THE HISPANIC ACCULTURATION
OF THE GILA RIVER PIMAS

by

Paul H. Ezell

A Thesis
submitted to the faculty of the
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DOCTOR OF PHILOSOPHY
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1955

Director of Thesis Date
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Abstract

When the Gila Pimas came into contact with Hispanic culture at the close of the 17th century, they had a relatively stable culture and economy. Subsistence was based on irrigation agriculture, supplemented by hunting and gathering. Except in basketry and weaving, their technology was simple. There were no full-time specialists. The social organization was based on the patrilineal extended family, complicated by forms of relationships which cut across family and village lines. Leadership was just beginning to extend beyond the village. The interests of the society were focused on curing, social relationships, and agriculture. Hospitality and peace were the two discernible values of the society.

During the one hundred sixty years of Hispanic contact, the Gila Pimas were in an advantageous position in their relationships with the Whites. No immigrant establishment was ever located within their territory, and they were valued as one of the defenses of Sonora against encroachment from the north. Contacts between agents of the two
cultures occurred intermittently and in an atmosphere of equality, rather than continuously and under conditions of domination. The Gila Pimas were thus never forced to live under two sets of values, and were able to choose what of Hispanic culture they wished to accept. They chose elements which they deemed desirable for their material benefit, rejecting others offered them. Consequently, Gila Pima culture was enriched by the Hispanic contacts, and readiness to adopt new cultural traits was stimulated. The continuity of the culture was uninterrupted, however, and no major reorientation took place, although the development of an orientation toward war was in process.

Culture contact under those conditions has been defined as the situation of non-directed acculturation. The response of the Gila Pimas to that kind of acculturation situation was to develop a pattern of adjustment designated as selective acceptance with no major reorientation, and it is suggested that such a pattern of adjustment is only possible in a situation of non-directed acculturation.
PREFACE

Sources

The following study of culture change among the Gila Pimas of central Arizona as a result of their contact with Hispanic culture previous to the middle of the 19th century is based on documentary material, both published and unpublished. While a few anthropological reports were used, most of the material consists of the accounts of travelers, both civil and ecclesiastical, and of the reports of government, military, and church officials.

The bulk of the archival material for the Spanish period was found in the Archivo General de la Nacion and the Archivo Franciscano section of the Biblioteca Nacional in Mexico City. Additional material was obtained from the libraries of the Escuela Nacional de Antropologia and the Museo Nacional and the Centro de Historia de Chapultepec in Mexico City, and from the Bancroft Library at the University of California, Berkeley, California, the mission archives in Altar, Sonora, and the Arizona Pioneers' Historical Society collections in Tucson, Arizona. Copies of some items were obtained by correspondence with the Eugene C. Barker Texas History Center, Austin, and from the Library of Congress, Washington, D. C.
Most of the unpublished material for the Mexican period was found in the Bancroft Library, in the Centro de Historia de Chapultepec, and the Archivo Militar, Mexico, D. F. Other items were secured from the Arizona Pioneers' Historical Society and the Biblioteca y Museo del Estado in Hermosillo, Sonora.

The early American material was obtained through the cooperation of the Bancroft Library, the Arizona Pioneers' Historical Society, the Yale University Library, New Haven, Connecticut, the National Archives in Washington, D. C., and the Munk Library at the Southwest Museum, Los Angeles, California.

In working out the historical reconstruction an evaluation of each report has been necessary. All the documentary sources have been considered as of two classes: primary and secondary. The primary accounts, i.e., of persons writing of their direct contacts with the Pimas, have been given precedence in evidential value. Secondary sources, those which retail what would be classed in law as hearsay information, have had to be weighed more carefully -- the number of times removed they were from the primary source, the purpose for which they were writing, whether what they wrote could be determined to be an inference on their own account or a retailing of the data given by a primary source. It has been necessary to use these
latter sources because often the primary source, while known to exist or to have existed, is not available for one reason or another. Translations of first hand accounts have been accepted as primary sources, although the original has been consulted wherever possible.

The documentary data have been supplemented and checked at some points by information obtained from a few old persons on the reservation who have been able to recall things told to them in their youth by elderly persons who had been born before the Americans came. Most of this information was obtained from Kisto Morago, 84 years old, of Sacaton; Alice Harvey, about 80, of Blackwater; Winfield Scott, about 76, of Gila Crossing; Mrs. Andrew Pablo, 65, of Casa Blanca; Antonio B. Juan, about 75, of Santan; and Sam Randall, 78, of Santan.

Analysis

The analysis of the historical material has been carried out using the categories set up in the Gila-Sonoran ethnology file in the Department of Anthropology at the University of Arizona, Tucson, as a guide. Some adaptations have been necessary, as would probably be the case when attempting to apply this system of categories to the analysis of the culture of any specific group, either in the past or the present. The eventual purpose of integration of this study with
others dealing with the same general geographical and cultural setting is better served thus than by attempting to set up a system solely for this study. As a matter of fact, it was found that an earlier attempt to do so resulted in a rather closely parallel system, differing principally in the labels chosen for the categories. As each account was read the data contained were noted under the appropriate categories; at the same time, inferences which came to mind were also noted, at least for later consideration in the light of more evidence and reflection.

Orthography for Pima Words

Wherever possible or convenient the symbols used by Russell 1 (1908:16) have been used in rendering Pima words in this study. Changes have been made, however, due to a number of reasons. One of these is the variation in the speech sounds heard. As the Gila Pimas themselves recognized differences in pronunciation between villages and between generations, the same words recorded in different villages, or from different generations, might show variations. Another cause of variation in recording is the hearer's own linguistic background -- I probably heard the speech differently from Russell.

A second cause of change in recording is the lack of usable symbols on the typewriter. Where Russell used symbols not on the keyboard of a typewriter, it has been necessary to seek substitutes. At the same time, the practice followed by Kurath (1945) and Willenbrink as used by Curtin (1949), of using combinations of symbols to indicate the sounds for which there is no symbol in the English alphabet, has been found unsatisfactory where such combinations may be confused with diphthongs. In preparing this orthographic system, therefore, the symbols (other than letters) available on the typewriter have been adapted as pronunciation aids to indicate different sounds in Pima represented by the same English letter. The orthography is based on the analysis of the phonemes of about two hundred and thirty words. It was nearly always possible to record them on tape at the same time that they were written down. A few were gathered casually, but over two hundred of the words were obtained from Kisto Morago at Sacaton, on the Gila River Indian Reservation.

The symbols used for writing Gila Pima words in this study are given at the left below. Each is followed by an English word

containing as close an approximation to the Pima sound possible, or an explanation of the sound where there is no English word containing it. Following that is a Pima word containing the phoneme, with its English meaning. Unless otherwise indicated, Pima words are accented on the first syllable.

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<th>Phoneme</th>
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<td>father</td>
<td>nawitc, &quot;friend&quot;</td>
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<tr>
<td>a</td>
<td>law</td>
<td>хks, &quot;old woman&quot;</td>
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<tr>
<td>b</td>
<td>bib</td>
<td>baaco, &quot;bed&quot;</td>
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<td>c</td>
<td>shall</td>
<td>baaco, &quot;bed&quot;</td>
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<td>d</td>
<td>dread</td>
<td>tcuulд, &quot;hip&quot;</td>
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<tr>
<td>e</td>
<td>they</td>
<td>kihseal(d), &quot;spoon&quot;</td>
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<tr>
<td>e</td>
<td>let</td>
<td>vahp'hieh, &quot;well&quot;</td>
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<td>f</td>
<td>fife</td>
<td>ufcaldi, &quot;woman's underwear&quot;</td>
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<tr>
<td>g</td>
<td>good</td>
<td>ĝłowut, &quot;belt&quot;</td>
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<td>h</td>
<td>he, an unvoiced aspirate</td>
<td>hikh, &quot;navel&quot;</td>
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<tr>
<td>i</td>
<td>pick</td>
<td>ma'ic'pah, &quot;lover&quot;</td>
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<td>ĭ</td>
<td>pique</td>
<td>hikh, &quot;navel&quot;</td>
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<td>j</td>
<td>jug</td>
<td>hulùlijilik, &quot;clearing&quot;</td>
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<td>kick</td>
<td>kua, &quot;forehead&quot;</td>
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<td>sing</td>
<td>tåñ, &quot;knees&quot;</td>
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<td>o</td>
<td>long</td>
<td>o'o'tam, &quot;people&quot;</td>
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<td>ucpo, &quot;beard&quot;</td>
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<td>Goethe</td>
<td>mblitkam, &quot;runner&quot;</td>
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<td>tatcruk, &quot;toe&quot;</td>
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<td>ū</td>
<td>rule</td>
<td>um, &quot;thigh&quot;</td>
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<tr>
<td>û</td>
<td>ù of German</td>
<td>hjljljtk, &quot;clearing&quot;</td>
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<td>v</td>
<td>valve</td>
<td>huk vaksik, &quot;floor&quot;</td>
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<tr>
<td>w</td>
<td>wish</td>
<td>wo'po, &quot;body hair&quot;</td>
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<tr>
<td>x</td>
<td>... a voiced bilabial fricative</td>
<td>a'aliixaipiēh, &quot;little springs&quot;</td>
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<td>y</td>
<td>canyon</td>
<td>nyuum, &quot;tongue&quot;</td>
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<tr>
<td>'</td>
<td>the glottal stop</td>
<td>wo'po, &quot;body hair&quot;</td>
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<td>()</td>
<td>phoneme inclosed is silent. Duplication of vowels indicates that the sound is drawn out.</td>
<td>kihseahl(d), &quot;spoon&quot;</td>
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Acknowledgements

When an attempt is made to set down a list of all the people who, in one way or another, have contributed toward this project, the extent of my indebtedness in that respect is almost alarming. Without the stimulation, advice, and encouragement of Dr. Edward H. Spicer, the task probably would not have been completed, nor, without the support of Mr. Z. Simpson Cox and Mr. L. J. Cox, of Mr. Charles M. Wright and Mr. Samuel P. Goddard, Jr., would it have been possible. Dr. Harry T. Getty and Mrs. Clara Lee Tanner cheerfully and patiently gave me of their time in reading and criticism of the manuscript, and Dr. David L. Patrick considerately saw to it that I was given time to finish it. The appointment as Research Associate of the Arizona State Museum, upon the recommendation of Dr. Emil W. Haury, has been of real service, for which I am grateful. The American Association for the Advancement of Science made a summer of work possible by the award of the Stillhamer Grant for research. Mr. and Mrs. Julian D. Hayden gave me the benefit of their acquaintance with the Gila Pimas and provided an interested but critical audience for my speculations. The help so freely given me by the staffs of the University of Arizona Library (particularly by the reference department), the Arizona Pioneers' Historical Society, the Bancroft Library (especially the Public Services), the Yale University Library, the Texas...
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# ABBREVIATIONS

For convenience in footnoting, the following abbreviations have been used.

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<td>Archivo Franciscano</td>
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<td>Archivo Militar</td>
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INTRODUCTION

The forces which affect culture produce constant change, but few consistencies in that change have been recognized. The present state of our knowledge concerning the importance of any one of the numerous variables involved in any case of culture change does not allow for reliable predictions in more than a few isolated instances. Only with the isolation of the significant variables bearing on such change will it be possible to formulate meaningful hypotheses concerning the process. The evidence necessary for the identification of any constant factors may be gathered from numerous studies of similar situations. While no culture can be understood as a functioning whole from investigation of its isolated parts, the investigation of culture change is not under the same compulsion for the complete picture. Much, or possibly more, can be gained in this field from a series of more restricted, but more intensive, studies with a consequent better opportunity to recognize and thereby identify the variables having significant influences on the particular process of change.

This investigation is a study in history in the sense that the data were drawn almost entirely from written records, but the approach is anthropological in that attention is focused not on the reconstruction of the chronology of the events discerned but on the effects of those events
upon the Gila Pimas and their culture. It is to be regretted that no archeological and contemporary evidence could be applied to the problem at this time, for where it is possible to apply information from all three of these fields a more complete picture can be drawn than is possible from any one of them alone. Contradictory information within one field can sometimes be reconciled, or a choice made, with additional evidence from another field. It is hoped that both excavation and ethnological field work can be done to make more clear the situation here considered, on a microscopic scale, of the interaction of the Western Europeans and the Indians of the New World. This study has been focused on one restricted group of Indians in the hope that the presentation of the greater amount of detail thereby made possible will be of aid in future investigations of the problems of interaction found so often in archeology and history.

This study is the first in a proposed series designed to trace the course of culture change, under varying conditions of acculturation, among the Pima Indians of the Gila River in central Arizona. The original project, begun in 1951, was to embrace only the period since they have been under the influence of the United States, i.e., from 1846 to 1946. When the study was begun, one of the first problems which arose was succinctly expressed by Mischa Titiev in the first question he asked upon being told of the project -- "What are you using as a baseline? Russell?" That aptly sums up the general impression of the possible ethnohistorical
knowledge of the Gila River Pimas; probably less is known about this, the fourth most numerous tribe (Kelly 1953:15)\(^1\) in Arizona, than about any other.

Although the historical approach is necessary in making any study of acculturation which is to embrace so long a span of time, with its several changes in the conditions of contact, there has often been a tendency to spend much less time on historical research than on study of the contemporary situation. Undoubtedly this attitude has arisen from the circumstances of lack of time and funds for such a project, and from the general paucity of information available, a lack usually becoming more pronounced as we go back in time. Actually, no such attempt as this at either a historical reconstruction of the culture of the Gila Pimas of the mid-19th century, of the course of acculturation under the Spaniards and Mexicans (hence the term Hispanic), or even of aboriginal Gila Pima culture had been contemplated at first. Such a task was deemed likely to be unrewarding, if not impossible, due to the lack of data mentioned above.

Furthermore, the general impression of contemporary Gila Pima culture made it seem unlikely that Hispanic influences could be detected or would be found operative, or that any of the aboriginal culture(except

---

perhaps for such traits as basketry and pottery-making and language) would have survived. The general impression was that one of the reasons why the Gila Pimas were so little known, in comparison with other Southwestern tribes, was that because they had lost their distinctive culture and taken on western American culture, they were not spectacular and photogenic enough to attract attention -- no dances, ceremonies, or attention-attracting material products. However, while the compilation of the bibliography was being done, initial field work among the Gila Pimas showed that an interpretation of present-day Gila Pima social institutions and of the course of acculturation under the Americans might not be clearly understood without some insight into the acculturation process which had gone on during the more than a century and a half when they were subjected to Hispanic influences. The results of this contact could still be detected, and the aboriginal traits still functioned, albeit in inconspicuous ways.

This realization made it advisable that there be undertaken more extensive and intensive research into the period before the middle of the 19th century. An analysis of the material gathered as a result of that search yielded data on the Gila Pimas which made possible the

1. The contacts of the Gila Pima with the nationals of the United States exposed them to more than Anglo-rooted traditions, so "American" rather than "Anglo-American" is here used to refer to those nationals and their culture.
present attempt at a historical reconstruction of their aboriginal
culture and of their acculturation under the Spaniards and Mexicans.
If this attempt be successful, the resulting description of the Gila
Pimas and their culture at the end of the Hispanic period, and of the
responses by which they achieved adjustment to their new historical
position, would also serve as a starting point for a complementary
study of their acculturation since the beginning of American influence.
Such a reconstruction can be only a partial one. Oftentimes the infor-
mation is incomplete - the contemporary reports contain only frag-
ments of the total culture, and the little professional work done suffers
from the same deficiencies to a lesser degree. The gaps cannot be
filled in by native informants, because Gila Pima culture underwent
such drastic changes during the last half of the 19th century that few
today have even hearsay knowledge of what it had been when the Amer-
icans came. Some of the details which might have been projected back-
ward in time from contemporary and professional American writers
have not been utilized. It would be pointless to fill out the picture by
mere repetition of such well-known sources as Russell (1908) which
are readily available. Rather, I have attempted to use contemporary
data wherever possible, using post-Hispanic sources to elucidate a
point mentioned in the Hispanic literature.

It has been pointed out that, in the study of acculturation, as great
a time depth as is feasible is essential (Beals 1953:631-634). By this means, one determines as nearly as possible the original cultural configuration, and the variety of stimuli which brought about the cultural changes. The end to which such reconstruction is directed is "to give insight into the response of a culture to foreign influences." (Wagner 1936:317). In short, the greater the time depth, the greater our understanding of the process of culture change and of the varying influences acting on it.

This study of culture change among the Gila Pimas is based on the results of their reactions to the presentation to them of culture traits and elements from the Hispanic culture of northern New Spain. Whether those elements reached the Gila Pimas as a result of first-hand contact between the two societies, or were transmitted to the Gila Pimas through the medium of an intervening society (the Sobaipuris, the Papagos and the rest of the Pimas Altos), is not so important as that the diffusion occurred. Actually, it has seldom been possible to distinguish between the two courses of diffusion from the records available, the final effect being the same. It is not within the scope of this

study to attempt an identification of Gila Pima culture change which has possibly been stimulated by contact between them and societies other than Spanish and Mexican. If an Hispanic trait is concerned, it has been assumed that it is a matter of Hispanic acculturation.

As a baseline from which to trace the Hispanic acculturation of the Gila Pimas, the premise is adopted that the cultural inventory described for them after 1687 represented the aboriginal culture, except for elements demonstrably European in origin, such as watermelons and muskmelons. The date 1687 is arbitrarily chosen as a starting point because in that year Kino’s arrival at Dolores marked the beginning of the Spanish advance northward through Pimeria Alta. As no description of Gila Pima culture prior to that time is available, it is obvious that post-1687 accounts must be projected backward in time to provide the baseline. It is not implied that aboriginal culture traits did not change during the one and three-quarter centuries of Hispanic influence; that evidence for change may be lacking is to be attributed to the accidents of reporting rather than to cultural stasis. Very probably the culture of the Gila Pimas at the time of first actual Spanish contact was not the "pure" aboriginal one. Wherever and whenever their coalescence into a self-identifying group took place, they had doubtless been influenced by other, equally self-identifying groups. More recent illustrations were their historically known
contacts with the Maricopas, Yumas, Yavapais, Apaches, et al.

It is assumed that the events which occurred over a period of a century and a half were all parts of one acculturation situation. The Jesuits, Franciscans, and Mexicans were agents of one culture as far as the Gila Pimas were affected, for although the missionaries themselves may have come from different countries, the policies which they implemented, the artifacts, and even the language which they, as well as the soldiers, used, were of Catholic Spain.

If we were to rely solely on the information contained in the accounts of Kino, Manje, Bernal, and Carrasco, and the unassailable conclusions which can be drawn from the reports of these, the first Spaniards to contact the Gila Pimas, the resulting reconstruction of the aboriginal culture of the Gila Pimas would be woefully unbalanced and so barren as to be virtually useless as a starting point from which to describe changes in that culture. By extrapolation from other sources, however, it is possible to fill in many of the gaps in the picture, and so establish a more adequate baseline. After the analysis of the data, and upon the starting of actual writing, two assumptions were therefore made: (1) that contemporaneous descriptions of other Piman groups contiguous to the Gila Pimas could, within limitations, apply to the Gila Pimas; (2) that descriptions of the Gila Pimas written after the initial period of contact could, with
reservations, be accepted as probably presenting at least parts of the aboriginal culture. The following examples illustrate the application of each assumption.

Manje's excellent description (1954:112-114) of the Yumas, on the occasion of his and Kino's first meeting with them in 1699 is an example of his keenness of eye for cultural differences and his readiness to set down what he saw. Had the Gila Pimas, on the other hand, been as devoid of overt cultural expressions as Manje's accounts of them might suggest, that fact alone would have excited some comment. Having just come from the Sobaipuris on the occasion of his first visit to the Gila River, Manje apparently saw so little difference between them that he made no new comments on the culture of the Gila Pimas. Kino (1948:1:172) evidently regarded them at first as the same people as the Sobaipuris, as did Manje himself (1954:102).

Therefore, for much of the content of Gila Pima culture at the beginning of Spanish contact, I am drawing on descriptions of the Sobaipuris.

A century and a half later, the practice of tattooing is described


for the first time for the Gila Pimas specifically (Couts 1848 MS), although Pfefferkorn had described (1949:188) it in detail for the "Sonorans" long before. Considering the existence of the practice in Pimeria Alta at that early time and the objection of missionaries to it, the probability seems to arise that the Gila Pimas tattooed aboriginally rather than that they adopted the practice sometime during the time of Hispanic influence. Consequently, for the reconstruction not only of Gila Pima culture and society at the end of the Hispanic period, but for the tracing of their acculturation during that time, and even for reconstructing their aboriginal culture and society, I am drawing, with discretion I hope, not only on pertinent Spanish and Mexican documents for the period, but also on the later and more detailed accounts of American travelers, administrators, and anthropologists.

It cannot be said that the period of Hispanic influence gave way to that of American influence on November 10, 1846. There was a period of overlap, during which Hispanic influence continued undiminished (or perhaps intensified as a result of contact with the Americans), while American influence was only beginning. American acculturation of the Gila Pimas really began with the swarms of emigrants pouring

through the Pima villages on their way to the California gold fields, and while its effects are perceptible (in clothing and tools, for example) it was limited and properly belongs in another study. Unless their contact with the American immigrants produced some lasting effect on the culture of the Gila Pimas, it could be argued that the two societies were not yet in an acculturation situation.
CHAPTER I

THE THEORETICAL POSITION

The concept of culture change is well established in anthropological theory, both as to the presence of change as a continuous, although varying factor, in any culture, and as to the genesis of that change, either in innovations arising solely from causes within a society, or in innovations arising from the effects of contact between one society and another. The attention of this paper is focused on that kind of culture change which follows contact -- acculturation. Although it is probable that change arising from within a society, not traceable directly or indirectly to the contact situation, is present during acculturation, the isolation of that change as a separate phenomenon will not be attempted here.

For the purposes of this paper, a "contact situation" is the geographical, historical, and cultural setting, varying with the circumstances, wherein culture contact occurs. "Culture contact" is that meeting of the members of two societies which involves sufficient communication so that the culture of one is affected by the other, thereby resulting in acculturation. "Acculturation" is conceived of as the process whereby the cultures of societies are changed as a result of the communication between members of the societies in contact, with the probability of diffusion of ideas and/or artifacts from one to
the other. "Acculturation situation" comprehends not only the culture contact, but also the setting in which that change takes place, i.e., both the acculturation and the contact situation, the basic components of which are the nature of the cultures of the societies in contact, and the conditions under which that contact takes place. The societies involved in the situation may be so located that they have close, first hand, face to face, day to day contact, or they may be so separated geographically that communication is intermittent, and the contacts may be perhaps of brief duration but recurrent over a long period of time. The effect of their geographical position upon the contact situation, however, is only one of the conditions having an influence on the acculturation situation. If culture change as a result of contact occurs (or has done so), then the conditions under which it takes place have a bearing on the direction of the process and the end result, as do the nature of the cultures concerned, but they do not determine whether or not acculturation has operated.

Cultures function as wholes, not as discrete parts, and when any part of the culture is affected, repercussions arising from the initial reaction may in turn affect other parts of the cultural inventory. It should be noted here that "reaction" is used in the sense of reciprocal action, with no connotations of reaction in any particular direction, rather than as a synonym for rejection (e.g., Broom, Siegel, Vogt,
and Watson 1954:987), which is only one of the possible forms of reaction. It has been pointed out (Herskovits 1948:483-490; Linton 1936:294-298) that, while cultures are dynamic, in that they are constantly undergoing change of some nature and degree, they are concurrently stable in that they exhibit continuity. In this state of gyroscopic equilibrium, changes take place at a rate and on a scale which permits adjustment to the change before the continuity of the culture is overborne. If, however, as is potential in any acculturation situation, the changes occur at such a rate and on such a scale, or as a combination of those factors, so as to be disruptive in nature, the continuity of the culture may be interrupted. When a culture is so disrupted, as when change is sudden, far-reaching, and enforced either by circumstance or human agency, it may disintegrate through loss of vital parts, or through repercussion stemming either from loss or from the addition of incompatible elements, or through the creation of incompatibles within the culture. All societies have some incompatibles in their cultural inventory, else the culture would be static -- and no living culture is ever static. The accumulative effect of a number of

conflicting traits will eventually precipitate disorganization, but the critical number of incompatibles depends upon many factors and is probably different for each society.

As acculturation is a process, a distinction should be made between the process and the end reached. "Adjustment pattern" has been used (Spicer 1954a:663-678) in place of "results of acculturation" (Redfield, Linton, and Herskovits 1936:152) to apply to the outcome of the process, and is so used here. As employed by Spicer, however, adjustment pattern seems to comprehend both process and product, that is, not only the reaction to contact between societies, but also the end result of that reaction. To avoid confusion between process and product, it is suggested that distinctive labels be applied to each. Because adjustment patterns are developed as a response to contact, the term "response" will be here used to designate that portion of the acculturation process, reserving adjustment pattern for denomination of the behavior pattern developing from the response. The process of response begins with first contact, but the point on the contact continuum at which it can be said that the adjustment pattern or patterns have been developed probably varies with each contact situation.


Spicer (1954a:633-678) distinguished five dominant adjustment patterns in the Southwest, which he designated as: rejection, limited selection, fusion, compartmentalization, and assimilation. A further distinction within the pattern of compartmentalization was based upon the difference in number of traits accepted from another culture; within the pattern of limited selection a distinction was made on the basis of whether or not extensive reorientation had occurred in the culture of the recipient society. Perhaps the possibility should be considered that, rather than only one adjustment pattern of fusion, there are two sub-patterns. The pattern of adjustment outlined by Spicer (1954a:665, 670-674) as fusion was the blending by one society of elements from the culture of another with its own culture, producing a new cultural configuration for that society by modification of both the old and the new, the assumption being that the culture of the other society in the contact situation was not greatly altered by the contact. If the above is a sub-pattern rather than the only fusion adjustment pattern, the second sub-pattern would appear to be the "socio-cultural fusion" which occurs when the members of two societies, and their cultures, are so combined as to produce, in place of the previously existing two, one new society with a new culture (Wagley 1952:224). It is probable that

other variants of these adjustment patterns, or other adjustment patterns, can be distinguished with further investigation of this concept. An additional change seems advisable. Because the limitation of selection in the pattern so designated by Spicer is exercised primarily by the recipient society rather than the donor, the term "selective acceptance" is here used in place of "limited selection."

The concept of the acculturation situation and its processes which governed this study might be expressed in diagrammatic form as follows:

Nature of the cultures and Conditions of contact

Contact Situation

Response

Adjustment Patterns

Rejection
Selective Acceptance
Fusion
Compartmentalization
Assimilation

Addition, Replacement, or Alternatives
Addition, Replacement, or Alternatives
Addition
Replacement

Little cultural change
Varying amounts of cultural change
Great or complete cultural change
These hypothetical stages, which are actually conceptualizations of points on a continuum, are initiated by the coming into contact of two cultures through the medium of the members of the two societies. The resulting contact situation comprehends the nature of the two cultures and the conditions of the contact, and, as the cultures are affected by contact with each other, the acculturation situation develops - the stimulus. Reaction to the stimulus -- the response -- may take the form of rejection or acceptance of individual items, elements, traits, activities, or complexes. Complete rejection is seldom achieved, and in any case, some change results, if nothing more than the development of a pattern of rejection where none had existed before. With acceptance, the cultural inventory of the accepting society is changed through addition, replacement, or creation of alternatives, in any combination, and reorientation may thereby ensue. The result of reaction to the stimulus is the establishment of an adjustment for that item of culture, and an adjustment is so established for each element diffused. The dominant adjustment pattern is made up of a number of similar or identical adjustments. A society's dominant adjustment pattern in an acculturation situation is recognized, not on the basis of particular adjustments, but rather on the predominance of one kind of adjustment over others in the over-all response. The use of five apparently mutually exclusive terms to designate over-all patterns of adjustment
should not obscure the coexistence of divergent adjustments within the
dominant pattern, at least during the period of transition between the
stimulus and result and perhaps for a considerable period beyond the
time when it is possible to recognize the dominant pattern. As an ex-
ample, a society which responds to an acculturation situation with an
adjustment pattern of fusion, may also accept, without any appreciable
modification some part of the culture of the society with which it shares
the acculturation situation -- e.g., although the dominant adjustment
pattern of the Yaquis is that of fusion (Spicer 1954a:665), the people of
Potam have accepted money as a medium of exchange but have not yet
fully integrated it into their social and ceremonial systems. Spicer
states (1954b:48):

"For the most part money enters into relations only
between Yaquis and Mexicans, not among Yaquis. It is
quite possible to fulfill one's social and ceremonial ob-
ligations in the village without possessing any money,
through agricultural and handicraft products. Few
actually do so, choosing to meet some of their obliga-
tions by money payments, but one's social position is
in most cases not affected by the fact that money is or
is not used . . . ."

In an acculturation situation the dominant adjustment pattern of
any society develops out of the response of that society to the contact
situation, which has two components. These two components - the

*American Anthropologist*, Vol. 56, No. 4, Pt. 2, Memoir 77,
Menasha, Wisconsin. 1954.
nature of the cultures and the conditions of the contact -- may be of equal importance to the final results of the acculturation situation. The influence of the nature of the culture of either of the societies in contact has been investigated primarily as a problem in personality - Barnouw's investigation (1950) of the reflection of Chippewa personality in their response to contact is a good example of this - on "the general assumption of some relationship between a given culture and the personality of the individual bearers, ..." (Beals 1953:635). The suggestion has been made (Broom, Seigel, Vogt, and Watson 1954:975-979) that this component of the nature of the cultures might also be approached profitably through the medium of such concepts as "boundary-maintaining mechanisms," "'flexible' or 'rigid' systems", and "self-correcting mechanisms." Some attempt should be made to determine the relative importance to the end result of acculturation of these, and other variables within the nature of the cultures in order to develop theories concerning the probable course of any acculturation situation.

Possibly of equal importance in the course of acculturation, and certainly factors which must be considered, are the variables found in the other component of the contact situation -- the conditions under which culture contact occurs. Some of those conditions are:

(1) The geographical location of the two societies. (a) The location of the two societies in relation to each other and in relation to natural barriers, such as a mountain range, would have a bearing on the ease or difficulty of communication between the two societies. (b) Some influence would be exerted on the situation by the occurrence of the contact within a territory over which one of the societies exercised control, (c) If contact took place in an environment to which only one of the societies was adjusted, expectable results could be distorted.

(2) The duration of the contact. The length of time over which the contact endures is of importance, since the acculturation process is not instantaneous, and cannot be said to terminate after any arbitrarily established period of time. Some change occurs as soon as the members of two societies are in communication if it is only the addition of the knowledge of the existence of a different way to dress, or travel, or speak. So long as contact between two societies continues the acculturation situation endures, and the contact may continue indefinitely unless one of them is removed or ceases to exist as an entity. The possibility of culture change as a result of that contact continues so long as the two societies do not merge either through assimilation or sociocultural fusion.

(3) The continuity of the contact. If contact between two cultures through the members of the societies bearing those cultures is
sporadic, although possibly long continued, one might expect fewer changes than if the contact were continuous over the same period of time.

(4) The relationship of the two societies to each other. This has been expressed by Linton (1940:501 et seq.) as "directed culture change" in contrast to "social-cultural fusion," to point out the distinction between that type of acculturation situation which partakes of the character of being managed and that type which might be described as the drifting together of two societies and cultures to such an extent that a new society and a new culture results. That distinction was made in situations involving "continuous first hand contact" only, and the terms for those two types of change, especially social-cultural fusion, cannot be satisfactorily extended to apply to some other contact situations, especially those in which one or the other (or both) of those conditions of continuous, first hand contact did not obtain. These latter situations, where contact was sporadic or intermittent, or where some of the cultural elements of one society were transmitted to another through the medium of the members of a third, were characteristic of the Hispanic contacts with such groups as the Seris, some of the Papagos, the Yumas and other Colorado River tribes, the

Yavapais, the Utes, and the Athapascons, as well as the Gila Pimas. Contact situations with different types of conditions can be shown to have operated at various times in some of those tribes.

The first three variables of the conditions of contact as listed above would influence primarily the amount of change which could take place, rather than the type of change that would occur. Separation by great distances or geographic barrier, contact for only a short time, and intermittent contact even over a longer period would tend to limit the opportunity for any great changes to occur in the culture of either society. As a corollary, continuous proximity for a long period would increase the probability that great changes would occur. The fourth variable discussed -- the relationship between the two societies -- may operate with greater flexibility, i.e., to cancel out or reinforce the expected results of any of the three other variables. A victorious army can, in a very short time, affect great change in the culture of a conquered society. Linton's differentiation between "managed" and "drifting" acculturation may be a more useful approach to the relationship between two societies in contact if it can be extended to apply to other situations than those so defined. It may help to analyze "directed" acculturation on the basis of types of direction, and

1. The specification of only these four variables of conditions of contact is not intended to imply that no others exist, only that these come most readily to mind.
to substitute for "social-cultural fusion" (with its connotation of an adjustment pattern) the concept of "non-directed acculturation," with no specific adjustment pattern implied.

When situations of directed acculturation are considered, two sub-types can be discerned. (1) Those cases in which force was employed, as when the Seris of Sonora were gathered in by the Spanish military and settled for a time at El Populo, Sonora, or when children were taken away to boarding schools against their own or their parents' wishes to "de-Indianize" them. These situations might be characterized as ones of "coercive acculturation." (2) "Persuasive acculturation" would represent those situations in which agents of one society, whether missionaries, administrators, or even military personnel, employed persuasion (i.e., education, sermons, etc.) to direct the acculturation of members of another society. This latter kind of directed acculturation situation has been characteristic of mission programs of the last half-century or more, and, at different times and different places was in effect in previous centuries along the northern frontier of New Spain. Because of the deficiencies of the Spanish military force there, much of the missionary activity was more of the persuasive type than the coercive, and such a program was recommended in 1772:

"I say that the foundations should be arranged in such a way that, without being perceptible, they be found already
"/established/ with the priests /present/, and it is in this manner: Send two Missionaries, one from Caborca and another in San Xavier. These two, the localities already determined, should enter and live some 15 or 20 (days) in one place. They should go little by little, building their hut, as God provides, and acquainting the Indians with the things of God, not trying for large sowings nor baptisms of adults, nor to subdue more than the Children. They should let their works speak, and not acknowledge molestation or much service to the priest, etc.

"These missionaries should return to their respective missions, and afterward make the same trial, and repeat it once again, and it will be seen how insensibly the thing will be found done. But to enter all of a sudden, with all the pompous show, soldiers, and /having/to serve them through necessity, bring them hay, water, etc., and to see in them that which perhaps could not be excused, and other things, and this at the beginning, could be /a/good, but not suave method (and) as that which I have intimated. Regarding work, and subjection to orderly life, it is necessary to see what they /the Indians/ may give spontaneously. The critical point is that they should admit the minister or ministers, and he with labor, or without it in every part, should reap the benefit of his labor and exertions in a humble manner." (Garces 1772 MS).

In any situation of directed acculturation it is possible that there may be parts of the culture of the subordinate society upon which the dominant society does not attempt to produce an effect, either of denial or of imposition. The decision as to whether an effect is attempted, however, would remain with the dominant society.

Directed acculturation is implemented by (1) denials to the subordinate society, i.e., through (a) "withholding" parts of the culture of the dominant society, such as the prohibition of liquor or the denial of the right to vote, and (b) "inhibition," the suppression of parts of the culture of the subordinate group, such as the attempted eradication of the navait (the saguaro wine) ceremony among Piman-speaking groups by the Spaniards. Positive action by the superordinate society in another direction results in (2) "imposition," the attempt to secure acceptance of parts of its own cultural inventory by the dominated group, such as militant conversion to the religious system of the dominate group.

For those acculturation situations in which, due to circumstances in the contact situation, no direction was exercised, the term "non-directed acculturation" might be employed. This term, rather than "undirected," is used because it implies that the absence of direction is produced by chance of circumstances, rather than the reverse situation of deliberately arrived at policy. In this situation, the transmission of items of the cultural inventory of either of the societies involved would be a matter of free choice on the part of the recipient, subject to limitations. It would be governed on the recipient's side by pertinent factors in its own cultural situation affecting the desirability or feasibility of borrowing a particular element. Diffusion
might be controlled on the donor's side by making some elements unavailable to the would be recipient, as, for example, secrecy about a ceremony might operate to prevent members of the recipient society from copying costumes or paraphernalia. Diffusion of cultural elements in a situation of non-directed acculturation, would not, however, be possible through imposition by one society on another, nor would inhibition of parts of the culture of the opposite member occur in such a contact situation.

A fundamental difference between situations of directed acculturation and those of non-directed acculturation is the relationship of the parties. In order for acculturation to be directed, one of the societies must occupy a dominant or superordinate position with respect to the other, and it is thus possible to refer to either of the two as the dominant or the subordinate group. In a situation where non-directed acculturation has occurred or is taking place, the contact occurs between societies neither of which is superordinate to the other. Hence, in the contact between two autonomous societies, e.g., the Apache and the Zuni (Dorr 1953:355-362), such terms as superordinate and

subordinate are not applicable. As acculturation is seldom, if ever, a one-way process, the terms donor and recipient can be used only in speaking of a specific instance of diffusion, whether it be an item, a trait, perhaps even a trait complex, or even an activity. They cannot be used to designate the same group throughout an acculturation situation, and can only be used in situations involving acceptance. Nor are the terms "immigrant" and "native" satisfactory for identifying the societies in contact. In some cases, the identification of either might not be possible; also, the group undergoing the greatest change as a result of the contact may be either the immigrant group (as when the migrant group is a minority group in the new country), or the native group (as when the native group is the minority group in the situation), depending upon the particular situation. Consequently it would be necessary, in speaking of this type of acculturation, to use specific identifications of the societies concerned, rather than generalized terms.

Given the differences between the nature of the cultures of any two societies in contact, and the conditions of any particular contact situation, as two assemblages of factors which must be considered in exploring any case of acculturation (Spicer 1954a:675-676), the course of the response and the adjustment pattern reached will be determined by those variables. Here we are concerned primarily with the differences between the adjustment patterns resulting from directed acculturation and
and those resulting from non-directed acculturation.

Under directed acculturation the policies and values of the dominant society exercise more influence in the situation than under non-directed acculturation. It is possible for the superordinate group to implement, by force or persuasion, denials and impositions designed to secure acceptance of its own values. Since the values of the two societies are rarely identical, the possibility of conflict between the two sets of values exists and is compounded when such policies are put into effect. The subordinate group is forced to live under the two sets of values, where the values differ and no substitution is achieved, in an environment of cultural conflict which produces strain within the subordinate society and between it and the dominant society. Thus, although directed acculturation need not necessarily be disruptive in some aspects, it may set up conflicts within the subordinate society which result in frustrations (e.g., McGregor 1946; Linton 1940:256-258). These frustrations, beginning with individuals (Barnett 1953:135-151) spread until they permeate much of the society. The conflicts and frustrations are brought about in part by denials to the subordinate society, through

withholding and inhibitions, and also through imposition.

As a result of frustration there may occur either on the part of individual members of the dominated group, or of some members, or of the whole group, behaviour which, although varying, is essentially negative. At one end of a possible range of behavior is apathy, such as the feeling that the Indian is doomed to extinction no matter what he does:

We (the Gila Pimas) call the Americans the Long Knives, because everything the white man does cuts the Indian deep. The white man came in and he just pushed the Mexicans out, and it just seems to me that he will go on doing that way, and someday the Indian will be just like the Mexican -- he'll be just pushed out. (Informant's statement).

Withdrawal, as a reaction to frustration, has two expressions. It may take the form of retreat from the dominant society and its culture, as in the case of the Hopis (Dozier 1954:682-683), or the Crows (Voget 1951:221), or it may be expressed in flight from the individual's own subordinate group, as was the case of the Zuni veterans (Goldfrank 1951:78). The attention focussed on nativistic movements, of which

the Ghost Dance may be taken as virtually a classic example, has overshadowed nativistic reactions which, although probably more numerous, did not progress far enough to be identified as movements. Such a reaction was that displayed by a portion of the Southern Utes (Opler 1940:182-186, 200-201; Linton 1940:205-206). Aggression as a reaction to directed acculturation constitutes a phenomenon distinct from aggression resulting from contact and/or non-directed acculturation, discussed below. It includes such motivations as revolt against alien authority, values, and policies, sometimes an effort to regain lost territory, as well as revenge for injuries, and the simple desire for pillage, although not all are present in every situation of revolt. The Pueblo Revolt of 1680 and the Pima Revolt of 1751 were events of this nature.

It has been stated that a contact situation in which neither of the societies concerned was in a position to exert pressure directed toward the acculturation of the other, constituted a situation of non-directed acculturation. In such a situation, even though the values of the two societies might be different, intra-society conflict arising out of that difference is unlikely, because neither society is forced to live under two sets of values. Conflicts, strain, and frustrations are still

possible, but if they occur they stem from different sources than they do in the situation of directed acculturation.

Under non-directed acculturation, inhibition and imposition could not be employed by either society since neither society occupies a position of dominance from which to enforce its policies, so that those potential sources of frustration would not be operative. Withholding, however, could still be a factor as, under the circumstances of this situation, each society may, within the limitations of practicability, determine what of its culture is made available to the other. The secrecy practiced by China regarding the making of silk is a case in point. Thus the chances for frustration to develop are lessened, although still present. Frustration could occur in individual cases, but not include an entire group -- the society is not under stress in this situation, although the individual might be. The inability of a member of one society to obtain a desired item of the cultural inventory of the other conceivably might become a source of frustration to him, so that withholding could be regarded as the source of that frustration. It should be pointed out that the withholding need not be an expression of deliberate policy, but might be circumstantial. The cost of the desired item, for instance, in terms of goods or effort, might be so great as to preclude its acquisition by the individual desiring it.

More information and analysis are needed to ascertain the extent
to which the reactions to frustration -- apathy, withdrawal, nativistic behavior or aggression -- which might occur as society-wide manifestations under directed acculturation, may occur in the situation of non-directed acculturation. Any of them may be displayed by individuals; in such cases they might be regarded as neurotic behavior. It would not be correct, however, to regard Apache raiding activities as a reaction to frustration. Raiding was the means employed by the Apaches to obtain from other societies the material goods which the Apaches coveted, just as in other situations involving other societies the means employed was trading. Apache raiding might be viewed, at its inception at least, as an extension of their hunting activity, and hence an addition to the Apache subsistence pattern. As such it would be recognized as a part of the dominant adjustment pattern of selective acceptance. The extent to which the increase of raiding, both as to scope and as to the number of Apaches involved, which began after the Pima Revolt of 1751, constituted a major reorientation might repay further study.

On the other hand, frustration may lead to productive effort on the part of individuals to obtain a desired cultural item or a satisfactory substitute for it (Barnett 1953:143-145), as when greater effort is expended to produce goods for trade is made, or when hitherto unused local resources are utilized in an effort to reproduce an unobtainable
item. The relief of the frustration attained through the satisfaction of a want, however, does not necessarily improve the individual's economic circumstances as a result of the achievement of his goal:

The heathen Papagos and the rest of this Pima nation also have all these industries. With all of these things they carry on commerce among themselves and with the Spaniards, who give them horses in return. ... By means of the buckskin, mantas, and provisions, they acquire some horses, and this traffic has ruined many, for it frequently happens that after having impoverished himself to acquire a horse or a cow the Apaches steal it in a few days. ... (Barbastro 1793 MS).

Despite the conflicts and frustration producing situations present within the cultures of societies, cultures tend to be stable, while dynamic (Herskovits 1948:20), and the core of the culture tends to be least susceptible to change, particularly to that arising from diffusion (Linton 1936:358-360). As a corollary, then, it would seem probable that the sudden appearance of a major change in any part of the cultural inventory of a society, whether as a result of internal causes or of culture contact, would reflect pre-existing imperfections in that area of the culture. (Linton 1940:467). Some of the characteristics of the response to culture contact of societies having stable cultures are (1) acceptance of elements before complexes, if the latter are accepted (Linton 1940:485); (2) acceptance only of elements or complexes

compatible with the pre-existing cultural configuration - rejection by the Mesquakie (Fox) of the European authority system because it was incompatible with their concept of "authority and organized collective action." (Miller 1955:278) (3) acceptance of elements and complexes at a time and in such an order as would satisfy immediate wants within the accepting society; and (4) stability of the core in the acculturation situation. This type of response would lead to the adjustment pattern of selective acceptance. Whether the selective acceptance would be accompanied or followed by fundamental reorientations within the culture, as was the case with the Athabascans (Spicer 1954a:665, 674-676), would depend on a fifth factor which would constitute a variable -- the strength of the orientations of the culture. What those orientations were might also have a bearing, which is not yet apparent. That the reorientations in Athabascan culture took place in areas where cultural interest was not strong suggests that, under this adjustment pattern, areas of weak orientation would be the first to be affected by selective acceptance. It was a function of the natures of their respective cultures that both the Apaches and the Navahos exhibited extensive reorientation in the areas of the cultures relating to subsistence. In a culture of another configuration, having different orientation, response

might lead to the same adjustment pattern but with reorientations in other areas. Another aspect of reorientation is that of possible shifts in the relative strength of pre-existing orientations without complete loss or change. Despite the addition to Athabascan culture of new subsistence techniques, the techniques of hunting and gathering continued to be employed, although their importance may have been diminished.

It is suggested that the pattern of response which results in the adjustment pattern of selective acceptance is only possible where each group concerned in the acculturation situation has freedom of choice in accepting or rejecting elements of the culture of the other. Such freedom of choice concerning cultural elements exists only in an acculturation situation which is free from direction -- the non-directed acculturation situation. As a result, the stability of either culture is not sufficiently disturbed to jeopardize the continuity of the culture at any given time.

As described below, the late seventeenth to mid-nineteenth century contact between the Gila Pimas and the Hispanic society to the south in Sonora, in contrast to the contact between that Hispanic society and the Indians reduced to mission establishments and pueblos, was a situation free from direction, the non-directed acculturation situation. Neither of the Hispanic groups ever succeeded in taking over the administration
of the Gila Pimas. No missions or presidios were ever established within Gila Pima territory, nor were any mining camps or colonies close enough to the Gila River to make any control possible or necessary. Throughout the period of Gila Pima-Hispanic contact, the former remained an autonomous group whose geographical location and relations with surrounding peoples made them so important a factor in Spanish and Mexican affairs that their good will and political affiliation were of greater concern than any changes in their culture which Hispanic policy might have thought desirable had circumstances been different.

This situation resulted in the response outlined above -- acceptance of only those elements, not complexes, which were compatible with the pre-existing culture, at a time and in the order which the Gila Pimas determined, and the maintenance of cultural continuity throughout the contact period -- and led to the development of the adjustment pattern of selective acceptance. Some cultural elements of the Hispanic society, such as wheat and horses, were adopted promptly by the Gila Pimas and integrated into their pre-existing cultural configuration. Others, such as cattle and plows, although apparently available for most of the contact period, were not adopted until late in the period. Still others, such as the institution of the fiscal or the prohibition of divorce, were rejected, although familiar to them. In
each case, the choice lay with the Gila Pimas, and was exercised at their convenience, rather than at that of the Spaniards or the Mexicans.

The adjustment pattern was not accompanied by any extensive re-orientations in Gila Pima culture, so that the continuity of the culture remained undisturbed throughout the period of Hispanic contact. There were changes in cultural interests but rather in the direction of the reinforcement of existing orientations than in the direction of reorientation. At the beginning of Spanish contact the major orientations were toward curing and economic labor, with a minor one toward war, although one of their values was peace. During the Hispanic contact, curing continued as a major orientation with one added feature -- baptism was accepted as a curing rite, but it was not added to the pre-existing shamanistic practices; the ceremony had to be performed by an individual recognized by the Gila Pimas as a Christian. Economic labor continued as a major orientation, although various aspects of it shifted in their relative importance. At the beginning of the contact period agriculture was of greatest importance, with gathering of wild plant foods, hunting, manufacturing of goods and gift-exchange as minor aspects. The acquisition of wheat increased the importance of agriculture, with an attendant lessening of the importance of gathering and hunting, while increased trade, from Hispanic desire for Gila Pima goods, raised in importance the manufacture of those goods for
trade. The minor orientation toward war in aboriginal times was strengthened by the presence of the Spaniards in Sonora, both directly through the high evaluation placed by the Spaniards and Mexicans on the Gila Pima military operations against the Apaches, and indirectly through their inadvertent fostering of Apache aggression by increasing the number of goods desired by the Apaches and by the weakness of the supposedly protective presidio system.
CHAPTER II

THE NORTHWESTERN FRONTIER OF NEW SPAIN

Geography

Although in theory the domains of New Spain, and later Mexico, reached indefinitely northward, in practice the western end of her northern frontier was limited by a mountain barrier (except in California). An extension of the Sierra Madre Occidental lies across southeastern and central Arizona, its western and southern edge stretching from the headwaters of the Santa Cruz River northward to a few miles east of Florence, and then westward to the Colorado River. Except for a limited occupation of the upper reaches of the San Pedro and Santa Cruz river valleys, brief explorations and occasional - and frequently disastrous - excursions against the Apaches were the only penetrations made into the mountains.

South and west of the mountains lies a lowland desert whose western limit, for the purposes of this study, is marked by the Colorado River. To the south a convenient limit is formed by a low ridge which, generally following the present International Boundary, forces north all the drainage of southern Arizona. From the mountains (and to the river bottoms within the mountain edges) the land descends abruptly to
a level of slightly more than 3000 feet. The further descent to 2000 feet is rapid, except for the tongue of land which projects across the southern part of the state almost half way to the Colorado River forming the ridge mentioned above. From this level the slope is gradual to the Colorado River, which at the International Boundary is approaching sea level. Physiographically this area is part of the Basin and Range Province, (Walker 1944:51-52; Atwood 1940:475-478; Bryan 1925:79-114, 118-135; Wilson 1933:15-18) with restricted and isolated mountains rising abruptly from wide plains of unconsolidated, detrital fill. It is part of the Sonoran Desert whose mass lies to the south, and supports a typical arid growth of brush, cacti and thorny plants. The growing season is long, approaching nine months throughout the area, but rainfall is scarce, averaging no more than ten inches annually. There is little permanent surface water in the area. In the scattered mountains are sometimes found natural rock tanks which may hold rain water for part of the year, but springs are generally lacking. The majority of the drainage lines are occupied by ephemeral washes which only carry

water during the normally torrential rains. This makes doubly im-
tant the location of the rivers.

In the desert land which is of concern here, the permanent water
is represented primarily by the Gila and Salt rivers. These streams
head in the mountains near the present Arizona-New Mexico border,
the Salt to the north and the Gila to the south. They keep generally
parallel courses westward and emerge from the mountains some thirty
to forty miles apart. Not far from the mountains the Salt is augmented
by the waters of the Verde River coming in from the north. A few miles
west of Phoenix, the Salt and Gila join to flow first west, then south
through an S-shaped bend, and finally southwestward to reach the Colo-
rado at the present town of Yuma. From the mountainous area of south-
eastern Arizona two rivers flow to the north. The San Pedro runs its
full northward course within the mountains and adds its waters to those
of the Gila before the latter emerges into the plain. The Santa Cruz
River, however, rises farther west and flows out into the flatter coun-
try to run beside the mountains. Near Tucson it turns toward the north-
west and shortly disperses in a tangle of shallow channels, failing to
reach the Gila. Only in its upper reaches has it any claim to perma-
nence.

History

Within this northwestern frontier of New Spain lived, in prehistoric
times, the Hohokam and their contemporaries. The beginnings of the
Hohokam are still undefined, although they share, in their early stages at least, certain features with the Mogollon who lived to the east of them (Haury 1950:533-543). Through hundreds of years they remained concentrated on the plains along the Gila and Salt rivers, influencing the people around them and receiving, primarily from the south, new elements of culture or new people bringing those elements, but showing also a gradual development generally local in form (Gladwin and others 1937; Haury 1950). In the 12th century a number of new elements appear (Gladwin and others 1937; Haury 1950; Schroeder 1947) dramatically emphasized by the later building of the big houses, of which Casa Grande ruins alone remains relatively intact today. This was followed shortly by an apparent abandonment of the area in the 15th century.

The first historical documents of the area record the Gila Pimas residing in 1694 within a smaller part of the Hohokam area, and to the west of them, the Maricopas, recently arrived from the Colorado River. There is as yet no archeological or historical evidence concerning the hiatus between the Hohokam and the modern inhabitants of the area.


Gila Pima mythology (Russell 1908; Fewkes 1912), however, consistently claims that it began with a successful invasion, precipitating a scattering of the local inhabitants, followed by a subsequent gradual return of at least part of them to their old home. Investigation of that hiatus is needed to relate archeology and history in this region.

The entrance of the Spaniards into upper Sonora in the 17th century brought about the contact of the Gila Pimas with Hispanic culture in a continuum which lasted a century and a half. Although during most of that time there was intermittent discussion of the advisability of establishing both presidios and missions on the Gila River, none was ever so placed. The pressure of French, English, Russian, and American threats to Spain's and later Mexico's, control of the northern frontier, as well as Indian attacks on the interior settlements, were felt more keenly by the authorities residing farther to the south, and the available resources of men and supplies were directed against these external and internal threats. Almost as important was the fact that no one could decide upon the best location for either presidios or missions. Lack of permanent establishments on the Gila River, however, did not preclude contact between the Gila Pimas and the Spaniards. Because of the continuity of the Spanish and Mexican attitudes, aims, and

policies, their contact with the Gila Pimas constitute one situation. But the advent of the Americans - official and unofficial - during and following the Mexican War, marked the start of a new continuum which is still in progress today, and is a complete study within itself.

**Ethnic Content**

This is not the place to attempt to settle the problem of the exact ethnographic delineation of the northern frontier of Sonora at the time of the arrival of the Spaniards; nevertheless, if the Gila Pimas are to be placed correctly in that setting, some attempt must be made to identify the people who shared that country with them. In no direction in which the Spaniards traveled in this region did they find any large area unoccupied. If they labeled some regions *despoblado* (uninhabited), it must be kept in mind that they were "settlement-minded" having come north from the villages and towns of central Mexico, and made little account of groups who depended upon gathering and hunting for subsistence. In order that their efforts be most effective, they sought the centers of population and, even when established in an area, urged the Indians to come in to them rather than attempting to proselytize on any intensive scale in the sparsely occupied countryside. This policy, unfortunately, left poorly identified some of the people outside of the settlements.

The Spaniards made their ethnic distinctions on a linguistic basis.
If two people spoke a mutually intelligible language, they were assumed to be the same people. This was generally satisfactory, except where lack of contact left the language questionable. By 1700 the linguistic distribution had been recognized as consisting of Piman speakers up the western side of the mountain barrier as far as the Gila and Salt rivers, Yuman speakers to the west on the Gila and the Colorado River and northwest between those rivers, and Athabascan speakers to the east of the San Pedro River and northeast of the Gila. This distribution places the Gila Pimas at the northern end of a group of linguistically related people, with all of whom they presumably shared amiable relations. The Spaniards soon recognized that the Piman speaking groups as a whole were opposed to the Athabascan speaking Apaches and were selective in their friendship or enmity with the Yuman speakers.

There is frequent difficulty in determining exactly who was meant by any one term used by the Spaniards. Only as they occupied a territory did they develop any consistency in their designations. Since the Spanish settlements north of the present International Boundary were confined to the central and southern portions of the San Pedro and Santa Cruz river valleys a certain amount of confusion was maintained to the end of the Hispanic period. This was especially true for the region north of the Gila River, an area into which the Spaniards and Mexicans
seldom penetrated.

Beyond the basic division between the upper and lower groups, the Spanish distinctions among the Piman speakers were seldom fine enough for ethnographic purposes. The same writer was rarely, if ever, consistent. Generally the later writers followed Kino (Baltazar 1944:229) and classed as Pimas Altos all the Piman speaking peoples living north and west of an imaginary line drawn from the Gulf Coast about at Tiburon Island northeast to the headwaters of the San Pedro River and then north down that river. As time passed a tendency developed to limit the term at times to those Indians within this area who had been induced to settle around missions and visitas, who were nominally Christians and had more regular contact with the Spaniards than had their kindred who were still considered uncontrolled by the mission system. During the Mexican period the term fell into disuse, being supplanted by the names Pimas Gilenos for those on the Gila River, and Papagos for all others, with the variations on the names noted elsewhere. Thus the Indians within reach of the Spanish and later Mexican establishments in the Magdalena, Altar, Santa Cruz, and San

Pedro valleys all came to be considered the Pimas Altos in the eyes of the Spaniards.

In the beginning years of Spanish contact the inhabitants of the middle Gila River were evidently thought to be of the same tribe as the people of the San Pedro and Santa Cruz valleys. Kino (1948:1:172) designated them all as Sobaipuris in 1697; and the impression of "oneness" produced by the earliest records was evidently strong enough that Bolton (1936:247) accepted their designation as the same people, although he divided them into three branches according to their geographical location in the three river valleys. So long as they remained geographically distinct, the identity of the Sobaipuris of the Santa Cruz and San Pedro valleys was maintained in the Spanish records; but the removal of the San Pedro group into the Santa Cruz valley was followed shortly by their submergence into the general Pimas Altos category which was later transmuted into Papago by the Mexicans.

Originally the term Papagos, with its variations, was applied to those desert Indians south of the Gila River and west of the Santa Cruz to distinguish them from the mission groups. They were not, however, always noted as separate from the Gila Pimas, who were only specified when that distinction was important to the Spaniards, either because

of trips to the Gila River or in relation to the role of the Gila Pimas as buffers against the Apaches. A measure of the difficulty of distinguishing between the Papagos and Gila Pimas from the documents is seen in the frequency with which the Spaniards failed to use any more distinctive terms than those of "Pimas," "Pimas Altos," "Pimas del Norte," or even just "Nortenos" in referring to both tribes or either one. The Papagos were often referred to as "Pimas Papagos" and "Pimas Papabotas," while the Gila Pimas were sometimes referred to as "Papagos" or a branch of the Papagos (e.g., Anza 1930:II:19; Moyano 1807 MS) or even as "Papagos Gilenos" (Anonymous 1849 MS).

Further evidence of the difficulties which arise when trying to consider the Pimas and Papagos as separate people is particularly apparent in discussing a splinter group known as the Kwahatks. They seem to have been a portion of a continuum, with the Gila Pimas at one end and the Papagos on the other, perhaps as a result of the geographical


location of the Kwahatks between the main populations of the other two.
From earliest Spanish contacts to the first years of the 19th century
they occupied a few rancherias in a strip of territory south of the Gila
River and between the locations of the present day Pima and Papago
reservations (Manje 1954:91; Carrasco 1698 MS; Font 1930:IV:30;
Hodge 1910:332; Fewkes 1912:112; Lumholtz 1912:111; Bryan 1925:391).¹
The present-day village of Kohatk (Quajote) on the Papago Reservation
probably represents a survival of these (Moore 1902), as did the
former village of Aktciny - the Santa Catalina of the Jesuits (Kino
1948:I:206, 235, 236), the Aquituni of the Franciscans (Anza 1930:II:128),
the Akutciny of Russell (1908:20, 22). Font (1930:IV:30, 33) apparently
had some difficulty in deciding whether to call them Papagos or Pimas
in 1775, for he used the term "Papago Pimas" in one entry and in an-
other identified them as the "Papagos, who at times live on the Gila

¹ Carrasco, Diego: Diario hecho por el Capitan ... para el
descubrimiento del desemboque del Rio grande a la Mar de la Califor-
nia y puerto de Santa Clara .... Real de San Juan Bautista. Octo-
ber 18, 1698. MS in Arch Gen. Ind., 67-3-28. Transcript in Ban-
croft Library. Font, Fr. Pedro: Diary which was formed on the
journey which was made to Monterey .... In: Anza's California Ex-
peditions, Vol. IV. Translated and edited by Herbert E. Bolton. Uni-
versity of California Press. Berkeley, California. 1930. Hodge,
York, N. Y. 1912.

of Arizona Monthly, Vol. IV, No. 5, pp. 183-187. University of Ari-
zona, Tucson, Arizona. 1902.
River ...." Later American writers coped as they could with the problem -- Russell, Hodge, Lumholtz, Bryan, and Moore, in the citations just given, generally classed them as Pimas who were living in the desert rather than along the river; Fewkes did not commit himself.

The Spaniards found a group of Yuman speaking people already resident on the Gila and perhaps the lower Salt rivers. These people were identified as linguistically and culturally all the same only being "distinguished in name by the district which they inhabit." (Font 1930:IV:57), and also as being identical with the Yumas on the Colorado. However, there must have been some unstated differences among them, for until as late as 1775 (Anza 1930:II:23) the Spaniards were still specifying the presence of two groups there, although Diaz, in 1774 (1930:II:30) listed the "Opas, Tutumaopas, and Cocomaricopas, none of which are different from the Yumas in anything, either in language or in any of their native qualities." The geographical location of the villages along the river was the only reason ever given for these distinctions. When one name was applied to the entire group, that name was generally Cocomaricopas. They had formerly lived on

1. Diaz, Fr. Juan: Diary which was formed ... on the journey, which was made from the Mission of San Gabriel ... to the Presidio of San Ygnacio de Tubac .... In: Anza's California Expeditions, Vol. II. Translated and edited by Herbert E. Bolton. University of California Press. Berkeley, California. 1930.
the Colorado River (Spier, 1933:1-47), leaving there to escape the harrassment of the Yumas and Mohaves, an objective in which they were unsuccessful, for this conflict continued into the mid-19th century. As a result of the continued conflict, by the end of the Hispanic period both the Kaveltchadoms and the Halchidhomas had joined the Maricopas on the Gila River. Spier (1933:1-47) has exhaustively treated the historical background of these Yuman groups, and the reader is referred to his work for detailed information on the ethnic composition of these people at any one point in time. No attempt will be made in this paper to define that ethnic composition during the Hispanic period. The shorter term Maricopas, which is applied to living descendants of those groups, will be assumed in this study to include whichever elements were present on the Gila River.

Located generally around the junction of the Gila and Colorado rivers were the Yuma Indians. Both to the north and south of them on the Colorado were linguistically related people who were seldom visited by the Spaniards and who have no place in this study because of a lack of contact between them and the Gila Pimas. The Yumas, who were so named consistently by the Spanish writers, maintained their position at the mouth of the Gila River throughout Hispanic times.

Kino (1948:1:248) wrote that in 1700 his party, while traveling through the fifteen leagues above the location of modern Wellton on the Gila River, passed several rancherias which had been abandoned during the preceding months. Manje, however, had reported (1954:118-119), on his and Kino's 1699 trip up the Gila River, that they met no human beings (nor did he report any traces of them) in the stretch of "more than 30 leagues" above the Gila-Colorado junction. Later this stretch came to be described by the Spaniards as an empty buffer zone existing because of the "continuous war waged by this tribe [Cocomaricopas] with that of the Yumas, ..." (Diaz 1930:300).

During the entire Hispanic period there was noted the presence of "Pimas" among the Yumas, either as visitors or as co-residents there. This seems paradoxical, in view of the known hostility existing during the same period between the Yumas and the Gila Pimas (Kino 1948:1:197; Manje 1954:118; Garces 1775 MS; Figueroa 1825b MS), and of the friendly relations of the Yumas with the people of the desert southeast of them, who were identified by Garces

1. Garces, Fr. Francisco: Copia de las noticias sacadas y remitidas por el ... de los Diarios que ha formado en las cuatro entradas practicadas desde el año de 68 hasta el presente de 75 a la frontera septentrional de los Gentiles de Nueva Espana. Item No. 6, Bundle H, Bolton Transcripts: Copia de barios Papeles del R. P. Fr. Fran. co Garces, Missionero en la Pimeria alta. Santa Cruz de Queretaro. MS in Eugene C. Barker Texas History Center. Austin, Texas. Figueroa, Jose: letter to Secretaria del Estado y Despacho de Guerra y Marina. Arispe. September 6, 1825. MS in Arch. Mil. Mexico, D. F.
as Papagos, and by Arguello (1797 MS) as "Pimas de las Arenas." It is significant that no instance was found of a Yuma either visiting or living among the Gila Pimas. Perhaps the explanation for these seeming contradictions is that the "Pimas" among the Yumas were members of the Piman speaking sub-group adjacent to the Yumas who came to be known as the Sand Papago (Ezell 1955:370-71). This view also might explain the statements of Manje (1954:112) in 1699, and Garces in 1774 (1930:377) regarding the difficulties their Pima interpreters had with the Pimas among the Yumas. No such difficulty was recorded in relation to the Gila Pimas, although the interpreters with the Spaniards in both cases presumably came from the same general dialect area in Sonora.

The failure of the Spaniards to penetrate the country north of the Gila River leaves the modern student with insufficient evidence for

2. Arguello, Jose Diario: Informe ... de naciones de Indios que habitan las marjenes del Rio Colorado ... Monterrey. February 28, 1797. MS in Bancroft Library. Berkeley, California.
exact ethnographic identifications in that area. Three basic terms were applied to the people there, with Nijora generally applying in the northwest, Yavapai in the north, and Apache in the northeast. Unfortunately, an overlapping of terms and a lack of detailed information makes it almost impossible to distinguish between them.

From the time of its first appearance in the records, the term Nijora (spelled in a variety of ways, including Nixora, Nijora, Nichora) had a dual application, both to captive slaves and to a group living either between the Gila and Colorado rivers or on the latter. Spier (1933:183) suggested that the name had its origin in the Maricopa word for "old" which formed part of the combined word for "old captive." Hodge (1907:489; 1910:78) apparently derived it from the Spanish word genizaros which was applied on the Rio Grande River to Indians captured or bought by the Spaniards. Some support for this second derivation is seen in the application in the Sonoran documents of Nijoras to slaves generally, and in its modern, though infrequent, use in New Mexico as a contemptuous term for a halfbreed (Ellis, personal communications). Whatever its origin, it early came to be applied, not only to slaves, but also to a group north of the Gila whom the Maricopas especially, but also the Gila Pimas on occasion, raided.

Sedelmayr (1746 MS) summed up the situation nicely, and incidentally pointed up the further confusion north of the Gila: "All of these captives are called Nixores down here, although there is another nation, the Nixora Apache, which I saw on the Colorado River." This group can be identified with reasonable certainty as some of the Yavapais.

The problem of distinguishing between Yavapais and Apaches in documentary sources is very vexing. Each historical reference must be evaluated in the light of subsequent information, factual or hypothetical. The basic difficulty lies in the use by the Spaniards of Yavapai and Apache as non-specific terms applying to untamed and predatory people, much as Chichimeca was used farther south. Kino (1948:I:202) wrote of the "Apaches nearest the Colorado," and Garcés (1900:II:452) stated that the "Yabipais Gileños are the Apaches of the Gila," whereas Croix (1941:113) identified the Apaches of the Gila as relatives of the Navahos. As it is not germane to the central problem

here, no attempt will be made in this study to resolve this question. Instead, the rather broad assumptions are made that Yavapais lived to the north of the Gila River, that they probably mixed with the Apaches a certain amount, and that a number of the raids actually credited to the Apaches may have been made by the Yavapais instead.

Despite the possible confusion of Yavapai and Apache north of the middle Gila River, it can be said that Spanish documents relating to the end of the 17th century were correct in identifying as Apaches the marauders who lived in the mountainous regions to the east of the San Pedro River, both north and south of the Gila. Goodwin (1942:68) has suggested that the Apache drift south from the Plains may have begun as early as 1400 A.D. and still have been underway in the late 17th century. In any case, they were occupying the land to the northeast of the Gila Pima, between them and the Moqui, by 1700 (Kino 1948:1:17, 235).

CHAPTER III

CONDITIONS OF CONTACT

The date of first contact between Spaniards and Gila Pimas cannot be determined exactly. Whether or not Marcos de Niza and Coronado encountered them cannot be ascertained with assurance from their accounts, and the interpretations and reinterpretations of their reports by the many historians and anthropologists have confused rather than clarified the question.

In any case, even had the two groups met in 1540, no lasting effect would have been produced if we can judge by the comparable situation among the Yumas on the Colorado River, who were visited by the Spaniards the second time after a lapse of less than a century. In 1699 Manje (1954:115) found among the Yumas only the tradition of having been visited by Oñate and his party in 1604, Manje being told that "this captain had talked with the old Indians, who were already dead,....." That neither Kino nor Manje recorded any similar tradition among the Gila Pimas one hundred and fifty years after they might have been visited by Niza and Coronado is suggestive, but hardly proof one way or the other.
Agents

In the period from the 17th century until 1854, bearers of two different cultural traditions came into contact with the Gila Pimas. Until the second decade of the 19th century, they were exposed to Hispanic culture alone as the non-aboriginal factor. At that time they began to experience (although to a limited extent until 1849) the impact of American culture in the visits of the fur trappers on the Gila River, the traders plying between Santa Fe and California, and the first of the immigrants to California.

During the greater portion of the time in question, the Gila Pimas were in contact with Hispanic culture elements through the Spaniards and Mexicans who visited the Gila valley, or whom the Pimas met when they went south to the mission settlements and mining centers of Sonora. In the Gila valley they met only priests and soldiers, whereas, in the settlements to the south they met not only members of the church and military, but also Spaniards and Mexicans not connected officially with either -- those who were opening up the mines, and their families.

Although under a different political standard, the Mexicans with whom the Gila Pimas had contact essentially continued the type of contact obtaining under the Spaniards -- in many cases the same individuals must have been involved. The total content of the offering of
Hispanic culture had diminished and altered by that time, but the traditions remained the same. With the temporary evacuation of Tucson by the Mexican garrison in 1846, the era of political control by Mexico, nominal as it had been, came to an end.

Until 1821, the Spaniards who visited the Pimas on the Gila River were either missionaries, military officers or soldiers. They were accompanied by Indian servants and guides who, coming from Piman-speaking groups in the south, could serve as interpreters. The soldiers probably included, beside Spaniards or creoles, Indians, such as Opatas, from the already reduced regions of Sonora. The missionaries and officers went as authoritative agents of church and state respectively, although in the absence of a military officer the missionary was empowered to act also as a political agent. On only one occasion, the Anza expedition of 1776, did non-authoritative agents in the form of colonists being conducted to California, meet the Gila Pimas in their own territory. No record has been found that the Spaniards visited the Gila River solely to trade.

After 1821 and independence from Spain, during the years of isolation and turmoil which was Sonora’s lot as a part of the state of Occidente, the contacts between the Gila Pimas and the Mexicans were probably limited to the military (which meant also government officials) who visited the Gila River. None of the Americans who traveled
along the Gila River during this period were official representatives of any government, nor did their presence on the Gila River have any but accidental connection with the Indians there. After 1831 and the establishment of a separate government in Sonora, contacts on the Gila River between the Gila Pimas and the Mexicans evidently became more frequent as Mexican traders began visiting the river and, with the discovery of gold in California, Mexican emigrants began to use the Gila route.

On the occasion of their visits to the Hispanicized settlements in Sonora, the Gila Pimas came into contact with the four agents referred to above. Although there is no record of it, the number and intensity of their contacts with the non-official agents (i.e., the "ordinary citizens") of Hispanic culture were probably considerably greater than on the Gila River. The circumstance that the records of contacts, both on the Gila River and in Sonora, were made by officials, does not mean that the Gila Pimas had contact only with them.

In respect to the Gila Pimas themselves, authoritative agents in the form of the various chiefs and village headmen seem to have been present in every contact between the Gila Pimas and the Europeans. In the majority of cases, however, non-authoritative agents were also present, as where whole villages gathered around the Europeans upon their entrance into Gila Pima villages. At Uturituc Font (1930:IV:42)
noted that they were welcomed by an estimated thousand Indians "arranged in two files, the men on one side and the women on the other." Even on their journeys to Sonora some private individuals may well have accompanied the chiefs as members of the deputation, despite the tendency of the European recorder to set them all down as chiefs. General Cojo sent his son as a news bearer to Tubac in 1769 (Anza 1769 MS)\(^1\); Antonio Azul accompanied his father to Sonora "and visited some of the Mexican towns" while yet a young man with no authority. (Grossman 1873:411)\(^2\). Informants have told of parties going down to trade, to collect bounties on Apache scalps, or "just for the trip", unaccompanied by any person having any superordinate status.

**Intensity**

There are grounds for believing that the Gila Pimas had knowledge of the Spaniards prior to the actual arrival of the latter at the Gila River. In reading the accounts of the visits of missionaries to the settlements of the Pimas Altos generally, one is struck by the frequency with which they were met by the inhabitants performing such acts as kneeling, "placing arches, bowers of flowers, and crosses in

the road and sweeping the trails ..." (Manje 1954:88). These are all culture elements which may not have been part of the indigenous Piman pattern, as it was not reported for all of the Piman villages. Wherever it was reported, prior knowledge of the Spaniards and their ways could either be established or assumed. Such behaviour was not reported for La Encarnacion (Tusoni Moo) on either the 1694 or 1697 visit (Kino 1948:1:128, 173; Manje 1954:87). At San Andres in 1697, however,

the excellent Captain Juan de Palacios (who had been at Santa Maria de Baseraca, travelling in going and returning four hundred leagues) welcomed us with all affection, and with so many arches and crosses that they reached for more than two leagues. (Kino 1948:1:173)

In addition, one is struck by the amount of travel engaged in by the Piman groups. The extent of the communication between the northern Piman peoples and the southern Pimas Bajos can only be guessed at now, but there are indications that the northerners were by no means an isolated group surrounded by unfriendly Apaches and separated from their linguistic relatives to the south by impassable barriers of distance and terrain. Until after the Cerro Prieto campaign of 1769, against the Seris and rebel Pimas, the area south of the Gila and west of the Santa Cruz was not reported to have had Apache depredations. Palacios was probably accompanied by other Gila Pimas on his journey to Bacerac in Sonora (Kino 1948:1:173).
Finally, there were Franciscan missionaries from New Mexico in the Pima towns of Sonora as early as 1640 (Manso 1646 MS; Manje 1954:280-281).

Given the existence of contact between the Gila Pimas and the Pimas Bajos, and the practice of the Gila and other Upper Pimas, of making journeys south into Sonora, it is quite possible that they observed such behavior as that referred to on the part of their southern congeneres when meeting the missionaries. Thus they might have carried back to the north the idea that this was the proper way in which to greet one of the robed foreigners.

The custom of traveling and visiting other groups can be shown to obtain throughout the period of Hispanic contact, and still occurs—witness the annual journey of the Papagos to Magdalena. Repeated mention has been found of parties of Pimas, Papagos, and Maricopas traveling to the religious and governmental centers such as Dolores, Baceraca, Arispe, Ures, Tubac, and Tucson, from as early as 1697 (Kino 1948:248) to as late as 1851 (Bartlett 1854:I:451-452). Also, the evidently close relationship between the Sobaipuris of the San Pedro valley and those of the Santa Cruz must be kept in mind, and

their drift north to the Gila River from Tucson as recorded by Anza (1770 MS), with their implications for either direct contact of the Gila Pimas with the Spaniards, or for the transmission of elements to the Gila peoples via the Sobaipuris.

Whether the initial contact between the Gila Pimas and the Spaniards took place in 1640 or not, such contact probably began to occur with increasing frequency after the arrival of Kino in Sonora in 1687. As the Jesuits extended missionary activity northward, the possibility of contact in Sonora between the Spanish advance party and the visiting Gila Pimas increased.

Between 1694 and 1700 Kino made five visits to the Gila valley. As he usually travelled with at least one other clergyman, and often with more, and with a varying number of soldiers, as well as Indian servants and interpreters, the total number of Pima-European contacts, admittedly of brief duration, during that period was large in comparison to those of the past. The Europeans were observed at that time by whole settlements of people instead of by a few men who had traveled south. In fact, the intensity of the contact taking place during this time, when measured in quantitative terms, was the highest of the period of Jesuit contact and higher than any until Anza.

led his party of colonists to California via the Gila River. If the Gila Pima-Sobaipuri intercourse was as frequent in Kino’s time as in Anza’s a half-century later, then some information about the Europeans continued to spread northward as a result of such incidents as the working party from San Xavier del Bac which went to Dolores, Remedios, and Cocospera (Kino 1948:II:34). Nevertheless, the contact continued to be sporadic and of brief duration.

For a time after Kino’s death there ensued a period of stagnation. According to Decorme (1941:II:421), the more distant pueblos, which had been raising stock, cultivating land, building houses, and chapels, and congregating in expectation of the promised missionaries, "cooled off and began to disperse as before." Some contact, however, was evidently kept up between the missionaries and the Gila Pimas. Velarde (1954:240) described Campos as visiting Casa Grande several times, and in connection with the solicitation of Campos for missionaries by the Hopi (Velarde 1954:264-265; Decorme 1941:II:422) he was described as "known and beloved" of the dwellers along the banks of the Gila River. When the project of opening up a road to Moqui was


revived in 1723, a presidio, La Asuncion, was proposed as a starting point to be established at the mouth of the San Pedro (Decorme 1941: II:422 and map, p. 423).

In 1732 a resurgence of effort at extension of the mission frontier began, as a result of which Segesser was established at Bac, with Casa Grande as one of his visitas (Cañas and others 1929:229), although there is no record available as to whether he actually carried his duty that far. In 1742 Keller penetrated at least as far as the Salt River in an unsuccessful attempt to reach Moqui (Alegre 1842:III:282) and in 1744 Sedelmayr himself (1746 MS) made a similarly unsuccessful attempt, following his journey across Papaguería to the Gila River and down it to the Colorado River. Neither of these expeditions was accompanied by a retinue of the size of that which accompanied Kino and Manje on their visits to the Gila Pimas.

Following this brief flurry of activity the Jesuits apparently gave up the effort of extension, and even may have lost some ground, for a mid-18th century report painted a pessimistic picture of Sonora as lacking colonists, cities, industries, and other necessities.


for civilization. (Gallardo 1750 MS). 1 Decorme (1941:II:427-428) sup­posed that there must have been expeditions to the Gila River in 1753 and 1755, on the basis of records in a book of baptisms which listed the names of five villages on the Gila River (erroneously sup­posed by him to have been Maricopa, although some of the names are those of known Gila Pima locations). No accounts, however, of any such journeys have been found, and experience with the baptismal records of the northern missions indicates that those baptised came to some center, such as Bac, for that purpose. A punitive expedition may have penetrated Papaguería to the Gila River in 1756 as a con­sequence of a Papago uprising, but the only record is an unconsulted letter by Sedelmayr in the Ysleta archives (Decorme 1941:II:443, f.n. 29). The last two Jesuits to write, Pfefferkorn and Nentuig2 apparently never got as far as the Gila River judging from their re­ports, and Decorme (1941:II:463 map) confirms this conclusion as far as Nentuig is concerned. Thus, from 1745 until the entrance of the Franciscans in 1767, no certain record of contact has been found, although it may well have continued to occur in the form of visits by the Gila Pimas to the mission centers of the south.

2. Nentuig is now generally accepted as the author of the Rudo Ensayo — see Decorme 1941:II:461 fn.
With the expulsion of the Jesuits in 1767 and the entrance of the Franciscans into Pimería Alta came another period during which Gila Pima-Spanish contacts increased in number. The total of individuals involved in some of the contacts was probably about the same as those during the visits of Kino's time -- the large retinue accompanying Anza in 1776, with 240 colonists, soldiers, and priests probably presented to the Gila Pimas more European contacts at one time than they had ever before experienced. Other than this instance, however, the contacts on the Gila River with Europeans were apparently limited to those with one man - Garcés. During the period between his arrival at San Xavier del Bac in 1767, and 1781 when he was killed by the Yumas, this priest visited the Gila River at least four times. He habitually travelled with only an Indian or two as company, or alone if necessary. On the return trip from California in 1774, the rest of Anza's first expedition went on to Tubac, but Garcés stayed behind on the Gila River with only one companion -- "a servant of the señor commander, who invited himself to stay." (Garcés 1930:376) Garcés, however, decided to go to the Colorado River, and left the servant behind, "because he would serve me rather as a burden than as an advantage, he being so timid and pusillanimous, ...."

At the same time, visits of the Gila Pimas and Maricopas to the missions, presidios and visitas were evidently continuing. As
examples, there are the communication to Anza at Tubac in 1769 of the news of white strangers on the Colorado (Anza 1769 MS) and that of a Pima victory over Apaches in 1773 (Urrea 1773 MS). The former case is a good illustration of the facility with which news traveled through even yet unreduced Pimeria Alta. The news was carried to Tubac by the son of Cojo, at that time governor of the Gila Pimas, who had heard it from the Maricopas. They, in turn, had been told by a neighboring group, presumed by Elizondo (1769 MS) to be the Nijora.

After Garces no record has been found of visits by Spaniards to the Gila River until in the 1790's. According to Alaman (1825 MS) the fathers Bringas and Llorenti visited the Gila Pima in 1795. Documents and a map, apparently relating to this expedition, are reported to exist in a private collection but have not been examined. The Anza

2. See below, this chapter, for a discussion of Spanish mission policy, and use of the term "reduced."
expedition of 1775-1776, however, marked the high tide of Spanish efforts to reduce the Gila valley people -- after that, talk of such reduction, projects for both forts and missions, continued to occupy a large portion of the documents written then. Reports were submitted to the authorities in Mexico, but the preoccupations of Spain were directed elsewhere. The trouble-shooter, Anza, had been sent to New Mexico and there was no one in Sonora with the drive necessary to overcome the inertia imposed by the distance of the northwestern frontier from the governmental seat in Mexico, and no money or men with which to build and man the presidios or missions (Croix 1941:132-230). Contacts probably continued to occur as Gila Pimas and Maricopas continued to make their journeys to the south. The bounty for Apache scalps, which in 1781 was three pesos (Croix 1941:138) probably was an added incentive for the trips on the part of the Gila Pimas until American times. It is questionable whether the Gila Pimas realized in 1821 that they ceased being vassals of the crown of Spain and became nominally subjects (but practically were regarded by the Mexicans rather as allies) of the new nation of Mexico.

There are fewer records available for the much shorter time of the Mexican contacts with the Gila Pimas, but they seem to indicate that contacts between the Mexicans and the Pimas on the Gila may even have increased. In addition to journeys such as those
of Romero (1824 MS)\textsuperscript{1} in 1823, and Caballero (1825 MS),\textsuperscript{2} Mexican influence was reinforced in 1825 by the negotiation of a treaty between the Mexicans, the Gila Pimas, the Yumas, and the Maricopas (Figueroa 1825b MS). Afterward, Comandante General Figueroa, counting on a peaceful attitude on the part of the Yumas, traveled by way of the Gila River to meet Captain Rivera, who was coming from California, at the Gila-Colorado junction. The Yumas, however, had broken the treaty by hostilities against the Maricopas within a few weeks of its ratification, and Figueroa turned back without waiting for Rivera, returning south by way of the Camino del Diablo (Figueroa 1825c MS).\textsuperscript{3}

This period saw the beginning of contact of the Gila Pimas with the culture of the Americans, in the visits of the fur trappers to the Gila. The nature of the contact, however, was such as to produce little change in the culture of the Gila Pimas, and the Hispanic influence continued to outweigh it. Numerous Mexicans passed along the Gila River on their way to California, (Zúñiga 1948:46)\textsuperscript{4} as emigrants

1. Romero, José: Letter to Mariano de Urrea, Governor of Sonora. San Gabriel, California. April 6, 1824. MS in private possession.
2. Caballero, José de: Estadística del Estado Libre de Sonora y Sinaloa, .... Mazatlan. 1825. MS in Bancroft Library, Berkeley, California.
3. Figueroa, José: no title - diary of his expedition to the junction of the Gila and Colorado. October 1825. MS in Arch. Mil. Mexico, D. F.
during the unsettled times in Mexico following upon independence and during the gold rush (Escudero 1849:142). The people of the Santa Cruz and San Ignacio valleys attended the annual "fair" held on the Gila River (Escudero 1849:142), and traders, such as those seen by Bartlett (1854:II:258-259), probably visited the Gila Pimas there at intervals. A detachment of soldiers was apparently stationed for a short time on the Gila River "to observe or harass" the passage of the American military parties (Cooke 1848:557), although this practice does not seem to have been in effect when the American gold-seekers passed along the Gila.

By way of summary, the contact between the Gila Pimas and the Spaniards and Mexicans was at first hand, either on the Gila River or in the settlements to the south, but, rather than being continuous in the sense of two cultural groups occupying the same area or living in juxtaposition, it consisted of a number of contacts, each of short duration, but repeated over a long period of time -- repetitious contact, rather than continuous, but repeated often enough and over a span of time great enough for the transmission of culture elements

from the Hispanic culture to the Gila Pimas. Whether or not there was exchange of culture elements in the opposite direction would be interesting to know, but that problem is not within the province of this study.

Relationships

In their contacts with the Gila Pimas the Spaniards seem never to have applied the pressure, sometimes amounting to coercion, for conformance with Hispanic values which they applied upon occasion in the regions to the south. This was probably a result of their never having established themselves in the midst of the Gila Pimas and hence not achieving a position which enabled them to do so. Some pressure in the form of persuasion and reward was applied in the realms of religion and politics, but even that seems to have been of a mild sort. When one of his visits coincided with a navait ceremony Garcés (1900:II:439) only "complained of these excesses to the governor" although drinking, especially in connection with such affairs, was deplored and discouraged to the south. Pfefferkorn (1949:252), on one occasion, "broke all the jugs with a staff, and spilled the entire supply of drink," and on the following day had some of the participants publicly flogged by the village magistrate.

The Gila Pima were "informed of the mysteries of our Holy Faith,"
to use the oft-repeated phrase of the Spaniards, through Pima interpreters from the southern missions at first (Manje 1954:77-78; Bernal 1856:799; Cañas and others 1929:230), although missionaries made the learning of Pima one of their first concerns (Cañas and others 1929:232). The arrival of a Spanish party always attracted a large crowd of Indians, and messengers were occasionally sent out to nearby rancherias to convoke an assembly. Garces (1770 MS) made use of the nightly gathering of elders, which he said the Indians called "the wheel" to preach. Baptism seems to have been held out to a few adults as a reward for sufficient acceptance of the new doctrines (and abjuration of the old beliefs?).

As far as practicable under the circumstances, Spanish colonial policy (Gibson 1952:89, 123; Dunne 1955:44, fn. 18) was followed on the Gila River as elsewhere. "Rods of office" were presented to individuals occupying the status and functioning in the role of government


2. Rueda - as the Indians had no word for wheel there is some doubt about this; informants have stated that those gatherings were called simply hōmapa, "meeting."

officials (e.g., at Sudaisón, or San Andres del Coaytoydag, in 1697 -- Manje 1954:90). Where the officials deemed necessary by the Spaniards did not exist the symbols of authority were bestowed upon individuals chosen by the Indians or appointed by the Spaniards with the approval of the Indians. Significantly, the adults chosen for baptism usually were the leaders.

Under the Mexicans there apparently was not even that much pressure toward acculturation. Rewards, in the form of clothing and presents, were occasionally granted to influential persons. What impetus toward acceptance existed probably arose from desires for items (goods and techniques) seen by the Gila Pimas during their visits to the frontier settlements. The Americans of the early 19th century apparently made no effort to influence the Indians toward either the acceptance of new traits or the elimination of existing ones. A possible exception to this was Yount (Clarke 1855 MS), who claimed to have so cowed the Indians by violence that "they and their children and their children's children should never again molest a pale brother of the Rising Sun."

The Spaniards regarded the Gila Pimas as subjects and vassals of the king and hence themselves as members of the politically dominant group, but it is possible that the Gila Pimas did not have the

same conception as the Spaniards of the oaths of fealty they were recorded as swearing, or of a sovereignty stemming from so distant a source. Officially, the Mexicans regarded them as nationals of Mexico from 1821 on, and at different times, as citizens as well. Actually they came to be treated as a virtually autonomous group allied with Mexico as a result of the 1825 treaty (Figueroa 1825b MS).

The question of social dominance or equality could hardly have arisen under the conditions along the Gila River before the last half of the 19th century, and we have no clue to the status occupied in the frontier settlements by the Gila Pimas in this respect. Generally, the Spaniards and Mexicans traveling in the country of the Gila Pimas were in large parties which presumably maintained a certain amount of solidarity which kept them from complete mingling with the Indians. Garcés, however, was a notable exception; his approach seems to have been somewhat different from that of the other priests in that he supped and slept and talked with the Indians in a more intimate way than was the custom of the other Europeans.

**Spanish Mission Policy**

Although no mission or presidio was ever established among the Gila Pimas, the project was doubtless in mind from the time of the first contact, and conditioned the approach of the Spaniards to the Gila Pimas. "Reduction" was the term used for the process of
inducing the Indians to settle in a restricted locality where the establishment of a mission was possible. Sites for missions were chosen not only with an eye to the water and arable land, but also to the accessibility of Indians. Existing large settlements of Indians were often chosen because the locality offered the three desiderata of water, land and people for a mission or visita (a settlement at which a chapel was built, where the missionary visited at intervals to conduct religious instruction and services, marry, baptize, and bury the dead).

It was necessary to have the Indians around the mission where they could be under the eye of the missionary, in order to carry out the process of reduction. There they could be taught enough doctrine to justify their baptism, aboriginal traits deemed undesirable by the missionary could be discouraged, and ways held desirable by the church and the state as represented in the ecclesiastical and lay authorities could be inculcated. While one of the aims of this system was admittedly income for the crown, the effort to improve the lot of the Indians according to the Spanish view is too often ignored or deprecated (Bourke 1894). Indians who had thus settled around a mission or a visita and had progressed far enough to have been baptized were

considered as "reduced"; those still living beyond reach of the missionary and not yet thus indoctrinated were "unreduced." The term is not exactly the same as the English "civilized," because one of the essential requirements was conversion to Christianity, which to the Spaniards meant Catholicism, and baptism.

Reduction to mission life was normally made as attractive as possible to the Indians in order to persuade them to come in voluntarily, rather than be herded in by force as was occasionally done. On his first visit to San Xavier del Bac (one of those chosen for the reasons outlined above) on August 23, 1692, Kino gave a good illustration of this approach. He preached Christianity to the Indians, of course, but he also gave them some background information concerning the conversion in the past of the Spaniards themselves and of the coming of the Spaniards to the new world to carry on the work. Then he dangled the bait (1948:I:122-123):

And I showed them ... how ... in the land of the Pimas ... there were already many persons baptized, a house, church, bells, and images of saints, plentiful supplies, wheat, maize, and many cattle and horses; that they could go and see it all, and even ask at once of their relatives, my servants, who were with me.

Bernal (1856:799-800) displayed the lay military approach in 1697 at Suamca, upon learning that some families had left the town:

I gave them to understand that they are obliged to live together in their pueblo, within the sound of the bell (y estar a son de campana), and to make their houses of earth and flat-roofed,
gathering their grain in them; that they should obey their missionary father, their governor and the other officials; that they should build community houses, providing the Spaniards who stop in them with wood and what ever else is required.

While there was found no such detailed statements of the mission policy of the Jesuits as the following one by Arricivita (1792:446) for the Franciscans, they apparently operated along much the same lines.

Of the temporal goods the Visitador ordered that the missionary fathers should take charge, and that they should make known to the Indians the convenience and utility which they have in the sowing and cultivation of the community cornfields, in order to have insurance or as deposit of some portion of grain and provisions. ... These plantings which the resident missionaries solicit and have solicited each individual Indian to make, they take very little advantage of through the motives and disorders touched on lightly in the April report, for which reason they are daily supplied from the common goods, and when they work for the community the governor or alcalde orders that food be provided for those of the pueblo. All the sick are assisted with food or nourishment proper to their infirmity; widows, aged, and incapacitated are succored in so far as the abundance or scarcity of the fruits and goods of the mission permit; and the missionary collects and cares for all the orphans ....

About 1786 Hidalgo (1786? MS) issued a set of Orders and General Instructions for the government of missions, consisting of one

2. Hidalgo, R. P. Fr. Miguel: Ordenes y Instrucciones generales ... hecha por el ... para que arreglados a ellas governen sus Misiones en lo sucesivo. 1786. MS in Bancroft Library. Berkeley, California.
hundred specific recommendations which give a remarkably detailed picture of ideal practice at a mission. In general, considerable thought was taken for the amor proprio and physical well-being of the Indians, as well as for their moral and spiritual welfare. There were a number of proscriptive regulations against nudity of Indian women and the association of the sexes in church, work, dances or ball games. Instruction in reading and writing was to be an integral part of each mission program. Pelota was to be allowed the Indians every Sunday and solemn feast day, and they were to be given seed to use for their bets. Contests (the nature of which was not specified), dancing, and painting were to be prohibited, especially to the recently converted; liquor was to be prohibited to all, but especially to the recently converted. The old were to be cared for to keep them out of the mountain rancherias.

In so far as the official policy was effective, despite actual practice, this attitude continued to obtain during the Mexican period, although largely nullified by lack of means, secularization of the missions, and the general unrest in Sonora (Bancroft 1889:II:628-692)

1. Whether this was the Spanish game of that name, much like handball, which is still played in parts of northern Mexico and New Mexico, or the Indian kicking ball race, could not be determined.

And while it had no direct effect on the Gila Pimas in their own country, this was a part of the attitude they met on their visits to such places as Tucson, San Xavier, Tubac, et al.
CHAPTER IV

HISTORICAL CHANGES IN THE CONTACT SITUATION

Spanish Period

There was a difference in the attitudes with which the Spaniards viewed the Gila River and its people before 1767 and after, which is to say, a difference between the approach of the Jesuits and the Franciscans. The former focussed their attention on the reduction of the tribes to mission status with an eye for the enrichment of the crown, but their labors were performed primarily for the good of humanity as they saw it:

From these good beginnings we promise ourselves, by divine grace, that there will be planted and grow a fruitful Christianity with the good effect which we may hope to make sure through the docility of the nation and the unalterable fidelity which for so many years it has maintained for our Catholic monarchy and the friendship with the Spaniards who trade in these parts, from where it is more than probable that the faith will be extended to the neighboring nations. Nor shall we omit to continue acquainting the Pimas with social, civil, and political life, stopping little by little the evil customs of their paganism and barbarity, so that they may be much aided by the acts of justice, the rules and good documents left them by Captain Anssa .... (Canas and others 1929:233).

The goals of official Spanish policy are expressed in the Recopilación de Leyes de los Reynos de las Indias, which, as it was added to and amended, eventually ran through several editions, and furnished the basis for Indian policy in Mexico after freedom from Spain (Bourke 1894; 193-201; Ezell
Briefly, the desired end was to bring the Indians into the commonwealth, rather than to shove them aside or tolerate their existence while taking over the country. That this ideal fell short of achievement, and was ignored by many seeking wealth in mines or cattle and agriculture, was true often enough, but as the missionaries were the ones who had the most to do with the Indians in the beginning years of the reduction of Pimeria much of their initial success can be attributed to their implementation of the provisions of the Recopilacion.

As stated, the attitude embodied in the Recopilacion continued to be held throughout the Hispanic period -- from beginning to end there was at least that much continuity of approach to the Indians. After the expulsion of the Jesuits in 1767, however, a new factor was introduced to influence the attitude of the Spaniards, and after them the Mexicans, toward the Indians. The Franciscan period was marked by growing concern over dangers to New Spain from other European powers with colonies in North America, from the increasing strength and effectiveness of the Apaches, and by increasing awareness of the strategic importance of the Gila River and the Pimas thereon in the political situation.

developing in western North America. This view was also the one held by the Mexicans from 1821 to 1853, when the Gadsen Purchase was negotiated, and it has probably been of little consolation to either that the course of history demonstrated the accuracy with which they foresaw developments. As the 18th century drew to a close, however, the problem of this northwestern frontier of one of her colonies could not compete with the larger problems of Spain in the world situation resulting from the War of the Spanish Succession, the revolt of the Netherlands, the increase of piracy, the revolt of the English colonies on the Atlantic seaboard, and the French Revolution. Despite the bonanza of the "bolas de plata" at Arizonac (Anza 1929:237-238), not enough easily garnered wealth in the form of gold, silver, pearls, etc., could be sent out of Sonora to interest either Madrid or Mexico in providing the means to make secure this frontier. The return which local authorities claimed might eventually come from the long-term investment in reducing the tribes of Pimeria was evidently too distant a goal.

Not enough colonists had been persuaded to enter the country to supplement the settled agricultural tribes, whose numbers had been diminished by epidemics (Velarde 1954; Pfefferkorn 1949; Garces 1770

The difficulty the Spaniards had in getting colonists for Sonora is illustrated by the suggestion of Sanchez Salvador (1751b MS) that "mujeres perdidas" be brought in as wives for male Europeans and Indians to colonize the Gila and Colorado valleys. In 1764 Padre Lizasoin (1856:699) thought it a good idea that all the poor, idle, and unemployed of the cities of civilized Mexico be sent out to the frontier provinces, including Sonora, as colonists. At the same time the mission and mining centers now contained attractions for the raiding tribes in food supplies, weapons, clothing, and livestock which either had not previously existed or had been too scanty to make raiding profitable enough to supplant hunting and gathering and incidental horticulture as a subsistence pattern.

Thomas (1941:15-69, passim) and Secoy (1953, Chapter 7, passim) have shown how widely rooted were the causes of increasing Apache


raiding in northwestern New Spain. Consequently, although the expenditure for missionary labors and military forces were probably actually increased somewhat as time went on, they were inadequate to counter effectively the Apache aggression. Gallardo (1750 MS) pointed out that whereas, according to Kino the Apaches had only penetrated as far south as Bacanuche, in 1750 they were raiding all the way into Ostimuri. Bohorquez (1792 MS) attributed the extension of Apache raiding into the western half of Sonora to the Pima revolt of 1751. The disorganization resulting from the continuing hostility of the Seri and Pima rebels began the weakening of the province which was aggravated by the Cerro Prieto campaign against them in 1769. Although the Seris and Pimas were brought under control, all hope of control of the Apaches was lost as a result of that campaign (Baldarrain 1792 MS). The operation was carried out at the cost of so weakening the garrisons of the crescent of forts extending from Buenaventura to Tubac that the Apaches not only could cease to fear the punitive expeditions which once had held them in check to some extent, but could even overrun the


the presidios themselves. Croix (1941:151) candidly informed Galvés in 1781 that "in Sonora there is no line of presidios and ... it does not have troops either." As a consequence, the actual number of Apaches engaging in raids increased greatly, and with that their scope and effectiveness, while at the same time the former size of the garrisons was inadequate and could not be sufficiently increased.

There was a brief spurt of interest and activity on the part of the authorities which resulted in the Anza expeditions to California in 1774 and 1775-1776. Anza himself, however, had borne the cost of his first exploration of the overland route to California (Ugarte 1787 MS), otherwise even that would not have been accomplished. One of the results of the 1775-1776 expedition was the establishment of the mission among the Yumas, a step in the direction of securing this frontier. Almost immediately, however, the Yuma revolt and destruction of that mission in 1781 put an end to efforts, almost even to talk of and plans for, the advancement of the frontier to the Gila and Colorado, a project which had been urged since 1746 (Sedelmayr 1746 MS) or before. In spite of the presidios of Tucson, Tubac, and Altar, the Apaches carried their depredations south up the Santa Cruz River into Sonora, causing the abandonment of mines, farms, and even entire towns. Spanish control

of Sonora had thus reached a precarious position by 1781 (Croix 1941:49). Baldarrain (1792 MS) a decade later regarded all Sonora north of Arispe as lost to the Apache. This was still the situation as described by McLean sixty-five years later (1859 MS):

They leave their families in these fastnesses and range in war parties as far as the river Yakee and the port of Guymas and may be said to hold military possession of the State of Sonora.

Through all this, however, the Gila Pimas held on. While the combined populations of Tucson and San Xavier del Bac shrank from over 400 families in 1775 to only 100 in 1790, the Gila Pimas were not only able to retain their territory and defend their unfortified villages against the Apaches, they were able to carry out their own punitive expeditions against them.

**Mexican Period**

Mexican freedom from Spain in 1821 cut off even what support and encouragement had been given the northwestern frontier by the vice-regal government in Mexico, and threw the responsibility of developing the frontier on the new nation. The chaotic conditions following independence were not conductive to the accomplishment of a task which the greater

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resources and better organization at the disposal of Spain had been unable to achieve in a century and a quarter. Despite being thrown together under the name of the State of Occidente, Sinaloa and Sonora never accepted political unity -- the inhabitants continued to regard themselves as primarily Sinaloenses and Sonorenses (Bancroft 1889:II:635-638, 644-646). The government convened variously in Alamos, Fuerte, or Cosalá in Sinaloa throughout the lifetime of the state, and from 1821 to 1831 Sonora was virtually without an organized government.

During this period, when Sonora was a part of the political unit of the state of Occidente, and even later as an independent state, governmental functions seem to have been largely in the hands of the military, in the person of the Comandante General, and were discharged by the officers of the presidios. Although Sonora sent deputies to the state legislature, the government was preoccupied with the affairs of Sinaloa and, except for Indian troubles, the affairs of Sonora were largely ignored. Sonoran dissatisfaction with that state of affairs resulted in the division of Occidente in 1831 and the consequent creation of Sonora as an independent state with a more centrally located government, sitting in Arispe, Ures, and finally Hermosillo.

Throughout the reorganizations necessary to set up the new nation of Mexico, and in it the state of Occidente, concern for the Indians was evident. Although the northwestern frontier had been of more immediate
importance to the people of Sonora than to the larger group encompassed by Occidente, the separation of Sonora from the larger state did not produce any real change in this attitude of the Sonorenses toward the problem of the Indians as a whole and of those of the Gila River in particular. This was not altruism. Occidente, and later Sonora, found herself with an Indian population far in excess of the gente de razon (the "civilized people" - Elias 1826 MS; Ezell 1955b: 201) and with little hopes for European settlers to supplant them.

The official attitude toward the Indians in the state of Occidente had been essentially that of Spain as expressed in the Laws of the Indies, amplified and given more specific application in the laws enacted by Occidente for the elevation of the Indians of the state to the status of full members of the commonwealth (Ezell 1955b). Sonora continued in effect some of the code of laws enacted while it was a part of Occidente and shortly after the division created the office of "protectors of the indigenes," whose duties were to direct the Indians in all the civil affairs concerning them (Gobierno 1835a MS). As these men, however, were to serve without pay it does not seem likely that they were very

effective. A more meaningful move was the legislative declaration in July, 1835, of the status of the Indians, apparently made in an attempt to clarify the wording of the state constitution which made no distinction between Indians and other classes of citizens (Gobierno 1835b MS):

"There is no difference between the indigenes, whether under the bell or now with the name of citizens. As a consequence, all shall enjoy the fruits of the lands of their respective pueblos."

The "pueblos of Pimas" were exempt from the regimen imposed on the Opatas, apparently as a result of some action taken by three individual Indians (Pimas?) who were declared to be "at liberty, as well as any others of their tribe, to follow the constitutional order" (Gobierno 1835c MS). Although "Pimas" in this act may not have been intended to comprehend the Gila Pimas, the act is instructive in illustrating the Mexican attitude toward the non-predatory Indians.

The ideal of raising the status of the Indians no doubt fell far short of realization. This does not alter the fact that, in contrast to the


2. "Under the bell" (bajo de campana) was the phrase applied to those living around the missions.

attitude prevailing in the United States whereby Indians were regarded as annoying occupants of lands desired by white settlers, the Indians of Occidente and Sonora were to be protected and encouraged to remain in possession of their lands in order to build up the population of the state in default of the colonists who had settled the United States. Not that the Mexicans, any more than the Spaniards, would have been averse to colonizing the Gila and Colorado valleys at the expense of the Indians, but they had an equal lack of success in getting settlers despite repeated recommendations and proposals to that end (e.g., Zúñiga 1948:61-67; Uraia 1843 MS; Anonymous 1849 MS). Generally the Mexicans recognized the unlikelihood of their getting colonists to go to the frontier, and turned their attention instead to means by which the loyalty of those Indians could be insured to Sonora.

That the friendly attitude of the settled agricultural Indian nations, including the Gila Pimas, was dependant upon the security of their territory was early recognized by the Mexicans. Even before Occidente enacted the laws attempting to secure their land to the Indians, Elias (1826 MS) expressed an opinion which set the tone for the laws to follow:

The odium which the indigenes maintain toward all whites is too well and widely known. Those who observe them at close range agree that there can be no other origin than

1. Uraia, Jose: letter to Ministro de la Guerra y Marina, Mexico, Guaymas. May 18, 1843. MS in Centro de Historia, Castillo de Chapultepec. Mexico, D. F.
the fear that they will be despoiled of their lands... Therefore, placing them in possession of their lands will destroy in them the distrust in which they live.

In view of the experience of the Mexicans with the Opatas and Yaquis, for example (Bancroft 1889:II:651-653; Spicer 1954b:27-36), it is safe to say that the amicable relations between the Gila Pimas and the Mexicans continued until almost the end of the Mexican period primarily because the Mexicans were never able to implement their plans for colonization of the Gila valley. Had they done so, it seems almost certain that conflict would have arisen.

Besides the constant danger of the Apaches, Sonora carried over from Spanish times an increasing preoccupation with the threats to her territory represented by European nations and the rapidly expanding young nation in North America, the United States. In Sonoran eyes, Texas joined the "North Americans", the French, the British, and the Russians, as possible menaces to Mexican territory after the imprisonment of Austin in 1832 and the revolt of the Texas settlers (Alaman 1825 MS; Zúñiga 1948:141-142). Consequently, such occurrences as the coming of the American fur trappers to the Gila and Salt rivers, the beginning of the use of the Gila River as a route to California in the late 1820's, and the visit of the U. S. Corvette "Dale" to Guaymas in 1843 enhanced the importance of the Gila valley, and the Indians living in it, to Mexico generally, to Occidente especially, and to Sonora specifically
All the aforementioned factors - Sonoran helplessness before the Apaches, failure to colonize or even establish presidios on the Gila River, a population largely Indian (concerning some of whom the Mexicans were not completely confident), and fears for her territory - combined to give the Gila Pimas a crucial importance in Mexican eyes. Whether the Mexican attitude toward them was friendly or hostile was determined in a large part by the Gila Pimas themselves. With their position on the Gila River they were on the most practicable route overland between Sonora and California -- due to the nature of the terrain and the scarcity of water the direct road from Caborca to the Colorado River via Sonoyta, the Camino del Diablo, was dangerous. The Gila Pimas controlled the only source of food for men and animals on the better watered and more level northern route, and were the guarantee of that route against Apache attack. In effect, they controlled the land route to California and the peaceful use of that route depended upon them.

Because the Gila Pimas maintained the same peaceable and friendly attitude toward the Mexicans as they had toward the Spaniards, the Mexicans valued them the more highly (Elias 1825 MSS; Comaduran...
In them was seen the necessary barricade of the northern frontier against the enemies of Mexico, Indians and white. The Mexican respect for Gila Pima military performance against the Apaches and for their social order, in comparison with the nations around them, distinguished these Indians in the Mexican view. It was this value placed by the Mexicans on the Gila Pimas which caused Simon Elias Gonzalez, the first governor of Occidente, to begin the negotiations with the Gila Pimas who came to Arispe, thus leading to the treaty of September 2, 1825. This was a treaty of mutual peace and alliance, signed by Jose Figueroa, Comandante General of Sonora, for the Mexicans and Jose Gavilan, Maricopa, for the Gila Pimas, Maricopas and Yumas, and was acknowledged by the President of Mexico (Figueroa 1825a MSS, Anonymous 1825 MS). This estimate of the Gila Pima nation and of the treaty so concluded may explain Zuniga’s reference (1948:68) to "the republic of the Gila" in his recommendations for


2. Figueroa, Jose: correspondence with the Secretario de Estado y del Despacho de la Guerra y Marina, Mexico. Arizpe. 1825. MSS in Arch. Mil. Mexico, D. F. Anonymous: memorandum from the office of the President of Mexico. Mexico. 1825. MS in Mil. Arch. Mexico, D. F.
advancing the line of presidios northward.

The first evidence found so far of doubts on the part of the Mexicans regarding the good faith of the Gila Pimas appeared in 1843, although it would seem probable that the Mexicans had begun to feel uneasy three years earlier. In 1840 Gandara began stirring up the Yaquis and Papagos for his own ends (Bancroft 1889:II:658-659). In 1843 he sent agitators to the northern and western Papagos and to the Gila Pimas in an effort to secure their cooperation with promises to sweep the gente de razon from Sonora and seize their property (Comaduran 1843a MS). On the 4th of March Culo Azul, General of the Gila Pimas, and Antonio, General of the Maricopas, had come to Tucson and informed Comaduran of these events and of the arrival of stolen stock on the Gila River, at the same time giving personal assurances of neutrality. Culo Azul, however, feared that the temptations would induce some of the Gila Pimas to join in the revolt, despite his efforts to restrain them. A week later, as a result of information given by a Papago arrested on suspicion of being an agitator, Comandoran dispatched an Indian of Santa Rosa (who had come with the prisoner) as an emissary to the Papago towns as far as the Gila River. He was given a paper, the contents of which were explained to him, and instructions to seek the neutrality of those Papagos. No messenger was sent to the Gila Pimas, for a rather surprising reason. Comaduran (1843b MS)
... also wanted to send another paper to the Gileños in charge of the Gov'r of the pueblito of Tucson, a man of influence with them -- but he in good faith excused himself on acct of ill-health, adding that he feared his parientes, because they were very savage, the interpreter saying he would feel safer among the Apaches.

Although Comaduran believed the Gila Pimas were in revolt, no hostile actions were ever attributed to them, and the uprising was brought to an end in the following year (Bancroft 1889:II:661) without any evidence that the Gila Pimas had actually participated (Velasco 1850:160). That they did not in fact join in the uprisings of the 1840's is the more probable in view of their later refusal to join either the Mexicans or the Americans.

Bigler (1872 MS) reported that "the Pimo chief said... his men should not fight that they never had shed the blood of any white man..." Their stand seemed to have been one of neutrality in those internecine struggles in Sonora, rather than any partisanship. The Gila Pima governor, Culo Azul (Comaduran 1843a MS), expressed the attitude that they "should keep their arms for use ag. t their enemies the Apaches." This is in agreement with their suggestion to Font (1930:IV:34) "that the Spaniards should live on the Gila River, for then the soldiers could fight with them against the Apaches."

When the American Army reconnaissance parties passed through northern Sonora in 1846 Comaduran evidently made an effort to secure

the aid of the Gila Pimas in action against the Americans (Bigler 1872 MS; Cooke 1848:556-557). Again, the policy of neutrality was observed insofar as the Gila Pimas refused to join the Mexicans in any military action against the Americans, and informed the Americans that they had no wish to get involved in the struggle. The Indians departed from a completely neutral stand, however, when the Gila Pima leader, in response to "a threatening demand" for the mules and goods left for Cooke by Kearney, refused to deliver them to the Mexicans "and expressed his determination to resist, by force, any attempt to take them". (Cooke 1848:557). In the light of their reputation with the Mexicans for honoring contracts and obligations (Zúñiga 1948:10; Escudero 1849:142; Anonymous 1849 MS), their behavior might be interpreted as adherence to principles rather than partisanship toward the Americans. Nevertheless, later statements of the Gila Pimas suggest that they were not at all unwilling to see the Americans come.

They represented to the Major ... they were exceedingly anxious to see the white men come and live amongst them to teach them how to make corn, big horses and everything they did. How long before they are coming? How many moons? and such questions. (Couts 1848 MS).

They appear to have welcomed rather than resented the final change in the Hispano-Gila Pima contact continuum brought about by the war between Mexico and the United States ending with the Treaty of Guadalupe Hidalgo and followed by the Gadsden Purchase which brought that continuum to an end.
In summary, then, it can be said that the changes in the contact situation during the Hispanic continuum which had the greatest effect on acculturation were the changes in policy and attitudes of the immigrant groups rather than any changes in the personnel of the agents or of the conditions of contact. These changes in policy and attitude were largely brought about by factors outside of the Gila Pima-Hispanic situation itself, although they did effect it. The favorable position in which the Gila Pimas found themselves as guardians of the northern frontier at the beginning of the contact period was steadily improved with time as the number of threats against that frontier increased. The failure of the Spaniards and the Mexicans to colonize the Gila valley prevented the development of any situation of conflict between them and the Gila Pimas which might have influenced the course of acculturation. Consequently the Gila Pimas found themselves ever more highly valued and their good will more assiduously courted as time passed. Nevertheless, Spanish, and later Mexican, failure to keep promises made to the Gila Pimas brought about a change of attitude on the part of the Indians which was directly contrary to the Hispanic desires. The neutrality which the Gila Pimas had maintained between striving factions among the whites was overtly maintained to the end, but covertly they evinced a readiness to exchange Hispanic association for American.
American Influence

The entrance of the fur trappers among the Gila Pimas in the 1820's probably had little, if any, lasting effect. No record has ever been found that the trappers brought anything to the Gila valley specifically for trade, other than the few goods necessary to obtain food from the Indians. Neither is there any indication that the Gila Pimas had anything other than food, and a river with some beaver in it (apparently the Gila Pimas did not collect beaver skins themselves), which the trappers wanted. The visits of the trappers seem to have been of short duration; the practice followed by those farther north, of wintering near trapping grounds, sometimes with a local tribe (and often with an Indian woman as a winter-wife) evidently was not practicable on the Gila River, probably because of the short winter and the small supply of beaver. In the main, contact between the fur trappers and the traders passing along the Gila River and the tribes dwelling there was accompanied by little overt hostility, if not always marked by actually friendly relations. The tendency, apparent in both the Pattie (1930) and Yount (Clarke ca. 1855 MS) accounts, to regard all Indians as potentially hostile, and the behavior of the Patties (1930:104) of announcing their approach by firing a few shots in the air, the suspicion with which the

Yount party met the Gila Pimas, did little, however, to endear the whites to the Indians. Probably some such behavior on the part of the whites lay behind the fight between the Robidaoux party with the Maricopas and the later fight between the Yount party and that group. Such behavior was so at variance with all previous records of the attitudes of the Gila Pimas and the Maricopas toward the white men (and most of the subsequent accounts, until the whites began to make nuisances of themselves) that some cause for it must be sought in the conditions surrounding these particular meetings.

With the appearance of the army of the United States on the Gila River in the form of the parties of Kearney and Cooke, beginning in 1846, the period of Hispanic influence virtually came to an end, although traces of it can be followed as late as the last decade or so of the 19th century, and the period of American influence began.
CHAPTER V
THE GILA PIMAS

Identification

Along with many other Indian groups, the name by which the Pimas have come to be known is in many ways a source of confusion. It is now used to designate only those people dwelling on (or originating on) the Gila and Salt River reservations in south central Arizona who speak a Piman dialect, as opposed to the Yuman language of their co-occupants, the Maricopas. The name, however, was used by the Spaniards and Mexicans in referring to any or all of many groups in the territory from the Gila River south into what is now Sinaloa. Some of the first Americans to enter the Santa Cruz valley used Pima to identify the Indians as far south as San Xavier del Bac and the Tubac-Tumacacori locality (e.g., Goulding 1849 MS). Consequently, unless some such qualifying term was added, as in the designation Pimas Sobas, only the ex post facto knowledge gained from previous reading of other documentary sources and from the work done by Sauer (1934) and Kroeber

enables one to identify the group mentioned in the particular document being read.

Velarde (1954:221), as early as 1716, gave the derivation of the word Pima as being from the word pim, the negative in their language, and said that their name for themselves was Otama (singular) and Ootama (plural), but failed to give its meaning, which is "person" or "people" as the case may be. Actually, Pima is compounded from two words, pi (the negative prefix) and matc ("know" or "understand"). The Gila Pimas name for themselves is Akimult O'otam, River People, as distinguished from the desert Papagos (Russell 1908:19-20 and informants' statements).

Kino (1948:1:127-129, 172, 186) and Manje (1954:123, 124) called the Gila Pimas indiscriminately Pimas, Pimas Sobaipuris, and Sobai-puris. As time passed the Gila Pimas were also referred to, when singled out for mention apart from the rest of the Piman-speaking groups, as Pimas Altos, Pimas Papagos, Pimas Norteños, Pimas del Norte, Pimas del Gila, Pimas Gileños, and even Gileños, although the latter term was also applied to the Apaches in the mountains on the upper Gila River. American writers added such terms as Pimos and Pimaws, a reflection of the difficulty felt by English-speaking persons to find a

satisfactory written symbol for the sound of the last syllable of the word, and even to identify it as other than the English phoneme "uh."

In 1919 Bolton (1919:50) at least gave currency to, if he did not originate, the application of the term "Pima proper" to the Gila Pimas, reinforcing this in 1936 (1936:247-249, f. n.) while pointing out at the same time that the Spaniards had used the term Gila Pimas (i.e., Pimas Gileños) to distinguish this group. In this study the terms Pima and Pimas will be used in the larger sense as applying to all speakers of Piman, and where necessary for the sake of clarity specific terms such as Gila Pimas, Sobaipuris, and Papagos. Linguistically the Gila Pimas were linked by the Spaniards with the other Piman groups of Sonora (Manje 1954:102; Villaseñor 1746:395; Diaz 1930:261). Modern classification (Kroeber 1934:3) includes them in the Pima-Tepehuan group of the Uto-Aztecan speech family which extends as a rather narrow strip from the Gila River to Tepic, broken in the Yaqui-Mayo-Fuerte rivers region by the Cahita-Opata-Tarahumara group of languages.

Throughout the Spanish and Mexican records, the only cultural distinctions made between the Gila Pimas and the other Pimas Altos was

that based on differences in their ways of life arising from the various environmental and geographic circumstances. None of the later writers disagreed with Kino's designation (1948:I:172) of them as Sobaipuris except on a geographical basis.

There is no information in the Spanish records concerning the racial affiliations of the Gila Pimas. Except for their darker skin color they were included, on overt physical characteristics, with the rest of the natives of Sonora. Hrdlicka (1908:10), on the basis of work done shortly after 1900, stated that although "the Papago were supposed to be physically identical with them, such is not the case, ..." despite inter- marriage and a linguistic relationship. He concluded instead that the Gila Pimas were closely related physically to "the ancient people of southern Utah in the north, the Tarahumare in the south, and the great race of American dolicocephals in general."

In physical appearance the Gila Pimas "are of good stature and are well built" (Velarde 1954:240). Font (1930:IV:44) considered that they were "rather corpulent Indians, and are very ugly and black, especially the women. And perhaps because they eat ... coarse things, when they are assembled together one perceives in them a very evil odor." While

they were "somewhat darker than the rest of the nations of New Spain" (Velarde 1954:240). Font is the only one to have considered them ugly or to have been offended by their odor. In 1846 the Americans considered them a "fine-looking race of people ... many of the women and children quite pretty and graceful" (Tyler 1881:234).

**Population**

No very accurate figure can be given for the aboriginal Gila Pima population as a number of factors tend to obscure the evidence. (1) None of the first group of travelers -- Kino, Manje, Bernal, and Carrasco -- visited all of the villages on any one trip; in fact, they may have missed some settlements entirely, as both Sedelmayr and Garcés visited villages never seen by this first group. (2) Even figures which look as if they might be accurate (e.g., 130 for Tucsan, given by Manje, 1954:87) must have been estimates, since it is doubtful that the adults, let alone the children, stood still to be counted. (3) There is no evidence as to exactly who was counted at any one village. For one figure (Manje 1954:122) "men" is stated as the units counted, but generally the term used is "souls", and Manje wrote (1954:127) that the women were not counted on one trip "because they would not allow themselves to be seen," although this may have applied only to Papagos and Yumas. On the other hand,

news traveled easily and it is possible that others than the actual inhabitants of a village were present, thereby increasing the supposed population of that site. (4) Succeeding reports show that epidemic diseases such as smallpox and measles began to spread through Sonora quite early. Although the first actual report of an epidemic among the Gila Pimas was not made until 1770 (Garces 1770 MS), considering the communication maintained by them with the Pimas Altos, it is more than probable that the new diseases had reached the Gila River before that, thereby producing a temporary reduction of population just prior to the entrance of the Spaniards.

Table 1 presents the figures given by the four writers for the period 1697-1699. Kino (1948:1:127-129) gave no figures for his first visit in 1694, although he did for later trips (1948:1:186, 206).

As neither Bernal nor Carrasco saw all of the known villages, their figures do not, of course, represent the total population. Kino and Manje did travel along the entire length of the settled territory except for the "bend" of the Gila River, but never in a continuous journey. The three trips involved, none of which included all of the villages, covered a period of two years. Because of the sporadic reporting, we are forced to combine the figures to arrive at even an approximation of aboriginal Gila Pima population. The 1699 figure for Aktciny is doubtful, because both Kino and Manje gave 1000 as the combined populations of San Clemente
and Santa Catarina (Aktciny); Manje's 1697 figure would seem more nearly correct. Manje's figure for the village at the bend of the Gila River was specifically stated as men only. If Bernal's report (1856:803) for Santa Catarina of "twenty-five houses and one hundred

<table>
<thead>
<tr>
<th>Town</th>
<th>Manje(^a) (1697)</th>
<th>Bernal(^b) (1697)</th>
<th>Carrasco(^c) (1698)</th>
<th>Kino(^d) (1698)</th>
<th>Kino(^e) (1699)</th>
<th>Manje(^f) (1699)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aktciny</td>
<td>200</td>
<td>100</td>
<td>...</td>
<td>...</td>
<td>500?</td>
<td>500?</td>
</tr>
<tr>
<td>(Sta. Catarina)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuscan</td>
<td>130</td>
<td>...</td>
<td>...</td>
<td>*</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Tusonimoo</td>
<td>200</td>
<td>200</td>
<td>300</td>
<td>*</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>(Encarnacion)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sudaison</td>
<td>400</td>
<td>400</td>
<td>500</td>
<td>*1000</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>(San Andres)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comac</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>200</td>
<td>...</td>
</tr>
<tr>
<td>(San Bartolomé)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>150</td>
</tr>
<tr>
<td>Bend of Gila</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>150</td>
</tr>
<tr>
<td></td>
<td>930</td>
<td>700</td>
<td>800</td>
<td>1000</td>
<td>500?</td>
<td>850?</td>
</tr>
</tbody>
</table>

b. Bernal 1856:805, 806.
c. Carrasco 1698 MS.

souls" shows a typical family size, this would mean an average of four persons to a house. Because Bernal's figure is the lowest, it seems safe to use it as a basis for estimating the actual size of the village at the bend. If half of the men were heads of families, this would give a figure of 300 persons for that village.
Thus we are left with two ranges based on censes taken over a period of three years, not all the villages listed having been counted in any one year. Kino's combined figures provided an estimate of 1500 or so; Manje reported 1280 or 1580, depending upon the actual population of Santa Catarina. Taking the lowest and the highest figure given by any of the writers for each village visited (Table 2), a range of from 1180 to 2000 is reached for the aboriginal Gila Pimas. While this is in substantial agreement with the variation presented by the figures given by Kino and Manje, it would appear that those figures are too low. The failure of this group of travellers to reach all of the villages and the possibility that some, if not all, of the women and children were not seen, even at the villages visited, leaves open the question of the exact population of the Gila Pimas at the end of the 17th century.

During the Hispanic period the size of Gila Pima population seems to have increased despite their exposure to new and epidemic diseases.

### Table 2. Lowest and Highest Figures Given for Gila Pima Villages

<table>
<thead>
<tr>
<th>Village</th>
<th>Lowest Figure</th>
<th>Highest Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aktciny</td>
<td>100</td>
<td>500</td>
</tr>
<tr>
<td>Tuscan</td>
<td>130</td>
<td>200</td>
</tr>
<tr>
<td>Tusonimoo</td>
<td>200</td>
<td>300</td>
</tr>
<tr>
<td>Sudaison</td>
<td>400</td>
<td>500</td>
</tr>
<tr>
<td>Comac</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Bend of Gila</td>
<td>150</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>1180</td>
<td>2000</td>
</tr>
</tbody>
</table>
This, however, may be more apparent than real.

Until the first census actually taken, by Mowry (1859 MS) in 1859, no very accurate figure can be given for the Gila Pimas. The early Jesuit counts may be low, and after Kino's time there are no Jesuit figures for the Gila Pimas alone. Manje (1954:264) estimated that after disease had taken its toll there were 10,000 natives in Pimeria Alta. In 1745 Escovar (1745 MS) gave a comparative estimate - after listing 3000 Seris, Tepocas, and Salineros, and 6000 Papagos (2000 at San Xavier del Bac) he wrote:

... all these gentiles enunciated are very few if compared with those who come next, and live neighboring with them on the banks of the various rivers, and especially on the Gila and Colorado.

Sedelmayr's passage (1746 MS) on population is rather obscure:

... so many thousands of souls who live on the banks of the said Gila and Colorado rivers and at the disemboguement. I do not set down their number, for I have formed no concept of it in order not to deceive myself, and I do not wish to guess in order not to deceive others, but if I am pressed, I will say that they will exceed ten thousand souls. The rancherias which are on its southern side, of Pima Papagos who live in dry and sterile and inadministrable lands descending to the river from Casa Grande downstream, and because of this are most of them pagans, will greatly augment this number.


Evidently he estimated 10,000 on the banks of the Gila and Colorado rivers, which would have included Gila Pimas, Maricopas, and all the lower Colorado River tribes, but not the Kwahatke. Pfefferkorn (1949:264) believed that Sonora had lost over half its population, and he understood from Kino's and Sedelmayr's reports that "the still unconverted Indians inhabiting the banks of the Gila and Colorado rivers, ... also show a declining population." He listed (1949:265) wars, disease, and a low birth rate as possible causes.

In 1770 Garcés (1770 MS) made a special journey from San Xavier del Bac to the Gila River to baptize those dying from a measles epidemic which was sweeping the Santa Cruz and Gila valleys. He reported that many died, despite having received baptism, but gave no population figures.

Table 3 presents the only population figures for the villages as given in the Anza expedition diaries. For the sake of comparison, where a Jesuit period village, previously listed in Table 1, seems to approximate the location of a Franciscan village, the Jesuit name is given in parentheses. The figure for Aktciny is an approximation, based upon an estimation of four in each of the sixty families reported by Anza. The figures given by Anza and Font for 1775 represented only

1. This is on the basis of Bernal's 1698 report (1856:806) of "twenty-five houses and one hundred souls."
part of the people - for several villages no figures were ever given. Although Pitac is one of these, it was declared to be larger than the next village below it, and Napcub was specified to be large. It is possible, however, that the inclusion of these neglected villages might not have greatly increased the total figure. From Kino's time to Mowry's, accounts showed the Gila Pima liking for viewing the passing show, so that virtually the entire population of the tribe may have been present.

### TABLE 3. FRANCISCAN FIGURES FOR GILA PIMA VILLAGES

<table>
<thead>
<tr>
<th>Town</th>
<th>Anza&lt;sup&gt;a&lt;/sup&gt; (1774)</th>
<th>Anza&lt;sup&gt;b&lt;/sup&gt; (1775)</th>
<th>Font&lt;sup&gt;c&lt;/sup&gt; (1775)</th>
<th>Garces&lt;sup&gt;d&lt;/sup&gt; (1775)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquituni</td>
<td>240?</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>(Akctciny)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pitac</td>
<td>(large)</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>(Tucsan)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pitaique</td>
<td>*</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>(Tusonimoo)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saboy</td>
<td>*</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Uturituc</td>
<td>*3000</td>
<td>1000</td>
<td>1000</td>
<td>...</td>
</tr>
<tr>
<td>Tuburs Cabors</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Napcub</td>
<td>...</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>unnamed village</td>
<td>+</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>unnamed village</td>
<td>+</td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>Sutaquison</td>
<td>+2000</td>
<td>800</td>
<td>500</td>
<td>...</td>
</tr>
<tr>
<td>(Sudaison)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Komatk</td>
<td></td>
<td>...</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>(Comac)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5240</td>
<td>1800</td>
<td>1500</td>
<td>2500</td>
</tr>
</tbody>
</table>

<sup>a</sup> Anza 1930:II:18-19, 125-128.
<sup>b</sup> Anza 1930:III:18-20.
<sup>c</sup> Font 1930:IV:42-43, 45.
<sup>d</sup> Garces 1775 MS.
at only two or three centralized points to see the strangers. Because of his peregrinations, it is probable that Garces' total figure is more reliable than the others. The range of estimates is even greater in this time span than in Jesuit times, but more important is the fact that the figures are larger.

After the Anza expeditions there is little information on Gila Pima population for seventy-five years. The only Hispanic estimate given was in an official report for 1849 (Anonymous 1849 MS). Unfortunately, the figure of 10,000 was not for the Gila Pimas alone, but for the Gila Pimas and Maricopas combined. Actually, a certain number of Maricopas were probably included in most of the previous estimates, too. The only American diarists who gave figures for the Gila Pimas apart from the Maricopas were two members of the Mormon Battalion with Cooke in 1846, and Bartlett of the Boundary Commission in 1852. Bartlett's figure (1854:II:263) of 1400 seems extremely low. Bigler (1872 MS) estimated their number at 5000, Tyler (1881:234) at 4000. In an official census taken in 1859 only three years after the transfer of the area from Mexican to American hands, Mowry (1859 MS) gave the first definite figure - 3770. Regrettably, no village breakdown is possible. Until after the establishment of the reservation in 1859 the Americans lumped all the settlements together as "Pimos Village," letters from early American officials sometimes being so datelined.
Again the range of estimates is considerable, but with the reasonably precise figure provided by Mowry, we have an absolute measure.

From the foregoing tables and discussion it appears that the population of the Gila Pimas steadily increased from the time of the first European contact, approximately one thousand over the first seventy-five or so years, and nearly thirteen hundred over the next eighty-five years. This increase was in spite of the introduction of epidemic diseases and the continued attrition of the guerilla wars with the Yumas, Yavapais, and Apaches. If that were actually the case, it represents an uncommon situation in Indian-white contact. It is suggested, therefore, that the earlier estimates fell considerably short of the actual number of Gila Pimas at the time, although there is little basis for estimating what they might have been.

Health

What the health condition of the Gila Pimas was aboriginally is hardly to be learned from the scanty records in the Hispanic documents, for those could as well refer to European-introduced diseases as to aboriginal. The earliest specific reference found to illness among them is that of Bernal (1856:804) in 1697, in which he merely noted that a sick woman was brought to Kino at Tusonimoo for baptism. Some form of eye trouble such as trachoma may have been present, for at San Mateo de Cuat below Gila Bend Manje (1954:120) saw a blind Indian. Presumably
this would have been a Maricopa. The prominence given later in the record to curing shamans, however, indicates that health was one of the preoccupations of the Indians.

Physical defects among the Gila Pimas seem to have been rare. Although he referred to him by the name of Cojo, "cripple," in 1769, Anza (1769 MS) did not give any clue as to why the governor of the Gila Pimas was so called. This was one of the only two references found to a physical defect among the Gila Pimas themselves. The other reference was that of Eccleston in 1849 (1950:210): "... & I only noticed one deformed person among them." If Pfefferkorn's statements (1949:187, 188) apply to Gila Pimas as well as to the other Pima Altos, still-born or crippled children were rare and there was "scarcely to be seen among them a feeble or a deformed person."

Apparently the Spaniards brought to the Gila Pimas at least two new diseases - measles and smallpox - judging by the increased mortality rate among the general Indian population as acknowledged by the Spaniards. Whether Velarde's statement (1954:247) in 1716 about the diminishing numbers of the Indians due to epidemic diseases refers to the Gila Pimas

as well as the other tribes he mentioned is not clear. A few years later Manje (1954:273) wrote that:

... although this part /Pimería Alta/ has been discovered and the Holy Gospel and missions established for 30 years they are of small population. It has diminished from the beginning of conversion, for the more it is arranged that they sleep in high beds, raised above the ground, well dressed and in comfort, the more they seem to sicken.

Pfefferkorn (1949:216-217) recorded epidemics of unknown diseases in 1760, when the mortality rate was not high except among those already weak and old; in 1765, however, it was severe. He credited smallpox with causing the greatest havoc, but did not cite any particular years of epidemics. In 1770 a measles epidemic swept down the Santa Cruz River to the Gila, and the Gila Pimas sent a request to Garcés that he come and baptize those who were ill. He noted (1770 MS) that on his way back to San Xavier del Bac the Papagos told him that the major portion of the children baptized had died, as well as one old woman. In 1775 he wrote (1775 MS) that the epidemic of 1770 had finished off a good portion of the Indians of the missions. Later that same year, at the Lagunas del Hospital, Font (1930:IV:49) wrote that the "Gilefios ... enjoy good health and are quite fat and robust, although in so large a concourse as assembled on our arrival I did not see many old men or old women."

The Gila Pimas appear to have been, on the whole, a healthy group, aside from the epidemic diseases introduced among them, albeit unwittingly, by the Spaniards.
CHAPTER VI
HABITAT

Territory

When first contacted by the Spaniards the Gila Pimas lived in sprawling villages scattered along the Gila River from the Casa Grande ruins to the vicinity of modern Gila Bend -- essentially the same area where their settlements are located today. Their affiliates, the Kwahatks occupied the low lands to the south of the river.

Kroeber has stated (1953) that where a sedentary agricultural people occupy a valley adjacent to a roving, hunting and gathering people living in the mountains, the waterless slope between the mountains and the plains of the valley (the Spanish bajada) is regarded by both groups as within the territory of the farmers. The mountaineers rely on the game found around the springs and mountain streams, on which they also depend

for water, and wild products are gathered within reach of those sources of water. The farmers are not limited to their crops for subsistence, for in case of crop failure, or as a supplemental food, they resort to the wild products not found in the farm lands.

This principle of the occupation by the farmers of the bajada as well as the river bottoms is borne out by the Hispanic evidence concerning the territory over which the Gila Pimas maintained control. Although their villages and fields were primarily located within a comparatively limited area along the river (Manje 1954: 87-88, 123), the Gila Pimas may be said to have occupied the lowland valley in south central Arizona, from the Salt River south to the higher country of the Papagos, and from the southern bend of the Gila River east to the mountains. It is interesting that the Yavapais distinguished between the Gila Pimas and the Papagos by calling the latter the "high Pima" (Gifford 1932: 182). The greater proportion of them actually lived along the river, but a sub-group, the Kwahatks, lived to the south in the lowland desert, practicing akchin agriculture, but occasionally coming to dwell along the river for temporary periods.


2. This is a method of dry farming practised at places where a seasonal supply of water was available, such as the mouth of ephemeral washes; hence the name, from the Papago ak tcín, "mouth of the wash."
This territory encompassed an area approximately ninety miles from east to west by sixty miles from north to south.

During the period of Hispanic contact there appears to have been a slight withdrawal on the part of the Gila Pima villages from the river area along the bend of the Gila River to the west. This was accompanied by an eastern movement of Maricopa villages as more Yuman speakers moved to the Gila River from the Colorado River, either directly or after a sojourn elsewhere (Spier 1933: 1-47). The designation of the villages in the Gila bend area as Maricopa (Opa, Cocomaricopa) by the members of the Anza expeditions to California (Bolton, 1930) indicates that the Gila Pimas were no longer exclusively occupying that portion of their aboriginal territory. It is not clear whether a shift of Gila Pima settlements is represented by the absence of San Bartolome de Comac in the records after its location in 1699 by Kino (1948: I: 197) and Manje (1954: 122) three leagues up the Gila River from its junction with the Salta River. In 1746 Sedelmayr (1746 MS) wrote that, travelling west from Sudacsson, fifteen to twenty miles east of the junction, one was "leaving now the Pima rancherias ..." The only subsequent records seen for the Hispanic period of visits to the general area of the junction are those of Garces

(1770 MS; 1930:388). He found Maricopas there in 1770, but failed to mention any Pima settlement, and on his 1774 passage through named several towns without designating them as to tribe. Although it is possible that he failed to visit the village, it does not seem probable that he would have ignored it had it been there. If his guides (Gila Pimas on the first trip, Maricopas on the second) told him of such a place he failed to record it. Such a statement as that of Font in 1775 (1930: IV: 48), that the Lagunas del Hospital marked the western extent of the Gila Pimas must have come from either Garces or the Indians themselves, since Font himself had never previously been in the area. Therefore, it appears that the Gila Pimas had ceded the region west of this to their friends, the Maricopas.

Other than the above contraction in the west to make room for the Maricopa, there seems to have been only minor shifts in village locations until the arrival of the first Americans. The eastern-most village on the river was always described as being in the vicinity of Casa Grande ruin, and Gila Pima possession of the country north to the Salt River and east to the mountains was never seriously questioned. Bartlett's camp (1854: II: 241-242) on the Salt River was visited by a

1. Bolton placed the Lagunas del Hospital two miles northeast of Pima Butte.
hunting party. Emory (1848:81), emerging onto the bajada from the mountains east of Florence, crossed the "neutral ground, about the dividing line of the possessions "claimed by" the Gila Pimas and Apaches. Unlike many other tribes, the Gila Pimas suffered no perceptible dislocation from the time of first contact by Europeans until the settlement of the Salt and Gila valleys by the Americans in the latter half of the nineteenth century. What changes occurred there seem not to have been part of the Hispanic acculturation situation, but rather an adjustment to aboriginal conditions.

Description

Except for the changes brought about by white occupation, the country looked to the Spaniards much as it does today. The river bottoms and the long slope up to the mountains (the bajada) lie at an average elevation of less than two thousand feet. These almost level detrital plains, characteristic of basin and range topography, are cut by the beds of the Gila and Salt rivers, and broken here and there by isolated small mountains rarely ascending to more than four thousand feet. Manje (1954:87) noted that "It seems that the land has a saline character," and Font's complaint (1930: IV, 47, 50) reads distressingly familiar -- the dust "formed a cloud so thick that we were not

able to see each other a short distance away."

There was no marked difference between the climate then and now -- "/It/ appears to me to be very cold in winter and very hot in summer, ..." (Font 1930:IV:34). Generally, however, the temperature was ignored by the Spaniards, except to note abstinence from travel during the heat of the day in summer. Few complained of the cold, except for the winter of 1775-76 when Anza (1930:III:33) reported that "as a result of it and of the ice, six of our saddle animals have died during the last four days." Eixarch (1930:320) at Yuma recorded heavy snow that winter but no freezing.

There is a suggestion of periodicity in the infrequent rains, which seemed to come during mid-summer (June through August), and midwinter (late November through January), much as they do today. Anza (1930:II:124; III:19), in May, 1775, spoke of summer rains and the following November noted that at Sutaquison, "the Indians tell me that the drought will last only till the middle of this month." Two days later the party was discommoded by rain although "there was no precedent for expecting such a rain to fall" (Anza 1930:III:20). On February 11, 1776, Eixarch (1930:353) at Yuma noted rising water in the Gila River as a result of rains.

During the entire Hispanic period the Gila Pimas had available a permanent source of water throughout the length of their land. Despite the fact that occasional drought brought about famine conditions among the Papagos, such seems not to have been the case among the Gila Pimas, who even at those times had adequate food supplies. (Anza 1930:II:128), indicating sufficient water to irrigate their crops. There seems to be nothing in the Hispanic records to substantiate Russell's statement (1908:66-67) that "About every fifth year in primitive times the Gila River failed in midwinter ...." Nor does the evidence support Castetter's and Bell's interpretation (1942:39-40) of the Spanish records as evidence of drouth in the sense of complete failure of the river.

It is possible that a more complete record would indicate a total absence of water in the river at times, but such is not the picture to be gathered from the reports consulted in this study. A typical statement is that of Font (1930:IV:43) for November, 1775, at Uturituc: "This stream is large only in the season of floods and now carries so little water that when an Indian waded in and crossed it the water only reached half-way up his legs." He adds (1930:IV:44) that "when the river was so low that the water could not enter the ditches"

the Gila Pimas built log and brush dams to raise the water level, so that even a shallow flow could be used.

The impression that the Gila dried up probably arose from the circumstances that the "channel is so deep and very sandy, during the dry season the water sinks and so in some places it does not run" (Eixarch 1930:353). The American travellers of the 1846-1852 period evidently did not learn of this characteristic of the river, most of them attributing the lack of water in the channel below the villages to Indians having drawn all the water of the river off in their ditches (Emory 1848:85; Bartlett 1854:II:215). Despite this temporary submergence of the water in the sand, the Gila River flowed to its junction with the Salt River which contributed an even greater volume of water (Font 1930:IV:54).

Ordinarily the river was not wide, and generally it was only a few feet deep. Sedelmayr (1744 MS) described it in 1744 as fordable anywhere, and Font (1930:IV:43) noted in 1775, as stated above, that before the rains it was only half-way up a man's legs. During flood times it overflowed its banks, washing out the Indians' dams (Garces 1770 MS) and forming sloughs "when it overflows and wanders from its channel" (Font 1930:IV:32). There were at least two

reliable sloughs - the one northwest of Casa Grande ruins and the one at Lagunas del Hospital.

In addition to the Gila River, the Santa Cruz River provided enough water for floodwater irrigation. In 1774 Anza (1930:III:124, 128) reported sixty families living at Aktciny, west of Picacho Peak, although at that time there was a "great drought and famine" in the Papago country to the south. Font (1930:IV:32) noted that the Indians on the lower Santa Cruz River "make something like canals for collecting" the rain waters into Ponds or lagunas (sloughs).

Additional water was obtained from wells dug not only where the Gila River ran sub-surface (Font 1930:IV:32) but elsewhere. Manje and Kino watered at one between the Maricopa and Estrella mountains (Manje 1954:122), Garces (1930:390) at one a league south of Pitac and at another at Pozo Salados fourteen leagues farther south. Sometimes the salinity of the water on the lower Gila River made wells necessary for potable water (Garces 1770 MS).

The only food plants noted by the Spaniards were saguaro, nopal, mesquite, screwbean, and "seeds" (see Appendix A for list). They were concerned primarily with resources in a European view, in respect to the maintenance of missions and presidios. Consequently they paid little or no attention to wild resources beyond pasturage for stock. Normally they saw only the bottom lands and the plains immediately
adjacent to them. When they did travel away from the river area, they left scanty information concerning either the terrain or plants.

General descriptions of Sonora such as those of Velarde (1954) and Pfefferkorn (1949) are not specific for the middle Gila River area, but they point to typical desert flora of brush, cacti, and thorny plants. Probably most, if not all, of the plants listed in Castetter and Bell (1942:21-27) for the habitat of the Gila Pimas have been present and similarly distributed for much longer than the recorded historical period.

Although a few areas were designated as having "good pasturage" (Manje 1954:123; Anza 1930:III:13, 17, 18, 19, 20) the general opinion was well summarized by Diaz (1930:303) in 1774: "The lands along the Gila ... do not fail to suffer from the scarcity of pasturage which is experienced all along this river ..."

Apparently brush in general, and mesquite in particular, was by no means as pronounced a feature before the mid-19th century as it was later. Anza (1930:III:19) mentioned a few detours "to avoid some thick brush" along the route; but generally the descriptions are of too little vegetation rather than too much. Font (1930:IV:33) complained that "what is most abundant is the weed or shrub which they call the hediondilla (creosote bush) ...; and another scrubby and useless plant which, if the horses eat it, burns their mouths."
According to him (1930:IV:46), the Indians of Sutaquison had moved back from the river "because near the river with its trees and brush, they fared badly from the Apaches." Except for Velarde (1954:235), none of the accounts mentioned mesquite as being thick or even plentiful, at least near the river bottoms. Both Anza (1930:III:199) and Font (1930:III:216) reported that some of the timbers in Casa Grande were mesquite, but the latter wrote (1930:IV:33) that "one sees only now and then a scrubby mesquite far in the distance." Mesquite beans were available to the Gila Pimas, for they were offered as food, both ground and as bread, to Kino's party in 1697 (Bernal 1856:804-805), but the trees must have been out on the plains and along the arroyos away from the river. Nearly all of the writers mentioned that along the river were willows and "a continuous cottonwood grove" (Font 1930:IV:45).

The Hispanic reports provide even less information on the fauna of the Gila Pima habitat than on the flora. Again, Velarde's and Pfefferkorn's information is not specific for the area concerned. The "native" name the latter gives for the peccary, "javalie" (jabali), is not that recorded by Russell (1908:80), who gave täsīʾīkālt as an alternative to kaaci, the Spanish origin of the latter from coche, "pig" being obvious. As none of the reports refer to it in this area, it may well have been as unimportant to the Gila Pimas as Russell claimed.
At the first village west of Casa Grande ruins Manje (1954:87) noted "a great mound of wild sheep horns piled up, looking like a mountain ..." and, because it was "higher than some of their houses," estimated the total as "more than 100,000 horns." This prompted the Spaniards to give to the village the name of Tusonimoo (Pima [tcurcony' mo'o], "mountain sheep horns"). Manje stated that "These animals are so plentiful that they are the people's common source of sustenance," yet neither he nor any other diarist ever reported seeing them or eating their flesh, and the name quickly vanished from the record. They were still present in the area in 1902 (Russell 1908:82, fn) and they were no doubt known and used by the Gila Pimas in the past, but Manje's statement is frankly incredible. No other wild game was specifically mentioned in the records although there are a few passing references to hunting parties (Garces 1930:389; Font 1930:IV:33). Possibly the 19th century Maricopa opinion that "the Pimos preferred work to hunting" (Hayes 1849-1950 MS) was also true in the 18th century.

Fish were mentioned, although less frequently than farther down the river in Maricopa territory. The Indians at Uturituc promised fish to Garces (1930:389) if he would stay over in 1774, but Font

characteristically disdained them, writing (1930:IV:60) that the Gila River was "very lacking in fish, for it had only the very bony matalote and not much of that." While among the Yuma (1930:IV:67) he identified the matalote as "the fish which in Spain they call saboga" \textit{Clupea alosa}, a species of shad. Actually they were probably the so-called Gila trout mentioned in some of the accounts of American travelers in the period 1849-50 which, according to Russell (1908:83, fn.), were chubs, \textit{Gila robusta} and \textit{Gila elegans}.

It may be noted that one fishing venture by Father Eixarch on the Colorado River (Font 1930:IV:418) was the only instance found recorded of the Spaniards or Mexicans taking any kind of game or fish themselves. Evidently they were not hunters, and that might account for their not having mentioned game where the American travelers did. It is unlikely that the geese, ducks, and quail later reported (Couts 1848 MS; Aldrich 1950:56) were not along the river then, to say nothing of the rest of the animals whose former use at least was recorded by Russell (1908:80-83). Beaver may represent a special case. While Johnston (1848:596)

"found a beaver tooth on the ground" at a site upriver from Casa Grande ruins, no trace of the animal among the Hohokam was reported from the excavations at either Snaketown (Haury 1937:156-158) or Casa Grande (Fewkes 1912:145-146). Nor does the beaver appear in Hohokam art as do other life forms, although a small carved stone figure in the possession of Mr. A. E. Robinson of Phoenix, Arizona, of an animal with a pronounced tail bearing incised cross-hatching might represent a beaver. Mr. Robinson stated, (personal communication) that the figure was given him by a Gila Pima, who claimed to have found it on one of the ruins in the valley. Yet a people who did as much carving as the Hohokam would surely have found the incisor teeth of the animal a useful tool and the animal itself was a prized food item among the Gila Pimas of a later day (Russell 1908:81). Historically beaver trapping on the Gila River was an affair of very short duration which attracted few people in comparison to the number engaged in it farther to the north, at a time when the northern trapping grounds were being exhausted. This suggests a possible late penetration of the beaver into a habitat not

too well suited to them, in respect to food, for example.

On reptiles, the Hispanic period sources are uniformly silent.

**Modification**

In contrast to all of their neighbors around them except the Sobaipuri, the Gila Pimas carried out a significant modification of their habitat in the construction of irrigation ditches, dams across the river, and the clearing of fields attendant upon the cultivation of cereal crops. We have no such survey of the Gila Pima canals as for the Hohokam canals (Turney 1929), so lack any real conception of the nature and extent of those works. Except for Emory's statement (1848:85) that the canals were "larger than is necessary" - which is open to question - the reports seen imply no more than that they were adequate to the demands of the Indians' agriculture according to statements of the size of the fields and the estimated yield (e.g., Anza 1930:II:125-127).

Because of the references to fields, cultivation, and cultivated crops in the earliest of the Spanish accounts (Kino, Manje, Bernal, and Carrasco) it has been assumed that irrigation had been an aboriginal development among the Pimas Altos in general, and among the

Gila Pimas in particular. Actually, there has been found a surprising lack of reference to irrigation upon the occasion of a first Spanish visit to localities in northwestern Pimeria Alta. Bernal's reference (1856:804) to washed-out cornfields at Tucsani, the easternmost Gila Pima village on the river, suggests that these might have been flood plain fields, and hence possibly not irrigated by canals. The only place Kino (1948:1:188) mentioned irrigation on a first visit to a settlement of northern Sonora was at San Marzelo del Sonoidag (Sonoyta, Sonora) in 1698, eleven years after his arrival in Pimeria Alta. The first Spanish reference to irrigation actually being practiced on the Gila River was that of Sedelmayr for the year 1744 (1744 MS). Excepted from this are Manje's comments (1954:120-121) in 1699 that, should a mission be established there, irrigation could be carried out in the Maricopa settlements by means of ditches at San Simon Tucsani and San Mateo de Cuat, as indicating that it was not practiced there. Manje, Bernal, and Kino all remarked upon the great canal at Casa Grande ruins, but none of them mentioned ditches in use. Kino (1948:1:172) even stated that the canal at Casa Grande was unusable without repairs. Yet Manje (1954:92, 93, 125, 141) repeatedly mentioned the ditches in use at San Augustin de Oiaur and San Xavier del Bac. It should be kept in mind that he visited those places five years after Kino, who himself first reached
Bac five years after his arrival in Pimeria Alta.

In concentrating on Pimeria Alta it is too easy to lose sight of the earlier work of the Jesuits (and possibly the Franciscans around Imuris) to the south in Pimeria Baja, to forget that Kino started out from a well-established base in southern Sonora - he even (1948:1:109-110) referred to the mission at Cucurpe as "old."

The indications of communication between Pimeria Baja and Pimeria Alta, and between the latter and the Gila River, are enough to raise the possibility that irrigation traveled ahead of the Spanish advance or along with it as far as San Augustin de Oiaur. The final jump from there to the Gila River could have been accomplished by means of the specifically demonstrable communication between the two localities.

In opposition to this possibility, there is the abundant evidence of a highly developed irrigation system in prehistoric times, not only on the Gila River but on the Salt as well, and of prehistoric irrigation in the desert of Papagueria (Turney 1929; Haury 1950:8). Hence the obvious answer would seem to be that irrigation in Pimeria Alta goes back at least to the 15th century and the Hohokam. Such has been the general opinion, with the exception of Russell (1908: 164) whose disagreement was based on purely subjective grounds.
The difficulty has been stated succinctly by Gabel (1950:499):

After . . . the later 14th or early 15th century, the Hohokam story becomes obscure. In fact, the period between the abandonment of the large houses . . . (in the neighborhood of 1400) and the earliest mention of the modern Papago at the close of the 17th century has been almost a complete blank.

The difficulty applies equally to the Gila Pimas, although we know even less of the prehistory of the Gila Pimas than we do of the Papago. On the San Pedro River, Di Peso (1953:257) has found evidence of irrigation, but it is not clear whether irrigation there falls within what might be termed the crucial period between about 1500 and 1650 A. D. The problem is certainly beyond the scope of such a study as this.

If irrigation agriculture were an indigenous trait for the Gila Pima the Spaniards and Mexicans had no effect on the modification of their habitat. On the other hand, if canal irrigation was introduced through Hispanic efforts, the results were pronounced. From 1744 on, canal irrigation was recorded for the Gila Pimas numerous


times, although the Maricopas seem not to have adopted it until after the Anza expeditions of 1774-1776 at least. The only Hispanic references to tools and agricultural techniques which might have been used in digging the ditches were those of Diaz (1930:304), who said that the Indians had "no other implements than a wooden stick," and of Anza (1776 MS), who wrote in connection with the possible establishment of a presidio on the Gila, that the Indians there had "no other tools than a poor stake" (una mala estaca).

Regardless of whether their irrigation was an indigenous development, retained from Hohokam times, or brought from the south, the Gila Pimas achieved by its means a stable economy with a surplus of food, at an early date. This stability, their geographic situation, and what might be called their "national character" (that is, the Spanish and Mexican estimates of Gila Pima attitudes and behaviour), all contributed to making the good will of the Gila Pimas of considerable importance to the people with whom they had contact.

CHAPTER VII

RELATIONS WITH OTHER TRIBES

The purposes of this study restrict the field of observation to the effects on the culture of the Gila Pimas of the presence of representatives of Hispanic society on the northern frontier of New Spain. Even aboriginally, however, the Gila Pimas did not live in a cultural vacuum, and it seems pertinent to give a brief sketch of their contacts with their co-residents in the area.

Sobaipuris

The original classification of the Gila Pimas as Sobaipuris by Spaniards who were already familiar with the latter (Kino 1948:I:119, 122-123) suggests a considerable original similarity of culture which had been maintained by continued and friendly contact. On Kino's journey to the Gila Pima villages by way of the San Pedro River in 1697, he took with him Sobaipuri guides (Manje 1954:84-93); and when Captain Coro of the Sobaipuri village of Quiburi went south in 1706 he delivered to Kino messages of greeting from the Pimas "from 170 leagues journey" (Kino 1948:II:184-186), this being the distance from the middle Gila River to Dolores.

This contact of the Gila Pimas and the Sobaipuris, affording an
easy route for the passage of knowledge of the Spaniards to the Gila Pimas, was evidently maintained so long as the Sobaipuris continued to be identified as an individual group. When Apache pressure and the attraction of the more urban settlements (Di Peso 1953:275-276) brought about the abandonment of the San Pedro River by the Sobaipuris in 1762 (Rudo Ensayo 1951:79), some went south, others west to the Santa Cruz valley and their kinsmen at San Xavier del Bac and Tucson. Some went as far as the Gila River, for in 1770 Anza (1770 MS) warned the governor of Sonora that unless something was done to protect Tucson from the Apaches the rest of the Sobaipuris would go on to join their relatives on the Gila.

The Spaniards continued to foster this contact by taking with them, or sending as messengers into the Gila valley, people from San Xavier del Bac and El Tucson on the Santa Cruz River (Garcés 1770 MS; Anza 1930:III:12). An unknown number did live permanently on the Gila River, for Russell in 1902 was told of their having come (1908:23, 186) and in 1953 there was reported the existence of a Gila Pima song which specified geographical features located in the middle San Pedro valley (informant’s statement).

Although it was not mentioned as frequently as the connection between the Gila Pimas and the Maricopas, there was evidently a closer relationship between the former and the Papagos who occupied the higher desert land to the south of the Gila River. The presence of Papagos among the Gila Pimas, either as visitors or residents, is mentioned as early as 1698 (Carrasco 1698 MS), and the general impression given by the documents covering the succeeding century and a half or more is that contact between them was constant and close.

No clear idea of the amount of intermarriage which took place in the Hispanic period can be gained from the documents, but it may well have been considerable, judging from the number of people now living on the Gila River reservation who claim long standing familial relationship with people living on the Papago Reservation. This consistent association of the two groups, whether through marriage or friendship, was probably what prompted Garces (1775 MS) to feel that the reduction of the Papagos would be better facilitated by missions on the Gila River, because the ordinarily dispersed Papagos would be more willing to congregate there.

The Spaniards and Mexicans evidently credited the Gila Pimas with exercising a certain amount of influence over the Papagos.
Keller (1752 MS) 1 absolved the Gila Pimas from complicity in the Pima Revolt in 1751; Garces (1776? MS) 2 also exculpated them in that case and wrote that upon the Gila Pimas depended the tranquility of the Papagos, that their influence kept the Sand Papagos from taking part in the rebellion (1771 MS), and that the Gila Pimas were "those who lay down the law to Papagueria or to the greater part of it" (1770 MS). Diaz (1775 MS) 3 regarded the Gila Pimas as "those who contain and can contain, i.e., control, the Papagueria."

The Papago practice of working for the Gila Pimas in return for food in times of scarcity in Papagueria was recorded as early as early as 1740 (Anonymous 1856:838). Evidently they were also

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welcome in the Maricopa villages (Anza 1930:II:123-124). But in times of plenty the Papagos also traded to the Pimas such Spanish goods as sayal (a kind of coarse cloth), bayeta, clothing, horses and cattle, as well as a considerable variety of desert food products and their own manufactured goods (e.g., Diaz 1930:304; Font 1930:IV:43, 49; Barbastro 1793 MS; Russell 1908:93, 94).

Pimas Altos and Pimas Bajos

Beginning with the visit of Juan de Palacios to Baseraca (Bacerac, in eastern Sonora) in 1697 to ask for baptism and a minister for the Gila Pimas (Kino 1948:I:166), it is apparent that contact between the Gila Pimas and the Pimas Altos was a constant thing. Whether this arose after the entrance of the Spaniards or was already in existence at the time of their arrival cannot be determined beyond question. Before the expulsion of the Jesuits in 1767, concern was being expressed for the preservation of the good relations which had existed between the Pimeria Alta residents and the Gila Pimas as a factor in the eventual reduction of the latter (Anonymous 1751 MS.)

Evidently the relationship continued, for eighteen years later the

governor of the Gila Pimas sent his son to Tubac with the news of the white strangers on the Colorado (Anza 1769 MS), and during the time of the Anza expeditions to California the close relationship was remarked upon (Díaz 1930:304; Font 1930:IV:49). By 1793 trade had apparently increased, judging by the list of goods exchanged (Barbastro 1793 MS). Although no overt conflict ever developed, perhaps not even strained relations, the Gila Pimas stood aside from the general Pima revolt of 1751 and the later uprising of 1843 (Keller 1752 MS; Comaduran 1843b MS), although in each case attempts were made to secure their participation.

Contact between the Gila Pimas and the Pimas Bajos was apparently much less frequent and sustained. Some may have taken place when guides and interpreters passed along the Gila in the company of Spanish exploring parties. No record was found of the migration of individuals from one region to the other, or of intermarriage between the two, either in the Spanish or Mexican periods.

**Maricopas**

Because of their contiguity in the Gila valley, the group most frequently coupled with the Gila Pimas in the Hispanic records was the Yuman speaking Maricopas, this association having begun in prehistoric times. Some previous knowledge, either that the Gila
River was unoccupied in the area in which they desired to settle, or that the Gila Pimas would allow them to live there in peace, or both, was a prerequisite for their flight to the Gila River from the Colorado.

Their relations apparently always remained amicable. There is no record of quarrels between them during the Hispanic period, and on numerous occasions they joined forces against common enemies or against a tribe or tribes which may have been, initially at least, an enemy of only one. It is difficult to accept Spier's statement (1933:44-45) that intermarriage between the two groups, as well as residence in the same villages, was uncommon, in the face of its frequent mention in the Spanish accounts. But their ethnic identity as separate peoples was never lost, even surviving today in spite of shared occupation of a reservation.

These two peoples shared an active relationship of exchange, two of the principal items being slaves captured in war by the Maricopas and blankets made by the Gila Pimas. Interestingly enough, both of the specified items moved farther, the Pima blankets at least as far as the Colorado River and possibly to the Pacific coast. Garces (1930:386) stated that he felt no surprise that "cotton blankets like those of the Pimas should have reached the missions of Monte Rey . . .," and also noted that "The majority of (the
Jalchedunes) go dressed with blankets and blue cloth from Moqui and from the Pimeria ...." The slaves from the Maricopas passed down into the Spanish settlements where they sold for "ten things, so long as the ten things include a knife and a bolt of ribbon, ..." (Sedelmayr 1746 MS).

Social cooperation between them ranged from competitive foot racing to acceptance by the Pimas of a Maricopa as the agent to sign for them a treaty with the Mexicans, said treaty also involving the Yumas (Figueroa 1825a MSS). A detailed treatment oriented to the acculturation situation produced by the close and extended association of the Gila Pimas and Maricopas is not a part of this study and must await further consideration.

**Yumas and Mohaves**

Except over the wrong end of a war club, it is doubtful that the Gila Pimas had any direct contact with the Yumas living on the Colorado River. All through the Hispanic period there was known hostility between the two groups. Kino could not get guides to go with him up the Gila River because the Yumas did not "talk to those living up the river, because of wars and strife among them" (Manje 1954:118). This state of affairs was never permanently changed. No instance was found in the documents of a Yuma visiting or living among the Gila
Pimas, and the "Pimas" so often mentioned among the Yuma were almost certainly not Gila Pimas but Sand Papagos.

Repeated efforts on the part of the Spaniards and Mexicans to establish peace between the Yumas and the Gila Pima-Maricopa group produced only short-lived armistices, and the hostility continued into the American period. Despite these persistent bad relations, recurrent mention was made in the early years of the presence of Maricopas among the Yumas (e.g., Kino 1948:1:194, 286 - although Manje failed to record them for one of these meetings - 1954: 112). The occurrence of Pima products among the Yumas may have resulted from trade between the Maricopas and the Yumas during these times of amity. In times of Maricopa-Yuma hostility the passage of the goods may have been from the Pimas to the Maricopas and then northwest to the Halchidhomas on the Colorado River and finally south to the Yumas.

No mention of contact between the Gila Pimas and the Mohaves of the Colorado River was found in the documents for the Hispanic period. This leaves us with the assumption that direct contact of the Gila Pimas with the Mohaves did not occur until after the Halchidhomas finally left the Colorado in the late 1820's (Spier 1933: 1-47), thus enabling the Mohaves more easily to join forces with the Yumas in raids on the Gila River tribes. Kroeber
in his biography of a Mohave, presented what probably was a typical situation: "... a summons from the Yuma; this time against the Maricopa. ... But the Maricopa had got wind of their presence and when the fight opened were reinforced by a vast number of Pimas."

Yavapais

The tendency of the Spanish writers to use "Apache" to apply to numerous unfriendly groups makes difficult any exact description of Gila Pima contacts with the Yavapais. Garces (1930:381-383; 1775 MS) was the only one of the travelers to use the term Yabipai, generally giving it as an alternate for Nijora. He stated (1930:376) that in 1774 the Opas (Maricopa group) maintained peace with some Nijoras in order to obtain red hematite in trade, but that "the Opas and Pimas are at war with other Niforas near to themselves."

The Southeastern Yavapais were in the Mazatzal-Superstition-Pinal mountains (Gifford 1932:178-180) in historic times, and may have been there before. It can be presumed, then, that the Indians of the mountainous region between the Salt and Gila rivers from the Pinal Mountains westward who raided and were raided by the Pimas

were the Southeastern Yavapais, or a combination of them and the San Carlos group of the western Apache.

At any rate, the relations between the greater part of the Yavapais and the Gila Pimas were apparently as hostile as those between the latter and the Apaches. In fact, it is entirely possible that many of the engagements recorded between Pimas and Apaches were actually with Yavapais. These contacts would have been such as to have little direct influence on the culture of the Gila Pimas, except to enforce the military aspects, and would have been a negligible factor of acculturation. Captives were no doubt occasionally kept by the Gila Pimas, but as they were children (Sedelmayr 1746) they were probably not of much influence in changing Gila Pima culture. Rather they would tend to abandon their own and accept that of the Gila Pimas with no perceptible effect on the latter. The impression produced by the records, however, is that most of the captives, whether obtained as a direct result of Gila Pima raids or purchased from the Maricopas, were sold to the Spaniards and Mexicans.

**Apaches**

Contacts between the Gila Pimas and the Apaches were consistently hostile. The time when conflict between the two arose, which may or may not coincide with the time of their initial contacts, is a problem beyond the scope or purpose of this study. Goodwin
(1942:64) has recorded an Apache legend which might refer to a time considerably prior to the first documented contact: "trouble arose with the Cliff Dwellers through their alleged theft of Apache property, forcing them to abandon their cliff dwellings and migrate to the Salt River Valley where they became Pima."

From the beginning of the Hispanic period on the northern frontier references to Apache raids are a regular feature of virtually all the writings dealing with Sonora, and in a large part of these special mention was made of the resistance offered the Apaches by the Pimas in general and the Gila Pimas in particular. In 1700 Kino (1948:1:17) was advised by the governor of the village near Casa Grande ruins that "his people had dealt a blow to the Apaches." Eighty years later the willingness of the Gila Pimas to fight Apaches was a functioning part of official Spanish policy. Teodoro de Croix, Commandante General of the Provincias Internas of New Spain, stated (1941:94) in his General Report for 1781: "If war were to be attempted against the Apacheria of the east, I had as allies the fierce Indians of the North; if against those of the west, the Ute, Moqui, and Gila Pima; ...."

The Gila Pimas made some volitional raids against the Apaches. Viceroy Bucareli sent notice to Spain in 1773 that the Gila Pimas, "having asked permission," attacked an Apache rancheria "killing twelve men and four women and taking prisoner eight boys and
captured some mounts ..." (Bucareli 1773 MS). Sometimes their encounters were accidental. Anza (1930:III:14-15) noted that a hunting party from the Gila River had met a band of Apaches, killing two of them and causing "the rest of them to flee and retire to their own country." Usually, however, Gila Pima invasions of Apache territory were in retaliation for an attack on the river villages. The people of Sutaquison told Font (1930:IV:45-46) that they had moved their village away from the brush near the river in order to have "open country through which to follow and kill the Apaches when they came to their pueblo." The Gila Pimas sometimes joined the Spanish forces in campaigns against the Apaches (Sauer 1935:9), although they normally fought alone. Most reference to "Pima" auxiliaries pertain to some other group of the Pimas Altos.


CHAPTER VIII
ECONOMICS: GENERAL ASPECTS

In pre-Spanish times the Gila Pimas dominated their environment to the extent that they had learned to utilize their resources, both of land and water, and of human energy and ingenuity, to achieve an adequate standard of living. That this standard was low by Hispanic measurements does not invalidate its designation as adequate by aboriginal standards. The evidence presents a picture of an uncomplicated agricultural economy, implemented by individual and group effort, which produced enough so that life was not precarious, but which did not furnish any considerable surplus upon which to base a more complex society or culture.

The Gila Pima way of life was based on a food supply garnered primarily from agriculture, but supplemented by the gathering of some of the wild plants available to them as well as by some hunting and fishing. Their farming and collecting furnished sufficient food and materials not only for their own needs, but also for hospitality to visitors. Although they carried on a certain amount of trade with their neighbors, there is no suggestion that this trade was an integral part of their economy or was even necessary for their comfort. With
few mechanical aids they produced, by individual effort or through the cooperation of groups of varying sizes, sufficient to meet their own material needs and still had leisure time for ritual activities, recreation, visiting at home and abroad, and war. There is no evidence of a desire to accumulate wealth either by individuals or groups, or of any individual variations from the then current standards of living. Indications are few for any division of labor other than the usual ones of sex and age, and there is nothing to suggest the aboriginal existence of fulltime specialties carried out to the exclusion of other labor.

From the evidence available it seems likely that, at the beginning of Spanish contact, the economic system of the Gila Pimas was a functioning whole, with no obvious conflicts or elements in transition. They appear to have had a standard of living at least as high, if not higher, than the other groups with whom they were acquainted. Within the limits of their body of knowledge, their economic system had been developed beyond that of most of their neighbors. In all of Pimeria Alta there were few ideas or material objects which they did not have or could not have acquired through personal effort, communication, or trade, had their acquisition seemed sufficiently desirable to them. Nevertheless, the later acceptance by the Gila Pimas of certain elements of Hispanic culture would indicate the
existence of some dissatisfactions, particularly in the field of economics. Their prompt and enthusiastic acceptance of wheat, as a complement to maize, suggests that mesquite beans had not been completely satisfactory as such a complement. That these dissatisfactions may not have been recognized or formulated, until their remedy appeared, does not negate the idea of their existence.

**Exploitation of Habitat**

The aspect of Gila Pima exploitation of their habitat which received the most notice was their agriculture, but utilization of the resources available within their territory was carried much farther than just the raising of crops in fields. Besides the availability of arable land, and water with which to irrigate it, agriculture itself involved the construction of dams from material provided by the habitat, and sufficient room within their territory to dig canals across untilled land to bring the water to the fields. From that land was produced not only the food crops, but also cotton for clothing. They depended on the Gila River not only for irrigation of their fields, but also for water for domestic use, sinking wells in the sand where it ran submerged in dry weather.

Utilization of their habitat involved such matters as locations for villages and burial grounds and menstrual huts apart from the
habitations. The Indians depended on the resources of the Gila-Salt basin and the surrounding plains and foothills for wood for fires and for building homes, storehouses and menstrual huts, as well as for tools and weapons. Within that area they obtained the wild foods which supplemented their agriculture, the game and fish, the plant foods, and the medicinal herbs. Clay for pottery was mined, at least in the Superstition Mountains, where there was also a sacred cave visited by the Gila Pimas. Other sacred places were scattered through the isolated mountains in the Gila and Salt valleys.

The Hispanic acculturation of the Gila Pimas resulted in a further exploitation of their habitat in addition to the extensive and intensive utilization of their territory previously developed under aboriginal conditions. The acquisition of new crops brought about an increase in the acreage tilled to raise wheat as well as the aboriginal staple, maize, and of gardens to produce vegetables. Probably there was also an attendant extension of the canal system to bring water to the additional land. If they had not done it before, it was during this time that the Pimas living south of the Gila River (the Kwahatks) constructed charcos by damming the washes above their fields to store runoff for irrigation.

The acquisition of livestock placed an added importance on the plains bordering the rivers, for the valley lands alone did not
provide sufficient pasturage for animals. The Gila Pimas, in common with the rest of the inhabitants of northern New Spain, did not raise special crops for animal feed, depending entirely on natural pasturage.

**Division of Labor**

Specific evidence for the division of labor among the Gila Pimas appeared so late in time in the Hispanic documents that even general inferences regarding it during aboriginal times can only be provisional. By the time the available statements were being written, evidence of change in the division of labor also had begun to appear. With some exceptions, those activities which could best be performed by groups were carried out by men and women together. Farming was probably the one most consistently so performed. Manje (1954:28) reported that, at Santa Teresa and Ati, the land was "cultivated by families related to each other by marriage," and Pfefferkorn (1949:205) agreed that the "Sonorans" did so. Because of the cooperation practiced in farming, it seems probable that when Font (1930:IV:44) wrote that "they planned to assemble together" to build a dam, most of the village inhabitants were involved. The digging of canals (Whittemore 1893:53), and perhaps house building were also cooperative in that

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respect, although none of the writers ever specified who built the houses. The gathering of wild products was an activity which could be carried out by individuals or groups of any size or composition. That Garcés (1930:338) referred to "the people of Subtaquisson" whom he met out gathering saguaro fruit, rather than just the women, suggests that at times both sexes participated, although the men may have been along to hunt as well, and to provide protection if necessary. Pfefferkorn (1949:205) listed the gathering of mescal as one of the men's tasks among the Sonorans, but the Gila Pima annals (Russell 1908:43) show rather that it was at least occasionally a group undertaking for the active members of both sexes.

Where there was a division of the labor performed by men and that performed by women, it seemed to have been founded on whether the tasks were those which could be accomplished around the home or had to be carried on away from it, where there was danger from marauding Indians, although this was not by any means consistent. War, apart from defense against raids on the villages, was the concern of the men, although the older men who were no longer so active and enduring, possibly did not go out on the campaigns. Hunting, because it might carry the men within reach of the enemy, may also have been primarily the special affair of the younger men, except for the small game hunted around the village by the boys (Russell 1908:39; Hall
Fishing, at least that done in the Salt River, was also a young men's activity (Bartlett, 1854:II:241-242).

The special tasks of the women were those connected with the household. In addition to caring for the children, preparing food, and carrying wood and water, women made baskets and pottery (Pfefferkorn 1949:188:189, 205-206; Font 1930:IV:43; Barbastro 1793 MS; Bigler 1846 MS). Although it is not so stated anywhere, it is probable that wild products which could be gathered within a "safe" distance of the village were collected exclusively by the women. The early American travelers were generally convinced that the men did little or no work. Coutts (1848 MS) makes a typical statement: "The women do all of their work, both in and out, are perfect slaves, and greatly fear their men." This impression was probably due to the fact that, passing through the villages as they did with a close view of the households, and often at a season when agricultural activities were at a low ebb, the Americans saw more of the women's activities than of the men's. Coutts himself (1848 MS) went through the villages in late October and spoke of the fields as "having been finely cultivated!" (the emphasis is his), and of corn, melons, pumpkins, tobacco, and cotton in storage. Thus at the time of his visit, the summer agricultural

labor was finished and the winter work of wheat planting not yet begun, since the rains were not due until later in November.

Apart from the activities more intimately connected with subsistence and survival, the division of labor between the sexes seemed to have been based on less pragmatic grounds. There is no such reason apparent why spinning should have been done by the women, but weaving by the men (Emory 1848:85; Goulding 1849 MS; Bartlett 1854: II:223, 226). If weaving was done only by the old men as Bartlett said (1854:II:223), it is possible that such relatively sedentary activities as weaving, pottery making, and basketry were undertaken when the more arduous work could no longer be performed. On the other hand, Goulding (1849 MS) saw a young woman making a basket, and two girls passing the shuttle back and forth in weaving a blanket.

The impression produced by the documents is that the division of labor was a rather flexible arrangement. Some tasks were performed solely by one sex or the other, but a large part of the work was done by whoever was able to do it at the time.

What changes there were in the division of labor during Hispanic times were apparently the result of the acquisition of livestock, particularly cattle. The Gila Pimas seem not to have adopted the use of oxen until late in the Hispanic period. Perhaps this would explain some of the contradictory statements found in the American diaries,
since they would have been reporting a part of Gila Pima culture which at that time was in the process of transition. Women continued to help in the fields, but plowing, planting, and harvesting came to be largely masculine occupations, as did the care of the larger animals (Bartlett 1854:II:223; Grossman 1873:415-416, 418). Women evidently began to take over the weaving. Bartlett (1854:II:226) noted that women "sometimes spin and weave," but Grossman's implication (1873:415, 419) that only the women were doing the weaving was contradicted by Whittemore (1893:52) and Russell (1908:148), who indicated that weaving by men survived well into the American period.

Property Concepts

Property concepts among the Gila Pimas aboriginally seemed to have been based upon the principle that private ownership, in contrast to the tribe's possession of its territory, was established by being earned, that is, worked for, not just by use. For example the land, water, and wild products of the tribe's territory were regarded much in the light of "public domain" (Sedelmayr 1744 MS; Anonymous 1849 MS). Upon being subjugated to cultivation, a parcel of land was no longer part of the public domain, but private property (Velarde 1954:243; Garces 1775 MS). If a wild plant, such as a mesquite tree, were left standing in that cleared land, however, the fruit continued to be public property
Thus private, or even communal, ownership of gathering areas, hunting grounds, the water in the river, or stock ranges could not be established, these things belonging to all of the people in all of the villages.

Communal property, apart from the public domain, was owned by the cooperative group which produced it or brought it into use. In this class were the dams in the river, the canals, and the fences. Private property was that produced or acquired by individual effort. Food, however, seemed to have had an ambivalent status, in that at times it was treated as communal property and at other times as private property. It had the former status when the people of a village, apparently acting as a cooperative group, provided food for other groups, as when travellers along the Gila River were given food (e.g., Bernal 1856:804; Manje 1954:87). In this case, the situation was more one of hospitality or gift-exchange than commercialism, as there is no evidence of a quid pro quo exchange. These factors also operated in situations where food was handled as private property, but some situations were entirely commercial ones of trade. That the concept of food as communal property, at least under certain circumstances, was part of the aboriginal pattern seems to be established by the early Spanish reports of the

way it was handled. It was offered through the governor, as a gift of the village to the visiting group rather than by an individual to an individual. Whether the concept of food as private property in some situations was also part of the aboriginal pattern is not so clear. That attitude might have come into being with the development of trade for items not produced by the Gila Pimas themselves, and thus have been an aspect of acculturation, but it is equally possible that it had already existed (viz., their trade with the Papagos) and was only sharpened by trade during Hispanic times.

The only change in property concepts which showed in the records as being the result of Hispanic contacts was an apparent increased awareness of possession, both group and individual. As Spanish and Mexican articles were acquired, either by groups or by an individual, their possession tended to remain vested in those who obtained them, although their use might have been shared on a loan or hire basis. The combined purchasing power of an extended family, a kin group, or even a village might be required to obtain a plow or an ox whose use might have been shared by the group or even others outside it, the possession remaining with the acquirers. A smaller article such as a garment, ornament, or small tool, lay within the purchasing power of a single individual, and its disposition thus rested with him. This more clearly defined concept of possession evidently came to be extended to apply to
tribal property during the Mexican regime (Anonymous 1849 MS; St. John 1860 MS). Mowry wrote: "Antonio [the chief] repeatedly stated that the Pimos and Maricopas claimed as their own property the entire Gila valley on both sides from the Pinal mountains to the Tesotal ...."

**Exchange**

The role of the Gila Pimas as farmers and Apache fighters has received so much attention that other activities have been quite overshadowed. Exchange of some kind was already in existence, however, between the Gila Pimas and other peoples at the time of their first contact with the Spaniards on the Gila River (Bernal 1856:805; Manje 1954: 88, 89, 122), and this commerce was based initially, not on agricultural surpluses, but on their manufacturing. Actually, their real production of large excesses of farm produce did not begin until after the arrival of the Americans made it profitable for them to expand their planting. In Hispanic times it was stated (Anza 1776 MS; Anonymous 1849 MS) that they produced only for their own needs. Their production, however, yielded a certain surplus, else they would not have been able to let the Papagos who came to work for them at harvest time have a share of it. This was rather a result of having to produce enough not

only for their own estimated needs from one harvest to the next, but
to allow enough seed for the next year's planting. It was from this
store that they provisioned Kearney's and Cooke's reconnaissance
parties, arriving as they did in early November, before the time for
planting the winter crop of wheat.

As a result of the vagaries of weather and agriculture, exchange
of food was already an established affair among the farming peoples of
Pimeria Alta at the very beginning of Spanish contact (Kino 1948:I:178,
311-313; Manje 1954:122; Canas and others 1929:231), but there is no
information as to exactly how much was actual trade and how much was
rather an exchange of gifts, an expression of hospitality, in view of
later evidence. A Mexican source credits the Gila Pimas with coming
to the relief of Tucson with grain in times of scarcity there, in such a
way that a gift, rather than trade, is implied (Anonymous 1849 MS).
"Their answer to Carson, when he went up and asked for provisions,
was, 'bread is to eat, not to sell; take what you want.' " (Johnston
1848:598). The accounts of all the Spaniards who passed through their
territory are repetitious in the notation that the Indians provided them
with food; less frequently is it stated that gifts of trinkets were re-
turned, and never the suggestion that the exchange was a transaction,
a trade. Well before the missionaries began work in Pimeria Alta —
in fact it came to an end before Kino arrived in Sonora — the Spanish
colonists of New Mexico had opened up a trading route to the Pimas Sobaipuris of the upper San Pedro valley (Bolton 1916:428; Kino 1948: 1;257). For maize the colonists exchanged tools and clothing, but there is no indication that either the Gila Pimas or the Santa Cruz Sobaipuris had a direct share in this commerce. It might, however, explain the arrival of watermelons in advance of the Spaniards.

What the Gila Pimas produced for commercial purposes, which is the sense in which trade is used here, were baskets and woven goods -- belts, hair bands, and above all their cotton blankets. These blankets, or mantles as they were more frequently called, must have been outstanding products -- Whipple wrote of the Navahos that "In the manufacture of blankets ... they ... compare favorably even with the famed Pimas of the Rio Gila." (1856:32). Although trade was primarily with the Papagos and Maricopas, the blankets spread as far as the Halchidhomias on the Colorado and even to the coastal Indians of California (Canas and others 1939:231; Sedelmayr 1746 MS; Garces 1770 MS).

With the establishment of missions and visitas within distances a

few days journey to the south of the Gila River, opportunities for
direct trade between the Gila Pimas and the Spaniards were possible,
depending upon the supply of goods at the southern centers. In the
beginning, supplies were no doubt short, and there was little surplus
for trade — the European goods were needed for the Spanish personnel
and Indians of the missions. As early as 1732, however, there is
evidence that some trading had already begun, and the nature of the
exchange is suggested by Sedelmayr (1746 MS) fifteen years later. The
Gila Pimas were obtaining horses, knives, chomites (a type of shirt),
pack needles, etc. The commerce in the captive Nijoras, already in
existence in the time of Kino and Manje, had found a new outlet among
the Spaniards. The price was now "ten things, so long as the ten
things include a belduque (a large, heavy Mexican knife) and a vara
(approximately a yard) of ribbon" (Sedelmayr 1746 MS).

Possibly the Franciscans were better supplied than the Jesuits
with trade goods, for by 1774 Garces (1775 MS) was "filled with admi-
ration" at the quantity of sayal and bayeta he saw among the Gila
Pimas. He attributed it to the great quantities of those cloths used by
the missionaries in dressing the Indians and to the increased flow of
goods at a lower price into the region as a result of the commerce
with Cieneguilla to the south. Evidently the presidios were now play-
ing a role in the dissemination of European goods to the Indians,
either as sources of gifts or trade, for Garces also listed the money now being provided the presidios as another cause of the increase of cloth or clothing along the Gila River. Diaz (1930:304) described the Gila Pimas as being dressed the same as the Indians already reduced in the missions, and gave as a reason for their greater abundance of goods the commerce between them and Papagueria and other Indians less fortunately situated for agriculture. What it was that the Gilenos obtained from the latter peoples was not made clear. After their introduction to livestock, first horses and later cattle became objects for which the Gila Pimas were willing to trade (Barbastro 1793 MS). Escudero (1849:142) reported a kind of fair held annually on the Gila River, attended by "multitudes" of the people from the towns and presidios of Tucson, Tubac, Santa Cruz and the San Ignacio River, who bought the "mantas Pimas", baskets, and Yuma or Apache captives. Bartlett in 1852 had most of his trade drawn off one day by three Mexican traders from Tucson who set up a booth in the Pima village.

Throughout the Hispanic period, this commerce was carried out on a barter basis. Barbastro's evaluation (1793 MS) of baskets at from one to two pesos was a statement of worth in terms of the price of European goods, not of actual price. This is demonstrated in the experience of Kearney's party and the Mormon Battalion in 1846 when they found that the Indians "would not have money they said it was of
no use to them" (Bigler 1872 MS). Instead they demanded clothing, beads, even "buttons taken off" the American's clothes (Tyler 1881: 235; see also Emory 1848:84). Between 1846 and 1850, however, the increasing demands of American travellers for their farm products taught the Gila Pimas that food was a commercial product and showed them money was useful- "we feel the want of small change, frequently paying more for an article than we would if we could make change." (Hayes 1849-1850 MS).

The Spanish and Mexican accounts leave us little information on which to estimate the prices of goods traded along the Gila River, or for that matter, in all Pimeria Alta. This is not surprising, in view of the fact that most of the commerce was conducted on a barter basis throughout the Hispanic period. Clothing, rather than cash, had become virtually the medium of exchange in Sonora (Kino 1948:II:80) by 1703, and subsequent accounts until the American period show that clothing was still the item most desired. Thus, to say of baskets that they value them at a peso, and even two, according to size" (Barbastro 1793 MS), is to express the price in terms of how much clothing a peso would buy then, if there had been any place to buy clothing. Evidently it was in short supply all during the Hispanic period, judging by the comments of the first Americans to go through in 1846, none of whom mentioned other clothing than the native cloth -- "They know how
to spin, also to weave thin cotton, for we see them wearing the cloth" (Boyle 1931:1). This despite the fact that extra effort may have been made to distribute clothing and cloth for a short time after the coming of the Franciscans (Garces 1775 MS).

### TABLE 4. RECONSTRUCTION OF MONETARY PRICES FOR HISPANIC GOODS*

<table>
<thead>
<tr>
<th>Item</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 horse</td>
<td>10 pesos</td>
</tr>
<tr>
<td>1 carbine</td>
<td>7 pesos, 6 reales</td>
</tr>
<tr>
<td>1 shirt of common linen, trimmed</td>
<td>6 pesos</td>
</tr>
<tr>
<td>1 cow</td>
<td>5 pesos</td>
</tr>
<tr>
<td>1 man's jacket</td>
<td>4 pesos, 4 reales</td>
</tr>
<tr>
<td>1 ell muslin (ca. 2 ft.)</td>
<td>3 pesos</td>
</tr>
<tr>
<td>1 hat</td>
<td>3 pesos</td>
</tr>
<tr>
<td>1 pair men's boots</td>
<td>1 peso, 2 reales</td>
</tr>
<tr>
<td>1 ell domestic (coarse cloth)</td>
<td>1 peso</td>
</tr>
<tr>
<td>1 pair scissors, inferior</td>
<td>1 peso</td>
</tr>
<tr>
<td>1 bar smoking tobacco (ca. 2 lbs.)</td>
<td>1 peso</td>
</tr>
<tr>
<td>1 ell silk ribbon</td>
<td>4 reales</td>
</tr>
<tr>
<td>1 knife, inferior</td>
<td>4 reales</td>
</tr>
<tr>
<td>1 ell cotton stuff</td>
<td>2 reales</td>
</tr>
<tr>
<td>1 hen</td>
<td>1 real</td>
</tr>
</tbody>
</table>


An approximation of prices can be reached by comparing prices in pesos for garments, labor, items commercialized by the Indians and others, without going into the complexities of coinage, exchange, or cost of living indices. Assuming an arbitrary standard for comparative purposes of eight reales equal one peso (Pfefferkorn 1949:309), a list can be given (Table 4) of prices for goods in which the Gila Pimas were conceivably interested.

Manje (1954:153) reported that Xironza, needing soldiers in 1701, hired local men at twelve reales a day; a muleteer with Anza got eight to fourteen pesos a month, to give an idea of pay scales. Croix (1941:138) instructed Anza in 1777 to "animate the Pimas Altos to continue their campaigns and reward them according to custom with three pesos for each head of an enemy captured or killed." This clarifies and extends the earlier instructions (Croix 1768 MS) to give a reward for the capture of Indian rebels "dead or alive," at which time the capture of a war chief was worth 300 pesos plus the title of cacique. This bounty had evidently been instituted by Kino's time (Bolton 1921:200). If the Spanish authorities paid up on this scale, an engagement such as that of


August 26, 1773, (Urrea 1773 MS) wherein the Gila Pimas captured or killed twelve men, fifteen women, and eight boys, would have netted the Gila Pimas the sum of some 105 pesos, enough to buy ten horses and one cow. No exact statements are available on the monetary prices of captives (Nijoras). In 1744 the price would have been perhaps two pesos, more or less, in terms of the goods demanded for them (Sedelmayr 1746 MS). By 1775 it had gone up to about ten pesos (Eixarch 1930:322).

Translating these prices into goods, a Gila Pima could have obtained a horse for a Nijora boy or girl, but would have had to trade from five to ten of his wife's baskets for the animal. He could have gotten a jacket for from two to four baskets, a bar of tobacco for one basket, and so on. We have no comparable prices for the Gila Pimas' woven goods - belts and mantles.
CHAPTER IX
AGRICULTURE

In view of the intensive and detailed study of Piman agriculture by Castetter and Bell (1942), there seems little point in attempting to repeat it all here. Nothing was found in the Hispanic documents examined which would materially add to or qualify their conclusions. Except for the statement by Bernal (1856:804) that the river had washed out the cornfields of Tucsan and Tusonimoo, so that the people had only mesquite to offer, the earliest records are woefully lacking in information about agriculture among the Gila Pimas specifically. It must be assumed that statements about agriculture among the other Pimas Altos can be applied to the Gila Pimas as well where no incongruity appears, and that later statements about Gila Pima agriculture can be taken to apply to preceding years, with the same qualification.

Crops

It seems safe to say that the aboriginal crops included maize, pumpkins, tepary beans, muskmelons, watermelons, cotton (the seeds of which were used for food - Russell 1908:77), and "beans." This last is included because of the probability, based on later evidence than the sources for the period, that at least one variety of bean in addition to the
tepary was also raised aboriginally. Castetter and Bell (1942:89-100) have adduced evidence, both historical and archeological, that the kidney bean was grown aboriginally by the Pimas and Papago, but that the lima bean probably was not, even though its presence adjacent to and within the Piman area in prehistoric times has been established (Steen and Jones 1941:200).

The aboriginal maize grown was a soft flour corn which apparently had a growing period (i.e., from planting to flowering) of approximately sixty days, demanded little water beyond the heavy pre-planting irrigation, and yielded, under aboriginal conditions, some ten to twelve bushels per acre (Castetter and Bell 1942:80-82).

Although watermelons and muskmelons (sandias and melones) were not listed specifically for the Gila Pimas, their cultivation at San Agustin de Oiaur in 1697 (Manje 1954:92) makes it seem probable that they were also grown on the Gila River. That they were found among the Indians at first contact does not mean that they were indigenous, having been introduced into the New World by the Spaniards and probably transmitted to the Pimas Altos in advance of them (Castetter and Bell 1942:118-120). They were nevertheless included in the aboriginal agriculture complex in so far as they reached the Indians before actual

contact with the Spaniards.

Castetter and Bell (1942:121) credited the Gila Pimas with having chile (*Capsicum annum*) since Kino's day, but it was never mentioned in any of the accounts of persons visiting them between 1694 and 1854. Nor was there any reference, other than that of Pfefferkorn (1949:50) to the presence of the wild pepper, chiltepequin.

The growing of cotton in sufficient quantity to provide "clothing" - blankets, loincloths, and skirts - for themselves and a small surplus for trade can be accepted as an aboriginal trait among the Gila Pimas despite the failure of the earliest Spaniards on the Gila River to mention it. Manje noted its being harvested at San Agustin de Oiaur in 1697, but not until 1746 was it recorded on the Gila River (Sedelmayr 1746 MS). Its presence on the Gila River, however, is known for prehistoric times (Fewkes 1912:148, 156; Sayles, 1937: 162) and the variety was a native American one. Sedelmayr's statement (1746 MS), therefore, that it was introduced by the Spaniards is not to be taken as more than an assumption on his part. There is no suggestion among the Hispanic sources that the seeds were used for food as was claimed by Russell (1908:77) and

Castetter and Bell (1942:198), but to do so would have been in keeping with the Piman utilization of all available resources.

There is no indication in the Hispanic sources of the exact amount of surplus produced by the aboriginal Gila Pimas. It must be presumed that their only source for seeds was from their own harvests, so that an excess must have been planted beyond the amount needed to feed the farmer's family until the next harvest. No Hispanic writer ever reported a famine for the Gila River; and basic to the Gila Pima hospitality which was reported by each traveler on the river was the furnishing of some type of food. Even when their cornfields were washed out in 1697 (Bernal 1856:804), they provided the Spaniards with mesquite meal and bread. On the other hand, there is no evidence that the aboriginal Gila Pimas considered food as a commercial product. This would tend to discourage the planting of an excessive surplus. The actual amount planted probably depended upon the number of persons dependent upon the individual farmer, and upon his own interest and energy.

The acquisition of wheat from the Spaniards was the most significant development in Gila Pima agriculture during the Hispanic period. Unlike melons it did not, apparently, precede the Spanish advance, but followed it. The progress of wheat northward through Sonora can almost be traced place by place and year by year, until it reached San
Xavier del Bac between 1694, the date of Kino's first visit (Bolton 1948:1:122) and 1697 when Manje (1954:93) reported a wheat field there. It may be assumed that it had not reached San Agustin, only fifteen miles farther north down the river, as Manje (1954:92) had been specific in reporting maize, beans, cotton, pumpkins, and melons there, just the day before arriving at Bac.

The actual date when wheat reached the Gila River cannot be determined, but it is perhaps significant that the first report found of it there (Sedelmayr 1746 MS) specifies it only for Sudacsson. It may have been just an oversight that in his 1744 letter (1744 MS) to Balthasar he did not mention wheat for the Gila Pimas, as he listed no crops for them that time. He did, however, state that the Maricopas whom he visited on the Colorado River grew "various beans, watermelons, muskmelons, pumpkins, a seed which resembles sand when ground, maize, and wheat ..." It would seem that if wheat had reached the Colorado River, it should also have reached the Gila; its cultivation by only one Gila River village might indicate that it had arrived there only a few seasons before. The fact that Sudacsson was generally listed as the home village of the governor of all the Gila Pimas suggests that it was through his agency that the grain had reached the Gila River, and that it was being tried out in his village first. Forty-seven years does seem an excessive length of time for it to progress
from San Xavier del Bac to the Gila River, having taken only two years to go from Caborca to Bac. Nevertheless, no evidence was found that wheat had reached even as far as San Augustin during the time that Kino and Manje were in the country, although both made visits to towns north of Bac and to the Gila River after 1697. After Kino's death and the departure of Manje for the south, Spanish travel to the Gila River either fell off or no records were left, and it may have been that the movement of wheat northward was arrested for a time.

By 1770 wheat rivaled maize as a major crop on the Gila River and was grown at all the villages, according to Garces (1770 MS).

In 1774 Anza (1930:II:127) wrote that at Juturitucan:

The fields of wheat which they now possess are so large that, standing in the middle of them, one cannot see the ends, because of their great length. They are very wide, too, embracing the whole width of the valley on both sides, and the maize fields are of similar proportions.

Diaz (1930:304), the same year, remarked that there was planted "so large a field of wheat, maize and other crops that they have filled us with admiration." He further reported that the Indians estimated one of the wheat fields to contain one hundred and twenty fanegas. The records show that wheat was planted in the fall, usually November or December, and harvested the next spring, in May or June. As this winter growing cycle complemented, rather than coincided with, the native crops of maize, beans, and pumpkins, it made wheat an
especially valuable addition to the economy of the Gila Pimas. It did
not, however, supplant maize as a native crop. Of fifty-four trans-
actions concerning grain noted by ten diarists in 1849, forty-four
were definitely identified as for corn. Hayes (1849-1850 MS) noted
twenty purchases of corn as against four of wheat. Nothing was found
in the records regarding the kind of wheat which reached the Gila River,
but Castetter and Bell (1942:115-116) state that the most common va-
riety among the missions was Propo, although Little Club and Califor-
nia Club were also found.

In addition to wheat, Kino (1948:II:256) wrote a long list of culti-
vated plants which had been introduced into Pimeria Alta. Of these only
squash (?), chiltepiquines (?), melons, and chickpeas (garbanzos) were
specified in the Spanish or Mexican accounts as having been raised by
the Gila Pimas. Squash is listed as questionable because of the in-
decisive nature of the evidence. Castetter and Bell (1942:100-102), ac-
cording to their descriptions, list as squashes some varieties of cucur-
bita which are commonly regarded as pumpkins. Therefore, when
Bigler (1846 MS), Tyler (1881:235), Goulding (1849 MS) and others list
squashes among the foods obtained from the Gila Pimas the identifica-
tion is not certain. The Spanish term calabaza, while it generally is
applied to the pumpkin used to make jack o'lanterns for Hallowe'en,
can also mean vegetables frequently regarded as squashes.
Pfefferkorn (1949:58-59) listed three varieties of "gourds," two of which were eaten, but they cannot be identified from his description. Nentuig (Rudo Ensayo 1951:23-24) described three varieties of "pumpkins" eaten by the Opata, one of which had a long neck and a hard rind, but again identification is hardly possible. Russell (1908:71) lists both pumpkins and squashes together, and designates Cucurbita moschata Duchesne as a squash, whereas both Castetter and Bell (1942:100-102) and Haury (1950:165) class it as a pumpkin. The chiltipiquin was listed here, although questionably, because, as stated, no reference to it in connection with the Gila Pimas was found, and because its Pima name, tciltipin, was recognizable as Spanish by Russell (1908:78). He noted that the Gila Pima obtained it from the Papago in trade, believing that they cultivated it -- Castetter and Bell (1942:121) have since shown that it grows wild. Because its range lies well outside Gila Pima territory, and because if it had been used since aboriginal times the Gila Pimas would be more likely to have their own name for it rather than an Hispanicized version of a Nahuatl name, it probably was introduced during Spanish times.

Melons were cultivated at San Augustin de Oiaur in 1697 (Manje 1954:92) and may have reached the Gila River before the arrival of the Spaniards themselves. They were definitely being grown there by 1746 (Sedelmayer 1746 MS). Chickpeas were first specified among
the Gila Pimas in 1849 (Anonymous 1849 MS), and may have been the "peas" listed by some of the later accounts (Demarest 1849 MS). 1

How early in the contact period the Gila Pimas accepted the new crops of chickpeas, tobacco, 2 onions (Goulding 1849 MS), and, questionably, black-eyed peas, potatoes, and yams (Pancoast 1930:244) 3 found among them by the early American travelers, cannot be determined. Such terms as "other grains and vegetables" (Diaz 1930:301) and "other crops" (Anza 1930:II:19) are hardly specific enough to be helpful. The early Americans, however, carried no seeds with them, and these must be accepted as Hispanic introductions. It is quite possible that by the time of the Anza expeditions the Gila Pima crop list had been increased by the addition of the garden crops listed by Castetter and Bell (1942).

New varieties of maize are known to have been grown in post-Mexican times, but there is no evidence to suggest their introduction during Hispanic times, so the presumption is made that the acquisition

1. Demarest, David: Diary. 1849. MS in Bancroft Library, Berkeley, California.

2. Tobacco might possibly have been an aboriginal crop. The designation of it, however, as a necessary item to be used as one of the gifts made in order to assure the friendship of the Indians (Font 1930:IV:23) would suggest that it was in short supply in Pimeria Alta in the 18th century.

of the other varieties took place after 1854. Although Castetter and Bell (1942:117-118) have stated that barley had been introduced at the missions of northern Sonora in the 18th century, no evidence for its presence on the Gila River was found unless it was one of the "other grains."

Despite the acquisition of increasing quantities of cloth from the Spaniards and later the Mexicans, the cultivation of cotton continued throughout the Hispanic period and into the American period. Coutts (1848 MS) described the Gila Pima method of harvest: "Their cotton is pulled in bowls sic7, just before opening, placed on their huts, dried and then picked, ...

How much of a surplus the Gila Pimas produced during the Hispanic period cannot be estimated in specific figures, but it probably was not large until the increasing markets of the American period made it worthwhile to produce more. At least as early as 1740 there was a surplus of cultivated foods, whether wheat had reached them by then or not. The Papagos by that time were helping with the Gila Pima harvests in return for a share of the crop, suggesting that the Gila Pimas might have been growing wheat by then (Anonymous 1856:838). That the surplus could not have been great during Hispanic times is indicated by the opinion of Anza in 1776 regarding the establishment of missions and presidios on the Gila River. He wrote
(1776 MS) that, as the production of necessities on the river was in proportion to the needs of the Indians, the new establishments should be provisioned from Sonora at first so as not to throw too great a strain on the productive capacity of the Indians. He felt that the Spaniards could count themselves lucky if the Indians could continue to support themselves, although he did attribute the estimated low production solely to lack of adequate tools. Nevertheless, there was sufficient surplus to care for some, at least, of the Papagos during the drouth and famine in 1774 (Anza 1930:II:124), and to send grain to Tucson in times of scarcity there (Anonymous 1849 MS). And there seems to have been enough left over for a certain amount of trade for cloth, tools, etc., with the more urban centers to the south.

Techniques

Fields were evidently fairly well cleared of brush and weeds (Font 1930:IV:44), for no one commented adversely in this respect and some of the Americans commented favorably. Couts (1848 MS) described "a series of the finest fields I ever saw. Give evidence too of having been finely cultivated!" (emphasis his). There is no evidence to suggest that the fields were fenced aboriginally. Probably they were not, since until the Gila Pimas acquired livestock, there was nothing in the immediate area that needed to be fenced out which could have been excluded by brush fences.
Dams were built of logs and brush in the river (Font 1930:IV:44), apparently a dam for each village, and the fields were flooded before planting. This might explain Emory's remark (1848:85) of November 12 (this is about wheat planting time) that all of the water of the Gila River was "drawn off by the zequias of the Pimos for irrigation; but the ditches are larger than is necessary for this purpose," the unused water returning to the river. This may also have represented the flushing of the alkaline deposits out of the soil (Russell 1908:87).

After planting fields were irrigated individually, on some sort of schedule - "they used to decide it" (Informant statement; Russell 1908:39-43).

Planting itself was carried out by means of the planting stick - "All these fields the Indians cultivate with no more oxen and no other implements than a wooden stick, with which they make holes in the ground and go slowly burying the seed" (Diaz 1930:304). During the growing season the Gila Pimas probably lived near their fields in temporary shelters, as did the Pimas Altos to the south (Canas and others 1929:232), for that practice was noted in 1848 by Couts (1848 MS).

As it kept the people from daily attendance at Mass and religious instruction, it would seem to represent an Indian rather than a Spanish behaviour pattern. It was noted that in the south (Manje 1954:28) the fields were cared for by groups of related people, and this probably
was true among the Gila Pimas.

The Hispanic accounts are silent as to harvesting and storage methods. It would seem, however, that those described by the Americans (except for the wattle-and-daub granary) were indigenous, since a quotation from Garces suggests that those methods (and the exception noted above) had been in practice during Spanish times. He wrote (1930:389) that the governor of Uturituc, pressing him to stay a week said to him, "You see that there is plenty of food...," implying that it was readily visible. The later American accounts show that storage was on the ramada roof and in the house in baskets and ollas. Goulding (1849 MS) noted:

... a large arbor open on all sides and on the top they pile up the cotton in the pod, corn & wheat straw &c. In these beehive like houses were stored large earthenware jars & baskets filled with mesquit [sic] beans, corn, wheat, and some fine mellons.

Pumpkins were dried, so presumably they were cut in strips and exposed on poles or on top of the ramadas as described by Castetter and Bell (1942:190). Regarding cotton, the description given in the Rudo Ensayo (1951:15) of the Gila Pima fields that "after the crop is gathered in, more remains in the fields, than is to be had for a harvest here in Sonora..." appears to be a misinterpretation. That which was left in the fields was probably the immature bolls not yet ready for picking (Castetter and Bell 1942:197).
The addition of new crops, especially wheat, brought about an increase in the amount of land cultivated by the Gila Pimas. It is difficult to say how much of an exaggeration is represented by the report previously quoted from Anza (1930:II:127) regarding the size of the fields at Uturituc. The actual acreage, however, must have been considerable for the ordinarily matter-of-fact Anza to have been so impressed.

Another result of Hispanic contact was the construction of fences around the fields. How early they began fencing the fields, or whether they thought of the idea themselves, or observed it in the mission centers to the south, cannot be determined exactly. Garces (1775 MS), however, probably saw them as early as 1770, although he was a little vague as to how each individual field was marked off: "Their sowings of wheat /are/ very large, well set off and fenced, and although it seems that all join to make the fences (but) they have their lands within divided." Emory (1848:83) was more specific:

The fields are sub-divided, by ridges of earth, into rectangles of about 200 x 300 feet for the convenience of irrigating. The fences are of sticks, wattled with willow and mezquite, and in this particular, set an example of economy in agriculture worthy of the Mexicans, who never use fences at all.

This last, along with comments regarding the superiority of the Gila Pima agriculture over that observed to the south by some of the Americans suggests that fencing might have been an independent development on the part of the Gila Pimas. Bartlett (1854:II:233), however, noted
large patches of wheat distant from any habitation which were unfenced. Jordan (1849 MS) was typical in his praise of Gila Pima farming — "the Indians here are decidedly in advance of the Mexicans as respects agriculture, ..."

The Gila Pimas evidently got European agricultural implements quite late in the time of their contact with the Hispanicised society to the south. While a small number of such things as hoes, axes, shovels, rakes and possibly mattocks no doubt found their way northward as soon as the missions to the south were established close enough to be visited by the Gila Pimas, the number was probably in terms of units, rather than tens or hundreds. Shortage of supplies and equipment was one of the consistent complaints of the missionaries and, not having enough implements of husbandry to distribute them adequately among the Indians of a mission, it is not probable that many were passed out to unreduced Indians living so far away as the Gila River. During the early explorations an occasional knife was given as a special reward, as when the San Pedro Sobaipuris sent a forgotten sword over to Kino’s party at Bac (Manje 1954:93). Later, knives were mentioned as one of the articles demanded as part of the price for a Nijora (Sedelmayr 1746 MS). These knives may have found use as an agricultural

Implement. An excellent measure of the scarcity of European tools among the Gila Pimas was Garces' 1770 account (1770 MS) of giving the people at Pitac one axe and loaning them two more to help them in the task of rebuilding their dam. As late as 1774, the only farming tools described for them were the planting stick and (probably) the weeding blade (Diaz 1930:304). Within the next seventy-five years they acquired more iron tools, and began making wooden imitations of others. Emory (1848:85) listed steel axes, wooden hoes, shovels, and harrows, but iron tools were evidently still in very short supply. In 1848 Couts (1848 MS) recorded a request for "a thousand or two spades so that they might have a great deal of corn for the next White men that came along!" and the complaints of theft made by the next immigrants in 1849 frequently concerned tools. The party with which Aldrich (1950:54) travelled, "having lost blankets, axes, and cooking utensils, complained to the chief...." The plough was not recorded until 1849 (Goulding 1849 MS) and as late as 1852 Bartlett (1854:II:237) wrote that the Gila Pimas ploughed but little, using the hoe mostly. The description of a "Sonoran" plough given by Pfefferkorn in 1767 (1949:204-205) corresponds closely to that of Goulding (1849 MS): "a long hooked shaped stick... to the end of which they hitch on an ox." It also could as well be applied to the one illustrated by Russell for 1901 (1908:98), or to one in the museum of the Arizona Pioneers' Historical
Society, Tucson. Thus, although the implement was adopted in response to the increased demands for wheat following the influx of the Americans, the first form of the implement was that in use in Sonora. The American travelers in 1849 left scattered along the Gila River, especially in the more or less waterless stretch traveled to avoid following the river in its big bend, a number of tools and implements: chains, yokes, wagons, trunks, chests, shovels, picks, etc. (Demarest 1849 MS; Aldrich 1950:55-56). These, of course, were of American manufacture and were not part of the Hispanic acculturation situation.

There is little evidence to suggest that either theSpaniards or Mexicans had much influence on Gila Pima harvesting or storing techniques. The introduction of wheat necessitated a method for separating the small grains from the chaff, a problem not faced on that scale before, since the amount of grass seeds collected aboriginally would have been small. This was solved by the acquisition of horses and the adoption of threshing by horses as described by Grossman (1873:419) whereby, after the grain was gathered on the stalk and spread in a flat area, "Horses thrash the grain by stamping. The women winnow the grain, when thrashed, by pitching it into the air by basketfulls, when the wind carries off the chaff; ...." The wattle-and-daub granary would appear to be the only addition to storage
facilities, and may have been adopted as late as Mexican times. No reference was found to it in the Spanish sources, the first description being that of Bartlett for 1852 (1854:II:234-235). Coutts' description (1848 MS) -- "little dirt cellars, made above ground" -- of the storage structure in which melons and pumpkins were kept, is not definitive; the structure could as well have been that described in greater detail by Bartlett.

Food Preparation

Russell (1908:68-83), Castetter and Bell (1942:187-208), and Curtin (1949:57-109) have included a detailed discussion of Gila Pima methods of food preparation in their studies which could not have been compiled from the records available to me. There appears to be little chance that the methods changed materially until after the introduction of American foods, or that the preparation of aboriginal foods changed at all. Grains and seeds of all kinds were made into gruels, called atol, pocol(i) or pinole (Sp. atole, pozole, pinole) depending upon the method of preparation. Some, such as mesquite and corn, were made into breads. Parching was a commonly used technique, either as a step in the preparation of the final dish, or as the only preparation deemed necessary. Grinding was done with the mano and metate, crushing in wooden mortars (mesquite or cottonwood) with unshaped stone pestles. Boiling was the most common method of cooking,
although Couts (1848 MS) noted that "Their corn is also hulled before ripening and dried. The ear is then stuck on a stick, and partially burnt, about same as cooking a roasting ear by the fire." He also remarked that the horse meat eaten by the Indians was "pretended to be cooked, used sticks, holding it over the fire." (emphasis his).

Drying was the common method of preservation, both for vegetable products and meat. Several contemporary writers (e.g., Bartlett 1854:II:218; Goulding 1849 MS; and others) commented on the jars of syrup (also referred to as molasses or honey) of the saguaro fruit, some of which were described as "hermetically sealed." This sealing was probably done by smearing the mouth of a jar having a relatively narrow opening with lac, the encrustations of the lac insect found on the creosote bush, and pressing a potsherd shaped to fit down on the soft gum. If the job were properly done a nearly air-tight closure could be obtained. As sherd discs bearing these lac encrustations have been found archeologically in southern Arizona (at Organ Pipe Cactus National Monument in the Papago country) the process was probably known aboriginally to the Piman tribes who used the sahuaro.

Goulding's description (1849 MS) of one type of food preparation is worth quoting, as it does not appear in any of the other sources examined:
I was very much amused seeing an old granny entirely /sic/ naked sitting down on her legs and rolling with a small smooth stone on another larger one of the same kind wheat boiled in water in an earthen pot shaped vessel, dipping her hand occasionally in a vessel of the thin water kind of molasses and by this mode rolled it into small rolls like stick candy or smaller, & little copper coloured and naked urchins all a laying around her watching hands as fast as she made the rolls and putting in their mouths. In this way she continued until they had a sufficiency to satisfy their meal.

None of the newly introduced crops necessitated any new methods for food preparation, all being adaptable to the old techniques, and no new methods seemed to have been developed or adopted.
CHAPTER X
MINOR SUBSISTENCE ACTIVITIES

Gathering

The documents of the Hispanic period provide no such detailed picture of the wild foods of the Gila Pimas as that presented in Castetter and Bell (1942), Russell (1908:69-80), and Curtin (1949:47-109), nor do they present much to change the statements of those authorities. Since it is unlikely that the Spaniards taught the Gila Pimas anything about the environment of the Gila-Salt basin, it is assumed that any wild plants used by the Gila Pimas were known to them aboriginally. Since the travelers through Gila Pima territory became aware of only a minute portion of the foods which were gathered from the desert around them, it is not surprising that they listed so few plants. 1

Castetter and Bell (1942:56-57) concluded that the Gila Pimas obtained only fifty to sixty percent of their total food supply from cultivated crops. Therefore, some forty to fifty percent had to be obtained by hunting, fishing and gathering. Of the wild plants, mesquite was by fat the most important - it was the staple upon which they depended when all else failed, but was probably used in addition to domestic foods as well. Font (1930:IV:44) ascribed the body odor of the Gila Pimas to

1. See Appendix A for a list of those plants reported.
the great quantities of péchita (mesquite meal) and other wild plant foods consumed by them.

Saguaro probably ranked next in importance. Garcés (1930:II:388) met "the people of Sutaquisson" gathering the fruit in 1774, and Cremony (1951:111) reported that both the Gila Pimas and Maricopas gathered it in the mountains of the bend of the Gila River in 1851. Bartlett's description (1854:II:191) of the preparation of the fruit into cakes in 1852 echoes that of Pfefferkorn (1949:75-77) almost a century earlier.

Plants used to a lesser extent included tornillo (screwbean mesquite), mescal, prickly pear, and "grass seeds and other coarse things" (Font 1930:IV:44). The listing of prickly pear by Pfefferkorn (1949:76) is inferential, but included because he also stated that it was reported to cause "agues" and this was repeated for the Gila Pimas by Russell in 1901-1902 (1908:75) and by Curtin in 1941 (1949:61).

Russell claimed to have identified some sixty-five wild plants used by the Gila Pimas, but his listing is exceedingly difficult to follow (1908:68-80). Curtin listed nearly seventy native plants in use as late as 1941 (1949:47-111) in her excellent study of Gila Pima ethno-botany.


2. It is apparent that Pfefferkorn was describing both the pitahaya (organ pipe cactus, cereus thurberi) and the saguaro (cereus giganteus) and confusing them.
The survival into modern times of the knowledge of so much of their potential wild food supply suggests that prior to white settlement and loss of water for irrigation the Gila Pimas use of their total habitat was much more extensive and intensive than is specified in the historic accounts. I assume that Castetter and Bell (1942:33), when they stated that "...there can be no doubt that agriculture was more important among these people [the Hohokam] than with the Pimas...", intended this to apply to the Pimas (and the Gila Pimas in particular) before they obtained wheat.

In part the survival of knowledge of wild plants is unquestionably a reflection of the "hungry years" from the late 1870's until the 1920's, but it also is connected with native medicine, with recreation, and perhaps with actual taste preferences. Curtin (1949) has demonstrated the continuance of the use of plants as medicine, and old people (and some not so old) have spoken of the pleasure they got out of rabbit hunts, and saguaro fruit gathering trips - "they were kind of like picnics." A number of households which apparently have adequate food supplies still gather and use mesquite beans, saguaro fruit, and other wild foods. "There are some old people who don't like modern food, white food. They still like to eat the old food, the Pima food. They say it tastes better - it's better for them - they feel better" (informant statement).
Hunting and Fishing

Castetter and Bell (1942:56-57) concluded that aboriginally game and fish provided only about one fourth of the total wild foods of the Gila Pimas, and there is nothing in the Hispanic records that refutes this. As a whole, the early American travellers give more information on this than do the Spaniards and Mexicans.

Reference has already been made to the pile of mountain sheep horns which gave Tusonimoo its name. Manje's statement (1954:87) that "These animals are so plentiful that they are the people's common source of sustenance" is not borne out by the testimony of later writers, or even by Manje's own later statements, either as to the number of the animals or as to their use by the Gila Pimas. Their use as a food by the Gila Pimas is not mentioned again until 1902.

In the main, references to hunting or fishing, or even to game or fish, are so infrequent in the Spanish and Mexican records that, in view of the evidence for the existence of game and fish available to the Gila Pimas within the bounds of their territory, some explanation is required. It has already been suggested that the scarcity of such comments in the Hispanic records might be attributed in part to the Spaniards and Mexicans having no interest in that aspect of the country - they were concerned with "civilizing the country," not with sport, nor even with utilizing the fish and game themselves. Another clue is provided by information from the early American writers.
Hayes (1849-1850 MS) wrote that when "The interpreter was asked if there were many deer or bear in the neighborhood - he replied they were, but the Pimos preferred work to hunting..." Russell (1908:82, fn.) reported that the Gila Pima attitude in 1902 as expressed by Antonio Azul was that "the mountain sheep were game fit only for the Papagos, who had no fields to look after." Note that this statement was made when the loss of their water to white settlers had already made farming no longer an adequate means of subsistence for the Gila Pimas.

Nevertheless, both hunting and fishing were being engaged in to some extent by the Gila Pimas both before and after 1854, and, projecting Hispanic and American comments backward in time, those activities were practiced aboriginally as well. To the references already cited regarding hunting and fishing by the Gila Pimas can be added that of Kino (1948:1:195) with its possibility that the Gila Pimas shared in Maricopa fishing. This seems plausible when it is taken into account that in 1852 Bartlett (1854:II:241-242) was told by the interpreter, Francisco (a Maricopa) that the Maricopas and Pimas fished at a spot on the Salt River about twelve miles above its junction with the Gila. On the night of July 3 he was visited by a party of twelve to fifteen young Gila Pima men who had been hunting and fishing. He contracted with them for fish, and by midnight he had "enough to last a week."
The hypothesis is suggested that hunting was an activity engaged in primarily by young men, as much for sport as for food, except in cases of necessity. Communal hunts for small game such as rabbit and quail, as described by Dines (1881 MS)\(^1\) in 1881, may have reflected the latter circumstances. Similar hunts were engaged in by boys (eight to fifteen years?) in the late 1800's (informant statement). Russell (1908:80-83) gives a list of animals hunted, either at the time he was there or in the past, including antelope and deer from the plains and mountains to the east of the villages.

The addition of wheat to their subsistence base brought about an increasing emphasis upon Gila Pima agriculture; whether that was accompanied by a diminution of hunting and gathering is not clear. The surpluses produced by them after they acquired wheat would have made it possible for them to have spent much less time in hunting and gathering, but the fact that so many wild plants continued to be used well into the American period (Russell 1908:69-80; Curtin 1949:47-109) demonstrates the survival of that activity through the Hispanic period. Their indifference to hunting (Hayes 1849-1850 MS) was probably reinforced by the agricultural surpluses.

**Domestic Animals**

Unless they had the dog, the Gila Pimas had no domestic animals

until after first hand contact with the Spaniards. That the dog was not mentioned in the Spanish or Mexican accounts does not necessarily mean that the Gila Pimas did not have it. The dog has been reported archeologically from the Hohokam of the Gila Valley (Haury 1937:156) and the Sobaipuri of the San Pedro Valley (Di Peso 1951:207; 1953:236).\(^1\)

At the other end of the time scale, several of the American travelers reported dogs present among the Gila Pimas (e. g., Emory, 1848:85; Clarke 1852:91; Goulding 1849 MS),\(^2\) Hayes (1849-1850 MS) finding that: "Their dogs, too are troublesome." Spanish and Mexican failure to report them may well have been a case of not setting down the obvious.

Properly speaking, such wild birds as eagles and hawks can not be considered as domesticated, even though confined in cages. This aspect of Gila Pima culture is considered under supernaturalism, below.

In view of the rapid spread of the horse over much of North America ahead of the advance of the Europeans, it is theoretically possible for it to have become known to the people of Pimeria Alta prior to the arrival of the Spaniards. That it did not is evident; why


it failed to do so is not so clear. To dismiss the question as one of ecology and/or subsistence pattern is not an adequate explanation, for when they acquired horses the Gila Pimas valued them, not for food or for aids to farming, but rather for their own sake, perhaps as prestige items, although not to the extent of tribes who came to have almost a "horse-oriented" culture.

The majority of the Indians of the Gila River had their first sight of horses when the Spaniards visited their villages. This is evident from the fear displayed by them. Although Kino (1948:I:164-165) had placed cattle and mares at Quiburi by the end of 1696, the people of Jiaspi, only a few leagues north down the San Pedro River, to say nothing of those at Tucsan on the Gila, were afraid of the horses the Spaniards rode (Manje 1954:81, 87). By 1699 the ranch at Bac was well established, yet the Maricopa boys were delighted the next year to learn that horses ate grass instead of little boys (Kino 1948:I:208, 247). In the spring of 1702 Kino (1948:I:350) noted that the animals lost on the Gila River the previous trip had been rounded up by the Indians and returned to him at Sonoyta. The Pimas living "on the arid frontiers" who acquired colts from wild mares (Manje 1954:75) were evidently not in touch with the Sobaipuris or the Gila Pimas.

There is no record of Kino's ever having taken stock to the Gila River as he did to the mission establishments to the south, so that in the beginning the Gila Pimas had to acquire them in some other way.
How early that process began cannot be stated categorically, but by 1732 the Sobaiapuris of the Santa Cruz River, at least, had some riding animals (Cañas and others 1929:231). By 1740 the Gila Pimas were raising "although few, ganado mayor y menor / major and minor livestock/, and horse herds." (Anonymous 1856:838). When he had trouble because the Guicam on the Colorado River below its junction with the Gila River tried to take the expedition's horses in 1750, Sedelmayr (1750 MS) stated that on all his entradas he gave some horses to the Indians. The principal means of acquiring stock followed by both the Gila Pimas and the Papagos in the first part of the 18th century, however, was by trade with the Spanish settlements (Cañas and others 1929:231). This was still true in 1793 when Barbastro (1793 MS) said that the:

heathen Papago and the rest of this Pima nation...carry on commerce among themselves and with the Spaniards, who give them horses in return...By means of the buckskin, mantas and produce, they acquire some horses, and this traffic has ruined many, for it frequently happens that after having impoverished himself to acquire a horse or a cow the Apaches steal it in a few days.

In 1843 Comaduran (1843a MS) reported that very large lots of horses and cattle were being stolen by the Papagos and sold to the Gila Pimas, and that this was confirmed by the Gila Pima governor, Culo Azul.

Although this would imply that large numbers of animals were reaching the Gila River, the accounts of the American travellers are contradictory. Emory (1848:84) reported that livestock was scarce, horses and mules being "prized extravagantly high," and the expedition was able to acquire only two or three bullocks. Bigler (1872 MS) in 1846 "saw a few cattle and a good many fine ponys some mules and jackasses."

It is plain that the horse was the most important of the domestic animals in the eyes of the Pimas, as well as of some of the other tribes in the region. Sedelmayr wrote (1750 MS) that the Guicam got some horses from the Pima (he meant Papago in this case), but that the latter "wanted them all," i.e., did not want to release those they had. According to Garces (1770 MS) the Gila Pimas did not go to the rancheria of the people who had seen the white strangers on the Colorado for fear of losing their horses. Barbastro's statement (1793 MS) that they would impoverish themselves for horses and cattle and Emory's opinion (1848:84) that they were highly prized give some measure of the attitude of the Gila Pimas toward horses. Eccleston (1950:210) noted that they had "some splendid ponies for which they ask $25 to $40, but will not trade much, wanting cash." Yet no instance was found where the horse was used for anything but riding -- oxen were the draught animals -- nor did the Pimas, at that time at least,
eat horses. Considering the circumstances under which the Gila Pimas first met the horse, ridden by authoritative white strangers, and their continued view of it under those same circumstances, it would seem probable that they came to value it as a prestige symbol, aside from its utility. Cattle growing had not, by that time, become enough of an industry with the Gila Pima to make the horse valuable as an adjunct to it.

Little reference was found to equipment associated with horses. Coutts (1848 MS) noted that the Gila Pimas "mount, invariably, on the right side, having one girth loose, which is used as a stirrup, one foot in it at a time." Apparently a saddle of some kind is implied, but the one illustrated by Russell (1908:pl. XV) shows a single stirrup and leather in addition to the cinch.

All of the American accounts between 1846 and 1852 state that there were very few mules among the Gila Pimas. Bartlett (1854:II:236, 237) attributed the presence there of those few to their having been left by the American travellers, but they had been reported by the first groups in 1846, so that explanation could only be partially correct. Bigler (1872 MS) had noted the presence of "jackasses" as well as mules in 1846, so that it would have been possible for the Gila

1. Coutts (1848 MS) gave a rather highly colored account of the Indians eating a horse belonging to his party when it died, presumably of old age and fatigue, but that was the only case found and seems rather suspect by reason of some of the rest of his statements.
Pimas to have bred mules, despite Bartlett's assertion to the contrary. If they were used as either riding or draught animals, no mention of it was found.

It seems to be fairly well established that the Gila Pima did not acquire cattle until long after they had horses -- in fact, that cattle were not added until during the Mexican period, in the decade between 1820 and 1830. The Spanish sources fail to establish cattle among the Gila Pimas. The statement that they had *ganado mayor y menor* in 1740 (Anonymous 1856:838) is not conclusive since the term comprehends such livestock as horses, sheep, goats, pigs, and poultry, as well as cattle. Generally, the statements are couched in curiously negative terms, being to the effect that there was not enough pasturage along the Gila River to support horses and cattle. The only positive Spanish statements (Font 1930:IV:33, 44) concerning animals among the Gila Pima list horses, sheep, and "Castilian hens," but not cattle, and Diaz (1930:304) implied that the Gila Pimas had no oxen (i.e., steers, hence cattle).

Russell (1908:85) gave a Gila Pima statement that the Kwahatks "brought the first cattle to the Pimas about 1830." This is corroborated by Whittemore (1893:79), both as to time and means, and is further substantiated by a Mexican report as regards the time -- "It has been only a short time since they dedicated themselves to the raising of cattle..." (Anonymous 1849 MS). Although Culo Azul stated in
1843 (Comaduran 1843a MS) that "large lots of cattle and horses" had been taken to the Gila River, cattle evidently continued to be scarce there until 1846, judging by the reports of members of the Kearney and Cooke parties. The Gold Rush accounts are contradictory. In July, Goulding (1849 MS) reported "a large number of cattle," but in November Eccleston (1950:210) noted "not many oxen or mules." The next month, however, Hayes (1849-1850 MS) reported "many cattle," but that: "The chief who sold us the beef has only two others...."

This continuing scarcity of cattle can be attributed to two factors. One, the poor range conditions along the Gila River, had been cited since Spanish times, and was given by the Mexican report cited above (Anonymous 1849 MS). The other seems to have escaped notice until the American period, probably because the reports for the Mexican period were made by persons who had spent little time with the Gila Pimas and had not chanced to observe the funeral of the head of a household. At that time, such of his livestock as had not been given away before his death was slaughtered and eaten, which practice kept down the number (Putnam, 1864; Grossman 1873:419; Russell 1908:85).1

It is possible that the Gila Pimas began making greater efforts to acquire cattle during the time of the Gold Rush. Goulding (1849 MS) wrote that some of the oxen "were new to work at this time...," and

Hayes (1849-1850 MS), before reaching the Gila River and the villages, reported meeting a party of Gila Pimas on their way to Tucson to buy cattle. When his party bought a beef from the governor, the latter was anxious to obtain silver in place of gold, and Hayes also noted that "they seem to prefer Mexican money." As it became apparent to the Indians that there would be a market for produce (and perhaps animals) among the American gold seekers, and as the Indians acquired money with which to purchase animals, they began to do so in anticipation of an increased demand which could not be met by planting stick agriculture. In spite of that, draught animals, which meant oxen, never became numerous. According to Russell (1908:85) a single ox might have to serve for a whole village. One man stated that when he was a boy (1880-1890) his "family circle" (extended family) had six oxen, and did the plowing for neighbors and friends (informant statement).

The Mexican documents make no direct reference to any use of cattle by the Gila Pimas, even when the evidence makes it seem reasonably certain that they had at least a few. That may have been only failure to record the familiar, for Emory (1848:84) noted their utilization in tillage in 1846, which practice must have been adopted from the Mexicans prior to that time. Descriptions for that period indicate that the plough and the technique were the same as those described by Pfefferkorn (1949:204-205) for the "Sonorans" of almost a century
earlier. Not until the American period, when observers spent enough time among the Gila Pimas to see more than was possible for transients, did the use of cattle as food become documented. Even so, that use was really a secondary one. The remarks of Cooke (1938: 172-176),1 Couts (1848 MS), Grossman (1873:419), and others indicate that cattle were not kept primarily for food and were eaten only when an excuse was provided by the death, either of the owner or of the cattle; nor was any use made of dairy products during the Hispanic period.

Of the other domestic animals, poultry (represented by chickens only) was already present among the Gila Pimas when the Americans began passing through their country; hence it had been there in Hispanic times. As Font (1930:IV:44) had noted the presence of "Castilian hens" among them, presumably the Gila Pimas had acquired chickens sometime prior to 1775. At least two attempts to introduce sheep among the Gila Pimas were made before 1854. Font (1930:IV:44) stated that in 1775 "They also have large sheep with good wool..." Cooke (1938:172) in 1846 gave the governor three ewes "with young," the Spanish sheep evidently having died off. Further mention of them

is lacking. One can speculate on the causes of this failure to accept successfully these particular animals, but the only explanation presented in the records was Nentuig's statement (Rudo Ensayo 1951:28) that they did not do well on the "thorny brambly ground." It is true that sheep were apparently accepted during Spanish times, but that acceptance was evidently abortive, as was that of 1846. Although Di Peso found evidence for swine in two of the phases at Quiburi over a span of time sufficient to indicate that they were used by the Pimas Sobaipuris of the San Pedro River for a time at least (1953:234-236), no mention was made of them among the Gila Pimas, in either the Hispanic or early American reports. This is rather curious, as the Pima word for pig or hog, $\text{kooji}^1$ is clearly derived from the Spanish $\text{coche}$. Perhaps the Gila Pimas were the "Sonorans" of whom Pfefferkorn (1949:103) was thinking when he wrote that: "The animal is so abhorrent to him that he would suffer the severest hunger rather than eat a piece of domestic pork."

1. Russell (1908:80) gave $\text{ka'atci}$ for peccary; the term recorded in 1953 for peccary was $\text{mictcin kooji}$, "wild pig."
CHAPTER XI

SHELTER AND DECORATION

Architecture

It is possible that the house type of the Gila Pimas, the Sobaipuris, and some of the Pimas Altos, at the time when the Spaniards first met them, was a dome-shaped hut consisting of a pole framework which was covered with mats of carrizo, rather than that it was thatched and earth-covered as later described. If they had originally been earth-covered, there would seem to have been no need for Bernal's adjuration (1856:799) to the Indians of Santa Maria Suamca to make their houses de terrado. Houses made of mats were noted specifically at Aribabia on the lower San Pedro River (Bernal 1856:801), Sudaison on the Gila River below Casa Grande ruins (Manje 1926:250), and Aktciny or Santa Catalina, San Augustin de Oiaur and San Xavier del Bac on the middle Santa Cruz River (Bernal 1856:805, 807; Carrasco 1698 MS);

1. The meaning of the term de terrado in 18th century Pimería Alta is not clear, but probably the reference was to the vertical walls of adobe and the flat roof common now in the Southwest.

and no other native type was described by these earliest writers. In contrast, Carrasco (1698 MS) at the same time specified one flat-roofed adobe house (una casa de adobe y terrado) at San Cayetano de Tumacagori "as at San Luis" (Bacoancos, to the south). Finally, Velarde (1954:241) in 1716 described the homes of the Pimas Altos as "jacales which are huts made of mats of reed-grass cut in half and built in the form of a vault on arched sticks. The top is covered with these mats, thick enough to resist the weather." This form of construction was also described by Villaseñor (1746:396) in 1746, after which mats were no longer mentioned in the descriptions of the houses.

If, as suggested, the aboriginal house type along the lower San Pedro, Santa Cruz, and middle Gila rivers when the Spaniards entered those areas, were a pole framework covered with mats, this represented a break with the architectural tradition of the Gila basin in prehistoric times for which there is no apparent explanation.

Archeological evidence (Sayles 1937:78, 79-80; Haury 1945:19, 30, 37) points to a thatched and (at least partially) earth-covered house,

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similar in structural details, if not in plan, to the Piman houses noted during the greater part of the historic period. One might speculate that the trend noted by Sayles (1937:79-80) toward smaller houses with fewer interior supporting posts culminated in the type of house construction described by the first Spanish writers. If that were the case, it is suggested that the latter form was not firmly entrenched in the Gila Pima-Sobaipuri cultural pattern, and hence that it was a recent development, for it was evidently abandoned early in the historic period.

There is nothing in the earliest records upon which to base an estimate of size, apertures, or orientation. It seems reasonable to assume that the house was of a size for a single family, since an exceptionally large house was not specified for the Gila Pimas as it was for the Yumans (Manje 1954:113).

The ramada was not specifically identified in the Gila Pima villages by either the Spaniards or the Mexicans. Font (1930:IV:43) was typical in labelling as an "arbor" the structures other than houses. The presence, however, of a "ramada the same size as the house" among the Yumas in 1699 (Manje 1954:113) would indicate that it was a native trait rather than an Hispanic one. Bernal (1856:801) sent messengers ahead to Jiaspi to order the preparation of a ramada for Kino, thereby suggesting that the type of structure was known in Pimeria.
Alta. It is quite possible that the ramada was such a commonplace feature of Pimeria Alta that the Spaniards took its presence for granted, whereas the Americans describe it frequently. Goulding (1849 MS) reported it as the "large arbor open on all sides and on the top they pile up the cotton in the pod, corn & wheat straw &c." To them it was something new and therefore to be noted. Whether or not it was in use among the Gila Pimas when the Spaniards first arrived was not specified, but is probable.

Apparently the Gila Pimas' use of mats as a house covering was abandoned by the middle of the 19th century, for in his fairly complete description of the construction of the "Sonoran" house Pfefferkorn (1949:192) did not include the use of mats. The framework of poles driven into the ground and formed into a dome continued unchanged, and possibly the cross-framework of twigs lashed to these supports may have been a survival. Instead of mats, however, sacaton grass was now used to thatch the structure, which was "sprinkled" with earth. Perhaps the Spanish efforts to introduce earthen houses to replace the easily destroyed and indefensible aboriginal structures was bearing fruit. Another possible reason for the attempt to bring about this change may have been the aboriginal custom of destroying the house at the death of the owner (or of anyone in the family?). This has been recorded as a former practice of the Gila Pimas by
Russell (1908:154) and might have been a Pima Alta custom also. It would have been more difficult to get earth to cling to the relatively smooth mats than to the thatching. The change might have been represented to, or been viewed by, the Indians as an improvement, and then have been carried northward to the Gila River by the San Pedro and Santa Cruz Sobaipuris. The use of the interior supporting posts may well have come in at this same time, as the former method of construction was probably not sufficiently strong to support the weight of earth now piled on the top of the house. By the time the Americans began writing about Gila Pima houses, they were more frequently than not described as earth-covered, although this feature was omitted by many (Demarest 1849 MS; Hayes 1849-1850 MS). Jordan (1849 MS) implies that some might have been entirely covered with earth:

Their houses are made by driving 4 posts in the ground then laying poles across & covering it with corn stalks, weeds, dirt or anything to turn water. Walls, when they have any, are made of willow or weeds plaited together, some are built like clay ovens, a good deal of that shape to.

In addition to sacaton grass, cornstalks and wheat straw were described as thatching material.

Bartlett's description (1854:II:233-234) of the construction of the Gila Pima house agrees closely with that given by Russell (1908:154) and none of the others is contradictory. The height at the center was five or six feet, and the diameter ranged from twelve to twenty-five
feet. The estimates of fifty feet (Emory 1848:85; Clarke 1854:91; Goulding 1848 MS) may have applied either to Maricopa houses, as stated by Tyler (1881:236), or to the socio-ceremonial house of the community. The entrance was a low opening, entered by crawling; whether it faced to the east as Russell described (1908:154) could not be ascertained. Only Cooke (1938:176) noted a smokehole and only Bartlett (1854:II:233) described vertical posts to support the center of the roof.

The virtual unanimity regarding the shape of the house (only Eccleston 1950:209, mentioned a quadrilateral house) raises the question of the date of the vertical-walled structure. Linguistic evidence suggests its introduction during Hispanic times. The round house is called kî, and only that term is used for it; the quadrilateral, vertical-walled, flat-roofed structure is distinguished by the word kosî, derived from the Spanish cocina, "kitchen." But the almost complete lack of reference to this architectural form, even as late as the mid-19th century, is in conflict with that interpretation, and it would be preferable to have more information before advancing any hypothesis.

Bartlett was the only writer to record a separate structure specifically as a granary (1854:II:234-235). This may well mean that such structures were adopted coincident with contact of the Gila Pimas with the Americans and the consequent increase in demand for
an excess of crops which would necessitate extra storage space.

Dress

The early accounts are so lacking in details of dress, even for the Sobaipuris, that we can only infer from the repetition of the statement to the effect that they grew cotton with which they clothed themselves that later more detailed descriptions hold true for the earlier times. At Ojio, the last rancheria of the San Pedro Sobaipuris before reaching the Gila River, Manje (1928:250) wrote that the people grew cotton, from which they wove first-class mantas (mantles, blankets), painted in various colors, with which they dressed and adorned themselves. Carrasco (1698 MS) stated that both the men and women of the Maricopas who came to see them at San Andres on the Gila River dressed differently from the Pimas, without saying how either tribe dressed. Velarde (1954:240-241), having obtained his information from the written and verbal accounts of the men who actually visited the northern frontier of Pimeria Alta, evidently confused one description with another, and has the people of the frontier both naked and clad. He did, however, clarify and amplify the statement by Manje about the colored garments, describing them as dyed (instead of painted) red and yellow, which is more congruent with both archeological and later historical evidence. Pfefferkorn is the first to give
a description of the actual garments worn by the "Sonorans," among whom were certainly the Pimas Altos, and later accounts make it plausible to apply his description to the Gila Pimas. In the matter of the skirts, however, later accounts suggest that, among the Gila Pimas at least, the skirt was not so long, coming instead about to the knees, nor were rattles on the skirt ever reported for the Gila Pimas. He wrote (1949:190-191) that, beyond the Colorado and Azul rivers the men went naked, among

the other Sonorans, however, the men have always covered their lins with a loincloth made of an old rag, picked up anywhere, or of a piece of soft deerskin. The upper end of this loincloth, which is about half an ell in width, is tied around the body with a string, and the lower end is pulled between the legs and fastened in the back to the same string.

The womenfolk cover at least half of their body completely down to the feet. For this purpose they use one or two deerskins which they fold around the body like a skirt and tie fast with a strap on the abdomen. Fastened all around the lower part of this skirt, about a span above the lower edge, are little sea shells, snail shells, nails, fragments of pottery, in short any kind of collected trifle that will produce a rattling sound. .... The women's torsos always remain uncovered. They do not paint themselves with colors.

Children, especially boys, run around naked until their ninth or tenth year, or, more correctly, until they are stimulated by the example of the adults to procure a loincloth for themselves.

Regarding footgear, Pfefferkorn (1949:191) wrote that the "Sonorans" usually went barefoot except in mid-summer when the ground was so hot that they wore hide sandals. Again, probably because they
were taken for granted, there was little reference to them in the Spanish or Mexican accounts. Velasco (1850:77) stated that some had "shoes" of goatskin, but in view of the other accounts that seems dubious - hide sandals were probably meant. Goulding (1849 MS) reported sandals only for the governor, Llunas, and most of the other accounts either ignored footgear or reported sandals as uncommon.

Contact with the Spaniards and Mexicans added some items to the Gila Pima wardrobe, for by 1774 at least, they were procuring part of their clothing by trade with their congeners to the south. Diaz (1930:304) stated that the dress of the Gila Pimas was "the same as that worn by those already reduced in our mission," thereby giving the impression that they were probably wearing Spanish type garments, and were wearing more than aboriginally, since the Spanish ideal was complete coverage of the body -- Hidalgo (1786? MS) stated that at the missions "no woman not decently covered" could receive a ration of corn. One year later, however, Font (1930:IV:49), although he implied that the men at least were wearing a little more clothing than formerly, made it plain that the aboriginal mode of dress survived:

These people try to clothe themselves with the blankets of cotton which they raise and weave, and with some sayal (a coarse cloth) which they acquire through the communication which they maintain with the Papagos, and with the Upper Pimas and the presidios of Tubac (Tuquisson now) and Altar. Of the sayal they make their cotton breeches, and those who do not have breeches supply their place with a blanket gathered up and tied, while the women cover themselves with deerskin.
During a part of the Spanish period at least, the Gila Pimas apparently wove woolen blankets as well as cotton. Font (1930:IV:44) noted that they had sheep in 1775, and Cortez (1799 MS) wrote that "they cover themselves with cotton and woolen blankets which they make." According to Barbastro (1793 MS), the Papagos and Gila Pimas traded buckskins, baskets, pottery, and agricultural produce for "bayeta [flannel], manta [unbleached muslin], etc., and clothe themselves by this means and with that which the common stores of the mission aids them." When heathens visited the missions the men were presented with _chomites_ (a kind of shirt), and the officials among them were given hats, trousers and _coton_ (printed cotton).

With the American travelers, descriptions of clothing were sometimes more specific. Even Pattie (1930:123) remembered the cotton cloth he had seen woven by the Gila Pimas in the late 1820's. Bigler (1872 MS) in 1846 mentioned cotton blankets and "britch clouts." Emory's illustration (1848:84, facing plate) of the governor, Juan Antonio, shows him in European coat and trousers, with a band around his head. As Goulding (1849 MS) later identified the coat as

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a "blue U. S. infantry jacket," it, and the trousers also, were probably given to Juan Antonio Llunas by one of the American officers. This costume was the exception, rather than the rule. One of the ways of setting leading men apart from their fellows was to give them a suit of clothing -- viz the Yuma Palma who aided Anza (Bolton 1930:1:224) and the Maricopa Jose Gavilan who signed the Mexican-Gila Piman-Maricopan-Yuman treaty in 1825 (Figueroa 1825b MS). Velasco (1850:77) stated that only the chiefs wore breeches and straw hats, and that the government had recently issued uniforms to the chiefs.

The Hispanic desire for complete bodily coverage for both men and women, seems to have received little consideration among the non-official Gila Pimas. According to Emory (1848:84), in 1846 the dress of the men was still a "cotton serape of domestic manufacture and a breech clout" and the women wore only a serape about the loins. Johnston (1848:601) described the women's costume as "a clean white cotton blanket folded around their middle and extending to their knees."

As the accounts generally stated or implied that cloth was used for breech clouts, Velasco's description (1850:77) of that garment as a goatskin is of doubtful validity, as goats were not reported among the domestic animals of the Gila Pimas. The extent to which skin was used as a kilt or loincloth is uncertain. Apparently there was some
use of it in earlier times, but it must have been uncommon unless Font's statement about the women's kilts being of skin be taken at face value as applying to the majority, and as cloth became more plentiful through trade, skin was evidently abandoned.

As the gold-seekers streamed through their towns the Gila Pimas acquired considerable clothing, principally shirts, handkerchiefs, and sheets or untailored cloth, in return for their provender, although the women apparently did not wear either the clothing or the cloth so acquired. Hayes (1849-1850 MS) gives a typical description:

The women have a blanket around the waist, shoulders & breast generally naked. The men variously dressed -- some soldier's old jacket, some red, or blue or white blankets, others only shirts. Some summer pantaloons, others legs naked. Feet seldom covered.

Accounts subsequent to 1846, however, continue to give essentially the same description of the Gila Pima costume as was given for the period before. Although Hatcher reportedly (Garrard 1938:153) attributed moccasins to the mid-19th century Gila Pimas, his description as quoted makes it evident that he was describing Apache (or Yavapai) footwear -- so far as is known the Gila Pimas never used moccasins, and seldom wore even sandals. Eccleston (1950:212) and

Russell (1908:122) reported only rawhide sandals.

**Personal Adornment**

Personal adornment was achieved in several ways - through treatment of the native garments, by painting and tattooing of the body, the dressing of the hair, and the wearing of jewelry.

It is difficult to separate painting from tattooing in the accounts. There is no separate Spanish word for tattooing, it being expressed by such words as pintar, "to paint" and rayar, "to decorate or embellish with lines." The word did not even become current in English until some time after it was brought back from Polynesia -- Bartlett (1854: II:228) described the process as "drawing" lines by pricking them into the skin. Consequently, it cannot be asserted that tattooing was practiced by the Gila Pimas at the beginning of European contact, and hence was an aboriginal custom, but it is probable. The descriptions of Pfefferkorn (1949:188) and Nentuig (Rudo Ensayo 1951:63) relating to tattooing among the Sonorans are so similar to that of Russell (1908:161-162) for the Gila Pimas as to make it plausible to include the Gila Pimas among the aboriginal practitioners.

In 1697 at San Adres, Manje (1926:250) saw a youth painted with red ochre, which had been brought from near the Colorado River according to the Indians. As there were Maricopas visiting in the village at that time, and the painted one gave a circumstantial account
of the acquisition of the paint, it is quite possible that he was a Maricopa. Sedelmayr (1746 MS) remarked that the Yumas did not paint the face as did the Pimas, but again, tattooing might have been meant. Pfefferkorn (1949:190) stated that the women did not paint, and the accounts of the Americans contain little reference to the use of paint among the Gila Pimas which could not as well have been descriptions of tattooing. According to Russell (1908:160-161) babies had their faces painted for the good of the skin; a mixture of paint and grease was sometimes used for protection against the cold, and painting with simple lines on the face was sometimes done for festive occasions, but even at that time it apparently was being abandoned.

Tattooing was done by pricking the skin with thorns or cactus needles and rubbing charcoal into the wounds. Coutts (1848 MS) stated that the coloration was achieved by the use of "some kind of vegetable juice resembling the India ink, after the work was done." The designs were simple lines around eyes, on temples, cheeks, and chin. Pfefferkorn (1949:188) stated it was done mostly for girls in babyhood, Bartlett (1854:II:288) that it was done for women at maturity; Coutts (1848 MS) restricted it to married women; Russell (1908:161-162) wrote that it was not done at any particular age. Other than embellishment, the only purpose assigned to it was indicated in the statement given by Russell that it prevented wrinkles.
Aboriginally the Gila Pimas may have done no more with the hair than to cut bangs over the forehead, if that, although men may have confined it slightly so as to hang loose down the back, and clay packs were used upon occasion. The purpose of the clay or mud pack has been variously stated to have been for coolness, relief of headaches, to kill parasites, or to retain the color (Pfefferkorn 1949:186; Bartlett 1854:II:230; Russell 1908:158-159).

Aside from painting and tattooing, personal adornment among the Gila Pimas took the form of belts and headbands woven with figures in red, blue, and yellow (or buff), on a white background, of strings of beads around the neck, of pendants or insertions in the septum and probably from the earlobes, and of sticks, feathers, colored cloth, etc., in the hair of the men.

Manje (1954:83) described the Sobaipuris at Ojio, the village closest to the Gila Pimas, as wearing strings of beads and belts of their own manufacture. Velarde (1954:236) noted that the Gila Pimas prized a stone "like emeralds in the rough" of a blue or green color. In his description of the chalchiguite can be seen the turquoise of the southwest. That Pfefferkorn (1949:81) limited the use of chiquiquites (i.e., chalchiguites) in necklaces and in the ears, to the "converted" Pimas probably represented his acquaintance with Pimas only at the missions rather than actual fact. Emory (1848:87-88) and Johnston
(1848:600) reported that after a rain the Gila Pimas would search the surface of the ruins for shell and turquoise, prizing the latter but cutting it smaller for wearing purposes. In connection with this Johnston recounted a story first told by Velarde (1954:40) one hundred and thirty years before, of the occurrence of pots full of turquoise in the ruins. The wearing of "tinklers" on women's skirts (Pfefferkorn 1949:190) was never specified for the Gila Pimas, nor even hinted at by any of the travelers among them.

Font (1930:IV:49) described the Gila Pima men as wearing sticks, feathers, and other ornaments in their fancier hair arrangements. If the Gila Pimas ever obtained macaw feathers from their kinsmen to the south (Manje 1954:168; Velarde 1954:238) no record was found of it. Font did not identify the feathers which the Gila Pima men stuck in their hair, and the gaudy feathers of the macaw apparently became a thing of the past for the Santa Cruz Sobaipuris and the northern Papagos. When the party with whom Hayes (1849-1850 MS) was traveling in 1849 shot hawks, the "Pimos" of the Indian village at Tucson collected the feathers for hair ornaments. Whether the keeping of red-tailed hawks and eagles for feathers (Goulding 1849 Ms; Russell 1908:86) represented an aboriginal custom cannot be ascertained, although the finding of red feathers tied with yucca cord in rock shelters east of Florence, Arizona, (Steen and Jones
suggests that possibility.

By the time of the Anza expeditions the only change in adornment noted for women may have been the cutting of the bangs, if that were not aboriginal. The men, however, had adopted more elaborate hairdresses which continued in vogue until the American period -- in fact the Gila Pima called Tac Kwint wore long hair until his death in 1954. Men continued to allow their hair to stream free at times (e.g. Johnston 1848:602; Evans 1945:154, sketch; Russell 1908:plates XXXVIII, XLII, XLIII) but generally it was confined in one of three ways, or combinations of those ways. The simplest was the wearing of a band around the head. Perhaps the most popular, judging by the frequency with which the method is mentioned in the literature, was to gather the hair up into a queue (called a "club" by the writers) hanging down the back. The most elaborate involved braiding or twisting a cord of hair or wool in with the hair and then wrapping this around the head to produce a turban-like effect. The best example of this style is that worn by Luis Morago (Luis or Louis the Interpreter), whose photograph was used by Hodge (1910:251) as an illustration of a Pima man. This is the

type of hair dress described by Font (1930:IV:49) for the Gila Pimas in 1775.

Some of these more fanciful ways of wearing the hair (on the part of the men) reached the Gila Pimas from the Spaniards. Pfefferkorn (1949:191) described the Opatas and Eudebes as already "imitating the Spaniards" and wearing their hair in a queue. Whether the Gila Pimas copied the style directly from the Spaniards, or accepted it from their southern kinfolk, cannot be determined. The turban-like effect may have been an Indian improvement on the queue in an effort during times of activity, better to confine the large mass of hair, made greater by additions of hair and other materials.

Women apparently never confined the hair until after the beginning of the American period -- at least the only statement that at times it was bound up occurs in Russell (1908:159). His description of women's hair as never being as long as that of the men because of cutting it to mourn for relatives explains earlier statements regarding the length of women's hair, especially that of Cremony in 1851 (1951:90) that women were never permitted to wear their hair longer than eight or nine inches. Evidently Cremony had seen women in mourning without realizing the significance of the short hair.

When the Spaniards entered the country, the Indians acquired new forms of jewelry. It was an established custom for the exploring
parties to carry along a certain number of *dadivas* (trinkets) as gifts. Even Sedelmayr (1744 MS) and Garces (1775 MS) carried a few on their solitary journeys. The exasperating thing is that they never stated what these trinkets included. Our best information is the listing of the items carried by Anza as presents for the Indians on his second California expedition (Bolton 1930:I:224). These were presumably chosen according to his own knowledge, and that of Garces, regarding Indian preferences, and included six boxes of beads (no black ones, but plenty of red), two bales of tobacco (350 pounds), two shirts, which must have been designed for influential men, and the clothing for Palma. Heathen Indians visiting the missions received glass beads in necklaces and shirts, which were as much for ornament as utility (Barbastro 1793 MS).

When the Americans began passing through on their way to California, the Gila Pimas acquired more such decorative items. Kearney's group (Emory 1848:84) found beads, red cloth, white domestic, and blankets useful articles for trade, and the Mormon Battalion traded "old shirts, old shoes, pants, vests, beads and buttons" for produce (Bigler 1872 MS). Bartlett's descriptions (1854:II:229, 231) of the

1. The beads were intended for the women, according to Font (1930:IV:45-46), but, judging by Bartlett's observation (1854:II:229, 231) probably were appropriated by the men as well.
material used for personal adornment, however, still included the aboriginal beads, feathers, figured bands, shell, bones, and buff-bordered blankets, as well as the use of pieces of tin and scarlet cloth, in addition to the showy garments obtained from the Americans.
CHAPTER XII

TECHNOLOGY

There is probably less direct information about the technology of the Gila Pimas from the Hispanic records than about any other aspect of the society and the culture. From the reported achievements and products, however, it can only be argued that they must have had tools and techniques to produce them. Such a statement as that by Manje (1954:88) that the Spaniards were met three leagues from San Andres (Sudaison) by Palacios, the governor, with his men, "placing arches, bowers of flowers, and crosses in the road and sweeping the trails," and that they lodged the Spaniards "in a house constructed of sticks and mats" implies the use of various tools, and the knowledge of some techniques at least, yet none of them are described then or later. Except for hints which were more scattered and incidental than usual, the only source for this information during the Spanish period is Pfefferkorn, and his statements can be taken for the Gila Pima only where subsequent information warrants it. For the Mexican period, the accounts of the Americans between 1846 and 1852 provide opportunity to check some of Pfefferkorn's descriptions, but by no means all - they often present results but ignore means. Not until the time of Russell, who
worked among the Gila Pimas in 1901, is there an adequate description of technology, for considerable that can be accepted as aboriginal evidently survived until the beginning of the 20th century. One informant in 1954 said that he had seen a fire drill used by some of his people who did not have the flint and steel, even describing its construction and operation, and naming the materials used.

To reconstruct aboriginal technology from Russell, utilizing what little information is provided in the earlier accounts, would amount to little more than repeating Russell, which is pointless. Therefore, that part of Russell's exposition (1908:95-158) which appears to portray, without serious question, the aboriginal condition is accepted, and identification is attempted only of those elements which appear in the Hispanic records, referring the reader to Russell's monograph for the elements not discussed here. For example: the bow and arrow may be assumed to have been aboriginal among the Gila Pimas; there is no evidence, and little reason to believe that contact with either the Spaniards or Mexicans influenced the making of these, except possibly in the adoption of iron or glass for arrowpoints (Grossman 1873:416). There would appear to be no reason not to assume that the aboriginal bow was as described by Russell. In some instances the records suggest a discrepancy in Russell's account, and those will be discussed.
Agricultural Tools

It would seem that the Gila Pimas had aboriginally, and through most of the Hispanic period, a relatively simple technology wherein manpower took the place of tools. For example, the only contemporary reference to the means by which trees were felled for the building of houses and dams is that of Sedelmayr (1746 MS) which occurs in a passage devoted primarily to description of the Maricopas. This probably applied to the Gila Pimas as well, for a Yavapai tale collected by Gifford (1936:341) tells of a Gila Pima felling trees in this fashion. Cottonwood and willow trees were burned at the base until they fell; then the log was burned through into the proper lengths. When Garces (1770 MS) gave the people of Pitac one axe and loaned them two more, he said nothing concerning any aboriginal cutting tools, nor did Font (1930 IV:44) when he described the building of dams. Yet the building of huts and ramadas, the clearing of fields, the making of bows, arrows, and clubs, and the dressing of game all required cutting tools of some kind. Russell (1908:95, 110) is obscure on this point; he implied the use of the stone axe found in the ruins, as well as a "stone knife" without ever so stating,

although the fact that he saw stone axes hafted lends credence to their use by the Gila Pimas. It hardly seems possible that the rather impressive stone axe of the Hohokam would have completely escaped notice, not only of all the Spanish and Mexican writers, but of the American ones also, until Russell, yet such seems to have been the case. This lack of reference to parting tools can only be explained by the suggestion that they were so unformalized as to escape the notice of the observers. An informant related how, when he was a young man an uncle laughed at him for not knowing that, in place of the knife he had lost, a sharp stone could have been used to dress out a deer he had killed.

The "poor stake" mentioned by Anza (1776 MS; also 1930: 304) as the only agricultural implement possessed by the Gila Pimas was a reference to the digging stick or planting stick, although he may have been including the weed cutter, a different tool. Such implements were recovered at Casa Grande (Fewkes 1912: 146-147) and in the Salt River valley (Haury 1945: 162-163, 170, 178, 182-183), and their resemblance to the one illustrated by Russell (1908: 97), fig. 10c is apparent. It should be kept in mind that these blade-shaped implements cannot be distinguished, on form alone, from the weaving sword also used by the Gila Pimas (Goulding 1849 MS; Bartlett 1854: II: 226) and in fact the same implement may well have served both
purposes (Beals 1932:163; Haury 1945:162). Diaz (1930:304) described the process of planting using the digging stick, and although no one seems to have observed the digging of the canals it is most probable that these were the tools used to loosen the earth as described by Russell (1908:97). From its shape alone it seems probable that the wooden shovel deemed aboriginal by Russell (1908: fig. 10b) actually is a native adaptation of an Hispanic shape.

The building of dams required a certain amount of ingenuity. Font (1930:IV:44) apparently did not see a dam under construction, for he wrote that the Indians told him that "they planned to assemble all together and fasten many logs in the middle of the river, and then many branches, to raise the water so that it would enter the ditches."

Grossman's description (1873:418) probably reflects little change from aboriginal custom, except perhaps in the use of rawhide for lashing, and in better construction resulting from more efficient tools:

... the Pimas dam the river at convenient spots by means of poles tied together with bark and rawhide, and stakes driven into the bed of the river. Small crevices are filled with bundles of willow branches, reeds, and a weed called "gatuna." These frail structures rarely stand longer than a year and are often entirely carried away when the river rises suddenly, ....

If their ditches during aboriginal times were like those described by Grossman (1873:418), the first writer to give a description, they represented an impressive bit of work:

Their acequias are often ten feet deep at the dam, and average from four to six feet in width, and are continued for miles, until finally the water therein is brought on a level with the ground to be cultivated, when the water is led off by means of smaller ditches all through their fields. Having no instruments for surveying or striking of levels, they still display considerable ingenuity in the selection of proper places for the "heads of ditches."

That the ditches he saw in 1871 dated from Mexican times at least is indicated not only by his statement that "Each village has constructed years ago an acequia (irrigating canal)," but also by his account of the depth of the ditches at the river. This is commensurate with Emory's statement (1848:85) that the ditches were larger than is necessary for the purpose of irrigation. It is also in agreement with that of Eixarch (1930:353) that the channel of the river was deep in 1775, which would necessitate "miles" of ditches to reach the level of the fields as Grossman stated.

The scarcity of information in the Hispanic records concerning the technology of the Gila Pima makes it difficult to determine exactly what influence the Spaniards had upon this part of the aboriginal culture. Generally there seems to have been an acceptance of some Hispanic technics and implements, copies in native materials of the desired implements being made when originals could not be
obtained. Russell's suggestion (1908:97, fn. b) that the wooden shovel he illustrated was an aboriginal tool of the Gila Pimas is unlikely; much less was it one of the Hohokam, if that is his meaning. Its palpable origin in the European spade is adequate reason for regarding it as a Gila Pima acceptance of a European form reproduced entirely in wood, the most feasible material available to them. Conceivably, when Emory wrote (1848:85) that the Gila Pimas had wooden hoes and shovels in 1846 he could have been describing tools of the aboriginal type. In view of Goulding's description (1849 MS), with a sketch of the hoe used by the Indians, it can be accepted that the hoe Emory saw was of the weaving-weeding blade shape, but when Emory said "shovel" he probably meant a European not an aboriginal, type of tool. The Gila Pimas, therefore, had acquired at least a few such implements in order to imitate them in wood, and when we find them in 1848 asking Major Graham for "a thousand or two" spades (Couts 1848 MS) it becomes virtually a certainty. It seems probable that they had only recently acquired this tool from the Mexicans, or possibly even from the Americans.

Ploughs were also a late acquisition, possibly as late as 1849. The sudden surge of traffic to the gold fields, with the attendant demand for produce, particularly grain, was probably responsible for the comparatively sudden adoption of the wooden plough of Mexico.
after so long a time of apparently failing to do so. As stated, they had asked Graham in 1848 for spades "so that they might have a great deal of corn for the next White men that came along! that they always wanted 'heap'..." (Couts 1848 MS). Graham, returning from three years of campaigning, could not satisfy their request. Failure to obtain sufficient spades, it is believed, prompted the Gila Pimas to acquire a few ploughs. It is doubtful that the time of acquisition can actually be set in the six weeks in 1849 intervening between Clarke's passage in early June and Goulding's in the latter half of July, but their testimony suggests that ploughs were acquired about that time. Clarke (1852:91) wrote that ploughs were not seen or needed, but Goulding (1849 MS) described and sketched a wooden plough and noted that some of the oxen were new to ploughing. With the plough, of course, came the yoke (Russell 1908:98, fig. 12), although if only one animal were used in the beginning, as described by Goulding, some other hitching device than the one shown by Russell would have been necessary. Incidentally, Clarke (1852:91) was the only diarist to remark on the presence of "carts made like those of the Mexicans" among the Gila Pimas, so that there is some question as to whether they actually had them or whether the carts he saw might not have been those of traders from Tucson.

Goulding's description (1849 MS) of the manner of using the hoe is
enlightening for the information it provides for Gila Piman acceptance of European materials while continuing to make and use the tool according to the aboriginal pattern of motor habits:

Their process of using the hoe is they sit down on their knees or legs and poke the knife shaped hoe in the loamy kind of soil, and by that means soften the soil and which is all that is necessary.

His sketch shows a dibble, with a triangular knife-shaped blade set parallel to the axis of the handle, such as that illustrated by Russell (1908:fig. 10 d).

Prior to the acquisition of wheat no special tool was necessary for the harvesting of cotton, maize, pumpkins, or even beans, all of which could be pulled by hand. For wheat, however, some aid would seem necessary, although, given enough hands, it, too, might have been harvested in the same way. Russell does not illustrate anything in the nature of a seed beater, although one would think some such device would have been developed for gathering the "grass seeds" referred to by Font (1930:IV:44), which might have been used for wheat. The only tool described for harvesting wheat is the sickle (Grossman 1873:419). This could have been a carry-over from Mexican times, but was more probably acquired from the Americans. The threshing of wheat by means of circling horses was a Spanish custom, and probably came in about the same time as the grain itself (Pfefferkorn 1949:47-48).
Winnowing by throwing the grain and chaff in the air for the wind to carry the chaff away (Grossman 1873:419) could easily have been carried over from the aboriginal gathering of wild seeds.

**Weapons**

Turning from the tools and techniques connected with agriculture, the historical records offer little information on implements of the chase and war. The bow and arrow for both hunting and war, and the club of the 'potato-masher' type were aboriginal artifacts (Velarde 1954:79). The only question seems to be whether arrows were of cane or reed with a foreshaft, or of arrowweed, with or without a foreshaft (Pfefferkorn 1949:202), or both -- both were found in Ventana Cave (Haury 1950:418-420). The descriptions of Pfefferkorn (1949:202), Grossman (1873:416), and Russell (1908:96) all indicate that the Pimas Altos generally used solid, untipped arrows for hunting and tipped arrows for war. The use of a foreshaft of hardwood may reflect the difficulty encountered in successfully mounting a point in soft wood such as arrowweed. Incidentally, Grossman's statement (1873:416) that fish were taken with untipped arrows is the only such found of the Gila Pimas taking fish by that method. Putnam (1864) saw the Indians dam a slough on the Salt River with brush and improvise nets to catch fish.

The Gila Pima bow and arrow complex was little affected by contact
with the Spaniards. The only discernible change was the substitution, in some cases, of iron and glass for the aboriginal trait of stone arrowheads, when the new materials were available to them (Grossman 1873:416). A weapon cited by Pfefferkorn (1949:204) for the "Sonorans" and Russell (1908:96) for the Gila Pimas is the lance or pike. The former designated it a hunting weapon, whereas the latter classed it as a weapon of war adopted from the Yuman tribes. Those are the only two references found to it, and it is probable that Russell's statement of its use is correct. Escudero's description (1849 MS) of a Pima soldier's equipment, however, includes a lance as an alternative weapon, suggesting that it was adopted from the Mexicans rather than the Yuman tribes.

On two of the weapons attributed by Russell (1908:120-122) to the Gila Pimas, there is no information beyond his own. He credits them with having the sling aboriginally, although the basis for his statement does not appear. The one he illustrates was collected about 1850, according to his record, and was made from a leather boot top; hence it was probably not made before 1848-1849 at the earliest. No mention of slings was found in the Hispanic literature. The information on the provenience of the two shields Russell shows (disregarding the models) is so sketchy (the date of acquisition of the one in the National Museum is not given) that it offers no clue. It is not impossible that shields
could have been an aboriginal artifact, but if so it is remarkable that Pfefferkorn, who described even the wrist-guards used by archers in his quite complete catalog of "Sonoran" arms (1949:202-204, 211), did not also describe the shield. Even more strange is that none of the accounts examined ever mentioned the shield. Yet Russell's information (1908:39) indicated that the Gila Pimas had it as early as 1836. Perhaps this lack of reference is merely another illustration of the curious blind spots which occur in all the accounts. Whether the shield was aboriginal or was taken over with modifications from the Spaniards or Mexicans, is still not demonstrable. Unfortunately, there is too little information available concerning Spanish and Mexican arms on the northwestern frontier, and certainly not enough to solve this problem. It is to be noted, however, that the soldier's equipment for the Anza expeditions did not include the shield (Bolton 1930:I:222) -- instead they were provided with the cuera, a leather jacket of seven thicknesses. This was nothing new -- cuirassiers had been a part of the Spanish military forces in Sinaloa and Sonora since before 1751 (Sanchez Salvador 1751 MS). The only references to the shield that were seen were the recommendations that the

1. The description given by Woodward (personal communication) of this particular form of the shield is that illustrated by Di Peso (1953:206).
Hides and Tanning

One of the products of hunting is hides, but the indications in the records are that the use of hides and the tanning of them were of little importance among the Gila Pimas. Whole hides of animals such as wildcat were used as quivers (Pfefferkorn 1949:203; Russell 1908:96, pl. XIII, d), and Bartlett (1854:II:228) illustrated a skin pouch which, although made of an animal's paw, is reminiscent of the pouches figured by Russell (1908:118, fig. 42, 119, fig. 43). The quiver was probably aboriginal (Velarde 1954:241) but whether these pouches represented survival of aboriginal artifacts or adoption and modification of Spanish and Mexican items it is impossible to say. Hunting, the wearing of hide instead of cotton clothing, and the preparation of buckskin (gamuza) were primarily Papago characteristics (e.g., Manje 1954:30, 41; Velarde 1954:241) which came to be classed as an industry (Barbastro 1793 MS). These buckskins came to be accounted one of the articles traded by the Papagos, both to the Gila Pimas and to the mission settlements for cotton clothing, etc. Font (1930:IV:49) and Velasco (1850:77) were the only two writers to state that the Gila Pimas wore hide clothing. As the latter described it as "goatskin," he

1. Barbastro even specified buro, muledeer, in addition to venado, whitetail deer, which definitely located the industry in Papagueria, rather than along the Gila River.
probably was writing, not of his own knowledge, but of hearsay --
there was not found any statement that the Gila Pimas had goats. Be-
cause of the foregoing it is suggested that Font was describing Papago
women -- his account is too much at variance with all others to have
been correct for the Gila Pimas.

Ceramics

The Gila Pimas were making pottery when first visited by the
Spaniards, for they brought water in jars from the Gila River to meet
a party approaching from Tucson (Carrasco 1698 MS). Unfortunately
there is no description (except a negative one) of it until 1852, and that
poor enough. Font (1930:III:215) anticipated Russell (1908:164) by a
century and a quarter in concluding that the Gila Pimas could not have
been descendants of the Hohokam because they did not make the same
kind of pottery. We can, therefore, say that in 1775 Gila Pima pottery,
whatever its characteristics, was not (to Font's eye at least) Hohokam
Red-on-Buff. That is not of much assistance. Seventy-seven years
later Bartlett (1854:II:226-227) considered the pottery of both the Gila
Pimas and the Maricopas as being the same. He noted the color as red
or dark brown, and stated that the articles were all "painted or orna-
mented with black lines arranged in geometrical figures, and of a
character resembling those on the headbands," which he had noted as
appearing to be copies of designs on the "ancient pottery found among the ruins." The shapes ranged through various sizes of ollas, bottle-shaped jars and basins, to oblong dippers. On such inadequate evidence, it is impossible to tell whether Bartlett's description applies as a whole, or in part, to the aboriginal pottery of the Gila Pimas. Only controlled excavation in known and dated Gila Pima and Maricopa sites can provide the information needed to delineate the history of ceramics in the middle Gila Valley from aboriginal times through the Hispanic period.

**Basketry**

The greatest technological developments of the Gila Pimas were in basketry and weaving. It is not possible from the documents consulted to discuss the materials and techniques of Piman basketry -- the sources for the period simply do not provide the necessary data. There was nothing in the records to suggest that the Spaniards in any way influenced either the materials (except for the use of wheat straw in the large storage baskets) or the techniques of manufacture. The assumption is therefore made that at least the basic knowledge concerning both was present among the aboriginal Gila Pimas. The subject has been extensively and intensively treated from more
modern sources elsewhere (e.g., Russell 1908:131-148; Kissell 1916; Breazeale 1923; Shreve 1943).

Although baskets (coras and coritas, depending on the size) were occasionally mentioned as part of the artifact assemblage of the Pimas Altos during the early years of contact, our first description comes from Pfefferkorn (1949:56-57). His reference to "pretty little baskets, dainty boxes, cases" is congruent with what is known of Gila Pima basketry in later times. The material he lists, mora ("mulberry") and cuemesillo (no translation found), have not been identified for the Gila River. They may refer to Sonoran plants not growing there. For Pfefferkorn, who was usually critical of the Indians, to praise the basketry suggests that it must have been of as high a quality then as later. Russell (1908:164-165) was the only dissenter to this otherwise unanimously high opinion of Gila Pima basketry. This might be taken as an indication of its deterioration under close contact with Americans, and hence not applicable to Gila Pima basketry of former times. In view of other statements by him, however, it looks rather like a

subjective evaluation of his own.

There is no evidence upon which to base a determination of the range of the products of the aboriginal basket makers among the Gila Pimas. It is suggested that the persistence of most forms through the Hispanic period and into the 20th century indicates their aboriginal origin, but no certain statement can be made.

Considering that there was so little reference to baskets in most of the accounts, it is perhaps not surprising that the kiaho (carrying net) was only described by Pfefferkorn (1949:194) and Bartlett (1854:II:236). There are two points of difference in the accounts. Pfefferkorn ascribed this device solely to the Opatas and Eudebes and, among them, only to women; Bartlett assigned them to the Gila Pimas and to both men and women. Subsequent accounts so uniformly place this article as a woman's device that Bartlett's statement that it was used by both men and women must be taken with reservation. If Pfefferkorn's statement implies that it was not used by the Pimas Altos, then it represents an acquisition from their southern neighbors during Spanish or Mexican times. One would think that a rather eye-catching device such as the kiaho would have been noted by one, at least, of the dozen or more diarist available for the 1846–52 period alone. Yet Goulding (1849 MS) probably the most observing and diligent writer among the Forty-niners, who spent a large part of his four days among the Gila Pimas in wandering around the
villages and visiting in the houses, apparently did not see one, or if he
saw it he did not think it worth describing. To say that its presence
went unremarked because none saw it in use is to ignore the amount of
provisions brought to the Spaniards, Mexicans, and Americans over
the period of more than a century and a half. These provisions includ-
ed, moreover, not only food for men, but fodder for beasts, as well as
firewood and water, which, in the later accounts of the Gila Pimas
(Bartlett 1854:II:236; Grossman 1873:419; Russell 1908:140-143; Kissell
1916:228-229) were noted as carried by women using the kiaho. One
hesitates to suggest that the Kiaho was not indigenous with the Gila Pi-
mas or that it reached them only toward the end of the Mexican period,
yet there is no evidence of its presence among them before that. Even
the etymology of the name is of no help, for, if it were transmitted
from the Opatas and Eudebes to the Gila Pimas via the Papagos or other
Pimas Altos, it probably started out with a Uto-Aztecan, if not actually
a Piman, name, rather than a Spanish name.

Another item which can be included with basketry is the cradle-
board. The first reference to it appeared in 1849 when Durivage
1 (1937:218) wrote: "They carry their papooses in little baskets made

1. Durivage, John E.: Through Mexico to California, Letters
and Journal of .... In: Southern Trails to California in 1849, edited
of wickerwork, in which they are encased like little mummies."
Clarke's report (1852:89) that: "Their children they carry, fastened
on frames on their shoulders" and Bartlett's illustration (1854:II:253)
definitely place it among the Gila Pimas in the middle of the 18th cen-
tury. It was of a pattern so widespread in the Southwest that the ques-
tion of where or how the Gila Pimas acquired it is academic. That
they did not accept it from the Spaniards, Mexicans, or Americans can
be taken for granted.

Although Pfefferkorn's description (1949:56-57) of Sonoran bas-
ketry was written comparatively early in the period of contact, it is
apparent that basket-making was already being influenced by the Span-
iards. New ideas in the way of forms and decoration were already be-
ing presented to the Pimas Altos who were in contact with the missions,
and the desirability of the products of the basket makers in Spanish
eyes was resulting in encouragement of the industry which was mani-
fest in a ready market for the baskets. How much of this influence
operated on the Gila Pimas at that time cannot be ascertained, but by
1793 Barbastro (1793 MS) included them with the Papagos in his com-
ments on basketry, which are in the same vein as Pfefferkorn's
praises. Baskets (still called coras and coritas) were one of the
items for which the Mexicans attended the annual fair held on the Gila
River (Escudero 1849 MS), but of the Americans passing through the
country during 1849 only Clarke (1852:91) and Goulding (1849 MS) mentioned the large storage baskets -- the rest either ignored baskets completely or mentioned them only incidental to comments about the Indians bringing in food for trade. Goulding (1849 MS) saw a girl making a basket of willow, and observed that "it was so closely fabricated that it would hold water and was beautifully made ...." Bartlett (1854:II:227-229, 235-236) thought the Gila Pima baskets "remarkably well made" and "so close as to be impervious to water," and noted willow twigs as the material for the smaller, wheat straw for the large storage baskets, which he estimated were so large as to contain from ten to fifteen bushels. The adoption of wheat straw for these was a result, of course, of the acquisition of wheat from the Spaniards. Large baskets made by the same technique have been found archeologically -- for example, at the Tonto Cliff Dwellings, in the Sierra Ancha (Haury 1934:73-74), and at Tres Alamos (Tuthill 1947:27-29). It is to be noted, however, that they were not found at Ventana Cave, and Haury concluded that they were not necessarily an item of the cultural inventory of the Hohokam (1950:412-413). Thus, although the


Gila Pimas may have had smaller storage baskets of this nature prior to the middle of the 19th century, the increase in size was probably a response to the need for storage of the surplus grown for sale to the American immigrants.

Lacking any better descriptions of sizes, shapes, etc., for preceding times we can make no comparisons of those aspects between the aboriginal basketry as represented in the beginning years and these at the end of Hispanic contact, but Gila Pima basketry may have been enriched, rather than withered, by that contact. No acceptable or easily procured substitutes were made available to the Gila Pimas, such as took place later under the Americans. On the contrary, Gila Pima basketry helped fill a need among the Spaniards and Mexicans, so that its manufacture and embellishment for trade, in addition to home use, were stimulated.

Weaving

Despite Cremony's assumption (1951:90) that the Jesuits had taught weaving to the Gila Pimas, there is ample evidence that it was an aboriginal industry in Pimeria Alta. Pfefferkorn's rather chauvinistic claim (1949:52) that only the Opatas grew cotton and wove cloth from it is incompatible with earlier statements of some of his colleagues (e.g., Velarde 1954:237; Sedelmayr 1746 MS; Rudo Ensayo 1951:15).
Although there was no early reference to it, weaving of cotton presupposes ginning and spinning of the fiber. Descriptions as late as those of the Americans of the processes and implements are congruent even with those of prehistoric times. The only description of ginning is that given by Russell (1908:148), but from its nature it probably represents one aboriginal practice at least. The cotton was simply spread out (Russell did not say on what, but a mat would be a reasonable assumption) and a woman beat it with a switch to separate the seeds from the fibers.

The two earliest descriptions of spinning differ somewhat. Emory's (1848:85) involved a spindle, whereas Goulding (1849 MS) described a simple twisting with the fingers:

The material [ginned cotton mass] is imbedded in sand and the spinner twisting with and between the fingers as she draws it out from the top of her toe from the ground, the foot pressing gradually on the mass of the material.

Otherwise, all accounts include a spindle, so that Goulding's must be taken either as idiosyncratic behaviour or as faulty observation. In all the accounts except that of Nentuig (Rudo Ensayo 1951:72-73) spinning was listed as being done by women.

Nentuig's description of the loom used by the Opatas in 1762 (Rudo Ensayo 1951:72-73) is substantially the same as those of Emory (1848:85), Goulding (1849 MS), Bartlett (1854:II:226), and Russell (1908:149-153). Goulding's description can be taken as typical:
In one of the arbors I noticed the kind of loom consisting of 4 stakes driven in the ground and the sticks of cane fastened by the cotton twine were attached to these and the ball of cotton is passed by hand from one side to the other .... The two beams are about 2 1/2 inches in diameter and 6 feet long each and are tied fast with mescal thread to the stakes in the ground about 18 inches up these four. 2 women or girls pass and re-pass the shuttle from one side to the other. The shuttle is about 2 feet long and contains the ball of cotton thread which is spun by another rude and singular process ....

He failed to note that the weft was beaten down with the weaving sword.

Most of the accounts agree that the weaving was done by men, but Goulding saw women weaving and Bartlett (1854:11:223, 226) noted that women sometimes wove but usually the weaving was done by the old men.

Although Goddard (1931: 136) stated that belts and headbands were woven on a belt loom (i.e., one end attached to a tree or post and the other to the weaver), no positive corroboration has been found. The following description from Goulding (1849 MS) may have been of such a loom:

I found in one of the arbors a man in a kneeling position, sitting as it were on the calves of his legs in the act of weaving a cotton belt of many colors. To a stick drove in the ground was attached a round stick about 10 inches long to which was fastened the different colored threads, red, blue & yellow and he passed a white thread through to fasten each time he moved the cross piece near his body.

This is the only reference found to another loom arrangement than the horizontal one.

Lack of a specific mention of an element is no proof of its absence, and where there is archeological evidence for the occurrence of the element in and around the territory of the Gila Pimas, the presumption can exist that the item was made by them aboriginally. Belts and head-bands have been so found (Steen and Jones 1935:288-291; Haury 1945:201-202; Tanner 1950:456-458). Nevertheless, there is no record of them until 1775, if then, unless Pfefferkorn's statement (1949:54) that bands were used to braid the hair and as belts included the Gila Pimas. In his description of the masculine hair dress among the Gila Pimas, Font (1930:IV:49) wrote that "a woolen cord, thin like the finger and long like a halter rope" was used in tying up the hair. Obviously this was not the same as a flat band two or three inches wide. Barbastro (1793 MS) specified belts and hair bands along with blankets as being produced by the Papagos and Gila Pimas, so that if such items were not produced and used by the time of the Anza expeditions they were certainly adopted in the interval.

Although Velarde (1954:240) wrote that "Those Pimas who live north are dressed in cotton, well woven and dyed red and yellow" his statement is ambiguous. The Pimas he meant could have included the

Gila Pimas, or it could have meant only the Sobaipuris. Later evidence is uniformly to the effect that the only coloring used on the blankets was a buff border (Bartlett 1854:II:223), the rest of the blanket of cloth being unrelieved white. They were woven in varying sizes, controlled by the spacing of the four stakes, and of different textures, but all accounts are unanimous as to their quality and durability. The reputation of these blankets must have spread considerably to have provoked the remark already quoted from Whipple.

The use of wool, particularly dyed yarn, in the weaving of the belts and headbands probably came about with the acquisition of dyed woolen fabrics. Whether this began with the bayeta said by Garces (1775 MS) to have been acquired by them about the time of his visit in 1775, or whether it did not begin until the Gila Pimas obtained woolen garments from the Americans after 1846, it does not seem to have been a result of the efforts to install sheep among them. Apparently weaving was stimulated by demand for the Gila Pima cloth among the Papagos and Mexicans to the south, where local weaving seemed to have been given up, or at least was inadequate to the demand. The "mantas pimas, which are white and beautiful large cloths, " were one of the articles

1. Couts (1848 MS) described the Gila Pimas as spinning "like the Mexicans" so some weaving evidently was still being done in the south.
purchased by the Mexicans on their trips to the Gila River (Escudero 1849 MS), and the Gila Pima trade, in the blankets and other things, with the Papagos and other neighboring tribes has already been noted. The only records of prices are those noted by the Americans, which are not as easily translated into purchasing power as the prices quoted in pesos. Hayes (1849-1850 MS) was quoted a price of ten dollars for a blanket; Bartlett (1854:II:226) recorded ten to twelve dollars or a new woolen blanket of equal size.
CHAPTER XIII

SUPERNATURALISM

Legend and Mythology

The body of mythological and legendary material which has been recorded for the Gila Pimas is so great that any but the most cursory treatment of it is beyond the scope of this study. In the tales the mythological and legendary elements are so intermingled and interwoven that an intensive analysis would be needed before any attempt could be made to separate the two. The greater portion of the material consists of a cycle of origin tales, which traditionally were to be related over four successive nights. In addition there are trickster tales revolving around Coyote, short mythical accounts, which are essentially fables, of origins of various features of the Pima world, and culture hero tales. A great many stories deal with the Casa Grande and other similar structures in Gila Pima country, and with their inhabitants.

The bare bones of some of the myths and legends were recorded by the Spaniards early in the contact period (see Manje 1954:84, 86, 91, 287; Kino 1948:1:128-129; Bernal 1856:806; Carrasco 1698 MS; Velarde 1954:224-225, 238-239, 240, 244, 245, 246). In varying form and detail, essentially the same accounts were noted by later Spanish writers.
(Sedelmayr 1746 MS; Anza 1930:III:15; Font 1930:III:214-215; IV:34, 37), but the records made by the Franciscans of the oral traditions of the Gila Pimas were neither so plentiful nor so detailed as those made by the Jesuits. No post-Franciscan Spanish or Mexican records relating to the subject have been found to date.

Acculturation in myth and legend probably began quite early with the Gila Pimas. The incorporation of the figures of Jioc (Sp. Dios, "God") and Jiaur (Sp. diablo, "devil") into the mythology is a case in point. Herzog (1941:68-70), however, concluded that the terms had reached the Gila Pimas through the medium of another Indian group rather than directly from the Spaniards. Other examples include the "iron bow" (gun) as a weapon used by a character in a myth (Herzog 1941:71), the game of quinze (Pima kînts, from Sp. quince) having been played by mythological figures (Russell 1908:175, 219, 231), and a mythological account of the origin of the horse (Russell 1908:241-242). Analysis would doubtless reveal other examples, as well as provide insight into their origins and the way in which they were incorporated into the "unwritten literature" of the Gila Pimas.

Supernatural World

It was characteristic of the Spanish approach that the supernatural content of Piman culture generally was overlooked. Nevertheless, enough of it, in relation to the Pimas Altos, was included in the reports of the early Spanish writers to demonstrate the aboriginal origin of the greatest part of that which was later recorded for the Gila Pimas by Americans. The concepts first recorded by the Spaniards can be found described in greater detail in the works of Russell (1908:206-268), Lloyd (1911), Fewkes (1912:43-52), and Hayden (1935 MS), to mention a few of the larger collections.

There were several individuals involved in the creation of the world and of the people who were to inhabit it. They could manipulate natural forces and deal directly with the animals. Even though the creation was a matter of the past, natural forces were still factors to be reckoned with as supernatural beings of power, either of good or evil according to the completeness of man’s control over them (Manje 1954:137-138; Font 1930:IV:38-39). Wind and storm clouds were the most powerful.


No evidence was found that would include lightning in this category, although eclipses were regarded as omens of disaster (Velarde 1954:244). The sun and moon were important beings which could be influenced on some occasions:

... for although they have some idea of the supreme power, and some of them told Garces that they invoked it when they made their plantings or when they were ill; but it has been well ascertained that they hold as God, some the sun, others the moon .... (Arricivita 1792:II:417).

Animals and birds were in close communication with man, sometimes being helpful, as when they provided warning of dangers to come. Frequently, however, they were mischievous or harmful. The Coyote tales include examples of all three attitudes, although he was most often annoying. At least one part-animal, man-devouring monster (the Hä'äk Åks) was included in the mythology (Manje 1954:105-106).

The Gila Pimas "had some inkling regarding immortality, but they do not realize that it can be either a reward or a punishment" (Velarde 1954:245). Pfefferkorn (1949:223-225) agreed that the "Sonorans" prepared their dead for an afterlife, but contended that they "lived without ever thinking about ... whither, as human beings, they were bound."

As Grossman (1873:412) recorded in 1871 that there still was neither reward nor punishment associated with the "other world" in which the spirits of the dead were believed to reside, this concept of the nature of the spirit world was probably the aboriginal one, not yet affected by
the dual Christian concept.

There is little evidence from the Jesuit period as to how much of Christian concept was being grasped by the Pimas Altos. Whether Pfefferkorn's statement (1949:227) that "The Sonorans have some knowledge of the devil" can be taken at face value is debatable, for he was apparently identifying as the Christian devil the Indian concept of the supernatural cause of ills. The frequent Spanish accounts of the eagerness of the Pimas Altos for baptism apparently reflects an extension of Indian concepts of disease and curing to include a Christian practice. During the Franciscan period there began to appear hints as to the nature of the Indians' perception and adoption of Christian dogma, representing the outcome of the Jesuit missionary labors.

The measles epidemic which swept through the Gila Pimas in 1770 was the occasion for Garces (1770 MS) to report that the governor sought baptism for his people because "the healthy would fall ill and would not go to heaven if they died," and that they knew there was a God, but did not know what God was. Five years later Font (1930:IV:101) recorded an indirect clue:

They say that there is a god, and that they know this because the Pimas have told them so; and that these Pimas and the Papagos, with whom they maintain peace and have commerce, have told them that above, in the heavens, there are good people, and that under the ground there are dogs, and other animals that are very fierce.
The elements of henotheism and an afterlife of two worlds, one pleasant and the other unpleasant are discernible, but it would be interesting to know whether the concept of the latter was a Piman interpretation or was the form adopted by the missionaries to make Hell and punishment or reward after death comprehensible by the Indians. Evidently some such rudimentary grasp of Christianity persisted, but went little, if any, farther during the Hispanic period. In the report to the Junta de Guerra (Anonymous 1849 MS) it was stated that:

The inclination of the Gila Pimas toward civilization and religious morality is great and decided, notwithstanding their ignorance of religious dogmas of this profession. Repeatedly they have requested that they be sent religious missionaries who can instruct them, ....

Keeping in mind the reservations previously expressed regarding him, Cremony (1951:103-104) reported somewhat similar concepts as those described by Font:

The Maricopas, like the Pimos, and most other Indian tribes, believe in the existence of two gods, who divide the universe between them. One of the divinities is the author of all good, the other the father of all evil. The good god is deemed a quiet and inactive spirit, who takes no decisive part in the affairs of mankind, ... On the other hand, they invest the evil spirit with powers of unequaled and inconceivable activity. .... The first duty of the Indian, exposed as he is to the influences of these two spirits, is to propitiate the most active of the two, and the one which will control his every day avocations.

Whether this statement is wholly correct or not, it does reflect the preoccupations of the missionaries from whom the Indians along the
Gila River had received their introduction to Christianity. The devil was accepted as a very real and active agent in the world of the 16th and 17th century - the concept was met with even among people who demonstrably had not yet had much contact with Christianity.

**Artifacts**

In addition to the offerings described by Velarde and the stones deposited at trail shrines, the club to which reference has been made suggests that these, and possibly other, weapons, as well as the cane cigarettes, may have been offered in the caves by the Gila Pimas. Other forms of offerings merit special attention. In 1697, at Santa Catarina, Kino collected "seven carved sticks painted blue in the shape of daggers" (Manje 1954:91). Although this is the only reference to this form of offering, they seem especially suggestive in view of the similar objects found in the Double Butte cave southwest of Tempe (Haury 1945:197-198, figs. 127, 128). Similar objects have been recovered from a cave in the Ajo Mountains (Supernaugh, personal communication), and as recently as 1950 offerings of such artifacts were still being made in Wihom Ki, a cave on the Papago Reservation.

A special class of offerings were the mountain sheep horns piled up at Tusonimo (Manje 1954:87). Whether Clarke's notation (1852:95) that he saw "some horns of the mountain goat" on the west slope of the Maricopa Mountains while going through the pass to regain the
river, represented another such offertory cannot now be determined. For Clarke to have noted them the way he did leads to the view that possibly they were the same sort of deposit as at Tusonimoo, but whether they represented contemporary practice or not is questionable. This was the sole reference of the kind encountered in addition to that of Manje for Gila Pima country, and the practice may well have been abandoned by them shortly after the coming of the Spaniards, if not before. Apparently it continued among the Papagos until the latter part of the 18th century; Anza found similar piles of horns near the tanks of the Cabeza Prieta west of Ajo, and was told by the Indians that they were placed there to keep the wind from leaving the country (Anza 1930:II: 29-30).

Another form of offering was effigies of fetishes, which were reported by Sedelmayr (1746 MS) at Casa Grande:

I, seeing in the wall of Casa Grande a niche, put in my hand and took out a doll in the form of a man, which I burned in front of a multitude of Indians in Sudacsion, preaching to them that they should not believe in such witchcraft.

Velarde's reference to feathers as offerings was the single such note found in the Hispanic documents, but one American diarist noted something which is of interest, not only because it is the earliest

1. The Spanish is as follows: "yo viendo en la pared de casa grande una cueva meti mano y Saque una mUnieca en forma de hombre que lo queme delante de un monton de Yndios en Sudac-sson predicandole no creyessen en tales bruxerias!"
first-hand observation found of a practice recorded by Russell as having existed among the Gila Pimas in the past, but also because of some analogous archeological and historical occurrences noted for the surrounding area. Goulding (1849 MS) wrote that "Most every family have dogs and a kind of pet eagle or hawk which is used in place of a cat."

Russell's statement (1908:96) was that "Eagles and red-tailed hawks were kept for their feathers... The feathers were regularly plucked for the paraphernalia of the medicine-men."

For lack of any historic description of how these birds were taken, details given by an elderly informant must be relied on:

The Pimas used to go up the Gila to where there were cliffs in which the eagles nested. One man would take a blanket and lie out all night as close to the nest as he could and just stay there still and listed to the young in the nest until he could tell how many birds there were in the next. Then they would gather this mescal and make a rope from it, and they'd make a loop in this rope. Some men would go to the cliff above the nest, and they'd lower one man to the nest. He would get the young eagles and he'd be lowered on to the ground; they would never pull him up again to the top.

The informant could give no explanation as to why the collector was not pulled up to the top - he said that was just the way it was done. Back in the village the eaglets were kept in cages made of sahuaro ribs. Their wing feathers were used only for the war arrows. The down was tied in men's hair as a decoration.

Steen (Steen and Jones 1935:292) reported "small red feathers tied to yucca fiber cord" and pieces of cotton from a rock shelter in the
mountains east of Florence. Fewkes (1912:148) gave no reason for his statement that at Casa Grande "the manufacture of feather garments was not known," unless it be the Pima tradition he recorded (1912: 51-52) concerning "Feather-plaited Doctor" or "Feather-plaited Civan." He did report, however, an eagle buried in Compound B (1912:109).

In 1701, at Guactum (a Papago rancheria west of San Xavier del Bac) the Spaniards were given red feathers from the guacamaya (Manje 1954:158), and Velarde (1954:238) wrote that "In San Javier del Bac and the neighboring settlements there are many guacamayas. The Pimas raise them for their beautiful feathers.... They are in great demand during the spring as adornment." The use by the Gila Pimas of feathers in the hair was noted in 1775 by Font (1930:IV:49). Both Russell (1908:222, 224, 228) and Fewkes (1912:46, 47) recorded the "parrot" (macaw ?) in Gila Pima mythology. So far as known the macaw has not been reported archeologically from the Hohokam area, but macaw burials occur at Point of Pines ruin in east-central Arizona, some one hundred twenty miles to the eastnortheast, where Hohokam cultural traits are also present. Lack of reported occurrence among the Hohokam may be nothing more than failure of preservation, or even a reflection of mortuary custom. The intentional burial of macaws at

1. Guacamaya ("macaw") - Psittacus macao.
Point of Pines, rather than the simple tossing of a dead bird on the trash dump, indicated special treatment; special treatment among the Hohokam might have meant cremation, in which case there would be little, if anything, for the archeologist to find. Without more information, a definite statement cannot be made, but there appears to have been a continuity of custom from the Hohokam to the Gila Pimas in the keeping of certain birds to supply feathers for esoteric and ornamental use.

Along with some of the concepts, the Gila Pimas also adopted some of the trappings of Christianity, although how much of the meaning was also transferred cannot be ascertained. Woodward (personal communication) stated that the dadivas (trinkets) which the Spaniards passed out to the Indians as gifts were usually crosses and saints' medals. Some sort of association, other than just decorative purposes, was evidently set up, for it was reported in 1849 (Anonymous 1849 MS) that,

... even when [the Gila Pimas] come to those towns in their vicinity they seek with great ardor the image of some saint in order to carry it to their country and provide it, as they say, with [word missing] and other provisions.

Evans (1945:145) noted in 1849 that many of the Gila Pimas were wearing a cross suspended from a string of beads, and in Curtin (1949:145) is reproduced a 19th century lithograph showing the cross so worn. The
Gila Pimas obtained crosses and saints' medals from the Papagos, which they wore and kissed before a race, wrestling match, and such (informant's statement). Whether the use of arches and crosses as a part of the ritual of greeting the Spaniards carried any religious connotation with the Indians is not known. The statement by White (1861 MS) that a hat was the emblem of a Christian may or may not have been his interpretation of a custom which had perhaps been instituted during the Spanish period, and institutionalized during the Mexican period, of providing the governor with such regalia as insignia of office (Anonymous 1849 MS). Jordan (1849 MS) was typical of the American gold-seekers in reporting that, at Tucson, the Christian Indians "are naked with the exception of a hat & dish clout around the unmentioned parts" (emphasis his), but that on the Gila River the heathen Indians wore only the "little clout." Perhaps the hat was becoming the symbol of Christianity among the Pimas Altos, in 1849, but it had not yet been fully accepted by the Gila Pimas.

Sacred Places

Various places within and without the Gila Pima country were regarded as "sacred" in that they either had some association in myth

or were regarded as especially suitable for propitiatory offerings. The Superstition Mountains seem to have been especially prominent in this respect. An important element in their flood myth is the "foam" line on the mountains, marking the height of the water. Traditionally there is a cave in the Superstition Mountains from which the winds blow in the four directions, and where the Gila Pimas used to leave offerings. The recovery of a Pima war club (which had been made with a steel axe) from a cave in the Superstition Mountains (Haury 1945:202-203), suggests that the other caves in the hills along the Gila and Salt rivers from which offerings have been recovered (Jones 1935:288-291; Steen 1939:292) were likewise places associated with the supernatural.

The "shrine" in the pass north of Olberg where so many petroglyphs are found - probably the one described and illustrated by Russell (1908:254 and pl. XL b) -- has been described as a trail shrine (informant's statement), such as those common in Papagueria, and the existence of which was noted by the Jesuits.

Near roads are seen small heaps of piled-up stones. .... Each traveler placed a stone at a certain place near the road, and the unconverted still have the habit. ... If the Indians themselves are asked why they heap up these stones, they answer, "We do it so that we shall not tire, but rather shall be able to run actively and swiftly over hill and dale, and so that no misfortune will overtake us on the journey." (Pfefferkorn 1949:228).
The fact that, even after the Gila Pimas had been converted to Christianity, the graves of individuals, usually shamans, who had been outstanding in life often became shrines in the sense that offerings were left at them, sometimes over a period of generations, suggests that this custom was a carry-over from aboriginal practice.

The place in the saddle of Gila Butte, described by Russell (1908:255 and pl. XL c) in 1902 as already long used as a shrine, either was or came to be regarded as the grave of a shaman (makai) and was still receiving offerings in 1931 (Van Valkenburgh 1946:20). Offerings were being made as late as 1935 at the grave of a shaman buried forty years before near the former site of Morgan's Store (Hayden, personal communication).

The most important of the sacred places seems to have been the ruins of Casa Grande. Probably the other ruins of this type along the Gila and Salt rivers had a similar association, but the information available for Casa Grande is lacking for them. As early as 1716 it was reported by Velarde (1954:240) that:

In regard to the superstitions of the Pimas, they do not dare to burn a piece of wood of the ruins of these houses. There is a room in one of them into which they throw guaris gourd rattles, feathers, arrows, jewels and other prize possessions perhaps as a means of offerings.

Offerings at Casa Grande were reported again in 1744 by Sedelmayr (1746 MS). Couts (1848 MS) wrote that:

The oldest men say that this was left by their grandfathers, as a sacred place. They did not know when it was built but from it came all the people. Whites from one side, Mexicans from another, Indians from another, &c.

But one wonders about the accuracy of his report when it is remembered that his was the only report located that recorded that origin statement. Casa Grande and the other ruins figure prominently in Gila Pima legend and mythology (e.g., Russell 1908:221, 227), and Fewkes (1912:34) reported that the Gila Pimas still regarded it with "superstitious fear" in 1906.

Curing and Shamanism

By far the greatest part of the information recorded on aboriginal Gila Pima supernaturalism concerns health (or disease) and curing -- in fact, this component of Gila Pima life can be regarded as the strongest orientation of their culture. Even in the matter of war, the most elaborate and most assiduously performed ceremony was directed, not toward the ends of war, but toward the prevention of curing of the maleficent effects upon the Gila Pima warrior arising from contact with an enemy feared because of his supernatural power rather than his military prowess.

Judging by the methods of curing described by the Jesuits (Velarde
Grossman's statement (1873:413) that "... all sickness, death and misfortune are caused by witches ..." should be rephrased to mean that sickness, misfortune, and death from other than clearly discernible causes such as an Apache arrow through the midriff, were attributed to supernatural agencies. Nentuig's description (Rudo Ensayo 1951:59) of the aboriginal concept of sickness reflects the Spaniards' incomplete understanding of the Indian beliefs:

In the practice of their trade these imposters /curing shamans/ provide themselves beforehand with certain pebbles, pieces of coal, roots of zacate resembling worms, and other things, which they carefully conceal; and when they come to a patient, they begin to suck the part where pain is felt, all the time keeping dexterously in their mouths some of those articles; so that after sucking they bring them out and show them to the patient, saying: "This is what made you sick;" and they throw it into the fire which is always kept in the patient's house, no matter how hot it may be.

Although such foreign objects were regarded as the immediate cause of the illness, those objects had been introduced into the patient's body by supernatural means. The ultimate cause of the illness, thus alleviated by removal of the article, was some agent, usually a bird, animal, or reptile, but also possibly an Apache, the sun, or some mythological being (Russell 1908:262-266) whom the patient himself or a relative of his had offended in some way. Each agent was associated with a specific illness, and each sickness had a specific cure.
There were probably a number of taboos, the breaking of which could result in harm. Of these, early information is available only on the associations surrounding birth and menstruation. Pfefferkorn (1949:187) reported that during childbirth "Sonoran" women isolated themselves, "for they imagine that the proximity of childbearing women will cause misfortune to their men and also harm to the sick and wounded." He also noted (1949:228) their withdrawal "away from the company of other people during their menstrual period. In various places in the fields there were little huts designed for this sojourn." Grossman (1873:416) noted these actions specifically for the Gila Pimas:

Women, during child-birth, and during the continuation of their menses, retire to a small hut built for this purpose in the vicinity of their own dwelling place. Men never enter these huts when occupied by women, and the latter while here have separate blankets and eat from dishes used by no one else.

Sedelmayr (1856:852) noted the existence of shamans among the Gila Pimas in 1744: "Wizards will not be lacking among them, as is the case among all these nations, and they are those who

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most hinder (the) conversion, and one of them so assured me.”¹ The
nature of the earlier observations was not searching enough to disclose
differences between shamans. Grossman (1873:413) ascribed all magico-
religious activities to the makai, whereas Russell (1908:256-257) has
distinguished the makai from the shaman as functioning in weather and
crop control and war, designating them by the term "magicians" rather
than "doctors" as the Pima word is more usually translated. He iden-
tified two kinds of curing shamans, the sìatcokam, whom he classified
as "Examining Physicians" treating disease by magical means, and the
Hai Ñtocam, the "medicine men", who were herbalists. In the Spanish
accounts all three fields of activity were attributed to the same indi-
vidual. The herbalist and the magician can be identified in Velarde's
description (1954:244-245), the magician and the curing shaman in
Nentuig's description (Rudo Ensayo 1951:58-59), and the herbalist and
the curing shaman in Pfefferkorn's description (1949:221, 227).

Apart from the administration of herbal decoctions, shamanistic
curing techniques involved sucking of afflicted parts (Pfefferkorn alone
specified the use of a tube for this purpose -- 1949:221), blowing
tobacco smoke over the patient, brushing with bird feathers,

¹. The Spanish is as follows: "hechiceros no faltaran entre
ellos como lo hay entre todas estas naciones y son los que estorban
mas la conversion y uno de ellos me lo afirmo."
prestidigation, singing to the accompaniment of rattles, the application of fetishes to the afflicted parts, as well as burning and sacrification. Grossman's description (1873:413) of curing techniques was probably an account of the treatment for a specific case, rather than general procedure as he implied, and may have been the procedure followed in cases of illness due to witchcraft:

The medicine man on these occasions masks his face and disguises himself as much as possible. He then swiftly runs around the spot supposed to be infested, widening his circles as he runs, until, at last, he professes to have found the other limits of the space of ground supposed to be under the influence of the witch. Then he and his assistants, (the latter also masked), drive painted stakes into the ground all about the bewitched spot. These sticks, painted with certain colors found in the mountains, are said to possess the power of preventing the escape of the witch. Now begins the search for the witch; everything is looked into, huts are examined, fences removed, bushes cut down, until at last the medicine man professes to find the witch, which is usually the above described stick, horse-hair and red cloth. Of course, this so-called witch has been hidden previous to the search, by some of the assistants to the medicine man. It is burned at once, ....

Whittemore (1895:62), on the other hand, may have been describing treatment for illness caused by some other agency than witchcraft:

If one is sick, he sends for the medicine man, often to a distant village. He comes with great pomp, long eagle feathers, and rattle in hand, of which he makes good use. As soon as possible his appetite is appeased, and he goes at his work with the patient. A paper of the indispensable tobacco is furnished. He has no pills or powders, no calomel or morphine, not even a saddlebag. He spends the night smoking his cigarettes blowing the whiffs in the face of his patient, sings weird songs, rattling and fanning to blow away the devils that caused the sickness.

Both men and women could be curing shamans and herbalists, but
very few women became magicians (Russell 1908:256-257). An individual became a shaman either by inheritance (this was most common among the curing shamans), or through power given in dreams (Russell 1908:256; Parsons 1928:458, fn. 19). Being a shaman was evidently not the unmixed blessing described by Pfefferkorn (1949:227). No doubt they were, as he stated, greatly feared, and wielded a great deal of influence; this is apparent in the first entry of the annals (Russell 1908:38), wherein the floods of the Gila and the Salt Rivers in the winter of 1833-34 were ascribed to "some medicine man who possessed great magic power. Many thought it must be the medicine man Kaku who brought this calamity upon them because they had not shown him the respect that he thought was due him."

This kind of prestige, however, was fraught with danger. The killing of shamans suspected of causing illness by witchcraft was recorded early for the Pimas Altos generally (Velarde 1954:245). In the decade between 1842 and 1852 the Gila Pima annals show that there were killed fourteen shamans suspected of causing the epidemics which swept the villages during that period (Russell 1908:41-45).

More information is available on the reaction of the Indians to

baptism than to any other element of the religion of the immigrant society. It cannot be determined whether this was owing to the concern of the missionaries with the saving of souls, or whether it was that the rite caught the fancy of the Indians, causing them to pay most attention to it, so that their interest in it was remarked by the chroniclers of the Hispanic period. Baptism was viewed by the Indians primarily as a curing ceremony, and came to be so accepted that, in later years when no missionaries were available, the form of the rite, including a baptismal name and the participation of someone regarded as a Christian, was resorted to as a cure for illness. Concurrently, however, it may have become related to an aboriginal naming ceremony. If this be so, on some occasions at least, baptism was not primarily a curing ceremony, although the idea of giving the infant protection against future harm was evidently one of the associations of the rite. It is easy to see why the Indians would have placed such an interpretation on the rite of baptism. It was the practice required of the missionaries to baptise only infants, adults at the point of death either from illness or age, and adults who had received sufficient instruction in Christian

1. Almost invariably the term employed in that connection was parvulos, conveying the sense of small size, hence babes in arms, little ones, little children. This was owing to the precarious hold on life of the parvulos, and admits of some speculation regarding infant mortality, which probably was no higher along the Gila River in 1700 than along the Guadalquivir, the Rhine, or the Seine.
dogma to be deemed ready for baptism. An exception to this rule was made in the case of native leaders, as will be shown below.

When Kino (1948:1:127-129) made his first visit to the Gila in 1694, he recorded no baptisms, which was somewhat out of the ordinary. A possible explanation might be that he was unaccompanied by anyone who could stand as godfather. Either this visit, or word from congener from the south, had acquainted the Gila Pimas with baptism, for in 1697 the governor of Sudaison, on the Gila River, went to Dolores, where he was instructed and catechized, then on to Bacarac where he was baptized Juan de Palacios (Kino 1948:1:166-167, 173). Thus, when later that year, Kino reached the Gila again, the Indians at Tucsan, the easternmost village, offered their children for baptism, and brought in a sick woman "in order that she should be baptized without being asked, and she was baptized." (Bernal 1856:804). Here also the exception referred to was made, for they also baptized "four captains, and among them the frontier captain of the eastern rancheria i.e., Tucsan, to whom was given as a name Juan Francisco de Acuna." (Bernal 1856:805). At Tucsoni Moo, the second village, Manje (1954:87) reported that "They asked us to baptize 15 children and seven sick adults," and when they reached Sudaison twelve infants were baptized, the godfathers being Manje, Bernal "and the other companions" (Manje, 1954:90; Bernal 1856:805).
On the 1698 visit, Carrasco (1698 MS), who kept the diary, recorded no baptisms among the Gila Pimas, but did so when they went among the Papagos where Spaniards had not previously been. Again, infants and a sick adult were the subjects, Carrasco being the godfather. Similarly, when Kino and Manje came up the Gila in 1698, Manje (1954: 123-124) noted the baptism of three children in San Bartolome del Comac, a Gila Pima village not previously visited by the Spaniards, but none in Sudaison or Tucsoni Moo, through which they also passed.

In each case, it is apparent that only a small percentage of the total population of each place was baptized, although more were offered for baptism. The circumstances described in the preceding paragraph suggest that it was Spanish policy not to baptize in a village on a second visit coming within a year or so after the first, possibly to avoid baptising some children a second time.

When the new group of Jesuit missionaries entered Pimeria Alta in 1732, they (Canas and others 1929:231) wrote concerning reports of the "Pimas of the north", through various sources, including "expeditions of their ministers to inform them of the Pimas nortenos of the faith, to baptize children and some adults (who had been) instructed in the danger of death".  

1. I would translate that last as: "adults in danger of death who had been instructed."
Sedelmayr (1744 MS) left no record of his own activities in this respect, except to remark that: "Since then, on the entries of the fathers, they bring their infants to be baptized."

During the Franciscan period, the policy of baptizing the infants and the mortally ill or moribund was continued. On his first trip to the Gila in 1768 Garces (1775 MS) wrote that both the Papagos and the Pimas

... asked me with excessive tenacity that I should baptize their infants, which I did not do through there being no certainty that missions would be erected later. I baptized four sick infants, and returned to my mission.

Two years later, on his way to the Gila River during the measles epidemic, he baptized "a very old woman, instructed in that which was necessary" (1770 MS). Arrived on the Gila, in the easternmost village he baptized "the sick children and not the healthy, although they made great importunity to me for it." Downstream some three hours travel he was offered both ill and healthy children to baptize and reluctantly did so, for "the healthy would fall ill and would not go to heaven if they died." Later, among the Opas, he evidently abided by the rule - "By chance I saw a little boy in the agony of death, whom I baptized."

When he was extracting information relative to the Gila and Colorado rivers, evidently in preparation for the second California expedition, Garces (1775 MS) wrote flatly that "I baptized a sick infant, and refused to baptize many others which they offered, especially the Pimas..."
who live mixed with the Opas."

Beside the foregoing evidence of the way in which baptism was presented to the Indians, there are certain corroborative statements by contemporary writers that the Indians accepted it as a curing rite. Before ever coming to Pimeria Alta, Kino (1954:61) found that the Indians with whom they were working in Lower California came to regard his fellow missionary, Father Goñi, as "an unskilled medicine man" and would not let him approach their sick, after a sick child died a few hours following baptism by Father Goñi. Alegre (1842:II:223) suggested that a number of tribes held the idea that baptism was a cure:

The Indians, with repeated experience, came to have such a confidence that to be baptized would cure, not only spiritual but corporal afflictions that, upon feeling some light beginning of sickness, they would call the father in order that he should instruct and baptize them; this belief came to cause the missionaries no little concern. Primarily, that they should not form a false idea of the sacrament, and secondarily, not to rebaptize some, especially infants, for, perhaps falling ill after baptism, their parents would come, gentiles still, saying to the missionary, "Here I bring you my son in order that you should baptize him again and cure him of his illness."

It also provides a possible explanation of the failure of Kino to baptize on the occasion of a second visit to a village following close on the first.

Garces and Eixarch must have had much the same experience as Kino

and Goni, for on January 26, 1776, Eixarch (1930:345) wrote that

... in the afternoon Father Garces came and told me that he had baptized four persons, three adults and one infant, all ill and in danger of death. We have noticed that some old Indians entertain the foolish notion that those who are baptized immediately die, but Father Garces and I are disabusing them of their error...."

Perhaps enough baptized children recovered to bolster up the friar's arguments, for the Indians continued to seek baptism when sickness struck. Barbastro (1793 MS) wrote that: "When a little infant \(\sqrt{\text{barvulito}}\) falls ill, they anxiously solicit baptism, which is carried out with much consolation to them, and more to the minister." After missionaries ceased visiting the river, the Gila Pimas there found another means, according to Grossman (1873:412), of having the ceremony performed:

They know that the Mexicans baptize their children, and sometimes imitate this ceremony. This baptism is applied, however, only as a charm, and in cases of extreme sickness of the child. When the ceremonies and charms of the native physicians (ma-ke) fail to produce a cure, then the sick infant is taken to some American or Mexican, and even Papago when he is known to have embraced the Christian faith. Generally Mexican women perform the ceremony.

Probably the existence among the Gila Pimas of some ceremony for young children analogous to that of baptism was a factor in the ready acceptance of the latter rite, as Russell (1908:187-188) suggested. His suggestion, however, that "the zeal, and, at times, the lack of judgment, of the priests led them to baptize as many of the Indians as they
were able to control for the purpose" is hardly tenable in the light of the foregoing quotations.
CHAPTER XIV
CEREMONIES

Curing

In addition to the individual treatment of patients by shamans, a
great deal -- perhaps the greatest part, counting the length of the pu-
rrification rite for an Apache killer -- of the ceremonial activity of the
Gila Pimas was connected in some way with curing. Although usually
regarded as an observance directed toward weather and crop control
(e.g., Drucker 1941:211), the drinking of the saguaro wine, navait, had also an element of curing. The only pre-American account of the
ceremony among the Gila Pimas which gives any of the meaning, em-
phasized curing and reported nothing of the other possible meanings.
When Garces, in early September of 1776, returned to the Gila River
from his journey northward along the Colorado, his arrival evidently

1. Drucker, Philip: Culture Element Distributions: XVII, Yu-
University of California Press. Berkeley, California. 1941.
2. One informant gave the word navam, "drunk," as the name
for the ceremony, but this has not been checked with others; "Tcutc
kita" and "djuutcki" (tcuutckita) were the terms recorded by Russell
(1908:347) and Drucker (1941:211) respectively, and the suspicion is
engendered that the informant's statement was affected by his interest
in the church.
coincided with the season for the navait ceremony. The governor told him that they desired to celebrate his safe return, and Garces (1900: II:439) retired apart, evidently having witnessed such a ceremony before. There was much shouting and an excess of friendliness towards Garces. The next day he

... complained of these excesses to the governor, who told me that it only happened a few times and in the season of sa-guaro, and adding that it made his people vomit yellow and kept them in good health. What pleased me was to see that no woman got drunk; ....

Although Pfefferkorn (1949:176) penned a lurid description of long-continued drinking bouts engaged in by both sexes among the "Sonorans," Velarde (1954:245), however, wrote: "They do not use it to the excess that other nations do."

The first description of a navait ceremony found in the Gila Pima annals (Russell 1908:39), for 1836, and Whittemore's account (1895:55) corroborates Garces' statement that the women did not take part in the drinking. The "most terrible debaucheries and the most shameful deeds" alluded to by Pfefferkorn, probably meaning a certain amount of sexual license, were not described for the Gila Pima navait ceremony. In view of their consistent reputation among the American writers for behavior consonant with the ideals of the latter, sexual license probably was not a part of the ceremony. Whittemore's statement that the wine was "brought to the chief or medicine men" suggests
that a socio-ceremonial center was chosen for the observance of the ritual, which might indicate the village community house.

There is no Hispanic evidence available for another healing ceremony which, because it treated numbers of patients simultaneously and involved a number of practitioners, was probably of considerable importance. Both Russell (1908:266) and Parsons (1928:462-463) gave much the same description for the role of the nanawitc (singular nawitc, "friend") as healers. Russell's statement, however, that the "Navitco is an evil spirit adopted from the Papagos" seems incongruous in view of the meaning of the name, the role of the figure (a clown -- Lumholtz, 1912:93-94) among the Papagos, and the role of nawitc as a healer among the Gila Pimas. Parsons' informant (who had been an interpreter for Russell -- 1908:18), described a nawitc ceremony at Blackwater which must have taken place about 1875-1880, early enough that the influence of the missionary, Cook, had not yet become effective, and hence probably represents a fairly complete aboriginal survival. In that description, nawitc may have been regarded with awe or even fear, but there is no suggestion that he represented an "evil spirit".

Agriculture

A comparison of Russell (1908:37, 73, 266, 347), Lumholtz (1912:47-61, 92-98), Parsons (1928:462-463) and Drucker
(1941:210, 211, 216) fails to make clear whether the Gila Pima ceremonies involving the nanawitc and the navait were the same as the more carefully reported ceremonies involving those two elements among the Papagos. It seems probable that masked curers and saguaro wine were, to some extent, associated with curing among the Gila Pimas, but may also have had other associations such as weather and crop control. The "Harvest Festival", described as last given about 1880 (Brown 1906:688-690) was the only description of such a ceremony found, and it has been impossible to relate it, with its phallic symbolism, to the rest of Gila Pima culture as it has been reconstructed from the early accounts. It may have a part of the viikita-type ceremony; at times much broad humor was displayed in it among the Papagos (Hayden, Steen and Pendleton 1937:276).

Arricivita's statement (1792:II:417) that Garces was told the Gila Pimas not only knew of a supreme power but "that they invoke it when they made their plantings or when they were ill" is the only direct evidence for such an act.


War

Fortunately, the purification ceremony for a Gila Pima warrior who had slain an Apache aroused no such condemnation among observers as obscured the reporting of the ceremonies just discussed. Grossman's account (1873:416-417) differs only in details from that of Russell (1908:204-205), but is worth quoting for comparison, because of the different meaning of the ceremony given by each:

They firmly believe that all Apaches are possessed of an evil spirit, and that all who kill them become unclean and remain so until again cleansed by a peculiar process of purification. The Pima warrior who has killed an Apache at once separates himself from all his companions, (who are not even permitted to speak to him), and returns to the vicinity of his home. Here he hides himself in the bushes near the river bank, where he remains secluded for sixteen days, .... During the twenty-four hours immediately following the killing the Pima neither eats nor drinks; after this he partakes of food and water sparingly, but ... cannot eat meat of any kind nor salt, nor must he drink anything but river water. For the first four days he frequently bathes himself in the river; during the second four days he plasters his hair with a mixture of mesquite gum and black clay, which ... is washed out during the night of the eighth day. On the ninth morning he again besmears his head with black clay without the gum; on the evening of the twelfth day he washes his hair, combs it, braids it in long strands, and ties the end with red ribbon or a shawl; and then for four days more frequently washes his whole body in the Gila River. On the evening of the sixteenth day he returns to his village, is met by one of the old men of his tribe who, after the warrior has placed himself at full length upon the ground, bends down, passes some of the salive in his mouth into that of the warrior, and blows his breath into the nostrils of the latter. The warrior then rises, and now, and not until now, is he again considered clean; his friends approach him and joyfully congratulate him on his victory.
The really essential difference between the two accounts is that Russell saw the ceremony as an expiation "of the crime of blood guilt", which seems more likely to have been a projection of a Euro-American concept as the meaning of the ceremony, whereas Grossman's statement of the meaning as one of cleansing after contact with inimical supernatural forces is more congruent with the rest of Gila Pima concepts. It is significant that this ceremonial behavior -- the prompt return from the field and the observance of the rite -- only followed upon contact with Apaches. The Yavapai and Pima accounts of their battles with each other, as recorded by Gifford (1936:16-21), present an entirely different picture, devoid of any supernatural overtones, and the evidence of the Hispanic sources (e.g. Kino 1948:1:202; Garces 1770 MS, 1930:381; Eixarch 1930:378) fails to show that the Gila Pimas' attitude toward the Yavapais was tinged with any element of the supernatural.

The Gila Pimas evidently performed a ritual of some sort before going on a planned campaign or into a battle. Pfefferkorn (1949:211) described, in general terms, such a ceremony for the "Sonorans," which included ritual smoking, speeches and the making of plans. Gifford (1936:16) recorded a pre-battle divination ceremony described by a Gila Pima, and Whittemore (1895:69-70) wrote of a pre-campaign meeting which partook of elements of both of the foregoing instances:

... councils were held by the Pimas and a time fixed for a campaign. All the war chiefs and warrior then got ready, with
feathers in their hair, faces and hair painted, war clubs and shields or bows and arrows and sometimes lances, and some food. They then met in a village and there danced as many evenings as they expected to be absent.

While the young sang and danced, the war prophets sat near and prophesied in regard to what their success should be, like the "Oracle of Delphi."

The post-campaign ceremonies, being more spectacular, received much more attention from observers. Kino's description (1948:I:168) of the victory dance of the Pimas and Sobaipuris at Quiburi in 1698 needs no repetition, and Velarde (1954:242) wrote that:

They used to dance all in a circle singing and yelling whether they celebrated a triumph or the death of their enemies, placing the scalp or some piece of the body of the dead in the center of the plaza where they danced.

Gallardo (1750 MS) provided more details of a dance (presumably the one he reported that he had to permit at Cocospera):

There is not for the Indians ... more worthy entertainment than the dance which they call "of the Scalps," in which, as trophy of their victories, men and women dance around a pole from which is suspended the arm, foot, hand, skull, or scalp of he whom they killed in War. The spoil in small pieces is carried long distances and by means of them is communicated the News in all the Nations and the Victory is celebrated at one time in all the Villages. Entire nights are consumed dancing, and the same entertainment serves them as rest. It is cause of dread to see that as a festive demonstration they even go so far as to eat with the very hand of the dead person, almost rotten as a result of the long time which they keep it.

Cremony (1951:108-109) described a somewhat similar dance held jointly by the Maricopas and Gila Pimas around the head and upper limbs of Antonio, a Yuma leader (see also Bartlett 1854:II:252-253). Pfefferkorn
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(1949:210), however, who lost few chances of recording anything derogatory to the Indians, only recorded dancing around a scalp mounted on a pole, and only scalps were reported as trophies taken by the Gila Pimas (Font 1931:III:213). Comaduran (1843b MS) reported a scalp dance held at Bac which was attended by people from as far away as Santa Rosa, and Durivage (1937:220) recorded that his party was invited to, but did not attend, a scalp dance in a Maricopa village on the north side of the Gila River when a Pima-Maricopa party returned from a campaign. None of the accounts, however, give any inkling as to the nature of the affair, i.e. whether it was anything beyond the celebration and diversion apparent to the observers. The account of a victory dance held by the Gila Pimas in 1839, however, suggests that there may have been more to these dances than simple exultation over a victory. The captured Apache raider was taken to a central location,

...where the people gathered and danced and sang around him. Two widows of men killed in an ambuscade earlier in the season walked four times around the outside of the circle of dancers, and then passed inside as an avenue was opened for them. They carried long clubs of mesquite, with which they beat the captive into insensibility, (Russell 1908:40).

The specific notation of the sacred number, four, as a part of the program indicates a ritual performance, so that the post-campaign dances probably had a magico-religious significance.
Death

The descriptions of death ceremonies for the Pimas Altos generally during Hispanic times agree with the early American descriptions of Gila Pima mortuary customs rather more closely than is usually the case with the other cultural components, with one important exception. The Hispanic accounts do not describe for the Pimas Altos the ceremonial destruction of property which was a feature of obsequies among the Gila Pimas.

In historic times, at least, the basic pattern of the Piman mortuary complex apparently consisted of interment in a sitting position with no earth covering the corpse, in a shaft grave which was roofed at ground level, the provision of sustenance for the dead, the interment of property, and a mourning ritual. Variations may reflect differences of observation, or of reporting, or of practice.

Velarde's terse statement 1954:245) that the Pimas "bury their dead with bows and arrows and some supplies and gourds filled with water" leaves out the details provided a few years later by Pfefferkorn (1949:223) in regard to the "Sonorans", who

.. have always had a kind of reverence for the deceased and have taken care to bury their bodies decently. The old monuments found in different places in the regions of the missions tell us of the manner of burying the dead, previously the custom among the now converted Indians and still the custom among the savages, as various Papagos have informed us. The grave was a hole in the earth about two ells square and
about three ells deep. The body was lowered into this grave in an upright sitting position. The tomb was not filled with earth, but covered with a roof, and the inner grave left empty. The roof consisted of thick pieces of wood placed one against the other, the spaces between being tightly filled with twigs. The covering was then thickly covered over with earth forming something of a mound. A vessel full of pinole, a jug of water, weapons, and whatever else the dead person had used in his life were placed in the pit beside the body -- just as if these things could still serve him in the other world.

This account is particularly interesting because of its close similarity to the Gila Pima burial practices observed by the Americans. None of the writers of either the Franciscan or the Mexican periods commented on the mortuary customs of the Pimas, either of Pimeria Alta generally or of the Gila River specifically. Presumably they either did not notice or did not feel it was worthy of comment. Even Garcés, who probably spent more time among them than any other white man until after 1854 (including a visit during a lethal epidemic of measles), left no information on this trait.

Of the early American travelers along the Gila River, all of them more or less transients, only three reports are available. This lacuna in the record may have as simple an explanation as the fact that none of these travellers, Spanish, Mexican or American, spent more than a few days among the Gila Pimas, and that no burials (with one probable exception) were observed by them. Of the numerous gold seekers who passed through the Gila Pima villages, only Durivage, a newspaper reporter, left any record of a Gila Pima death ceremony. The members
of the United States Boundary Commission were among the Maricopas and Gila Pimas for two weeks, yet there resulted only two statements, one of them excessively terse, regarding mortuary customs of those Indians. The account by Durivage (1937:219) in 1849, then, is the first after many years of silence on the subject, and it is doubtful that he was describing a Pima ceremony. According to him, the corpse was laid out in the house with all the property owned by the deceased while alive, and the whole was burned.

Before discussing the implications of the foregoing statement, those of the members of the Boundary Commission should be quoted in order that they may be considered together, as they were closely linked in time. Bartlett (1854:II:262) noted that: "The Pimos bury their dead, while the Coco-Maricopas burn theirs." Cremony (1951:102-103) reported that:

The Pimos invariably resort to the ceremony of cremation when any of their tribe dies. The body is placed upon a funeral pyre and rapidly consumed. No effort is made to collect the ashes of the dead, but all his friends take a portion, and, mixing them with the dissolved gum of the mesquite tree (which is a species of the acacia, and yields a concrete juice similar to gum arabic), they daub their faces with the odious compound, and permit it to remain until it is worn away.

The Maricopas invariably bury their dead, and mock the ceremony of cremation.

First, it seems a fairly safe assumption that neither Bartlett nor Cremony was writing from first-hand observation. The gratifying detail into which the former went in descriptions of incidents observed
by him renders it highly improbable that either a cremation or an inter-
ment witnessed among the Maricopas or the Gila Pimas would have been
dismissed with such a laconic statement. The most likely explanation,
then, of his taciturnity on this one subject, is that he was recounting
what had been told him by the Indians, in default of actual observation.
Cremony's description, on the other hand, might have been from obser-
vation, but in comparison with his reports on other incidents (e.g., the
eclipse of the moon, 99-102, or the dance around the head and arms of
the Yuma, Antonio, 108-109), it lacks some details which might have
been expected. Furthermore, being of Bartlett's party, it seems un-
likely that he would have witnessed a lengthy ceremony (e.g., the ex-
cellent description of a Mohave cremation in McNichols 1944:151-172) such as a cremation and Bartlett not. Consequently, his account is
also being regarded as something told to him rather than a report of
first-hand observation. There is a possibility, of course, that Duri-
vage's description was likewise from information received, but there
is nothing in his diary to indicate that he ever carried on a conversation
with the Gila Pimas. The impression presented by the Forty-niner ac-
counts is that, in general, they had neither time nor interest to question
the Indians about anything except that which was related to their own

preoccupations.

The second point is the discrepancy in the reports regarding cremation versus interment. To accept cremation as the Gila Pima form of disposal of the dead at that time is to assume that they had abandoned interment sometime during the preceding century, only to return to it by 1864 when a Gila Pima burial was described in detail. The suggestion is advanced that Cremony transposed the names Pimas and Maricopas, inadvertently, no doubt, just as he reported the Boundary Commission as beginning operations in 1849, whereas they actually began a year later (Bartlett 1854:1, title page). In the case of Durivage, it is possible that he was, indeed, reporting a Pima cremation, for which there is otherwise virtually no information. It is equally possible that he witnessed a Maricopa funeral. In the latter case, it would have represented a departure from Maricopa custom, in the burning of the body in the house rather than on a pyre prepared outdoors (Spier 1933:300-304). Probably Durivage saw the ceremonial destruction of property in connection with a Pima funeral, and, drawing the analogy between that and his own cultural heritage, assumed that it actually was a "funeral pile" and that there was a body being consumed in the fire. Clarke (1852:89-93), who passed through the villages a few days later, gave no indication that the people had just lost any person important enough to have been cremated. The only specific information available concerning the
actual cremation comes from the annals (Russell 1908:45, 52): "1852-53...
... four Maricopas and one Pima" killed by Apaches in the Santans
"were burned that day north of the Santan hills." "1856-57. The Pimas
and Maricopas joined the white soldiers in a campaign against the Apa-
ches. ... The Pimas burned their dead." "1865-66. ... The Pimas
went on a campaign against the Apaches and one of their number was
killed. His fellows burned the corpse with the bow and war gear."
Russell (1908:52, fn. a) reported that his informants insisted cremation
was never used except for those killed in war.

The earliest American description found of a Gila Pima interment
which provides sufficient detail to allow of comparison with the account
of Pfefferkorn is that of Putnam (1864):

After his death, his family takes possession of the body, and
with a riata $^7$sic - Sp. riata$^7$ or hide rope, tie up the body,
passing the riata under the knees, around the neck, drawing
the legs up to the chin. It is then buried with the head toward
the east, and the grave covered with brush to keep the coyotes
off.

Grossman's version (1873:414) amplifies the foregoing description and
suggests either variation in practice or corrections applicable to it:

The Pimas tie the bodies of their dead with ropes, passing the
latter around the neck and under the knees, and then drawing
them tight until the body is doubled up and forced into a sitting
position. They dig the grave from four to five feet deep, and
perfectly round, (about two feet diameter), and then hollow out
to one side of the bottom of this grave a sort of vault large enough
to contain the body. Here the body is deposited, the grave is
filled up level with the ground, and poles, trees, or pieces of
timber placed upon the grave to protect the remains from the
coyotes, (a species of wolf).

Finally, Cook's description as quoted by Whittemore (1893:61): "They bury their dead in a sitting posture, six feet below ground," lends weight to the supposition that Putnam was in error when he implied that the trussed body was placed in such a fashion that the head was "toward the east". It is suggested that what was meant was that the body faced the east.

With the possible exception of that given by Whittemore, all the foregoing descriptions, by statement or implication, apply to the burial of adult men -- there is no specific evidence as to whether the same form of interment was carried out for women and children. Furthermore, there is the possibility that those descriptions which specified the placing of the body in the sitting position were of the burial of individuals singled out for special treatment. Russell (1908:193) reported that only medicine men were buried in the sitting position, and Hayden (personal communication) stated that in 1934, the position of the shaman buried about 1896 near the site of Morgan's Store was reported by a Gila Pima informant as seated in the recess at the bottom of the shaft, with hands resting on a "cane" and head resting on the hands.

In the matter of sustenance for the dead and the manner in which that provision was made, and of the interment of personal property, there is considerable variation in the accounts. These are briefly
summarized as follows:

Velarde (1954:245) -- weapons, supplies, gourds of water, buried with body.
Pfefferkorn (1949:223) -- a vessel of pinole, a jug of water, personal property; placed in pit with body.
Putnam (1864) -- women sow wheat over grave four days after interment; beads unconsumed in fire at this (hence a discrepancy in his account as quoted below) buried with deceased.
Grossman (1873) -- no statement.
Whittemore (1895:62) -- "mother prepared food and scattered it to the winds".
Russell (1908:194) -- water and pinole placed on the grave, no statement as to interment of property except possibly paraphernalia of shaman.

It would seem from the foregoing that, among the Gila Pimas specifically, provision for the dead was probably made outside the grave, and except in the case of the paraphernalia of a shaman, personal property was not interred.

That there was not, apparently, any burial of personal effects (except possibly beads), is made more probable by the ceremony of destroying property as a part of the death rites as described by Durivage and in the following accounts.

... one of these superstitions is a very expensive religious duty. It enjoins upon them upon the death of a person they are to destroy all the personal effects of the deceased and his relatives and friends are to destroy a portion of their personal property according to the estimation in which the departed is held (St. John 1860 MS).

Then after the sowing of wheat on the grave on the fourth day an old man advances, pulls off his blanket, or some other valuable thing, and throws it down for the beginning of the funeral
pile, others follow, and soon the rush becomes general, every one throws on something, beads, blankets, saddles, and every description of personal property. Sometimes the women strip off their tapa, and throw that on to the blazing pile, which often reaches thousands of dollars in value. This consumed, the ceremony is over. Beads, in some way, are sacred; those unburned in the funeral pile are carefully gathered, and buried with the deceased (Putnam 1864).

Immediately after the remains have been buried, the house and personal effects of the deceased are burned, and his horses and cattle killed, the meat being cooked as a repast for the mourners. .... The custom of destroying all the property of the husband when he dies impoverishes the widow and children and prevents increase of stock (Grossman 1873:414-415).

As pointed out previously, the destruction of property was not a part of the Hispanic accounts of Piman death ceremonies. Against the assumption that it was, therefore, an acculturative effect arising from contact with the Spaniards (or the Americans prior to 1864) is the fact that it was not, so far as is known, a part of the cultural configuration of either group. In that case, it would seem to have been either an aboriginal trait, or one acquired from some other Indian group. If it were an aboriginal trait, it apparently distinguished the Gila Pimas from the rest of the Pimas Altos. The close association from pre-Hispanic times of the Gila Pimas with the Maricopas, who cremated their dead, makes it seem likely that this custom was borrowed by the Gila Pimas from the Maricopas.

The last component of the Pima death ceremony to be considered is the mourning ritual. Like the others, this was described
comparatively early in Hispanic times, and that description bears some similarity to those of the Americans. As of 1767, Pfefferkorn (1949:222-223) wrote that:

Among the Upper Pimas there still exists the custom of bewailing the dead. It was formerly the vogue among all the peoples of Sonora, and still is among the savages who inhabit the regions of the Gila and Colorado rivers. Whenever a death occurs, women lamenters among the relatives of the deceased assemble. The lamenters, with bedraggled hair and with the most pitiful expressions they are capable of making, sit by the corpse. They let their heads sink on their breasts and emit a low-toned piteous howling which resembles bellowing more than weeping. With this one hears no other speech than a sad and slowly uttered "hau, hau." This horrible howling is continued until the deceased is buried.

Almost a century later Putnam (1864) described the formalized mourning of the Gila Pimas at a funeral:

When a warrior dies, the nation mourns, and imposing obsequies are performed. .... Four days after the burial, processions are formed at each end of the chain of villages in this order; first, women clad simply in the tapa, or cloth wrapped about the loins; second, warriors in the full panoply of war; lastly men on horseback, i.e., old men, farmers, etc.

The two processions meet near Casa Blanca, the women part to the right and left, the warriors advance to the front, halt; an old man now grasps a tattered banner attached to a long staff which assists his tottering steps as he advances to the open space, and in trembling accents recounts the virtues of the departed. As he proceeds, a prolonged wail goes up from the assembled Nation. Afterwards they proceed to the grave, nearby which a Romanda is erected (a romanda is a brush shed resting on poles), under which, baskets of wheat are placed. The circle completed around the grave the women sow the wheat over it, and sprinkle it over the heads of those present.
Grossman's account (1873:414) agrees with the above in most respects, but represents the affair as being considerably less impressive:

Burials usually take place at night without much ceremony. The mourners chant during the burial, but signs of grief are rare. The nearest relatives of the deceased, as a sign of their sorrow, remain within their village for weeks; and sometimes months; the men cut off about six inches of their long hair, while the women cut their hair quite short.

It is suggested that most funerals were of this order, the more elaborate one indicated by Putnam being reserved for warriors and important persons. Cook (quoted by Whittemore 1893:60) added a few details to the foregoing accounts which give some insight into otherwise unreported elements of mourning:

Mourning for a child and relatives of distant consanguinity usually lasted a month. If a child died early in the morning or late in the evening the mourners went a little distance from the village and you could hear their plaintive cry, My child! oh! my child!

If a husband, or wife died, mourning lasted six months or a year. After this the name of the departed ones must never be mentioned, and everything relating to them, appear forgotten. The women wore sack-cloth as did the Jews for the memory of the departed.

Grossman's statement about cutting the hair as a sign of mourning would explain the occasional reports (e.g. Johnston 1848:602; Couts 1848 MS; Audubon 1906:157; Cremony 1951:90) that the women wore their hair shorter than the men.

As has been pointed out previously, the Gila Pimas were unique among the Pimas Altos in their custom of burning property as a part of the death ceremony, and the coincidence of the association of the Gila Pimas with a Yuman people, the Maricopas, who practiced cremation with a similar destruction of property, was remarked upon. In addition, the Gila Pimas cremated, instead of interring, the dead under certain circumstances. Whether the origin and antiquity of this practice, which, along with the burning of property at a funeral, set the Gila Pimas apart from the rest of the Pimas Altos, is a matter of question. Conceivably, the cremation complex, to use a short term to designate the actual cremation and the destruction of property at the funeral by burning, could have represented the aboriginal practice of the Piman as well as the Yuman peoples, to be abandoned, except in special cases, by the former under missionary influence. There are, however, some obstacles to the acceptance of this view, but before discussing them let us consider what evidence is available.

Although the archeological evidence from the sites excavated within Gila Pima territory shows that cremation was the most common method of disposal of the dead, inhumations were reported in more than just occasional numbers from Casa Grande (Fewkes 1912:93, 106, 108–110, 111, 117, 127), Snaketown (Sayles 1937:91–96), Los Muertos (Haury
1945:43-44), and Pueblo Grande (Hayden 1942 MS). Fewkes (1912:109) wrote that "The two methods of disposal of the dead -- inhumation and cremation -- were practiced in all the compounds of Casa Grande."

Turning to the historic evidence, the statements of Velarde (1954: 245, 255) indicate that although the common method of disposal of the dead among the Pimas Altos was inhumation, they cremated the dead under certain circumstances. His remarks anent inhumation have already been quoted; regarding cremation, he wrote, in connection with the death of Saeta, that:

While they rebel Indians were scattered and away in other sections, a Christian Pima Indian, Felipe, who with his son lives in the district of San Ignacio, burned the precious body of the priest. Because of the deadly poison of the arrows and the heat it was in bad condition. It is the custom of the Pima Indians to burn their most esteemed dead.

Concerning this same incident, Manje (1954:58) wrote that on April 15, 1695, his party arrived at Caborca where:

We remained over to care for the ashes and bones of the body of the venerable priest, which had been burned by an Indian we had sent ahead as a spy. This was because the remains had started to decompose because of the many wounds and the poison of the arrows, and because 13 days had elapsed since he had been killed. It is the custom of the Indians of this nation to burn the dead bodies of those most beloved and venerated.

Kino (1948:I:143), reporting on the same affair, said nothing about it having been a Piman custom to cremate the dead:

Four or five days afterward the governor of El Bosna, whom I had sent to find out in detail about all that had happened, arrived at La Conception de Caborca. As he found that the bodies of the dead were decomposing, he burned them, not being able to give them any other burial.

It will be noticed that all three of the foregoing contemporary accounts of the same event agree on only one thing, that the body of Saeta was burned because it was in "bad condition" — as it probably was after several days under the spring sun of Sonora! If one accepts the juxtaposition of Velarde's and Manje's remarks about the reason for Pima cremation with the account of the cremation of Saeta as meaningful, then regard for the missionary may have been a motive. Kino's use of the plural "bodies", however, would indicate that the other, less esteemed, people were also burned, suggesting that the poor condition of the bodies was the more important motive. But the significant point is that the two writers who noted it agreed in their reports that cremation among the Pimas Altos was a special, not a universal, custom.

Following the burning of Father Saeta in 1695, no historic evidence has been found of cremation as a burial custom among the Pimas Altos in general, or the Gila Pimas in particular, until Americans entered the country — in fact, there is no information on Gila Pima mortuary practices at all until then. It is particularly noteworthy that Pfefferkorn (1949:222-223), who gave such a detailed description of inhumation among the Pimas Altos, said nothing about cremation, specifying,
rather, that "they have taken care to bury their bodies decently." Cremation was not an approved Christian method of dealing with human dead and considering his readiness to point out the faults (in his eyes) of the Indians, it is hardly likely that he would have passed over such an opportunity had it been presented to him. Furthermore, there is not, in the Spanish record, any evidence that cremation had been one of the customs of the Pimas Altos, such as the navait ceremony, which the missionaries had felt called upon to eradicate. It would appear, then, that inhumation was not adopted from the Spaniards by the Pimas Altos, nor did they then pass it on to the Gila Pimas.

The first specific evidence of Gila Pima mortuary customs is found in the annals recorded by Russell (1908:42). In 1844 a party of Gila Pimas was ambushed and slain by the Apaches near a Kwahatk town: "The dead were buried there by the Kwahatk's, ...." As similar incidents related later in the annals (Russell 1908:45, 46, 52, 53), the first of which occurred in 1852, specified cremation of men killed by Apaches, it is assumed that inhumation, rather than cremation, was the method employed by the Kwahatks to bury the dead Pimas. This is not to suggest 1852 as a beginning date for cremation among the Gila Pimas -- the annalists simply may have failed to mention it before that time. It should be noted, however, that before 1900 all of the American writers (always with the possible exception of Cremony, but including the agent
St. John as well as Grossman and Cook) who spent more than a week among the Gila Pimas described inhumation as the customary method of burial, and none made any mention of cremation, although a number documented the burning of property at funerals.

From the above, the conclusion is reached that inhumation was the pre-Hispanic aboriginal burial practice among the Gila Pimas at least, and probably among the Pimas Altos generally, and that cremation represents either acculturation of the Gila Pimas or a partial survival of an earlier cultural pattern. The possibility that cremation, or possibly the cremation complex as defined above, was taken over from the Maricopas has been suggested. Another possibility, perhaps of equal weight, is that it is a survival from the time of the Hohokam. As this is a study of the Hispanic acculturation of only one portion of the Pimas Altos, this is not the place to explore the possibility of the acculturation of that portion resulting from their contact with other Indian groups. Whether the cremation complex came down from the Hohokam is equally a separate problem.

Such components of the death ceremonies as riatas (rawhide ropes), mounted men, banners, and domestic animals are obviously elements borrowed from the Hispanic culture of Sonora. The lashing of the body, the eating of domestic animals slain as part of the ceremonial destruction of property which was a part of the funeral, the funeral oration, the sowing of wheat over the grave and the sprinkling of wheat on the heads
of mourners are less easily identified. There is no evidence available on whether bodies were bound for burial in pre-Hispanic times, but it is hardly a trait attributable to Christianity. The suggestion is made that it was an aboriginal trait, and therefore the use of a riata represents a modification — i.e., the use of a new material for an old purpose, with rawhide supplanting mescal fiber cordage.

The eating of domestic animals may have been simply an extension of property destruction. The demolition of several animals the size of horses and cattle represents a rather formidable task in the way of cremation, whereas a crowd of people could dispose of them rather readily by eating them. Feasting on animals killed as part of the ceremonial destruction of property may have originated, in part, as an expedient by which the meat supply could be supplemented.

The resemblance of the funeral oration to a Christian rite might have lain in Putnam's eyes rather than in any real similarity, or it might actually have been patterned after Christian funerals observed by the Gila Pimas, either among the Americans along the Gila or among the Mexicans to the south of them. Again, the sprinkling of wheat over the grave and the heads of the mourners may have been the Gila Pima form of provision for the dead, or it may have been modification of the Christian gesture of sprinkling earth on a coffin. This last seems rather far-fetched, and the sprinkling seems more likely to have been
an aboriginal custom. Not knowing how much opportunity the Gila Pi-
mas had to observe Christian funerals, we are without any good idea
of how much chance there was that their own funerals were changed
by imitation.
CHAPTER XV
INTERPERSONAL RELATIONS

The nature of Hispanic contacts with the Gila Pimas was such as almost to guarantee that the details of the social organization of the latter would not be noted. Items of material culture were at least visible, and sometimes might be described, but socio-religious aspects may not have been so readily apparent to people spending at most only a few days at a time among the Gila Pimas. This would be especially true when there was a preconception on the part of the visitor that the Indians had nothing worthy of being considered either as religion or as social organization. Reinforcing this attitude was the expectation held by the Spaniards that aboriginal culture would not be maintained intact, but that the Indians would accept however much of Hispanic culture as was available at the missions and presidios.

The failure of the Spaniards and the Mexicans to extend either the mission or presidial systems to the Gila River meant that little if any pressure was brought to bear on the Gila Pimas to accept any specific components of Spanish culture in place of their own. What little information the early Hispanic records furnish concerning the socio-religious components of aboriginal Gila Pima culture, is validated by the later
reports, indicating very little change over several decades. Not until after the second decade of Gila Pima existence under American control was any directed effort made toward changing their social structure. Use, therefore, has been made of some data from writers who saw the Gila Pimas after American acquisition of their country, but prior to the arrival of the missionary Cook among them in 1870.

The Family

Although the biological family was possibly the minimum social unit among the Gila Pimas, the household probably consisted more frequently of the extended family - the parents and married children. This reflected the marriage usages, for which there is no evidence to suggest any change from the aboriginal condition during the Hispanic period.

Marriage probably took place shortly after puberty (Pfefferkorn 1949:187). There was social sanction against marriages of couples between whom a blood relationship was known to exist. "They do not marry women relatives or those of the same blood." (Velarde 1954: 245). Marriage between relatives "in the cousin line," which included any pair related to each other through the grandparental generation, was regarded as incest, and the children of such a union were liable to be born deformed, padijk (informant's statement). The majority of historical sources are in agreement that polygyny was permissible, but not common. Velasco's statement (1850:161) that: "The western
Papagos, as well as the aforementioned Gila Pimas, disavow polygamy..." stands alone, uncorroborated by any other writer. Grossman's statement (1873:415) that "many of the men who can support more than one wife practice polygamy..." is supported by traditional comment that polygyny was "fairly common" before 1879 (the time when the informant thought Cook's missionary work began to be effective), but that an older friend had told him it was "no good because the women were jealous." This must also have been true in 1716 for Velarde noted (1954:245): "They may have two or three wives but have them at distant settlements and by no means together." It is possible because of the economic factor, that some increase in polygyny was attendant upon the post-Hispanic period of affluence initiated by the commerce with the Forty-niners, but no evidence was found to support this.

It is not clear whether Bartlett's description (1854:II:222-223) of courtship by means of flute serenades was meant to apply only to the Maricopas or to the Gila Pimas as well, but Putnam (1864) also attributed flute serenading to the Gila Pimas. Most sources agree that the young people had considerable freedom in choosing their own mates, even though the custom was for marriages to be arranged, but there is not so much agreement as to how the marriages were arranged. Pfefferkorn (1949:187) stated that marriages were customarily arranged by the parents, and old informants have concurred in this as having been the
custom "in the old days." One specified that the parents of the girl would approach the parents of the youth in behalf of their daughter, but all were agreed that parents would not compel a marriage. According to Putnam (1864), once the youth's serenade was successful he and the girl went to her parents; Grossman stated (1873:415) that a friend of the suitor would act as intermediary, dealing with the girl's father. It is possible that these varying statements reflect alternative ways of behavior.

In the matter of presents, the only sources which state that presents were given were describing the post-Hispanic period referred to above (Putnam, 1864; Grossman, 1873:415), and Grossman qualified his statement by writing that presents were seldom given unless an old man were buying a young wife. There was uniform agreement that no ceremony of any kind signalized the marriage. "As for their weddings, if a woman and a man like each other they live together without any ceremony and are not molested by others ...." (Velarde 1954:245). "Marriages among the Pimas are entered into without ceremony ...." (Grossman 1873:415). Residence was generally patrilocal, and the usual household thus consisted of the eldest couple, their unmarried daughters, and their married sons' wives and children (Grossman 1873:415). Matrilocal residence presumably occurred, but was evidently deprecated, as the term used to describe the situation was derisive of and derogatory to the son-in-
law (informant's statement).

Divorce was as simple as marriage. "If the man and woman do not get along ... each does what he pleases and goes where he wishes" (Velarde 1954:245). Although this was against church policy, any attempt, if such were made, by the missionaries to alter this attitude was unsuccessful. Grossman (1873:415) noted that marriages were "never considered as binding. Wives frequently leave their husband and husbands their wives. This act of leaving is all that is necessary to separate them forever, ...." In case there were children, they might remain with either parent (Velarde 1954:245).

If Pfefferkorn's generalized statements (1949:174, 188) about the training of children among the "Sonorans" held good for the Gila Pimas, children were treated with kindness and consideration rather than discipline and coercion. When away from the house, children were carried about by the mother. The sling arrangement described by him, and recorded for the Gila Pimas in 1885 and 1901-02 (Russell 1908:104 fn. c) was not noted for them during the Hispanic period. Instead, the cradle board was used for about the first year of the infants life (Clarke 1852:89; Bartlett 1854:II:231, 253, 254). Durivage (1937:218) described the cradle boards as "little baskets made of wicker work, in which they are encased like little mummies." The child was carried either on the back, or in the carrying frame, or even lying on top of a basket of goods
balanced on the head. At home, the cradle was suspended from the ceiling or ramada and kept swinging by other children or adults around the house. After about one year of age children were sometimes carried astride the hip or pick-a-back. Boys went naked until about nine years of age, but girls wore kilts like their mothers.

Around the house, the care of the children was taken over by grandparents (Goulding 1849 MS). Children were "lectured" on good behavior in an unformalized way by their elders at home. This enculturation was carried out in a more formal way in the council house by a special person, usually the chief (viz. Johnston 1848:601); "and when we stopped having chiefs we stopped doing that. The young people never answer back, they never said anything" (informant's statement). Mothers would use the word *hup* (Apache, literally "'enemies') to still a crying child (Whittemore 1893:68), but physical punishment was almost never resorted to "in the old days."

With no mission, presidio, mining camp or other center of Spanish or Mexican population ever established among the Gila Pimas, and with no colonists in close contact with them, the only opportunity for the household affairs of the Gila Pimas to have been subjected to Hispanic influence would have been while Spaniards and Mexicans were traveling along the Gila River, and few stayed in the villages for more than part of a day. Consequently, any change which might have taken place,
although there is no evidence that any did, would have arisen from causes within Gila Pima society, rather than from contact with Hispanic society. The two components most likely to have been attacked by the missionaries -- polygyny and divorce -- remained undisturbed well past 1856.

**Kinship and Kinship Extension**

Spanish and Mexican acquaintance with the Gila Pimas apparently did not extend far enough to include knowledge of their kinship system or, if it did, no one described it. For that we are forced to turn to work done long after Hispanic times, although there is no means of judging how much Hispanic and American contacts may have affected this aspect of social organization. Parsons' study in 1926 (1928:445-464) showed that at that time the kinship system of the Gila Pimas was of the bifurcate collateral type. Kinship was reckoned in both the paternal and maternal lines, and an individual used a different term for each relative of his parents' generation. Relationship was recognized within five generations -- that is, persons who could trace blood relationship through a grandparent's parent were supposed not to marry. Russell (1908:188, fn. b) related the ceremony of baptism as he observed it among the Gila Pimas to a naming ceremony of the Pimas Altos described by Nentuig (Rudo Ensayo 1951:63-64):
Another ceremony, not painful however to the innocent little creatures, is called Peri, and consists in the adoption of the children, either at the request of the parents themselves, or of some relative who offers to adopt the children. The Peri speaks to the child, male or female, as if it were a full grown person, saying that he must become a strong and valiant warrior, and at the same time the adopter runs his hands all over the body of the child, stretching his arms and legs; finally the adopted child is given a name by the adopter which is a word of their own language, now used for names of persons only, and the meaning of which they do not know. It is of no avail to tell these people to take the name of their parents, as it must be the name of the Peri, who (according to their notions) remains in the same degree of relationship as that made by the Peri, for instance, the father and mother of the child are called father and mother of the Peri, and so with the other relations, for Peri and child are considered one and the same thing.

Alegre (1842:II:217) repeated this, but his passage does nothing to clear up the resulting relationship:

Each child has a Peri, which is a kind of godfather, whom its parents invite. This one, after having made a long speech to the recently born child on the obligations appropriate to its sex, feels it all over its body, stretching out its arms and legs, and afterwards gives it a nickname or a name in their language, of no meaning. After the ceremony, the Peri and the child are reputed in the community as one person, and they have the same relation to their respective relatives: the women do the same on their part with the girls.

There is a suggestion that the moiety divisions of the Gila Pimas might once have had a connection with some form of ceremonial

1. The last part of this quotation was footnoted as follows: "This passage is rather obscure. The original reads 'y con todo no hay forma persuadirles, que tomen los de sus padres, sino que ha de ser el de el Peri, quien queda (según su capricho) en el mismo grado de parentesco, con el hecho Peri.' L. F. F."
kinship. Traditionally the choice of the old man delegated to care for a warrior who had killed an enemy, while the warrior was undergoing the purification ceremony, was apparently contingent in some way on moiety membership (Lloyd, 1911:90-94).

As no study of the moiety system among the Gila Pimas was made until after they had been under American influence for two generations -- in fact, no reference at all to the existence of moieties has been found recorded before that -- the role and functions of the moieties in aboriginal times remain unknown. Although they are commonly called "clans", Parsons (1928:455-456) and Herzog (1936:520-521) have shown that these hereditary affiliations are arranged on a moiety basis, with subdivisions of the moieties called variously clans by Parsons, gens by Herzog, and gentes by Russell (1908:197). Membership in moiety and clan descended through the paternal line, and it is noted that children of non-Piman fathers do not have clan or moiety affiliation (Parsons 1928:455). Presumably such a situation would not have occurred under conditions of Gila Pima autonomy, when any male captives could have been either killed or, during Hispanic times, sold. It can be conjectured that the use of the clan name by which a child addressed its father, and the group consciousness arising from membership in a

moiety, represent survivals of aboriginal custom, but there is no hint that the clans or moieties were even exogamous, nor of any functions of this aspect of the social organization.

The form of ceremonial kinship known as the compadrazgo, the god-parent relationship, was introduced early among the Gila Pimas, and evidently was adopted by them. During the period of Kino's activity along the Gila River the laymen who traveled with him stood god-father to literally dozens of Indians (Bernal 1856:805; Carrasco 1698 MS; Kino 1948:1:172, Manje 1954:87, 90, 123). During the period of Franciscan activity, however, there was either less attention paid to baptism of the Indians (the means by which the compadrazgo relationship was established) or it was not so faithfully recorded in the journals of the missionaries. Garces (1770 MS) baptized children and sick adults without recording who stood god-father; presumably it was one of his Christian Indian companions from San Xavier del Bac. With the cessation of missionary activity during the Mexican period the records cease, but the institution had evidently become a part of the Gila Pima culture by that time. Grossman (1873:412) noted its existence before the Protestant missionary activity of Cook had become effective, and old people refer to compadrazgo relationships which go back to Mexican times. No information was found on the function and meaning of the institution.
The ceremony of baptism had evidently become a curing ceremony. Russell (1908:188) in his description emphasized the relationships involved in contrast to the curing emphasis expressed by Grossman (1873:412). The combination of aboriginal with Christian elements is perhaps more easily seen in Russell's account of it than in almost any other component of 19th century Gila Pima culture. The ceremonial speech, the passing of the hands of the godparent over the limbs of the child, the bestowal of the name, and the sexual alignment of godparent and god-child, are the same as in the Peri ceremony described by Nentuig (Rudo Ensayo 1951:63-64) and Alegre (1842:II:217). The statement by Russell that "The parents in their turn reciprocate by naming the children of the couple that acts as godparents to their own ..." might explain part of the confusion in the Spanish accounts of the Peri relationship. The Gila Pima words for the godparents -- kompalt (Spanish "compadre") and kmult (Spanish "comadre") -- are, of course, acquisitions from the Spaniards, but the sacred number four, the presentation of the infant to the sun, and perhaps the gifts, were aboriginal elements of the ceremony.

Age Groups

Although a finer age-gradation may have obtained, the data from the Hispanic period only allows of a rough division into childhood, adulthood and old age. The chronological ages at which an individual passed from one to the other can only be approximated. There is a
suggestion that, for the Pimas Altos generally, a transition of some kind took place about the tenth year when boys donned loincloths (Pfefferkorn 1949:191). One record rod keeper described himself as a "little boy" at the age of ten, but by the time he was about thirteen he was "just big enough to handle the bow" and accompanied a war party which engaged the Apaches (Hall 1907:414). Although no specific record for the Hispanic period has been found concerning recognition of puberty as marking a transition, it must, whether marked by any ceremony or not, have operated as a chronological milepost -- marriage, for instance, could only become feasible after puberty. Pfefferkorn's statement (1949:187) that "they marry as soon as they are old enough to do so" takes this into account. The onset of old age was probably not so clearly marked. It might be assumed to be that physical age (in distinction to purely chronological age) at which men were no longer able to go on campaigns against the Apache and women to do heavy work. This marked the time when men settled down to weaving (Bartlett 1854:II:226) and council activities (Anonymous 1849 MS) and women to the lighter tasks of caring for children (Goulding 1849 MS).

Cooperating Groups

The smallest cooperating group was probably the family, but for many of the activities undertaken, at least a number of families, an entire village, or even a number of villages in some cases, combined
efforts. Such activities as hunting, gathering, irrigation of individual fields, etc., which could be carried out by individuals or groups equally well, were probably pursued on that basis — whether one person or many took part on any one occasion was a matter of decision for that occasion rather than a general rule. Examples of range of behaviours in such situations are given in the annals (Russell 1908:38-66). The construction of dams in the river, the digging of the canals, by the very size of the tasks when measured against the tools with which the work was done, required the cooperative effort of a large number of people and were on a village, if not an inter-village basis.

Manje reported (1954:28) that at Santa Teresa and Ati (west of Tubutama), the lands of those Pimas Altos were divided into small parcels and cultivated by families related to each other by marriage. Such a practice would account for the fenced but subdivided plots of the Gila Pimas described by Font (1930:IV:44), but there may have been some variation of behaviour in this to give rise to Cortez' statement (1799 MS) that "each proprietor fenced his sowed field." Diaz' statement (1930:304) that "each village plants in common so large a field of wheat, maize, and other crops that they have filled us with admiration ..." may have meant cooperative farming on the part of the whole village as he said, or it might have meant nothing more than that the fields of a village, in that time before the individual allotment system,
were contiguous to each other as they seem to have been in 1848 (Couts 1848 MS). There is a possibility that wheat cultivation brought about cooperative labor on a larger scale than that required for the aboriginal crops, although there is no indication of the community farming policy described by Arricivita (1792:446) for the mission settlements.

As stated above, some projects required concerted effort for their successful performance. "Although it seems that all [at Sutaquison] join to make the fence, [but] they have their lands within divided..." (Garces 1775 MS). Font (1930:IV:44) wrote that the people of Uturituc "planned to assemble all together and fasten many logs in the middle of the river, and then many branches, to raise the water so that it would enter the ditches." A canal thirty miles in length, even allowing for exaggeration (Pancoast 1930:244), probably would have served a number of villages and hence represented the combined labor of all of them. Such group projects were under the direction of individuals chosen for recognized qualities of leadership, who served to coordinate the efforts of the individuals within the group.

Another complex of activities requiring group performance centered around the treatment of visitor-hospitality. The "houses of sticks and mats" provided for Kino's parties, not only on the Gila River, but on the San Pedro and Santa Cruz as well, the "eatables" and provisions given to the travelers, and the greeting activities with roads lined with
arches and crosses, even the gathering of the people in files, all represented group activity rather than individual. The participation of a whole village in caring for a traveler visiting it, and the provision of grain to the presidio of Tucson were examples of such cooperative activities (Anonymous 1849 MS).

Irrigation, (i.e., the actual spreading of the water on the fields) was one aspect of farming which could be carried out by individuals, especially during the growing season after the preplanting flooding of the fields: "One cold night in the spring a Pima at Rso'tuk was irrigating his wheat field by moonlight." (Russell 1908:39) Hunting, fishing, and gathering were carried out individually on occasion - "Early in the morning a woman started toward the hills to gather cactus fruit..." and, "... a man who was irrigating his field and a boy who was hunting doves ..." (Russell 1908:39). More frequently members of a family at least participated in hunting, fishing and gathering activities: "... a woman went with her daughter to gather cactus fruit for drying. She was accompanied by her husband, who went as a guard. .... The husband was hunting near at hand, ..." (Russell 1908:42). Larger combinations, however, seem to have been the rule -- ... the people of Subtaquisson, who were gathering saguaro ..." (Garcés 1930: 388), and "We saw a body of twelve or fifteen Indians .... They proved to be a party which had been engaged in hunting and fishing ..."
The cooperation of these larger groups was due as much to the need for protection against the Apaches, an end not necessarily achieved, as for success in the enterprise. "These heathen told me that when a large number of them were hunting the day before, they encountered a band of Apaches..." (Anza 1930:III:14); and "...the Apaches waylaid a party of Pimas who were returning from a mescal-gathering expedition in the mountains. Nearly all the party were killed and two girls were made prisoners" (Russell 1908:43).

Cooperative action had its greatest expression in wars with enemy tribes. This reached not only a supra-village, but a supra-tribal scale. Retaliatory action against the Apaches was carried out by part of the men of a village upon occasion, but as frequently, or more so, the Gila Pimas combined with the Sobaipuris, Papagos, and Maricopas (and later the Spaniards and Mexicans) on punitive campaigns. They also joined with the Maricopas and the Cocopas against the Yumas, Mohaves, and Yavapais.

**Position of Women**

References to women are so scarce in the documents of the Hispanic period that the presumption is made that there was nothing in their position to strike the Spaniards and Mexicans as remarkable. As there is nothing to show that Hispanic contact had any influence on that aspect of Gila Pima social organization, American comments on the position
of women are taken as reflecting what was probably the aboriginal situation. In no other area of the culture, except perhaps religion, are the culturally-determined biases of the observers so apparent as in the statements made about women’s position. From Pfefferkorn to Grossman, with rare exceptions, the position of Gila Pima women was interpreted in terms of western European concepts of the ideal position of women. As a consequence, most of the statements are to the effect that the Gila Pima women were a much abused, much imposed on lot of human beings. Two statements, made by observers who passed along the Gila within a few months of each other, show the contrast present in the interpretations. Couts (1848 MS) felt that: "Their women do all of their work, both in and out, are perfect slaves, and greatly fear their men." Pancoast (1930:244), on the other hand, reported that: "The men did most of the labor, and the Squaws bore an air of importance and independence not usually seen in other Tribes."

Another circumstance beside cultural predisposition probably operated to produce such divergent statements. If a traveler passed through at a season when no agricultural activities were in progress, the ones he was most likely to see at work would have been the women. Even during a time of agricultural activity he may well have remained unaware of much of the work going on in the fields, while observing at close hand the industry of the women as he passed through the villages.
In addition, not many were aware of the number of men constantly out on campaign. Even so, just as disparate opinions were voiced by men who, instead of seeing the Gila Pimas for two or three days on their way along the Gila River, spent enough time there to observe the yearly round:

The wife is the slave of the husband. She carries wood and water, spins and weaves, has the sole care of the children, and does all the work in the field except plowing and sowing. It is the Pima woman that, with patient hard labor, winnows the chaff from the wheat and then carries the latter upon her head to the store of the trader, when the husband -- who has preceded her on horseback -- sells it, spending perhaps all the money received for it in the purchase of articles intended only for his own use. Pima women rarely ride on horseback. The husband always travels mounted, while the wife trudges along on foot, carrying her child or a heavy laden kiho (basket) on her head and back (Grossman 1873:415-416).

... and the consideration with which they are treated by the males forms one of the strongest grounds upon which is based my hope for the future advancement of these people (St. John 1860 MS).

Separating the value-conditioned statements from factual descriptions, however, a different view is apparent, wherein the women are seen to have occupied a position of comparative equality with men. The most notable distinctions were seemingly that women did not participate in military operations, and they did not take part, at least not actively, in council deliberations. As described above, women evidently had equal rights with men in marriage and divorce. In the mythology, a number of women played roles of power and influence (e.g., Johnston
Women, as well as men, could inherit power and treat disease (Russell 1908:256). During the period of American migration through the Gila Pima country in the mid-19th century, the women took as great or greater part in the trading as did the men, and there was no indication that the trading of the women was controlled by the men. The behavior of women during the early years of contact with the Spaniards, in hanging back and keeping out of sight (Manje 1954:88, 122, 127; Bernal 1856:804, 805), may have been either shyness before strangers or a protective measure. It is to be noted that the men went out from the villages to meet the strangers. As well as a sign of courtesy, this could have been a reasonable precaution in case the newcomers proved to be hostile. Once the friendly and peaceable intentions of the visitors were established, the women participated in the greeting ceremonies in the villages. That the men took precedence over the women in those ceremonies (Font 1930:III:217; IV:42-43), probably reflected the patrilineal orientation of the social structure, rather than a fundamentally subordinate status of the women. And if the women were singled out to carry water to the Spanish party (Font 1930:IV:43) that probably reflected a customary division of labor. Men carried jars of water out to meet the Spaniards some distance from the village (Carrasco 1698 MS), and were singled out to provide game and fish (Anza 1930:III:14). Of far more frequency are statements of cooperation on the part
of all in a village, both in providing for visitors and for themselves.

The Jesuit writers did not record whether they distinguished between the men and the women among the Gila Pimas when they were passing out gifts to them, as did the diarists of the later Franciscan times. The practice of giving glass beads and necklaces to the women (Anza 1930:III:20, 24; Font 1930:IV:45-46; Barbastro 1793 MS), represented Spanish ideas of what was appropriate, rather than a difference recognized by the Indians, for the American travelers noted both women and men wearing beads (Durivage 1937:219; Eccleston 1950:209). Evidently the Spanish behavior did not affect Gila Pima attitudes in that respect, at least. It is not apparent whether the singling out of the women for one kind of gift, tobacco being regarded as an appropriate gift for the men (Font 1930:IV:45-46), had any effect on the status of women.

**Etiquette and Behavior**

Affability, friendliness and courtesy seem to have been characteristic of the public behavior of the Gila Pimas, judging by the frequency with which it is so described in the accounts throughout the contact period. Beyond such characterizations the Spanish accounts are devoid of specific descriptions of behavior, with the exception of that during meetings. The quiet and attentiveness with which the Indians listened to sermons and the saying of mass (Carrasco 1698 MS; Font 1930:IV:34, 42) probably reflected their behavior in any meeting and under the
experience of being admonished by someone in a superordinate status.
The description of them as phlegmatic (Zuffiga 1948:10) may well have indicated calmness of demeanor and deliberateness of speech and action. Clarke (1852:89) found them "good-natured and sociable" and Evans (1945:154) remarked that they were "more given to laughing" than the "northern races." Hayes (1849-1850 MS) described them as "a lively, merry race - apparently very happy, very talkative, and each laughs heartily at everything he says." The only evidence of dissension found in the records of the Hispanic period was the factionalism which arose over whether or not the Gila Pimas should join in the Gandara-inspired revolt of 1843 (Comaduran 1843a MA, 1843b MS).

Aboriginal forms of greeting are hard to separate from those which are suspected of having been adopted from the Spaniards. Pfefferkorn's sarcastic comment (1949:173) regarding greeting behavior of the "Sonorans" indicates that he failed to perceive the real form of greeting, thinking that greeting forms were lacking because European pattern of "hello" and "goodbye" was not followed. The most probable suggestion is that some kinship term was expressed at meeting (Parsons 1928:446), and leave-taking was expressed simply by ntohîm ("I am going"), as is still done (informant's statements).

There is no indication that contact with the Spaniards had any effect on public manners, unless it might have been to formalize them
somewhat, perhaps by the addition of some elements of behavior. In
greeting the Spaniards, the placing of arches and crosses, the sweep-
ing of trails, the assembly of the people in files, were only followed by
those people to whom previous knowledge of (or contact with) the Span-
iards had given the idea that such was the correct way to receive the
visitors (viz. Manje 1954:119-122). Even then, not all villages followed
that pattern, and all but the standing in files seem to have been aban-
donned by the time of the Anza expeditions, for no mention of the prac-
tices was made in any of the diaries. Embracing the visitors was part
of the pattern during Kino's time but apparently the practice was dropped
thereafter. Shaking hands was probably introduced as early (Velarde
1954:243), and was incorporated into the Gila Pima behavior pattern.
It is possible, however, that it was an aboriginal custom not identified
as such by the Spaniards.
CHAPTER XVI

DEMOGRAPHY AND DEFENSE

Settlement Pattern

The location and identification of individual villages is made extremely laborious and provisional by the dispersed character of any individual settlement, the practice of moving a settlement without changing the name, and a process which might be termed "village drift", whereby over a period of years a settlement may gradually change its location by several miles. Village drift came about as a result of a number of practices. The custom of destroying a house where a death had occurred and erecting another for the survivors some yards away, perhaps that of married sons building houses in proximity to their parents, and the practice of building houses near new land when it was brought under cultivation, all combined to bring about a constant gradual shifting of the location of any one settlement. Traces of the process can be seen along the Gila River today, where the former location of one village finally abandoned between 1870 and 1880 (informants' statement), can be followed for a considerable distance.

During the first years, at least, of Hispanic contact, the villages of the Gila Pimas were spread out along the river for a distance of
MAP 1 Early Jesuits

- 1694 Kino
- 1697 Kino, Bernal,
  Manje
- 1698 Kino, Carrasco
- 1699 Kino, Gilg, Manje

- Elevations -
  - under 1000
  - 1000-2000
  - 2000-3000
  - over 3000

Scale
from forty to forty-five miles or more (Maps 1 and 2) from the vicinity of the Casa Grande to Gila Bend, although below the Gila-Salt junction the towns were a mixture of Pimas and Maricopas (Bernal 1856:803-806; Carrasco 1698 MS; Kino 1948:I:127-129, 171-174, 184-197, 246-247, map; Manje 1954:84-91, 122-124; Sedelmayr 1746 MS). Kino (1948:I:172) wrote that "there are nearby [the Casa Grande] six or seven rancherias of Pimas Sobaipuris all of whom in all places received us very kindly," but the existence only of three in the eastern part of the Gila Pima territory can be substantiated by other documentary evidence.

On his first visit in 1694 Kino (1948:I:128) apparently did not visit the easternmost of the villages, for the one he designated as the "first" on that trip, on subsequent trips was noted as the second village downstream from the Casa Grande. Manje's identification (1954:87) of the easternmost village as Tucsan, located "on the banks of the river at a league's distance from Casas Grandes," is substantiated by the statement of Sedelmayr (1746 MS) a half century later that the "easternmost is called tuquissan." Four leagues (about nine miles) downstream lay Tcurconyi Mo'o ("mountain sheep horns"), the one visited first by Kino in 1694 (1948:I:128) and identified by him as "El Tusonimo, which we named La Encarnacion ...." Manje (1954:87) and Sedelmayr (1746 MS) recorded the same Indian name as Tucsoni Moo and tussonimo,
respectively. In regard to the next village, however, Kino (1948:1:128) noted it was "El Coatoypdag, which was four leagues further on from La Encarnacion," and named it San Andres, whereas Manje (1954:88) recorded it as Sudaison and Sedelmayr (1746 MS) as Sudac-sson, both being attempts to reproduce the Gila Pima name Codakcon, "where water comes up." Sedelmayr's statement is particularly valuable, by connecting the native name with a specific feature of the Gila River: "Lower down from La Encarnacion the river sinks under ground in hot weather, and where it comes out again is the large rancheria Sudac-sson." This evidently was the Rso'tuk ("water standing") designated by Russell (1908:23) as "northwest of Casa Blanca," which would place it some twenty-five miles or more downstream from the Casa Grande. The figures given by the Jesuits for this distance vary from the eight leagues reported by Kino (1948:1:128) and Carrasco (1698 MS) to the eleven leagues counted by Manje (1954:87, 88).

In 1699, Kino and Manje traveled along the Gila River in the opposite direction, coming from the Colorado River. Manje (1954:122) distinguished the village where the party left the river to cut across the bend as:

1. The original reads as follows: "mas abaxo se sume el rio en tiempo de calor, y donde buelve a Salir, esta la gran rancheria Sudac-sson."
MAP 2. Late Jesuits
- 1742 Keller
- 1744 Sedelmayr
- 1744 Sedelmayr
- 1749 Sedelmayr
... a settlement where we counted 150 men, all of the Pima tribe. These were the first to welcome us with crosses and triumphal woven arches, giving us coritas de poliadas of cornmeal and white beans which they bring from the Colorado River...

This was evidently San Felipe y Santiago de Oyaduibuis (Kino 1948: I:196, 247, map), although Bolton (1948:II:322) designated it as a Coco-maricopa village. In view of repeated statements (e.g., Kino 1948:I:186; Sedelmayr 1746 MS) that the Maricopas and Gila Pimas occupied joint villages along the great bend of the river, Oyaduibuis probably was one of those towns. After crossing the mountains, Kino and Manje reached San Bartolome del Comac, a Gila Pima village three leagues above the Gila-Salt junction (Manje 1954:123).

Another of the mixed Gila Pima-Maricopa villages was located some twenty-five to thirty miles west of the confluence of the Gila and Salt rivers, according to Sedelmayr (1746 MS):

From the junction to the first rancheria is about 12 leagues. It is a rancheria of large population called Stuc cabitic, Pimas and comaricopas /sic/ connected by marriage, of whom the most know both languages pima and comaricopa.

Sedelmayr tantalized ethnohistorians with a place name list which is the longest given for the Gila River by any of those who traveled along it, without giving even approximate locations for more than a few. Of that list, two names might possibly be identified in other accounts. Assuming that he was naming the villages in order going downstream from the junction of the Gila and Salt rivers, his oxitahibuiss might be the
OyaduibuiSe referred to above. Between it and Stuc cabitic he listed tubur-caborh, which might have been the Tuburs Cabors described later by Garces (1930:389), it then being located between Sutaquison and Uturituc on the Gila River well above its junction with the Salt. As tubur-caborh was the second village upstream from oxitahibusis along the north-south reach of the Gila River where Sedelmayr presumably placed ten villages, it must have been within a few miles of modern Gila Bend.

To the list of Gila Pima place names might be added that of Santa Catalina, west of Picacho Peak on the banks of the Santa Cruz River. The Pima name was rendered by Manje (1954:91) as Cuitaubagu, by Carrasco (1698 MS) as Coytoabagum, but it has not been possible to secure any modern Pima word which sounds the same. The present Pima name for the place, Aktciny may date from Franciscan times.

These eight place names are all that can be located even approximately during the Jesuit period, although references exist to other unnamed rancherias (see Bolton 1948:map). Except for Tucsan, most of the locations given were for the south bank of the river, although Sedelmayr (1746 MS) wrote that "all these rancherias are on one and the other bank of the river, ...." That the locations were given for the south bank almost exclusively is a result of the fact that travel was along that bank, so that places across the river were not visited
and hence often escaped record.

Perhaps one of the most enduring aspects of the aboriginal culture of the Gila Pimas has been their preference for individual dwellings, housing at most an extended family, and set apart from each other by distances of many yards. Sedelmayr (1746 MS) remarked upon the difference between the single-family dwellings of the Gila Pimas and the large multi-family houses of the Maricopas, even when the two were living in the same village. Manje (1954:113) described the large communal habitations of the Yumas especially, although he had not done so for the Gila Pimas, presumably because the Yuman structure represented something different from that to which he was accustomed in Pimeria Alta.

The scattering of the houses may have been characteristic of the Pimas Altos generally. Pfefferkorn (1949:174) did not even regard the settlements as "formal and true villages." One of Barbastro's recommendations (1793 MS) for better defense against the Apache was in effect a change in settlement pattern -- "if a ranchería was composed of straw huts distant from each other by two to three shots of a fusil \( \sqrt{100} \) to 150 yards? why be surprised that the Apaches finished them off?" This may have been an exaggeration, but the diaries of the Forty-niners almost invariably described the Gila Pima "village" as composed of scattered huts. In 1872 after at least two centuries of Apache warfare,
the Gila Pimas were still building their houses no closer to each other than forty to fifty yards (Howard 1907:141).

The nucleus of a village was probably a number of related families, if Gila Pima custom was the same as Papago. Manje (1954:28) noted that Santa Teresa and Ati, two settlements located west of Tubutama, were composed of families related to each other by marriage. The situation was probably not as restricted, at least among the Gila Pimas, as described by Pfefferkorn (1949:174): "Only the nearest of kin associated with one another. Here and there a few households lived together, depending on the fertility of the region." Availability of arable land was not a limiting factor in the settlement pattern along the Gila River at that time.

There is no evidence that either the Spaniards or the Mexicans attempted any direct effect upon the settlement pattern of the Gila Pimas. Between 1700 and 1854, the pattern of village location underwent a modification which was brought about by the presence of the Spaniards in Sonora, but which was not a result of direct action or policy on their part. This change was in the density of the settlement, more than in the total amount of territory settled, although the withdrawal of Gila Pima villages from the Gila Bend region was in effect a contraction of territory at that end. On the

other hand, the Gila Pima settlements on the Salt River were evidently established during this period (Hall 1907:415-420, passim). During Franciscan times the Gila Pimas continued to occupy essentially the same territory along the river (from the Casa Grande to Pima Butte) in which they had been found in Jesuit times, but the number of villages identifiable for that area during the Franciscan period is nearly triple that for the 1694-1767 period. Doubtless this is in part a result of better reporting during Franciscan times, arising from the more extensive explorations of Garcé's, but the diminished distances reported between villages, with no diminution in the total length of the settled portion indicates that settlement density had actually increased. As population increased, new villages evidently were formed, which would account for the circumstance that two of the villages actually consisted of three rancherías under one name. During the 1770's one village was relocated in combination with another, and one village was situated where none had been reported previously.

As the population increased it might have been expected that the extent of the settled area would have increased also, but such was not the case. That an increased population could be supported with no increase in territorial settlement was made possible by the introduction of wheat and corn in the same fields in different seasons. The circumstance of increased food supply could thus be interpreted as a direct
outcome of contact with the Spaniards. At the same time it is possible that the increasing pressure of the Apaches prevented the Gila Pimas from extending their settlements with their increase in population, as they might have done if free from hostilities in that quarter. The adaptation of the Apaches to raiding as a part of their subsistence pattern arose from the increased wealth of Sonora brought about by development at the hands of the Spaniards. It can be said, then, that this limitation on the extent of Gila Pima settlement was a result of the Spaniards' presence in Sonora, although it can not be attributed to Spanish policy.

Although the situation during Franciscan times is more difficult of interpretation, a number of changes in settlement pattern can be discerned. There apparently was a withdrawal of the Gila Pimas from the western end of the region, leaving it to the Maricopas. Some Gila Pimas, however, continued to reside in the Maricopa towns. (Anza 1930: II:124; Diaz 1930:301; Font 1930:IV:52). The only map of the area (Bringas 1795 map) found for the end of the 18th century, shows the principal Maricopa settlements still west of the Gila-Salt junction. Whereas during the Jesuit period the settlements seemed to have consisted of individual rancherias separated from each other by distances of from

MAP 4. Anza's Expeditions

- 1774 Anza, Diaz
- 1774 Garcés
- 1775 Anza, Font, Garcés
nine to fifteen miles or more, during Franciscan times there appeared
the "metropolis" form of settlement as well. In this, a number of
rancherias and pueblos now were separated from each other by dis-
tances of only about two and one half to seven miles (see maps 3 and 4).
Finally, the increase in population was reflected in an increase in the
number of individual rancherias, eight being identifiable along the
twenty-five miles or so downriver from the Casa Grande where only
five had been listed during Jesuit times.

Efforts to follow the story are complicated by the change of ad-
ministration from the Jesuits to the Franciscans. The only place name
which can be traced with assurance from one period to the other was
Codakcon, which was recorded by the Franciscan diarists as Sutaqui-
son. The possibility has been pointed out that the Tuburs Cabors of
Franciscan times, the next village upstream from Sutaquison, may
have been occupied by the same group which had been placed by Sedel-
mayr in 1746 as a short distance upstream from the location of modern
Gila Bend, having moved up by 1770 to join the rest of the Gila Pimas
and carrying the name of their community with them. Garces (1770 MS)
mentioned no town between Uturituc and Sutaquison in 1770. In 1774,
however, he (1930:389) located Tuburs Cabors there, stating that he
"had never been in this town." Otherwise, the story is confused by the
Franciscans application of different names to settlements in the same
approximate locations as in Jesuit times, by their use of different
names to designate the same settlement in their own period, and by the
use of names from Jesuit times for places differently located in Fran-
ciscan times.

Unlike the Jesuits, the Franciscans only applied saints' names to
metropolitan centers, giving the Gila Pima names alone for the indi-
dual rancherias, if they named the latter at all. Thus La Encarnacion
de Sutaquison consisted of the rancheria designated by that Indian name
plus two unnamed ones -- and lends itself to confusion with La Encarna-
cion de Tusonimo of Jesuit times. San Juan Capistrano de Uturituc
comprised not only the rancheria of that Indian name, but also those of
Saboi and Pitaique (Garces 1770 MS; 1930:389). Santa Catarina de Cul-
tuabagu became just Aquituni (Aktciny). Pitac, the easternmost village
in Franciscan times, could have been the Tucsan of Jesuit times, but
the only evidence found for such a supposition is its location in approxi-
mately the same vicinity. Pitaique, which itself consisted of two ran-
cherias on both sides of the river before it moved down to combine with
Uturituc (Garces 1770 MS), may have been the Tusonimo of Jesuit times.
This was the place where Garces (1770 MS) reported finding old people
who remembered Kino. The conferring of the name San Adres on Tuburs
Cabors by Garces in 1774 leads to confusion because he had previously,
in 1770, applied that name to the bipartite village of Pitaique. He
applied the term to Tuburs Cabors only after the villages of Pitaique had moved downriver to become one of the rancherias of San Juan Capistrano. It also leads to difficulties of identification in relation to the San Andres of Kino's day, especially as both were located in the same general area, if the assumption be made that the Jesuit San Andres de Sudaison was the La Encarnacion de Sutaquison of Franciscan times.

The village of Napcub, one league from Sutaquison and on the north bank, was a new one which evidently was formed before 1770 (Garcés 1770 MS). In addition to the possible move of Tuburs Cabors and the stated move of Pitaique, the location of Sutaquison was also shifted slightly, and for that move a specific reason was recorded (Font 1930: IV:46):

The Indians were asked why they lived so far from the river, since formerly they had their pueblo on the banks, whereas now they had moved it to a place apart. They replied that they changed the site because near the river, with its trees and brush, they fared badly from the Apaches, but now being far away they had open country through which to follow and kill the Apaches when they came to their pueblo.

Another aspect of the settlement pattern during the late 18th century was the practice of some groups of occupying a site on the river sporadically. These groups may have been those Kwahatks who were most closely connected with the Gila Pimas. Font (1930:IV:33) wrote that when the party had almost reached the Gila River -- Anza (1930:III:14) stated four leagues -- there came out to meet them the governors
of Uturituc and Sutaquison and "the governor of the villages of Cuytoa and Aquituni, settlements of Papagos, who at times live on the Gila River, ...." This probably was the place known as Comari (Anza 1930:III:14, 17), identified by Bolton (1930:III:14 fn.) as "evidently Blackwater Slough, some eight miles west-northwest of Casa Grande ruins." No settlement in this locality had been reported prior to this time (1775) in the Franciscan period. The latest known map of the area for the Spanish period (Bringas 1795 map) indicates that this settlement, as well as the other principal Gila Pima villages maintained their positions at least until the end of the 18th century.

This situation evidently continued during the Mexican period (see map 5). Emory (1848:83-86) reported that they traveled from their easternmost camp among the Gila Pimas a distance of fifteen and one-half miles to the next camp "on the dividing ground between the Pimos and Maricopas." Presumably the stretch covered by the settlements was a little more, as the party had entered the villages the day before. Couts (1848 MS) reported the Gila Pimas as

...thickly settled for 20 or 25 miles along the Gila.... From the village down the river, for about 18 miles, the whole distance might be called an Indian city. Their huts are scattered thickly too, along the route from 1 to 2 miles from the river ....

This location of the Gila Pimas shows an abandonment of part of the eastern area of former settlements, in that the first village was now
located about fifteen miles downriver from the Casa Grande. The most apparent explanation of this withdrawal of the eastern settlements would seem to be Apache pressure from the east. If that were the case, it is hard to understand why the Gila Pima settlement in the vicinity of modern Mesa (Hall 1907:415, 416) persisted, as it was equally exposed to Apache attack. This persistence in an exposed position suggests that further study might show some other explanation for the withdrawal. There may have been some factor in the ecological situation which played a part in bringing about the relocation of settlements.

Although the majority of the Americans made no distinction between villages until after the establishment of the reservation, the Mexicans continued to count them as individual settlements (Escudero 1849:142; Anonymous 1849 MS; Velasco 1850:162), usually seven, although they failed to give names. One Mexican report (Anonymous 1849 MS) described them thus:

The position of these settlements is in such a manner calculated for the defense against the Apache enemy, a tribe living in an almost constant state of war, that the distance from one to another pueblo is only that which the voice of a shout reaches to communicate. Thus it is that in this proximity the 7 settlements can calculate themselves only as one, ....

Defense and War

Although public works projects such as the construction of canals serving more than one village doubtless acted as factors in
organizational unification, defense was probably more effective. This was true not only because of the scope of the operations occasionally undertaken, but also because of the consistency and duration of the circumstances. The early penetration by the Spaniards into northern Sonora focused attention on the menace represented by the Apaches (Kino 1948:I:148, 166 et seq.; Manje 1954:6, 35, et seq.). At the time the Spaniards arrived in Pimeria Alta, the inhabitants were already experiencing the hostilities which continued, with increasing force, for almost two centuries, on the Gila River as well as the San Pedro (Bernal 1856:805). The Pimas Altos were apparently capable not only of taking care of themselves, but of helping the Spaniards. They were

... able to defend themselves against their enemies and to fight against our adversaries, the enemies of this province of Sonora, for these our Pimas defend themselves very well, better than any other nation whatsoever, against the warlike Apaches, and their allies, the Jocomes, Janos, etc. .... (Kino 1948:II:287).

If Kino's statement (1948:I:197) that "those of the west had always lived at great enmity and in very bloody wars with those of the east ..." referred to the strife between the Yumas and the Maricopas, but not to the Gila Pimas, the latter were evidently soon drawn into the conflict (Garces 1771 MS; 1775 MS).

Warfare against the Apaches was probably the prime reason for the existence of one leader more prominent in the tribe than the others at
the time of first contact by the Spaniards, although prestige gained in
war may have carried over into other activities of the society. Such
may have been part of the basis on which the Spaniards recognized
Palacios as governor of La Encarnacion and San Andres, for in 1700
Kino (1948:I:247) recorded "the notice which the captain of La Encarna-
cion had sent me to the effect that this people had dealt a blow to the
Apaches." The use of two titles, one civil and one military, in refer-
ring to one individual (Kino 1948:II:122) indicates the dual role played
by some Indian leaders. In view of the pacific character with which the
Gila Pimas were credited from the first historic contacts, their actions
against the Apaches in the beginning may have been no more than pur-
suit of raiding parties. This type of action followed an Apache raid
where immediate contact with the raiding party was possible, in which
case as many men as were available, even if only those in the imme-
diate vicinity, followed the Apaches without waiting for reinforcements.
It continued to be a feature of Gila Pima military action against the
Apaches for the duration of the Apache wars.

During the Hispanic period the Gila Pimas adopted an additional
type of military action, the planned campaign. These punitive expedi-
tions, while retaliatory in purpose, did not necessarily follow on any
one specific raid by the Apaches, but were undertaken only after de-
liberation on the part of the council (Whittemore 1893:69). They may
have been stimulated by acquaintance with Spanish military tactics gained through communication with Pimas Altos soldiers. The "heathen Pima auxiliaries" of the Spanish and Zuni campaign against the Apaches in 1747, however, were most probably Sobaipuris (Escalante 1775 MS). Nevertheless, the communication between the Gila Pimas and the presidio of Tubac implied by Anza (1930:II:126), suggests that some Gila Pimas may have served with presidial forces at least as early as 1775. Gila Pimas accompanied Allande on his Arivaipa campaign of 1793(?) (Sauer 1935:9). This practice of organized campaigning developed to the point where the Gila Pimas (with the Maricopas) kept a number of warriors in the field almost constantly (Hayes 1849-1850 MS). This was extended until, before American troops began to be effective against the Apaches, the military organization of the Gila Pimas and Maricopas included what virtually amounted to universal military service. One thousand men were classed as warriors and non-producers (i.e. they were not counted among those engaged in farming), of which 300 to 500 were constantly in the field (St. Johns 1860 MS).

Another feature of the organization for war of the Gila Pimas was

the system of sentinels. Just when this was instituted cannot be as-
certain, but it was evidently comparatively late. It does not seem
to have been in operation in 1774 or the Apache could not have struck
Sutaquison so successfully that 60 of the villagers were killed (Anza
1930:II:126), although Diaz' statement (1775 MS) that an entire village
was wiped out would seem to have been an exaggeration. As a result
of this heavy raid Sutaquison was relocated in the "open country" away
from the river. The stated reason (Font 1930:IV:46) for this move,
however, was not to make the sentinels more effective, but to enable
the Gila Pimas more efficiently to "follow and kill" the raiders. Wheth-
er the quick communication between villages described by a Mexican
report of 1849 (Anonymous 1849 MS) had reference to a system of sen-
tinels is not clear, but contemporary American accounts establish that
the system was in operation by that time. The sentinels were posted
on natural elevations: "I noticed 2 mounds or high hills in the
middle of their settlement on which they have guards to watch the ap-
proach of any attack by their Indian enemys" (Goulding 1849 MS).
Other means, however, were utilized, "one of their watch towers be-
ing a large cottonwood" (Eccleston 1950:209). The effectiveness of the
system, both of sentinels and inter-village warning, was apparent to
Bartlett (1854:II:249). When he approached the Pima villages from the
north, not only was his presence promptly discerned, and all the Gila
Pima and Maricopa villages alerted, but he was at once confronted by an armed force ready to fight. The sentinels seem to have been effective against Apache war parties, although Apaches prowling alone or in very small numbers seem to have been able to approach very close to the villages.

The best evidence of the success of the war organization developed by the Gila Pimas in response to enemy raiding is that they were able to maintain their position. The Sobaipuris, who were just as capable fighters, judging by their victory over the Apaches in 1698 (Manje 1954: 97-98), may have failed to develop such an organization. This might account for their having been pushed out of the San Pedro entirely, and the difficulty experienced by Anza in keeping those at Tucson from moving to the Gila River (Anza 1770 MS).

Another aspect of the military organization of the Gila Pimas was the peacetime preparation for war so tersely expressed by the Gila Crossing record keeper (Russell 1908:39) for the year 1836-37, during which no enemy raids were suffered: "We tilled our fields, danced our war dances, sang songs, kept up target practice, and exercised in the use of the shield."
CHAPTER XVII
SOCIAL CONTROL

Spanish Policy

In the 17th century the established Spanish policy (Gibson 1952:89, 123; Dunne 1955:44, fn. 18) was to make use of any existing native government and leaders in the initial stages of bringing a new group under the control of the colonial government. This produced written records which were helpful in reconstructing aboriginal political organization. The investiture of individual Indians with titles and insignia of office was more faithfully noted in the journals of the expeditions than were observations on the aboriginal society. Inspection of the nature of the appointments made and the men chosen for those offices, particularly during the initial stages of contact, reveals at least the broader outlines of the social structure.

One finds expressed in the accounts a curiously contradictory attitude on the part of the Spaniards toward existing native government in Pimeria Alta. On the one hand, no such thing as native government was held to have existed prior to the arrival of the Spaniards and their subsequent appointment of native officials as agents of Spanish colonial government. This is seen in such statements as: "They were given staffs of justice as insignia of authority to establish their own government..."
(Manje 1954:90), and: "They have no government, neither laws, traditions nor customs from which to govern themselves. Thus each one lives entirely free..." (Velarde 1954:243). On the other hand, in practice individual Indians were recognized by the Spaniards as having the status and playing the role of leaders and governing officials. In the same two references cited above we also find that: "The Indian chief who governed it /San Andres del Coatoydag/ had months before journeyed to Santa Maria de Baseraca..." (Manje 1954:90), and "...in each town they look upon some Indian as chief" (Velarde 1954:243). Actual practice, as opposed to official viewpoint, is further manifest in the choice of the existing native leaders to receive appointments as officers. Carrasco's instructions for his 1698 trip with Kino (Xironza 1698 MS) included orders to "give rods to the Indians who govern the rancherias and name them Governors...."

To be effective, in the absence of any mission or military establishment which could compel recognition of their authority, any Spanish-appointed native officials had to be men who either already occupied positions of leadership and authority in their tribe or whose status was such that their appointment to such a position was acceptable to their fellows (e.g., Bernal 1856:800, 801; Villasenor 1746:88:405). While

among the Yumas in 1849, Couts (1849 MS)\(^1\) noted their refusal to accept the designation by the Mexicans of a leader concerning whom they had not been consulted: "Cuchans had a large council, deposed Pablo, whom they derided as a Mexican, he having been appointed by them,..."

How adept the Spaniards were at recognizing the native leaders is uncertain, of course, but in the case of the Gila Pimas the Spaniards met them after considerable preparatory experience with the Sobaipuris and the other Pimas Altos, congeners of the Gila Pimas. Given a similarity between the societies and cultures comparable to their linguistic affinity, Kino and Manje probably had no difficulty in identifying the leading men among the Gila Pimas.

A word about the various Spanish titles given to native officers by the Spaniards may prove helpful in understanding their approach to the Gila Pimas. Kino (1948:II:271) claimed that as far as San Xavier del Bac the natives of Pimeria Alta "have their cabildos [councils] of justices, governors, captains, alcaldes, fiscales, and their topiles, alguaciles, etc." Bolton took this as: "An indication that the pueblo organization prescribed by law had spread well beyond the actually occupied frontier" (1948:II:271, fn. 270). There is no evidence, however, that an organization of such scale ever came into existence along the

The terms used in the documents of the Hispanic period in referring to Indian officials are frequently ambiguous by being essentially synonymous in application. In other parts of New Spain where the Indians and the Spaniards were in closer contact, the Spanish title for an Indian official may have conveyed a precise meaning in terms of rank, responsibility and authority, but no such uniformity of application can be extracted from the records for the frontier of Pimeria Alta. Although the "most principal chiefs of Pimeria" who assembled at Remedios were described as twelve capitanes, eleven governadores, and twenty-two other justicias, alcaldes, topiles and fiscales (Carrasco 1698 MS), there is no discernible consistency in the titles given to the individuals mentioned. Palacios was usually listed as Captain but sometimes as Governor. English equivalents for the other titles may not convey quite the same meaning, but the correspondence is sufficiently close to warrant their use. Justicia, although elsewhere conveying the sense of a legal officer, a magistrate, here is merely a generic term for "official." Pfefferkorn (1949:255-258, 275) gave the clearest exposition of Spanish-shaped Indian officialdom in Pimeria Alta. The ranking officer was the governor, "goenvaar, as the Sonorans called him,"; following him was the alcalde, "in the Sonora dialect, arical, who was the assistant to the governor." The fiscal, "in the Sonora dialect,
fiskel," was a summoner -- a minor church official for which our "deacon" is the closest approximation. The *mayoria*, "or as the Spaniards say, *madores*" \(\sqrt{\text{mayores?}}\), that he credited to every village, did not appear on the Gila River. In general in the literature, the tendency has been to use the Spanish forms *alcalde* and *fiscal*, and they will be so used here. No record has been found of the appointment on the Gila River of either *alguaciles* or *topiles*, who functioned as law enforcement officers in the mission establishments to the south, the *topiles* also being in charge of the *casas de comunidad* (community houses).

The Spanish bestowal of "staves of office" (to use this generic term for the Spanish one of *varas de justicia*), which signalized the appointment of fiscal, governor, alcalde, etc., constituted a recognition of the status quo and a beginning of the formalization of native government within the broader framework of colonial government (Xironza 1698 MS). This formal recognition was sometimes preceded by another ceremony which, whether intentional on the Spaniards' part or not, had somewhat the same effect. Native leaders were occasionally baptized quite some time before being given insignia of office or even having a Spanish title attached to their status; in fact they were the only adults except the moribund who were baptized after only a minimum of instruction in Christian doctrine, the baptism of the other
adults being delayed until they were thoroughly instructed (e.g., Bernal 1856:804; Kino 1948:1:282). By this preferential treatment the Spaniards probably hoped to make baptism (i.e., conversion to Christianity) appear something to be desired, a reward attained by conformance to certain behavior. The expectation seems to have been that the granting of it first to leading men would enhance its desirability, fortify the position of those men, and, at the same time, win them as adherents to Spain and Christianity.

To summarize, the only Spanish titles which were conferred on Gila Pimas were governor, captain, alcalde and fiscal. While there was at times a distinction between the three former terms, in that separate individuals were named for each post, the significance attached to each, even in Spanish eyes, is not clear. It is possible that the captain was primarily the war leader, although that was by no means always or even frequently the case. At other times one individual occupied more than one post concurrently, so that the effect was that governor, captain, and alcalde came to mean simply the head man, whether of a single village or of several villages. The term governor is used, therefore, to designate that official. The same person was never, so far as is known, simultaneously designated as governor and fiscal, as one was a civil and the other an ecclesiastical officer. In the absence of an established mission on
the Gila River, the fiscal was evidently supposed to have been a vicar for the missionary (Carrasco 1698 MS), but seems to have been of little importance to the Gila Pima. The periodic appointment of this official represented an effort on the part of the Spaniards to establish among the Gila Pimas an institution for which, unlike the headmen, there was in Spanish eyes no apparent parallel in Gila Pima social organization. The term "apparent to Spanish eyes" is used because their attitude toward Indian social structure was such that they may well have remained unaware of the existence of the senyo'ohkam, to whom the rod of fiscal might have been nearly as well suited as was the office of governor to the head man. Consequently there was no such continuation of the office of fiscal as there was of governor—the former apparently did not endure beyond the period of missionary contact. The senyo'ohkam, being as indigenous to the social structure as was the governor, and not dependent on the contacting society for inspiration, continued to function until recent times.

Native Leaders

The aboriginal social organization of the Gila Pimas, as it can be reconstructed from the Spanish accounts, was apparently not complicated and might be described as nascent but for the fact that it was no more complex after a century and a half of Spanish and Mexican contact. The unknown factor is the extent to which Hispanic influence
changed the functions of the various leaders, for information regarding them comes from accounts subsequent to the first contacts. It is assumed, however, that the aboriginal functions were little different from those of historic times, since the framework of leadership seems to have remained unchanged, even the Gila Pima names for officers being retained, and the functions as later described appear to have fallen short of what the Spaniards aimed at in the way of control.

When the Spaniards reached the Casa Grande in 1697, Bernal (1856:804) reported that they were met by "three gentiles . . ., heads of a rancheria which frequents this river," who conducted them to where their people were waiting to receive them at Tucsan (Manje 1954:87). The next day, in Tusoni Moo, baptisms were performed, including those of the three head men and "the frontier captain of the rancheria of the East Tucsan to whom was given the name of Juan Francisco de Acuña" (Bernal 1856:805). Another individual sufficiently prominent to be listed by name was the leader of San Andres, of whom Manje (1954:88) wrote:

The Indian chief who governed it had months before journeyed to Santa Maria de Baseraca to see the Father Visitor . . . for the purpose of asking for a priest and the Sacrament of baptism. Since he had been thoroughly instructed at Dolores, Father Francisco Kino baptized him and named him after the provincial father of Mexico, Juan de Palacios.

Palacios evidently had the same status in Tusoni Moo, for Kino (1948: II:249) reported that:
We descended more than forty leagues farther to the west, to the Casa Grande and to La Encarnacion del Tusonimo, where we were received, ... by the captain of that great rancheria, who was called Juan de Palasios, for we had given him this name of the actual father provincial at his baptism, he being one of those who two months before had gone to Santa Maria de Baseraca....

It is evident that there were two men of sufficient prestige among the Gila Pimas at the beginning of the period of Spanish contact to be accepted by them as leaders, baptized, and given Christian names which were recorded in the journals. Of these two men, one apparently had a status recognized beyond the confines of his own village. Palacios' initiative and energy impressed the Spaniards to such an extent that he came to be regarded by them as the "chief or principal captain" of the Gila Pimas (Villasenor 1746:II:403).

By this evidence the Gila Pimas had a rudimentary political organization somewhat along the following lines. In each village there was at least one individual looked upon as a leader. In addition, one man was accepted to some extent as having influence extending beyond his village. Perhaps this influence was not tribal in scope, although Palacios could report to Kino (1948:I:247) that "his people had dealt a blow to the Apaches." Drucker (1941:132, 197) reported both a native term ("stick-owner") and one adopted from the Spanish (kovenal, from gobernador) for the chief of the leading village. Cook (n.d. MS),

however, defined "kaw-ve-narl" as government, and gave "se-kū-a" as the word for the noun, chief. Other terms were obtained from informants: "They say that in many ways, like a leader or captain—that is, in Indian it means those things. Hagtū́ ṭū́jik takes in all those."

These leading men decided important questions in deliberation with an informal council composed of the older men, on both the village and the supra-village levels (Garces 1775 MS; Anonymous 1849 MS; Putnam 1864). While the Spaniards only recognized, or perhaps even discerned, these leaders, there were other village officers discharging specific functions. Goldfrank (1951:75) has noted that studies have shown "that large-scale water control, which demands co-operative effort, requires a directing center outside the family and usually outside the local community." She goes on to point out that, however established, whether through water control, defense, or construction, social control is easily extended over other activities.

Although leadership of war parties was one of the primary functions of both the village and tribal leaders, frequently that role was played instead by a separate individual (Pfefferkorn 1949:209; Putnam 1864). The construction and maintenance of dams and ditches, the decision on the subjugation of new land, and the distribution of water were often the specific responsibilities of individuals (Putnam 1854; Grossman 1873:418). Evidently these were directed by separate men:
They have leaders of other kinds, besides him \( \sqrt{\text{huag}^\prime \text{ujik}} \). They say like vaifkakejig\'u - they mean he's the leader on the ditch work. Then there's another leader, the dam leader, \( \text{kuuhkpakejig}^\prime \text{u} \) -- and all like that, they just mention what they are chief about. Kuuhkpa can be put on to other things that have a lid to it -- you cover it. River dam, you have to say akimult kuuhkpagejig\'u is plainer -- you're mentioning where he's the chief. And it just runs that way on. (informant's statement).

Regarding criers, there is little on which to base any inference as to whether that office existed aboriginally. No direct reference has been found in either the Hispanic documents or the American sources for the Hispanic period. Nevertheless, criers functioned in the Mexican part of the period at least (Russell 1908:39). In view of the apparently slight effort of Hispanic contact on Gila Pima institutions, the office of crier may have been one more aboriginal trait which was overlooked by the writers of the period. All that is known concerning his role was that he informed the village of the decisions of the council.

Finally, there was a public figure whose role and function can only be partially perceived from the data, the \( \text{senyo'ohkam} \), literally "much talks person." Cook (n. d. MS) defined the word as "gossip," Lloyd (1911:2) as a "professional traditionalist," one who committed myths and legends to memory. However, the senyo'ohkam was more than that; he apparently functioned almost as a "preacher" in so far as he harangued the people, exhorting them to conform to certain ideal behavior patterns:
Senyo' ohkam, that means he could talk, good lecturer, good talker, like that. Senyo' ohkam would put out that in a council. He's looked upon just like an officer. Not out somewhere, just in the meeting. He's a good lecturer like--these old men and the preachers are mostly that; Cook, Cox and all those you can say that for them. Senyo' ohkam, he can explain it better than other people--that's his job. They wouldn't bring Christian religious instruction or missionary activities in hardly ever in any of the meetings; I mean even the Mexicans and a good deal later with the Americans--in those meetings like council meetings they don't bring that in there. (informant's statement).

The principal effect of Hispanic contact on the governmental structure of Gila Pima society was to formalize, to regularize, offices, functions, and procedures. The aboriginal organization of a headman and a council in each village, with one of the headmen occupying a (slightly) paramount position in some affairs, and of some kind of intervillage council representation, was one which could be fitted easily into Spanish colonial government policy. Thus there was an existing culture pattern which could be integrated into the form of elective government provided by Spanish policy. Men who already had sufficient status to have made them acceptable to the Indians as leaders were, at Spanish instigation, so designated by the Indians. This choice was then formally confirmed by the local Spaniards. Because of the transient nature of the contacts between the two societies, a uniform and elaborate hierarchy of officialdom on the Gila River, such as came into existence in the south where contact was close and continuous, was apparently not achieved. The only real addition may have been that of
choosing specific persons to represent the village in the inter-village council (St. John 1860 MS).

Spanish efforts to give to village and national officials some measure of absolute authority beyond that achieved by the leaders in their own right, as well as to make offices hereditary, were only slightly, if at all, successful. Prestige within the configuration of the culture remained the basis of leadership and authority, although family-membership tended always to be a factor in the selection of leaders. This was probably due more to a fundamental patrilineal orientation of the society than to any dynastic concepts of leadership.

As far as can be determined, the Mexicans did nothing to change the organization which had crystallized during Spanish times, being content to continue the policy of recognizing leaders chosen by the people, and of attempting to vest as much authority as possible in one individual as governor of the nation. In that respect, they apparently had no more success than had the Spaniards. The nature of the Gila Pima governmental organization which had developed during the Hispanic period was most clearly described by St. John (1860 MS), one of the first agents under American authority before American policies began to exert an effect on the society:

I find their internal government superior to any other tribe I ever met. The hereditary chiefs are men of but little influence. Their government consists of a Council made up
by delegates, two or more being chosen from each pueblo or community, this council controls the affairs of the Nation. Separately their functions are somewhat similar to those of the Mexican Alcalde.

Qualifications and Authority

Officials and council members occupied their positions as a result of the recognition by most, if not all, of the adult men of the village and nation of their status as being men of outstanding ability in some field or fields. Initiative and willingness to assume responsibility were also factors in the choice of men for office (Velarde 1954:243; Pfefferkorn 1949:209; Eccleston 1950:210; Cremony 1951:98-101).

In the meaning of that word /hagü'üjik/ he's large and big in everything for the people. This man, hagü'üjik, he's over them all on these different doings. Like ditch manager, like that or planting manager, they have all those under him in a way. The hagü'üjik, he don't have to be a leader in some other line, some line of his own with the people -- he don't have to be hagü'üjik. But if it's something in his line he ought to be. (informant's statement).

Age, i.e., maturity was evidently a requisite and a concomitant of the prestige and status necessary for leadership and council membership (Garces 1775 MS; Anonymous 1849 MS; Putnam 1864; Whittemore 1893: 59). Garces (1770 MS) referred to a Maricopa leader as "their old man" and was himself called "The Old Man" by the Gila Pimas (Garces 1900:438), although he was not yet thirty years old (Bolton 1930:I:45). One of the reasons given in the 1920's for not electing George Azul to the office of governor was his youth (Parsons 1928:447).
Offices were not hereditary, despite the Spanish and Mexican tendency to favor sons or nephews of an officer either as successors or for other offices. However, a son or nephew of the incumbent probably was in a favored position to acquire the standing necessary for election, which would also commend him to Spanish and Mexican regard (Bernal 1856:800, 801, 806; Anza 1769 MS; Anza 1930:II:127).

The means by which leaders governed are rather obscure. Inferences concerning those means are based as much upon what was not written (e.g., no examples found of leaders being able to compel obedience by force) as on what was written. The behavior of the Spaniards in the reduced pueblos to the south of the Gila River and in other parts of New Spain (Gibson 1952:89, 123) was also taken into account.

Among the Sobaipuris the Indian called Coro/"the chief?/ was killed five years ago by another Indian as a result of several disputes the two of them had. ..... Among the Indians of the north, the Indian Francisco Pacheco was very popular. ..... There have been other captains and there are in other parts some who have a name among them (Velarde 1954:243-244).

... no one had pre-eminence/"among the "unconverted Sonorans"/, none had the right to command and none could punish (Pfefferkorn 1949:174).

Those succeed to this title/"war chief/ who have gained for themselves the respect of the nation and have acquired a reputation for bravery, either through some proof of courage or more often through boasting and bragging (Pfefferkorn 1949:209).

Culo Azul added that his people had taken no part whatever in the revolt, ... that many of his people are wicked & disobey him - that he cannot check their offences, from fear
of their openly rebelling ag. t him .... The Comndt fear Cub Azul's statement that many of his people disobey him is true, from which he apprehends the Chief will be obliged to go with them to save his own life .... (Comaduran 1843a MS).

The Gila Pima official in aboriginal times evidently was a leader in the narrow sense rather than a commander, with means for enforcing his decisions.

If so small a project as a rabbit hunt was decided in council (Russell 1908:39), most courses of action probably represented the decision of at least a majority of that group rather than of one man, and government probably was by agreement rather than fiat. The governor apparently functioned more in an advisory capacity than as an actual ruler, his being the responsibility of seeing that the decisions of the council were implemented. A suggestion of the nature of the governor's role is present in the use of the term "my children" by the governors (Garces 1770 MS, 1930:389). Cub Azul told Kearney that "he endeavored to do the best for his people; he gave them good advice, and they had fathers and grandfathers who gave them good advice also ...." (Johnston 1848:601). When one group of gold-seekers complained of theft, the chief made a long speech to a gathering of the Gila Pimas, charging the restoration of the lost articles; as his exhortations were not followed (Aldrich 1950:54-55), "he replaced the missing blankets by two of his own." Yet Cremony (1951:101) credited the same governor with restraining the Indians, without waiting for a council
meeting, on the occasion of an ill-timed joke by the Americans about "killing the moon" during a lunar eclipse. Of the same man, Bartlett (1854:II:255) wrote that "he was greatly beloved by his people, who showed him more deference than I have ever seen extended by Indians to their superiors."

Community Houses

One feature of the socio-religious component of Gila Pima culture specifically, and of the culture of Pimeria Alta in general, which seems to have escaped description by the Hispanic and American writers was the socio-ceremonial house described by Strong (1927:1-61)\(^1\) and Drucker (1939:644-647). The occasional statements by Americans (Emory 1848:85; Clarke 1852:91; Goulding 1849 MS) that Gila Pima houses were as large as fifty feet in diameter may have been references to this structure. It is perhaps understandable that the use of the community house, to say nothing of its function -- the "priest-house-bundle complex" -- would have escaped the notice of travelers spending little time with the people. That the existence in the village of one house larger than the rest should have passed unremarked is a little odd. This oversight was true not only of the travelers, but also

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of those who stayed for some length of time; and was characteristic of
visitors to the Pimas Altos of the Santa Cruz and Altar drainages, as
well as to the Gila Pimas. Drucker (1939:646) has pointed out that the
existence of the complex among the Opata and Eudeba, neighbors of the
Pimas Bajos in the south, was known to the Spaniards.

As the Spaniards moved northward, it was virtually a custom for
the people of the villages to have a "guest house" ready for their occup-
pancy on arrival. At times, this may have been by advance instruction
from the Spaniards — although the only instance which comes to mind
(Bernal 1856:801) specified a ramada — but far more often the party
would reach a village to find the house ready. On the first journey of
the Spaniards down the San Pedro River in 1697 Bernal (1856:801-807)
reported that the Indians "at Aribabia had made a house of mats for our
Father Kino ...." At Tucson, opposite Casa Grande ruins on the Gila
River, the party found "a house which they had made for our Father
Kino ...", and at San Andres there had been erected "a house of mats
for our Father Eusebio Francisco Kino ...." Traveling south up the
Santa Cruz River, the Spaniards were pleased to find that at Santa Cata-
lina (near Picacho) the Indians had "made a house of mats for our Fa-
ther Kino", and at San Agustin (de Oiaur) "they had made a very good
house of mats, and [had] much wood and water ...." Carrasco (1698
MS) and Manje (1954:78-92) gave similar accounts for this and other
journeys. If this guest house was the village socio-ceremonial house, the term "built" may have meant no more than that it had been refurnished - renewal of the mats, for example. Although lodgings were not so frequently mentioned again, apparently the custom continued (Garces 1770 MS). Anza (1930:III:17) reported that lodging had been prepared for his people, although this may have been a ramada, as the wording is ambiguous.

Admittedly there is nothing to support the conjecture that some, at least, of these houses may have been the community house of the village, except the frequency with which the Spaniards, even on the first visit, found a house prepared for them. And unless the implication is that only Kino occupied the shelter, which would not have been in keeping with his character as described by Velarde (1954:262-263), then a rather roomy house would have been needed, for, except in the case of Garces' travels, the Spanish parties usually consisted of several persons.

The lack of reference to the community house among the Pimas Altos generally is the more puzzling in view of Spanish knowledge of its existence among not only the Opata and Eudebe but other tribes (Drucker 1939:646 summarizes the distribution). In fact, Bernal (1856:799) issued specific instructions to the people at Santa Maria de Suamca "that they should build a community house /casa de comunidad/, assisting the
Spaniards, when they should appear in it, with wood and the rest that is observed." These community houses evidently were constructed in most, if not all, mission and visita villages at least, within a fairly short time after Spanish entry into Pimeria Alta. Carrasco (1698 MS) recorded that in the year he visited it the people at Tumacacori had made a flat-roofed house of adobe such as the one in San Luis de Bacanacos, whereas at San Xavier del Bac the house was still made of mats. As to size, it should be noted that in the previous year Bernal (1856:807, 808) had written that the houses erected for Kino at those two places each consisted of two rooms, designated as the sala, the "drawing room", and the aposento, the "apartment", i.e. living quarters. During Franciscan times it was noted (Anonymous 1856; 728) that the topil was not given a special seat in the churches because he

...only serves to assist in the community houses which are in each pueblo. The community of the Indians bears all the expenses of these community houses, and the topile [sic] must assist, serve and provide the travelers with wood, water and hay, without receiving or asking any advantage for this personal service. Because of unjust treatment of the topiles by some travelers the priests have allowed some community houses which have fallen down to remain unrepaired.

It would be tempting to regard the foregoing as the origin of the community houses among the Gila Pimas and the Papagos, but there are cogent arguments against it. For one thing, Spanish contact with the Gila Pimas was neither so frequent nor so intensive as to have implanted the institution among them to the extent that it would have been
taken over by them and retained until the time of Drucker's informants. But aside from that, the priest-house-bundle complex as described by Drucker was unquestionably an aboriginal institution, and it is hard to see that association being transferred to a structure introduced into the area by the Spaniards.

The conclusion seems to be that the aboriginal community houses among the Gila Pimas (and the rest of the Pimas Altos?) passed unnoticed by the Spaniards. One possible explanation is, of course, the same one so often resorted to in this study -- that the Spaniards took them for granted and thus did not think it worth while to set that information down. Another explanation is possible, however -- that the real use (and meaning or function or both?) of the house was concealed from the Spaniards, that the distinctive character of the community house was minimized to them by the Indians.
CHAPTER XVIII
SUMMARY AND CONCLUSIONS

Drawing primarily on documentary sources, an effort at an historical reconstruction of the changes in the culture of the Gila Pimas between 1694 and 1854 has been made. Part of the material is in the form of unpublished documents, part in published accounts, of Spaniards, Mexicans and Americans who, in one way or another, came into possession of information about the inhabitants of the Gila-Salt Basin and their congeners in the Gila-Sonoran area. These written sources were supplemented by extrapolation from pertinent anthropological reports and by information obtained from Gila Pimas.

The Gila Pimas at the Close of the 17th Century

At the beginning of the historical record for the area, the Gila Pimas were the northernmost sub-group encountered by the Spaniards belonging to the linguistic division in Sonora which were referred to generally as Pimas Altos. Numbering between twelve hundred and two thousand, they occupied six or seven villages along the Gila River from the vicinity of Casa Grande ruins to a point close to the site of the modern town of Gila Bend, and an unknown number of settlements in the lowlands south of the river.
Their relationship with the Sobaipuris of the Santa Cruz Valley, and with those in the lower San Pedro Valley, were so close that the Spaniards at first referred to them all as Sobaipuris. They were on friendly terms with the Papagos to the south of their country, and with the Maricopas, a Yuman-speaking people whom they had allowed to settle among them in the western part of their territory. To the north were the Yavapais, another Yuman-speaking group, who were at least intermittently hostile. In the mountains to the east lived the Apaches, an Athabascan-speaking group, some of whom had a relationship with the easternmost of the Yavapais somewhat similar to that obtaining between the Gila Pimas and the Maricopas. At the time that historic records began, hostility between the Apaches (and probably the Apache-Yavapai groups) and the Gila Pimas was the rule.

Their economy was based on agriculture, utilizing the water of the Gila River to irrigate fields in the lands adjacent to the river. The staple crop was maize, but they also grew beans, pumpkins, watermelons, muskmelons, and cotton. Besides the cultivated foods, considerable use was made of wild foods. Mesquite beans were the most important of the natural products, with saguaro fruit as a close second. Hunting was still important, but may have begun to decline in importance about the time of the arrival of the Spaniards. Fishing in the river provided a second important source of protein. To obtain
the wild products (except fish) it was necessary for the Gila Pimas to draw upon the country around them beyond the river where their fields were -- that is, on the bajada as far as the beginning of the foothills. Surplus food was stored in large jars and baskets in the house and on the tops of the ramadas.

The Gila Pima house was a domed hut five or six feet in height by twelve to twenty-five feet in diameter, made by setting poles in the ground about a circle, bending them over and fastening the tops together, and covering the resulting framework with mats. In addition to these, there were the ramadas -- roofs of branches and brush supported on uprights, with no walls. Clothing consisted of a kilt for women, a loincloth for men, girdles, headbands, and mantles, all of cloth woven from the native-grown cotton. By way of adornment, they practised painting and tattooing, and wore beads, pendants, feathers, and girdles and headbands woven in colors.

The rest of the property inventory included the mano and metate, cottonwood and mesquite mortars, stone and wooden pestles, the horizontal loom and weaving sword, baskets, kiakos (?), shields (?), pottery (and probably gourd) vessels, cradles, planting/digging sticks, the bow and arrow, quivers, nets for fishing, and the "potato masher" war club. The possession of some of these elements requires that they also possessed such things as cutting tools, awls for basket making,
pottery paddles, and cordage.

The greatest technological achievements of the Gila Pimas were in weaving and basketry and in the construction of their irrigation system. Manpower, rather than tools, was relied on for the realization of projects. In weaving and basketry, however, technical and even artistic attainment were outstanding. By contrast with their basketry, their pottery was serviceable, perhaps, but not particularly impressive artistically.

In the realm of supernaturalism, they had a considerable body of myth and legend, centering around the origins of things in their world, culture heroes, and tricksters. Concept and ceremony, however, were primarily concerned with sickness and curing, less so with food production and war. Disease was regarded as having a supernatural cause, and its treatment was in the hands of specialists who had power to combat those baneful influences. Other shamans had power over crops and weather. Certain places, such as the Casa Grande and similar ruins, caves in the mountains, and the graves of outstanding shamans were regarded as sacred and received offerings.

After contact with an Apache, a warrior had to undergo a sixteen-day purification ceremony involving isolation from the people, to avoid bringing to them the contagion stemming from those witches. The term of the ceremony is itself an expression of the concept of the
sacred number four. The annual saguaro wine festival, at which only men drank, was focused on curing. Another ceremony of mass healing involved a masked figure representing a curer. Before a campaign, ceremonies were held designed to insure success; post-campaign celebrations had ceremonial aspects also. The dead were interred in a sitting position in shaft graves, with provision of food and drink, the ceremonial destruction of property, and a ritual of mourning. Warriors slain by the Apaches were cremated in the field.

The basic social unit was the patrilineal extended family, consisting of a married couple, their married sons, and unmarried daughters. Relationship was counted through both parents, covered five generations, and constituted a guide for avoiding incest. Polygyny was permissible, but not common. Parents arranged the marriages of their children, but considerable freedom of choice was allowed. Marriage was unaccompanied by ceremony, and divorce was easy. Relationships between parents and children and between husbands and wives were easy and free from much strain. Division of labor was essentially pragmatic, although certain activities were customarily carried out by the members of only one sex. Women managed the products of their own industry and, except for ceremonial affairs, were essentially equal in status with men.

A social affiliation which cut across village lines was the
membership in a clan and a moiety which descended through the male line. Children of non-Pima fathers (if there were any) did not acquire this group identification. A form of ceremonial kinship somewhat analogous to that of the compadrazgo also served to identify the individual with a group beyond the immediate family. There was, however, no age-grouping or rites of passage, unless a puberty rite for girls existed. Impermanent cooperating groups were formed for the carrying out of specific projects which demanded coordination of effort. The size of these groups ranged from family undertakings to inter-village projects, as the case required.

The individual settlement consisted of family holdings clustered together. Houses were built close to fields, but separated from each other by distances of several yards. The settlements were separated from each other by distances of from ten to twenty-five miles, except for the westernmost village which was at the same time in the midst of closely spaced Maricopa villages and some forty-five miles from the nearest known Gila Pima settlement. Under such circumstances, the countermeasures taken immediately against enemy raids were family, neighborhood, or village affairs. Inter-village cooperation could only be employed on a planned campaign of retaliation into the enemy's country.

Individual leaders were chosen for projects demanding cooperation
on the part of a number of people for their accomplishment. The af-
fairs of each village were in the hands of a council of elders, which
had a separate structure as a meeting place, where some ceremonials,
as well as civil, affairs were carried out. One member of the council
was charged with the responsibility of implementing decisions arrived
at following discussion. In at least one case, the responsibility and
influence of one leader was recognized by more than one village. Status
rested on maturity, experience, willingness to assume responsibility,
and war prestige. Leaders had no direct authority; government was
by example and exhortation, rather than by command.

At the beginning of their contact with white society and culture, the
Gila Pimas had a stable economy and culture, with few, if any, serious
intra-cultural conflicts. Irrigation enabled them to achieve a more
dependable food supply than would have been possible under complete
reliance upon their unmodified environment, and provided enough of a
surplus that hospitality could become one of the values of the society,
observed even in times of comparative scarcity. Trade was thus
rather a matter of gift exchange than a means of acquiring commodities.
Their relatively greater supply of food enabled them to exercise some
influence over the Papagos, but also made them the targets of raids by
the mountain-dwelling Indians. A surplus of land placed them in a fa-
vorable position in their relations with the Maricopas. Technology,
although simple, was adequate for the necessities, and self expression was possible through the media of basketry and weaving. The society was loosely organized, so that there were few restrictions on the individual; what organization existed was directed toward community welfare - public works and defence. Agriculture was a focus of interest, if not an orientation. Although there were no full-time specialists, one of the existing three kinds of part-time specialists was concerned with agriculture. Another of the values of the Gila Picomas was that of betterment, of improvement of the standard of living and other areas of their culture; they were eager for instruction concerning anything that seemed to be "bigger and better" than what they already had. The one identifiable orientation was that of curing, but even here the two kinds of specialists concerned with it were only part-time specialists. War, instead of being an interest, was a necessity forced upon them by circumstances; their interest lay in the direction of defensive measures rather than in warfare for its own sake. The most important ceremony connected with war was a curing rite. Peace, rather than military prowess, was the value, but military prestige was beginning to become a value, and interest was beginning to turn toward punitive, rather than defensive, warfare.
The Gila Pimas of the Mid-19th Century

When the Gila Pimas passed under the control of the United States, they still lived along the Gila River in south central Arizona. Now, however, they numbered nearly four thousand persons -- their population had approximately doubled during the preceding century and a half, despite the introduction of such new diseases as measles and smallpox. Instead of six or seven villages, there were now from seven to eleven (the early American figures vary greatly). With this increase in population and number of villages, however, there had not been a corresponding increase in the area of settlement. On the contrary, it had actually been contracted; with the possible exception of Komatke, the western portion had been given over to the Maricopas, and the easternmost village had moved downstream some fifteen miles. Some of the Kwahatk villages, however, still existed in the low country south of the river. Individual settlements still consisted of clusters of houses close to the fields, with fifty or more yards between houses, but the intervals between the settlements were now on the order of two to five or seven miles, and those intervals were no longer completely devoid of homesteads, a circumstance which led the Americans to regard the entire area as one settlement. One of the most marked results of the Hispanic acculturation of the Gila Pimas was thus increased density of population.
A number of factors combined in the acculturation situation and process to bring about such a change in population density. Of these, the acquisition of wheat was one of the most significant, in that it made the change possible. An additional factor was the acquisition of more efficient tools; although this occurred late in the contact continuum, even later than the increase in population concentration, the number of tools obtained was never large. Another factor was the stimulus of a market for some of their products. These improvements made possible a settlement pattern of more people per acre of cultivated ground. At the same time, the increasing severity of Apache raiding militated against the former pattern of individual settlements isolated from each other by distances of several miles. By this concentration, a much greater force could be thrown into the field against invaders in a much shorter time, a development which accounts in part at least for the Gila Pimas' successful retention of their lands.

The second most marked change was in their living standard. The addition of new food crops, one of which provided a second staple, and of domestic animals, meant more efficient food production and a more varied diet. The more efficient production of food allowed more time for other activities, and more specialization began to appear, along with a change in the division of labor. Men took over the heavier work in farming and caring for the stock, and at the same time could devote
more time to defense -- in fact, universal military service appeared. Women began to devote more time to the production of baskets and blankets, for which the demand in the towns in Sonora provided a stimulus. In trade, it was possible to acquire more of the cheaper cloth, small tools, articles of adornment, and livestock. The availability of goods which were not produced or producible by the Gila Pimas, and the more or less fixed prices demanded for them, brought about an acceptance by the Gila Pimas of the concept of trade in the commercial sense, rather than as a matter of gift exchange. All of these changes stemmed, ultimately from the more efficient production of food, i.e., from improved agriculture. It should be noted that time thus gained was expended partly in other economic labor, partly in war activities -- there was no increase apparent in the time spent in other activities such as supernaturalism, for example.

The third outstanding change was in social organization. With increased population per square mile came increased interactions between individuals and groups, with problems which could not be solved on the individual level. The greater use of more land for farming, coupled with increasing enemy pressure, brought a greater need for more cooperation, not only on the village level but also on the tribal level, in such matters as dam and ditch building, land subjugation and allotment, and defense. Concurrently, the incipient institutions of
village and tribal governor were being encouraged by Spanish and Mexican policy, so that by the end of the Hispanic period each village recognized a governor, and all the villages recognized one tribal governor. Along with this went the extension of the village council to the tribal level, and the development of "specialty" leaders who functioned in public works projects and military campaigns. The functions of governor and war leader were often, but not always, discharged by one man. Unification of the tribe, and alliance with another tribe (the Maricopas) progressed far enough so that one man could be designated to act as emissary and agent for all in executing a treaty with the Mexicans.

The change that developed in the pattern of warfare may also be significant. Campaigns were now planned and executed in enemy country with some regularity, and prestige in war began to acquire increasing importance. A greater number of men spent more time on campaigns or scouting duty; arms drill was held at home, and warning and communication systems were established. In short, war was fast becoming systematized; but the advent of American rule made it an abortive development.

In the realm of the supernatural, Gila Pima concepts were extended to incorporate some ideas and artifacts from Christianity, without loss of any of the aboriginal concepts. Similarly, in interpersonal
relations, the Christian form of ceremonial kinship expressed as compadrazgo was combined with aboriginal concept and ritual.

One aspect of acculturation for which there has been no evidence forthcoming in the historical records is that in the field of language. Herzog (1941:66-74) has stated that the linguistic acculturation of the Gila Pimas reflects the varying conditions of contact to which they have been exposed since the beginning of White contact. He distinguished three acculturation situations - Hispanic, early American, and "modern reservation", which began in the 1920's -- and felt that each had left its mark on the Gila Pima language. The first and the third he notes as marked by the taking over, by the Gila Pimas, of words from the language of the other society in each of the situations. Of the one hundred and fourteen terms he lists as arising from Hispanic contact, eighty are for material objects - plants, animals, foods, and materials - eighteen are for concepts of measurement, ten for religious concepts, and six for status and occupational concepts. The second acculturation situation, the early reservation period from 1854 to the 1920's, he states was distinguished by the creation, from within the language of the recipient society, of terms for elements taken over from the donor society. Basing his analysis on the premise that the Gila Pimas, during the Hispanic period, were subjected to the same conditions of contact (although to a lesser degree) as during the modern
reservation period, he then correlates word borrowing with what has been defined here as a situation of directed acculturation. In contrast, he correlates with a situation of non-directed acculturation the creation of words for elements acquired from a donor society. If, however, the acculturation situation of the Gila Pimas during the Hispanic period were actually free from direction, as is argued in this study, then some other explanation must be sought for the similarity between the Hispanic period and the modern reservation period in the acculturation of the language of the Gila Pimas.

**The Course of Acculturation**

In the acculturation situation under discussion here, each party concerned was geographically isolated from the centers of population of the other party, the Hispanic settlements lying far to the south of the Gila Valley. No mission or military post was ever established within Gila Pima territory during one hundred and sixty years of contact, the closest such to their villages being Tucson, one hundred miles to the south; nor did any colonists ever take up land in the Gila or Salt valleys. The contacts between the two cultures took place on the occasion of visits by members of one society to the settlements of the other, and owing to the circumstances of distance and lack of resources (on the part of the Hispanic society at least), those contacts were intermittent and of brief duration.
The Gila Pimas were a settled agricultural people living on the frontier between the Hispanic group and the roving tribes of Apacheria. They also held the most feasible land route between Mexico and the province of California. These factors gave the Gila Pimas a special standing in the eyes of the Spaniards and Mexicans. Fundamentally peaceful, the Gila Pimas early came to be regarded as one bulwark between Sonora and predatory tribes to the north, as a result of their successful resistance to those tribes, and because of their friendliness toward the Hispanic immigrants. Their value as allies was such that their continued good will toward the immigrant society took precedence over such goals of Hispanic colonialism as conversion and reduction. Practices such as the navait ceremony and shamanism, which brought down severe punishment on the offenders among the other Pimas to the south, were let pass among the Gila Pimas with no more than admonitions. Never were stronger words of coercion used in connection with them than "complained to the governor," "admonished them," "instructed," "laughed a little at these yarns." Presents were made, honors were shown to leading men, and a treaty was signed, in the effort to insure the continued loyalty of the Gila Pimas to Sonora.

One of the characteristics of the Hispanic acculturation of the Gila Pimas is that the latter accepted items and traits of Hispanic culture, but not complexes or activities. The form of this acceptance -
i.e., whether there was acceptance of form, meaning, and use or any combination thereof, whether it was a case of simple addition, or of replacement, or of fusion - depended upon the nature of the item or trait and its compatibility in form, meaning, and use with Gila Pima culture.

In Sonora, the Spaniards utilized their habitat primarily by means of farming, mining, and the raising of domestic animals. When first visited by the Spaniards the Gila Pimas were farming on their land, and they continued to do so throughout their contact with the Hispanic societies. The Gila Pimas were not sufficiently impressed by mining to seek for quicksilver, gold, or silver; although the possibility was open to them, they rejected mining by ignoring it. From the stock raising industry the Gila Pimas selected the raising of horses, mules, cattle and poultry, rejecting sheep, goats and swine.

The mining industry of the Spaniards and Mexicans, of course, was directed solely toward production of a trade item, not toward anything for home consumption, and farming was conducted in such a manner as to produce a surplus for trade, as well as to provide subsistence. As stated, the Gila Pimas totally rejected mining and its trade implications, and only tentatively accepted the commercial aspects of farming very late in the Hispanic period when the large influx of gold seekers formed a ready market for large quantities of food. Because of their
previous experience with trade in their manufactured goods, the Gila Pimas could accept unmodified the Hispanic view that those goods could be articles for commerce.

In agriculture, the same selection in acceptance was exercised. Of the long list of crops which were available to them, the Gila Pimas chose wheat, a few of the vegetables, and melons. They failed to take over many of the other cultivated plants, their most notable rejections being fruit trees and grapes. Those crops which they accepted were the ones which provided a great deal of food for the time and labor necessary for their utilization, and which were adaptable to existing techniques. Flax, for example, could not compete with native cotton; the successful propagation of grape vines and fruit trees demanded knowledge and skills not possessed by the Indians. Those crops which were taken over were accepted as human foods, with no apparent modification of meaning or use. In agricultural techniques there was no acceptance until quite late in the contact continuum when plows drawn by oxen were taken over, with no change in form, meaning, or use. This delay was not due to (inadvertant) withholding on the part of Hispanic society, through the unavailability of the traits, for oxen became available well before their acceptance by the Gila Pimas, and the plow could have been copied earlier as well as later. Rather, there was no stimulus toward a change of techniques which were providing an adequate
food supply until late in the continuum. The threshing of wheat by driven horses was accepted along with wheat, but the animal powered grinding mill was not also utilized; rather grains continued to be ground in the old way. In the matter of food preparation, the foods taken over from the Spaniards could be, and were readily prepared by existing methods - in fact, it is difficult to find an example where food preparation would have been a factor in the acceptance or rejection of an item of Sonoran Spanish culture.

Except for domestic animals, there was no discernible change in the minor subsistence activities. The acceptance of European crops lessened the dependance on wild foods, but by no means eliminated their use, nor did acculturation produce any modification of the wild foods complex of the Gila Pimas. The Hispanic societies utilized domestic animals for food, wool, leather, draft animals, and riding, cattle being used both for food and for work, but horses (and mules) being only rarely used for anything but riding. Except for poultry (and this is uncertain), the Gila Pimas did not accept the raising of domestic animals for any of the purposes for which the Hispanic society raised them except for riding and draft animals, and sheep, goats, and swine were rejected. In addition, the acceptance of the larger animals was consumated at times chosen by the Indians. Thus meaning and use were accepted also as far as riding animals (and
some items of equipment) were concerned but only partly so as regards cattle.

A number of items and one trait were accepted in the shelter complex. Thatching was substituted for mats as covering for houses, and the use of dirt as additional protection was accepted. Selection was exercised here, in that the aboriginal form of the house, as well as the construction of walls, was retained, although the use of interior support posts was taken over, possibly as an accompaniment to the additional weight of the dirt covering. The rectangular, vertical-walled, flat-roofed structure of wattle-and-daub construction, on the other hand, was adopted as a storage structure, not as a dwelling - the form was accepted, but the meaning and use were modified. Finally, adobe construction as practised in Sonora was ignored, at least during the Hispanic period, which is regarded as rejection. Individual articles of clothing were accepted, but not the costume of the Spaniards or Mexicans. This would have been an instance of withholding on the part of the Hispanic society, albeit inadvertant - the necessary clothing was not available. The eagerness with which the Gila Pimas traded for garments and cloth when the Americans came suggests that this scarcity had operated to lend European type garments prestige value in Gila Pima eyes, which would represent a modification (in some cases) of meaning and use, although some articles of clothing
doubtless carried associations of prestige among the Sonora Spaniards and Mexicans. The practice of giving suits of clothing to favored persons among the Indians reinforced this meaning. Hispanic articles of adornment such as beads and ribbons were accepted as such; at the same time, the aboriginal adornment of tattooing, in disfavor among the Spaniards, was retained, which was a rejection reaction.

In technology, withholding again operated to some extent, again inadvertently, in that tools were too scarce in Sonora to supply the Indians with all they would have accepted had they been available. As far as can be seen, tools were accepted with no change in form, meaning, or use, with one exception. They were accepted to the point that one tool at least, the spade, was copied as nearly exactly as was possible in wood. The hoe, however, was modified in form to conform with Gila Piman ideas of form for the implement and Gila Piman motor habits, this modification being maintained for a time after iron became available for the blade. Its use as a cultivating tool remained unchanged. The gun was accepted with no changes in its associations; as with tools, scarcity operated as a form of withholding, and the same factor accounted for the failure of European weapons to disturb the aboriginal arms complex. Leather armor, adopted by the Apaches, was rejected by the Gila Pimas, but the reason for this rejection is not clear. Contact with the Spaniards did not stimulate the Gila Pimas
to any apparent greater use of leather than can be credited to aboriginal custom, which could be considered another instance of rejection. New forms may have been accepted, at the instigation of the Spaniards, in basketry, but no new techniques, nor was anything new accepted in weaving or ceramics. Not enough information is available to assess this particular bit of the acculturation of the Gila Pimas.

In the realm of supernaturalism, the concept of deism was added to Gila Pima belief, Christian elements were added to the mythology, and Christian artifacts were accepted in form at least. The extent and the implications of acculturation in this area require more information for their elucidation. Some effort was made by the Spaniards at persuasion and inhibition. Piman offerings at a sacred place (Casa Grande) were destroyed by Campos and Sedelmayr and the practice and associated beliefs were inveighed against, but this persuasion and inhibition were rejected on the Gila River in that offerings continued to be made in sacred places. Shamanism, likewise, was inhibited, at least to the south within contact range of the Gila Pimas, but this inhibition also was rejected in that shamans continued to be part of Gila Pima life until the 20th century. There is no evidence as to what was offered in the field of curing. Baptism, offered as a religious ceremony, was accepted by the Gila Pimas, but its meaning was modified in that they took it over as a curing ritual, retaining the
form, with no fusion with aboriginal practice. It thus constituted an addition to Gila Pima culture in the form of an alternative. Secondarily, baptism provided another naming ceremony, but the compadrazgo relationship was not, apparently, accepted along with the other items of the trait of the Christian baptismal ceremony.

In the field of ceremony, in addition to that of baptism noted above, the aboriginal form of a naming ceremony was combined with the meaning of the compadrazgo relationship (and possibly the meaning of the aboriginal ceremony) to produce the one example discerned of fusion in Gila Pima acculturation. Otherwise, the only evidence of acculturation in ceremony is in the modification of the meaning of the riata which, in addition to being a tool for handling cattle, came to be used to bind up a corpse for burial. In the mourning ceremony, cattle, wheat, and other items of Hispanic culture were accepted as property, to be destroyed along with aboriginal items of property.

The only apparent change in interpersonal relations was the compadrazgo relationship alluded to above, and that change may have been more apparent than real if the analogous peri relationship had already existed among the Gila Pimas. As such, it constituted an addition to the social affiliation of the moiety and clan, but one which was entered into after birth and independently of parenthood. Its acceptance suggests an interest in social relationships, almost in kinship extension,
which could be counted as one of the interests of the society.

The change in the settlement pattern resulting from the increase of population density constituted a response to changing environment but not a reaction to persuasion or imposition on the part of the Spaniards or Mexicans. Rather, it was an aboriginal solution of a problem which, although it became more acute after the arrival of the Spaniards in Pimeria Alta, had existed before that time. The refusal of the Gila Pimas to concentrate their settlements by building their houses closer together, in the face of Spanish recommendations, is an example of rejection of persuasive acculturation. The growing preoccupation of the Gila Pimas with war, likewise, represented their own reaction to changing environment, although in part it was an acceptance of Hispanic persuasion in the form of scalp bounties and encouragement of Gila Pima hostility to raiding tribes. It also represented the beginning of what could have developed into a major reorientation of Gila Pima culture.

In the area of social control, the incipient Gila Pima pattern became formalized along lines encouraged and approved by the Hispanic society, lines which had been laid down after previous experience with aboriginal societies to the south. To the extent that officials and institutions offered by the Spaniards could be taken over in conformity with existing Gila Pima social organization, however inchoate, the process
can be characterized as acceptance. Selection is apparent, however, in that only the offices of village and tribal governor were compatible with the Gila Pima pattern. Despite repeated appointments of fiscales, that office never endured beyond the appointments, a rejection of persuasive acculturation. The opportunity for replacement represented by the senyo-ohkam was not realized, which accounts perhaps for the rejection of the fiscal. Inheritance of office, and the vesting of authority in the governor independent of public consent were never accepted by the Gila Pimas in spite of Spanish efforts to establish those concepts. This represents another failure of attempted persuasive acculturation.

**The Adjustment Pattern**

From the foregoing, it can be seen that adjustments to acculturation by the Gila Pimas varied from rejection to fusion. The choice as to what the reaction was going to be rested, in virtually every instance, with the Gila Pimas. Separated as they were from the nearest agents of Hispanic culture by a journey of at least two days, contacts between them were intermittent and of brief duration, although repeated at intervals. With no establishments, either ecclesiastic or military, in the Gila Valley to back up their policies, the Spaniards and Mexicans were obliged to tailor their relations with the Gila Pimas to fit the circumstances if they were to achieve their major goal of keeping the
Indians friendly to, and allied with, them. Instead of being reduced to a status of subordination, as were the Indians who had missions and presidios established in their country, the Gila Pimas maintained an equality of position in their contacts with the Hispanic immigrants. Consequently, efforts at directed acculturation, either persuasive, in the form of the appointment of fiscales, or coercive, in the form of the destruction of Gila Pima offerings, were doomed to failure, unless the Indians had chosen to accept them. In the great majority of reactions, the response of the Gila Pimas was either rejection of an item (or trait or complex), or selective acceptance. This selective acceptance was accomplished with no major reorientations of Gila Pima culture. The fact exists that a great deal of Hispanic culture was accepted by the Gila Pimas, but items and traits were accepted largely on Gila Pima terms, and out of context to some extent, in that they were accepted for themselves and not for the complexes of which they formed a part. This response to the contact situation has been defined as the adjustment pattern of selective acceptance, an adjustment pattern which is possible only in the non-directed acculturation situation.

Since the acculturation situation was one of non-direction, the Gila Pimas were not forced to live under another set of values in addition to their own. As a consequence, the tensions generated both
within a subordinate group and between the two contacting societies where two sets of values operate would have been absent from Gila Pima society of the Hispanic period and from their relations with Hispanic society. Certainly there is no historic record of strain arising from those causes. The concern on the part of the Mexicans regarding the attitude of the Gila Pimas and the temporary tension within Gila Pima society at the time of the Gandara uprising in 1843 had their genesis in the conflicts within Mexican society, not in the relations between the Indians and the Mexicans. The intra-society tension experienced by the Gila Pimas reflected a change in the attitude of some of the Gila Pimas toward the Mexicans, but that it did not develop into an open schism indicates that it was both temporary and of small moment. Although there is not enough evidence available to determine the causes of the incident, one can speculate that it represented individual frustration reactions which did not become society-wide.

The possibilities for some frustration reactions among the Gila Pimas were present in the contact situation during the Hispanic period, as desires on the part of the Gila Pimas for items of Hispanic culture were not realized. The incidents of 1843 reflect frustrated desire on the part of some Indians for such items as domestic animals and tools. The frustration arose, then, from inadvertent withholding on the part
of the Mexicans. The reaction to that frustration was apparently aggressive, in that animals brought to the Gila Pimas were bought by them, even though the stock had been stolen in Sonora, and some defiance to the wishes of the chief evidently was manifested. Other than this one case, however, there is no evidence of frustration reactions on the part of any appreciable number of the Gila Pimas during the Hispanic period, although individuals doubtless experienced them. That none became society wide is evidenced by the absence of any conflict between the Gila Pimas and the Spaniards, or between the Gila Pimas and the Mexicans until the very end of the period, and the little hostility shown at that time by the Gila Pimas arose from a desire to avoid embroilment in the war between the Mexicans and the Americans, rather than from any aggressive reaction toward the Mexicans.

It has been noted previously that the response of a stable culture to contact is characterized by the acceptance of elements before complexes, of only those elements which are compatible with the existing cultural configuration, at a time convenient to the recipient society and in order to satisfy its wants, and that the stability of the core of the culture would remain undisturbed. This pattern of response was characteristic of the reaction of the Gila Pimas to contact with Hispanic culture. It was further noted that reorientations within the
culture of the recipient society would depend on the strength of the existing orientations. In the case of the Gila Pimas, existing orientations were reinforced and existing foci of interests were strengthened to the point of becoming orientations. In one respect, a new focus of interest, associated with war, came into being, and gave promise of developing into a new orientation.

Despite the addition of a considerable number of items and some traits of Hispanic culture, cultural continuity was not disrupted during the Hispanic period. This is not to say that the continuity of Gila Pima culture was uninfluenced by contact with Hispanic culture, but that the changes which occurred were of a nature and took place at such a rate that the Gila Pimas had time to adjust to them without suffering cultural dislocations. Because changes had come about, and had been accepted with equanimity, because the Gila Pimas had been made aware of a greater cultural content possible to them, they had to some extent been conditioned to accept and even to seek change as a result of the century and a half of Hispanic contacts. To that extent, it can be said that Gila Pima culture was less stable at the end of the Hispanic period than it had been at the beginning, that it was more fluid, more susceptible to change. This result of Hispanic acculturation would have been a factor in their acculturation under the Americans, making them the more ready to accept changes resulting from contact with the agents of a new
culture. The eagerness with which they sought clothing, tools, and new techniques at the beginning of American contact is an example of a difference between the Gila Pima-Hispanic and the Gila Pima-American contact situations.

By now it should be evident that this investigation of culture change between 1694 and 1854 in the Gila-Salt Basin is incomplete, not only in temporal terms, but also for the segment of time considered. More questions have been raised than have been answered -- the areas of ignorance are much more apparent than they were at the start of the study. It should also be obvious that documentary research alone can provide only a part of the information for reconstructing the cultural history of the Gila-Salt Basin or of any other area. For example, such things as the aboriginal house type or the history of the ceramics of the Gila Pimas cannot be established on documentary evidence alone. Yet it is only by the accumulation of precise factual data on such details that the history of a culture can be described. Such information can only be obtained, if at all, by applying the techniques of archaeology in historic sites. The need for more excavation in sites of the 16th and 17th centuries in the Gila-Salt area has been emphasized (e.g. Haury 1945:212-213), but the necessity for archaeological evidence for the 18th and 19th centuries is nearly as great. The continuity (or lack of continuity) of Hohokam
and Gila Pima societies and cultures is not the only problem relating to the cultural history of the Gila-Salt Basin susceptible of examination via the discipline of archaeology. The possibility of acculturation resulting from contact with the Maricopas should be taken into account in reconstructing the aboriginal culture of the Gila Pimas. In this case, in addition to the usual deficiencies of documentary evidence, there is the further complication that the contact situation between the two groups came into being before the beginning of the historical period, so that archaeology is the only means of obtaining information for that part of the contact continuum.

A great deal could be done just with an intensive archaeological survey of the Gila Valley. The prominent sites, of course, have long since been noted, but the unspectacular sites commonly designated as "sherd areas," especially if small and devoid of impressive mounds, have received little attention. A feasible beginning might be the location of historically identifiable Gila Pima sites which have been abandoned. Even if permission could not be secured for excavation in those sites, surface collections would provide considerable information on the material culture inventory of the Gila Pimas, with temporal placement at least as precise as is obtainable in most of the prehistoric sites in the Gila-Salt Basin. Such an inventory would furnish a starting point from which to attempt the procedure of working
backward in time in an effort to bridge the gap between the 15th and the 18th centuries.

The study of the cultural history of the historic period, not only in the Southwest but in other parts of the New World, is coming in for an increasing share of interest. It can be made a great deal more fruitful than research in the prehistoric period simply because of the fact that contemporary written accounts are oftentimes available, so that archaeology and documents can be used to complement each other. The archives of Mexico and Spain contain an immense quantity of ethnographic data, and the utilization of those repositories of information is receiving a growing amount of attention from anthropologists. This use presents a problem of its own. Obviously, not every document can have the same evidential value. Every worker who utilizes documentary materials evaluates, to some extent, the reliability of each document but, as here, the process is not always systematized or made explicit. What weight is to be given to each, and how that value is to be determined, are problems which will assume increasing importance as archival materials come to be used more extensively, but, in the absence of a study devoted to the assessment of the worth of individual reports, they will be primarily the responsibility of the researcher making use of the documentary materials.

In addition to the factors of first-hand observation versus hear-say
statements, it might be profitable to take into account such others as the occupation of the recorder, the purpose for which the report was written, and the cultural backgrounds of the various writers.

It has been possible to sketch the outlines, at least, of the changes in the culture of a group under one kind of acculturation situation - a situation wherein the group was not subjected to any effective persuasion on the part of the agents of another culture to change their own culture in any particular direction. From the course of acculturation which resulted from that non-directed acculturation situation it has been concluded that the reactions to contact exhibited by the group considered were most often of a kind which has been defined as selective acceptance, which term has been used to designate the dominant adjustment pattern of the society in contact with another. In the case of this particular contact situation, no extensive reorientations took place in the culture of the recipient group, owing to the direction and strength of existing orientations in its culture. Thus, although the culture of the recipient society was changed by enrichment as a result of the contact, the cultural continuity of the group was not disrupted.

A study of the changes in the culture of that same society arising from its experience of a different kind of acculturation situation should provide useful data for understanding the process of acculturation.

More often than not, individual studies of culture contact and change
have dealt primarily with the directed acculturation situation, because the prevailing interest has been in contact situations which were essentially colonial in nature, where one group has been subordinate to the other. As a result, studies of the same group in two different situations have been infrequent. An opportunity for such a study exists in the situation of directed acculturation in which the Gila Pimas found themselves with the advent of the Americans in 1854. The opportunity offered by a comparison of the acculturation of the Apaches and the Navahos during the Hispanic period with that which has taken place since the middle of the 19th century should be particularly useful. Like the Gila Pimas, the Athabascans were free from direction during the period of their contact with Hispanic culture, but, in contrast to the Gila Pimas, they underwent cultural reorientations during that time. As a part of the tribe were exposed to directed acculturation at the same time that the rest were experiencing non-directed acculturation, a similar study of the Papagos should prove especially fruitful for comparison of the effects of the two situations on the same culture. A little exploration should reveal other cases where an analysis of the acculturation of one group in the two different situations is possible.

The analysis of other situations of non-directed acculturation might reveal other types of adjustment patterns and other reorientations, and make possible the determination of the significant factors in
producing those changes. The extent to which the results of directed acculturation depend on the policies of the directing group, and the extent to which acculturation in the directed situation is conditioned by the culture of the subordinate group, need to be assessed in order to compare the effect of both on culture change. The results of paired studies such as those suggested for the Gila Pimas and the Athabascans, and of the relationship between culture type and results of acculturation in a given situation, would provide a basis for the comparison of other acculturation situations and the acculturation of other groups in similar situations.

Although situations of directed acculturation were not unknown in the western hemisphere before the coming of the Europeans - the Aztecs in the Valley of Mexico and the Incas in Peru, for example - situations of non-directed acculturation were probably far more common. A formulation of principles governing acculturation in non-directed situations, if that be possible, might prove of value in the analysis of culture changes manifested only in archaeological evidence. As more detailed archaeological studies sharpen the definitions of past cultural divisions, both chronologically and geographically, the possibilities of discerning culture change in the past arising from contact between groups increase.
Turning from reconstruction of culture history to prediction in culture history, a perception and an understanding of principles of culture change in definable situations should be applicable to existing situations of contact between bearers of different cultural traditions. With the increase in communication between agents of different cultures which seems likely to be a factor of growing significance in relationships between men, the possibility of foreseeing the direction and nature of acculturation might at least offer the chance of obviating some of the friction which so often attends culture contact.
APPENDIX A

WILD PLANTS FROM THE HISPANIC RECORDS

Following is given a list of the wild plants mentioned in the Hispanic records. The botanical identifications are taken primarily from Curtin (1949), which pertains specifically to Pima ethno-botany, rather than from Castetter and Bell (1942:21-27), which is generalized for the entire Piman area. Admittedly such identification is only provisional in many cases where the historical reference is vague.

Carrizo - Phragmites communis.

Cottonwood - Populis fremontii.

Creosote Bush - Larrea tridentata.

Elms - not identified; doubtful reference (Velarde 1954:235); probably not on Gila River.

Galleta - not identified.

Gueribos - not identified; doubtful reference (Velarde 1954:235); probably not on Gila River.

Jojoba - Simmodsia californica; above three thousand feet (Castetter and Bell 1942:26).

Mesquite - Prosopia velutina.

Nopal - Opuntia phaeacantha, Op. engalmanii; prickly pear.
Sacaton - *Sporobolus wrightii* (Castetter and Bell 1942:22).

Saguaro - *Carnegiea gigantea*.

Salt bush - probably one or more of *Atriplex lentiformis*, *A. polycarpa*, *A. wrightii*, or *Suaeda torreyana*.

Screwbean - *Strombocarpa pubescens*.

Tamarack *sic.*, actually tamarisk *Tamarix aphylla*; doubtful reference (Velarde 1954:235) as it is an exotic introduced from North Africa. (Castetter and Bell 1942:23).

Walnut - *Juglans rupestris* (Castetter and Bell 1942:23); doubtful reference (Velarde 1954:235); probably not in Gila Pima territory.

Willow - *Salix goodingii*.

"brush" - context gives no means of identification; good possibilities are arrow weed - *Pluchea sericea* (*Ber thelotis sericea*) and catclaw - *Acacia greggii*.

"grass" - context gives no means of identification; sacaton is one possibility.

"pasture" - context gives little means of identification; may well have referred to the plants known collectively as salt bushes which served as forage.
"seeds" - context gives little means of identification; may have referred to quailbush - *Atriplex lentiformis*, the seeds of which have been eaten by the Pima in historic times (Curtin 1949:66). Russell (1908:69-78) gives a long list of possibilities.
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