed to cause illness.

Chizero. Wizard; a person believed capable of causing and/or curing illness by supernatural means.

Chizo. Sorcery.

Ejidatario. Holder of *ejido* (q. v.) parcel.

Ejido. Government-grant farm land.

Envidia. Vindictive envy.

Fanega. Local measure of 96 liters.

Finca. Minor estate.

Frijol. Kidney bean.

Gangrena. Infectious exudation of a corpse.

Guelaguetza. Reciprocal-aid system used for large fiestas whereby the lender establishes credit against future need.

Hacendado. Owner of large estate or *hacienda*. *Haciendas* have been much reduced since the Agrarian Revolution by the imposition of legal limits on land ownership.

Hermanidad. Altar society.

Humedad. "Humid"; term used to describe land with high water table.

Inconoso. Irritating; term used to describe the effect of certain foods on the body.

Jacal. Cane hut, usually with maize leaves interwoven with the cane and often daubed with mud.

Levantada. Figurative raising-up of an afflicted individual before a saint's figure to petition for a cure.

Mal de ojo. Evil eye sickness.

Manzana. Block of house lots.

Mediero. Sharecropper.

Milpa. Maize field.

Muina. Anger; anger sickness.

Municipio. Mexican political unit roughly equivalent to a U.S. township.

Oficio. Occupation; potter's specialty.

Patrón, patrona (f.). "Boss".

Plaza. Regional term for a weekly street market.

Presidente municipal. Chief magistrate of a *municipio* (q. v.).

Propiedad. Privately-owned land.

Propietario. Landowner.

Propio. One who sells his own product.

Puesto. Vendor's space in street market.

Regatón. One who buys for resale.

Sacada de misa. Life crisis rite following baptism.

Sociedad. Association; cooperative enterprise.

Suerte. Luck.

Susto. Fright; fright sickness.

Tejate. Maize drink.

Temporal. "Seasonal"; term used to describe land that requires rain to produce crops.

Tequio. Communal work assessment.

REFERENCES CITED

- Adair, John, and Evon Z. Vogt
1949 Navaho and Zuñi Veterans: A Study of Contrasting Modes of Culture. *American Anthropologist* 51:547-561.
- Adams, Richard N.
1959 *A Community in the Andes; Problems and Progress in Muquiyaayo*. Seattle: University of Washington Press.
- Adams, Richard N., and Arthur J. Rubel
1967 Sickness and Social Relations. *In Handbook of Middle American Indians*, Vol. 6, pp. 333-356. R. Wauchope, Gen. Ed.; Manning Nash, Vol. Ed. Austin: University of Texas Press.
- Alva Ixtlilxochitl, Fernando de
1891 *Obras Históricas de Don Fernando de Alva Ixtlilxochitl*, Vol. II: *Historia Chichimeca*. Edited and annotated by Alfredo Chavero. Originally published ca. 1616. Mexico City: Secretaría de Fomento.
- Apodaca, Anacleto
1952 Corn and Custom. *In Human Problems in Technological Change*, pp. 35-39. Edward H. Spicer, Ed. New York: Russell Sage Foundation.
- Banfield, Edward C.
1958 *The Moral Basis of a Backward Society*. Glencoe: Free Press.
- Barlow, R. H.
1947 Conquistas de los Antiguos Mexicanos. *Journal de la Société des Americanistes*, New Series, Vol. 36, pp. 216-222. Paris: Musée de l'Homme.
- Barnett, H. G.
1953 *Innovation: The Basis of Cultural Change*. New York: McGraw-Hill.
- Barnett, H. C., Leonard Broom, Bernard J. Siegel, James H. Watson, and Evon Z. Vogt
1954 Acculturation: An Exploratory Formulation. *American Anthropologist* 56:973-1002.
- Barth, Fredrik
1967 On the Study of Social Change. *American Anthropologist* 69:661-669.
- Beals, Ralph L.
1953 The Village in an Industrial World. *Scientific Monthly* LXXVIII:65-76.
1966 *Community in Transition: Nayón, Ecuador*. Los Angeles: Latin American Center, University of California.
- Belshaw, Cyril
1965 *Traditional Exchange and Modern Markets*. Englewood Cliffs, New Jersey: Prentice Hall.
- Bennett, Wendell, and Robert M. Zingg
1935 *The Tarahumara, An Indian Tribe of Northern Mexico*. University of Chicago Press.

Bernal, Ignacio

- 1965 Archaeological Synthesis of Oaxaca. *In Handbook of Middle American Indians*, Vol. 3, Part 2, pp. 788-813. R. Wauchope, Gen. Ed.; Gordon Willey, Vol. Ed. Austin: University of Texas Press.
- 1966 The Mixtecs in the Archaeology of the Valley of Oaxaca. *In Ancient Oaxaca*, pp. 345-366. John Paddock, Ed. Stanford University Press.

Blommers, Paul, and E. F. Lindquist

- 1960 Elementary Statistical Methods in Psychology and Education. Boston: Houghton Mifflin.

Burgoa, Francisco de

- 1934 Geográfica Descripción. 2 tomos. Mexico City: Talleres Gráficos de la Nación. Originally published 1674.

Cancian, Frank

- 1965 Economics and Prestige in a Maya Community. Stanford University Press.

Caso, Alfonso

- 1962a The Mixtec and Zapotec Cultures: The Zapotecs. Translated by John Paddock. Boletín de Estudios Oaxaqueños No. 21. Originally published 1942.
- 1962b The Mixtec and Zapotec Cultures: The Mixtecs. Translated by John Paddock. Buletín de Estudios Oaxaqueños No. 22. Originally published 1942.

Chaianov, Aleksandr V.

- 1966 The Theory of Peasant Economy. Translated and edited by Daniel Thorner, Pasile Kerblay, and R. E. F. Smith. Homewood, Illinois: published for the American Economic Association by R. D. Irwin. Originally published in Russian in 1925.

Diaz, May N.

- 1966 Tonalá: Conservatism, Responsibility and Authority in a Mexican Town. Berkeley: University of California Press.

Dube, S. C.

- 1956 Cultural Factors in Rural Community Development. *Journal of Asian Studies* 16:19-30.
- 1957 Some Problems of Communication in Rural Community Development. *Economic Development and Cultural Change* 5:2:129-146.

Durán, Diego

- 1867 Historia de las Indias de Nueva-España y Islas de tierra firme. 2 tomos. Prepared for publication by José F. Ramirez from manuscript of 1579-1581. Mexico City: Imprenta de J. M. Andrade y F. Escalante.

Edel, Matthew

- 1969 Economic Analysis in an Anthropological Setting: Some Methodological Considerations. *American Anthropologist* 71:3:421-433.

Erasmus, Charles

- 1961 Man Takes Control. Minneapolis: University of Minnesota Press.

- Esteva, Cayetano
1913 *Geografía Histórica del Estado de Oaxaca*. Oaxaca de Juárez: Tip. San-German Hnos.
- Ewald, Robert H.
1967 *Directed Change*. In *Handbook of Middle American Indians*, Vol. 6, pp. 490-511. R. Wauchope, Gen. Ed.; Manning Nash, Vol. Ed. Austin: University of Texas Press.
- Feldman, Arnold S., and Christopher Hurn
1966 *The Experience of Modernization*. *Sociometry*, Vol. 29, No. 4, pp. 378-395.
- Firth, Raymond
1964 *Capital, Saving and Credit in Peasant Societies: A Viewpoint from Economic Anthropology*. In *Capital, Saving and Credit in Peasant Societies*, pp. 15-34. Raymond Firth and B. S. Yamey, Eds. London: George Allen and Unwin Ltd.
- Flannery, Kent V., Anne V. T. Kirkby, Michael J. Kirkby, and Aubrey W. Williams, Jr.
1967 *Farming Systems and Political Growth in Ancient Oaxaca*. *Science*, Vol. 158, No. 3800, pp. 445-454.
- Foster, George N.
1959a *The Coyotepec Molde and Some Associated Problems of the Potter's Wheel*. *Southwest Journal of Anthropology* 15:1:53-63.
1959b *The Potter's Wheel and Invention: An Analysis of Idea and Artifact in Invention*. *Southwest Journal of Anthropology* 15:2:99-119.
1960 *Culture and Conquest: America's Spanish Heritage*. New York: Wenner-Gren Foundation for Anthropological Research, Publication in Anthropology No. 27.
1961 *The Dyadic Contract: A Model for the Social Structure of a Mexican Peasant Village*. *American Anthropologist* 63:1173-1192.
1962 *Traditional Cultures and the Impact of Technological Change*. New York: Harper.
1963 *The Dyadic Contract, II: Patron-Client Relationship*. *American Anthropologist* 65:1280-1294.
1967 *Tzintzuntzan: Mexican Peasants in a Changing World*. Berkeley: University of California Press.
- Fromm, Erich, and Michael Maccoby
1970 *Social Character in a Mexican Village*. Englewood Cliffs, New Jersey: Prentice Hall.
- García Pimentel, Luis
1904 *Documentos Históricos de México, Vol. II: Relación de los Obispos de Tlaxcala, Michoacan, Oaxaca, y Otros Lugares en el Siglo XVI*. Mexico City: Casa del Editor. Originally published 1897.
- Gay, José Antonio
1950 *Historia de Oaxaca*, 3rd edition. 2 *tomos*. Mexico City: Biblioteca de Autores y de Asuntos Oaxaqueños. Originally published 1882.
- Goodenough, Ward
1963 *Cooperation in Change: An Anthropological Approach to Community Development*. New York: Russell Sage Foundation.

- Gusfield, Joseph
 1967 Tradition and Modernity: Misplaced Polarities in the Study of Social Change. *American Journal of Sociology* 72:351-362.
- Hagen, Everett E.
 1960 The Entrepreneur as Rebel Against Traditional Society. *Human Organization* 19:185-187.
 1962 On the Theory of Social Change: How Economic Growth Begins. Homewood, Ill.: Dorsey Press.
- Hallowell, Alfred Irving
 1945 Sociopsychological Aspects of Acculturation. *In Science of Man in the World Crisis*, pp. 171-200. Ralph Linton, Ed. New York: Columbia University Press.
- Hendry, Jean
 1957 Atzompa: A Pottery Producing Village of Southern Mexico. Ph.D. dissertation, Cornell University.
- Holland, William R.
 1963 Medicina Maya en los Altos de Chiapias. Mexico City: Instituto Nacional Indigenista.
- Hoselitz, Bert F.
 1964 Economic Development and Change in Social Values and Thought Patterns. *In Explorations in Social Change*, pp. 673-693. George K. Zollschan and Walter Hirsch, Eds. Boston: Houghton Mifflin.
- Ingham, John M.
 1970 On Mexican Folk Medicine. *American Anthropologist* 72:1:76-87.
- Ixtlilxochitl - See Alva Ixtlilxochitl
- Kahl, Joseph
 1968 The Measurement of Modernism: A Study of Values in Brazil and Mexico. Austin: University of Texas Press, Latin American Monograph No. 12.
- Kaplan, Bernice
 1960 Mechanization in Paracho: A Craft Community. *Alpha Kappa Deltan* 30:59-65. *Reprinted in Contemporary Cultures and Societies of Latin America*, pp. 246-254. Dwight Heath and Richard N. Adams, Eds. New York: Random House, 1965.
- Kelly, Isabel, and Angel Palerm
 1952 The Tajin Totonac; Part 1: History, Subsistence, Shelter and Technology. Smithsonian Institution, Institute of Social Anthropology Publication No. 13.
- Krappe, Alexander Haggerty
 1927 Balor with the Evil Eye: Studies in Celtic and French Literature. Institut des Etudes Francaises, Columbia University.
- Levy, Marion J., Jr.
 1966 Modernization and the Structure of Societies, Vol. I. Princeton University Press.
- Lewis, Oscar
 1963 Life in a Mexican Village: Tepoztlán Restudied. Urbana: University of Illinois Press. Originally published 1951.

- Linton, Ralph
 1936 *The Study of Man*. New York: Appleton-Century.
- Macneish, Richard S.
 1967 *Mesoamerican Archaeology*. In *Biennial Review of Anthropology*, pp. 306-331. Bernard J. Siegel and Alan R. Beals, Eds. Stanford University Press.
- Mair, Lucy
 1957 *Malinowski and the Study of Social Change*. In *Man and Culture: An Evaluation of the Work of Bronislaw Malinowski*, pp. 229-244. Raymond Firth, Ed. London: Routledge and Kegan Paul.
- Malinowski, Bronislaw
 1938 *The Anthropology of Changing African Cultures*. In *Methods of Study of Culture Contact in Africa*, by B. Malinowski *et al.*, pp. vii-xxxviii. London: Oxford University Press, for the International African Institute.
 1945 *The Dynamics of Culture Change; An Inquiry into Race Relations in Africa*. Edited by Phyllis M. Kaberry. New Haven: Yale University Press.
- Martínez Gracida, Manuel
 1883 *Colección de "Cuadros sinópticos" de los pueblos, haciendas y ranchos del estado libre y soberano de Oaxaca...Oaxaca*. Oaxaca: Imprenta del estado a cargo de I. Candiani.
 1888 *El Rey Cosijoesa y su familia, reseña histórica y legendaria de los últimos soberanos de Zachila*. Mexico City: Oficina Tip. de la Secretaría de Fomento.
- Mead, Margaret
 1955 *Cultural Patterns and Technical Change*. New York: New American Library.
 1956 *New Lives for Old; Cultural Transformation -- Manus, 1928-1953*. New York: Morrow.
- Munch, Peter A.
 1970 *Economic Development and Conflicting Values: A Social Experiment in Tristan da Cunha*. *American Anthropologist* 72:6:1300-1318.
- Murphy, Robert
 1964 *Social Change and Acculturation*. *Transactions of the New York Academy of Sciences, Series II, Vol. 26, No. 7*, pp. 845-854.
- Nash, Manning
 1958 *Machine Age Maya*. *American Anthropological Association Memoir No. 87*.
 1966 *Primitive and Peasant Economic Systems*. San Francisco: Chandler Publishing Company.
 1967 *Indian Economies*. In *Handbook of Middle American Indians, Vol. 6*, pp. 87-102. R. Wauchope, Gen. Ed.; Manning Nash, Vol. Ed. Austin: University of Texas Press.
- Nicholson, H. B.
 1961 *The Use of the Term "Mixtec" in Mesoamerican Archaeology*. *American Antiquity, Vol. 26, No. 3, Pt. 1*, pp. 431-433.

- Ottenberg, Simon
 1959 Ibo Receptivity to Change. *In Continuity and Change in African Cultures*. William R. Bascom and Melville J. Herskovits, Eds. University of Chicago Press.
- Paddock, John
 1966a Oaxaca in Ancient Mesoamerica. *In Ancient Oaxaca*, pp. 83-242. John Paddock, Ed. Stanford University Press.
 1966b Mixtec Ethnohistory and Monte Albán V. *In Ancient Oaxaca*, pp. 367-385. John Paddock, Ed. Stanford University Press.
- Papeles de Nueva España (PNE)
 1905 Segunda Serie, Vol. IV. Francisco del Paso y Troncoso, Ed. Madrid: Impresores de la Real Casa.
- Parsons, Elsie Clews
 1936 Mitla, Town of the Souls. Chicago: University of Chicago Press.
- Patch, Richard
 1960 Bolivia: U.S. Assistance in a Revolutionary Setting. *In Social Change in Latin America Today*, by Richard N. Adams *et al.*, pp. 108-176. New York: Random House.
- Piker, Steven
 1968 Friendship to the Death in Rural Society. *Human Organization* 27:3:200-204.
- Redfield, Robert
 1939 Primitive Merchants of Guatemala. *Quarterly Journal of Inter-American Relations* 1:42-56.
- Rogers, Everett M.
 1962 Diffusion of Innovations. New York: Free Press.
 1969 Modernization Among Peasants: The Impact of Communication. In association with Lynne Svenning. New York: Holt, Rinehart and Winston.
- Salazar, Agustín de
 1962 Relación (of Cuilapan, 1581). Translated and edited by Douglas Butterworth. *Boletín de Estudios Oaxaqueños* No. 23.
- Schnaiberg, Allan
 1970 Measuring Modernism: Theoretical and Empirical Explorations. *American Journal of Sociology* 76:3:399-425.
- Seler, Eduard
 1904 Wall Paintings at Mitla. *Smithsonian Institution, Bureau of American Ethnology Bulletin* 28, pp. 243-324.
- Sellitz, Claire, Marie Jahoda, Morton Deutsch, and Stuart W. Cook
 1964 Research Methods in Social Relations, revised edition. New York: Holt, Rinehart and Winston. Originally published 1951.

Shepard, Anna

- 1967 Preliminary Notes on the Paste Composition of Monte Albán Pottery. *In* La Cerámica de Monte Albán, pp. 477-484. Alfonso Caso, Ignacio Bernal, and Jorge R. Acosta, Eds. Mexico City: Instituto Nacional de Antropología e Historia.

Spicer, Edward H., Ed.

- 1952 Human Problems in Technological Change, A Casebook. New York: Russell Sage Foundation.

Spores, Ronald

- 1965 Zapotec and Mixtec at Spanish Contact. *In* Handbook of Middle American Indians, Vol. 3, pp. 962-1028. R. Wauchope, Gen. Ed.; Gordon Willey, Vol. Ed. Austin: University of Texas Press.

Steward, Julian

- 1967 Foreword. *In* Contemporary Change in Traditional Societies, Vol. III, pp. v-ix. Julian Steward, Ed. University of Illinois Press.

Tax, Sol

- 1953 Penny Capitalism: A Guatemalan Indian Economy. Washington, D.C.: Smithsonian Institution, Institute of Social Anthropology Publication No. 16.

- 1941 World View and Social Relations in Guatemala. *American Anthropologist* 43:27-42.

Taylor, William B.

- 1972 Landlord and Peasant in Colonial Oaxaca. Stanford University Press.

Vaillant, G. C.

- 1950 The Aztecs of Mexico. Harmondsworth, England: Penguin Books Ltd. Originally published 1944.

Van de Velde, Paul, and Henriette Romeike Van de Velde

- 1939 The Black Pottery of Coyotepec, Oaxaca, Mexico. Southwest Museum Paper No. 13, Highland Park, California.

Villa-Señor y Sanchez, Joseph Antonio de

- 1952 Teatro Americano, Descripción General de los Reynos y Provincias de la Nueva España, y sus Jurisdicciones. 2 tomos. Mexico City: Editora Nacional. Originally published 1746-1748.

Wade, Nicholas A.

- 1972 A Message from the Corn Blight: The Dangers of Uniformity. *Science* 177:4050:678-679.

Whetten, Nathan L.

- 1948 Rural Mexico. University of Chicago Press.

Whitecotton, Joseph W.

- 1968 The Valley of Oaxaca at Spanish Contact: An Ethnohistorical Study. Ph.D. dissertation, University of Illinois.

Winter, Marcus C.

- 1970 Excavations at Tierras Largas (Atzompa, Oaxaca): A Preliminary Report. *In* Preliminary Archeological Investigations in the Valley of Oaxaca, Mexico, 1966-69, by K. V. Flannery *et al.*, pp. 61-69. (Mimeographed.)

Wiser, William, and Charlotte Wiser

1963 Behind Mud Walls. Berkeley and Los Angeles: University of California Press.

Wolf, Eric

1955 Types of Latin American Peasantry: A Preliminary Discussion. *American Anthropologist* 57:452-471.

1959 Sons of the Shaking Earth. University of Chicago Press.

1966 Peasants. Englewood Cliffs, New Jersey: Prentice Hall.