Folk Housing in Northeastern Mexico: a Key to Culturogeographic Regionalization.

Scott Stuart Brown

Louisiana State University and Agricultural & Mechanical College

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FOLK HOUSING IN NORTHEASTERN MEXICO:
A KEY TO CULTUROGEOGRAPHIC REGIONALIZATION

VOLUME I

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Geography and Anthropology

by

Scott Stuart Brown
B.S., The University of Texas at Austin, 1992
M.Sc., Universidad de Costa Rica, 1996
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LIST OF COMMON ABBREVIATIONS AND ACRONYMS

States

AZ - Arizona
Chih. - Chihuahua
Coah. - Coahuila
Gto. - Guanajuato
Hgo. - Hidalgo
NL - Nuevo León
NM - New Mexico
Qro. - Querétaro
SLP - San Luis Potosí
Tamps. - Tamaulipas
TX - Texas
Ver. - Veracruz
Zac. - Zacatecas

Acronyms

INAH - Instituto Nacional de Antropología e Historia
INEGI - Instituto Nacional de Estadística y Geografía
SEP - Secretaría de Educación Pública
UNAM - Universidad Nacional Autónoma de México
UANL - Universidad Autónoma de Nuevo León

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ABSTRACT

Folk housing is one of the elements of material culture which geographers often employ in understanding the cultural aspects of regional studies. As one of the most obvious features of the cultural landscape, folk housing serves as a tool in the determination of culturogeographic regions, the final objective of this study. In this atomistic regional approach, geometry is the principle feature of interest. In other words, the one-dimensional plan type and the three-dimensional form class are the elements of focus in order to distinguish regionality. As opposed to other sub-systems of structural analysis, geometry, especially house form, distinguishes regions of influence and surpasses both environmental and socioeconomic barriers.

Once a part of New Spain’s vast northern frontier, the northeast Mexican borderlands – presently the states of Coahuila, Nuevo León, and Tamaulipas – became characterized as a buffer zone between two major colonizing cultures. The mixing of influences of these two nations, the Spanish — later the Mexicans — from the South and the Anglo-Americans — among other European immigrants — from the North, perhaps has become most apparent through time in the cultural landscape. To add to these two major ethnic groups are Native Americans, namely the Tlaxcalan and Huastec cultures, the latter a northern extension of the Maya-Quiché group. Northeastern Mexico’s folk architecture clearly represents these major cultural elements.

The purpose of this dissertation is to provide one important component that would contribute to an ultimate determination of northeastern Mexico’s culturogeographic regions and, thus, to better understand the geographic expression of culture. Due to the
persistence of traditional modes of life in this region, as in the rest of Mexico, the folk house seems to be an adequate tool in which to accomplish such a task. For these reasons, this can be considered a region worthy of regional culturogeographic research, as the existence of folk dwellings is still highly visible here, despite proximity to an industrialized nation such as the United States and the industrial zones of Mexico itself.
INTRODUCTION

The main objective of this dissertation is to establish folk housing regions in Mexico's northeastern borderlands, specifically the states of Coahuila, Nuevo León, and Tamaulipas, and the far northern portions of San Luis Potosí and Zacatecas. This includes several specific steps. The first entails classification the region's folk dwellings into several basic form classes, based on three-dimensional, geometric appearance. The second involves further classification the folk houses into specific plan types, based on two-dimensional geometric layout. The third step is to determine the levels of contemporary change in the livelihoods of the peoples of northeastern Mexico and how it has affected the existence and/or persistence of vernacular architecture. The final two steps involve the cartographic representation of these data. These include the establishment of both a spatial expression of each house form class and a spatial expression of the existence and persistence of folk house forms. The hypothesis of this dissertation states that with the establishment of folk housing regions, folk architecture can serve as a useful element in the determination of contemporary culturogeographic regions of Mexico's northeast borderlands.

Once a part of New Spain's vast northern frontier, the northeastern Mexican borderlands -- presently the states of Coahuila, Nuevo León, and Tamaulipas -- became characterized as a buffer zone between two major colonizing cultures. The mixing of influences of these two nations, the Spanish -- later the Mexicans -- from the South and the Anglo-Americans -- among other European immigrants -- from the North, perhaps has become most apparent through time in the cultural landscape. To add to these two major
ethnic groups are Native Americans, namely the Tlaxcalan and Huastec cultures, the latter a northern extension of the Maya-Quiché group. The most obvious and visible component of the cultural landscape which geographers often utilize to demonstrate cultural influences, such as these, on a regional basis, is folk housing. Northeastern Mexico's folk dwellings clearly represent these major cultural elements (López Morales 1993; Tamez Tejeda 1992, 1993).

Just as Kniffen (1965, 1990) utilized folk housing in determining culturogeographic regions in Louisiana and, subsequently, the whole eastern United States, the same task can be accomplished in establishing such regions in the culturally diverse northeastern Mexican borderlands. In order to establish these culturogeographic regions through vernacular architecture, a term closely associated to folk housing, a structural analytical approach must be taken. Through the method of structural analysis, buildings can be compared and, therefore, patterns can be sought. Because folk dwellings are characterized by repetition, as opposed to diversity and uniqueness, unity and, thus, cultural meanings can be revealed. This is most effectively achieved by means of looking at the geometric repertoire in the vernacular architecture (Edwards 1997; Rapoport 1969).

Two basic kinds of geometric patterns that may be used to define a tradition characteristic of a particular culture, or cultures, include form classes and plan types. Form classes are three-dimensional geometric shapes that persist in cultural traditions through many decades and often over great geographic distance. Plan types are two-dimensional patterns that define the geometry of different spaces and the acceptable order these spaces may take within any building. While the former pattern demonstrates a style common to a
particular ethnic, as well as social, group and is more obvious, the latter reveals a cultural group's utilization of space and is more covert.

With ongoing changes in cultural values, these geometric patterns tend to undergo changes as well. Although it is geometry that most adequately demonstrates unity and cultural meaning, other noticeable elements in folk dwellings include decoration, construction materials, and construction methods (Edwards 1997; Rapoport 1969). In fact, by looking at all of these structural elements and the changes they underwent over the decades, the transformation of the folk dwelling itself, into what may not be a folk dwelling at all, can be discerned. Thus, in addition to defining culturogeographic regions, the structuralist approach aids in the determination of regions where folk housing either continues to persist, only exists, or has disappeared all together.
Using Structuralism in Defining Culture Regions: The Geometric Approach to the Study of Folk Housing

The Importance of Material Culture

In order to establish culturogeographic regions based on knowledge of the cultures involved, the history of these cultures and how they got there, of course, must also be understood. Thus, the historical development of the culture is an integral part of cultural geographic regional studies. Conventional methods of studying history involve the use of literate records, whether being written histories, diaries, legal documents, or statistical data, and, thus, tend to reflect only a minor portion of a particular society’s history. Naturally, the segment of society portrayed by such materials is that of the literary elite, especially in the case of more traditional, or of developing, societies. Throughout much of history and much of the world the majority of humanity has been characterized, even at present, mostly by largely illiterate societies, whereby the only vestiges these have left behind are the material artifacts that they fabricated and used in everyday existence. In this way it is folk culture, as opposed to elite or even popular culture, which is often overlooked in historical, or culture history, studies, for that matter (Deetz 1996; Glassie 1975, 1988; Prown 1988; Schlereth 1985a, 1985b).

For this reason, many social scientists, such as anthropologists, folklorists, cultural historians, and cultural geographers interested in the study of folk cultures, their historical development, and the spatial representation of these cultures, have felt the necessity to focus upon the non-written records produced, used, and left by largely non-literate
societies. These are often referred to as things, objects, or more specifically, artifacts or as material culture, in an even narrower context. When we study culture we are looking at “learned behavior that embodies the enduring values and deepest cognitive structures of a social group,” according to Upton (1985: 64), or as Schlereth (1985a: 5) states, “socially transmitted rules for human behavior that entail ways of thinking and doing things.” More specifically, according to Schlereth (1985a), when we study material culture we are concerned with the ideas about human behavior required to manufacture objects, that is, objects resulting from human behavior. It is these artifacts which are used by humanity to cope with the physical world, to facilitate social intercourse, to delight our fancy, and to create symbols of meaning. Thus, he also defines material culture as “that segment of humankind’s biosocial environment that has been purposely shaped by people according to culturally dictated patterns.” In short, material culture always includes the factor of human artifice and undoubtedly suggests a strong interrelation between physical objects and human behavior (Schlereth 1985a: 4). Deetz (1996: 35) thus defines it as “that sector of our physical environment that we modify through culturally determined behavior.”

Schlereth (1985a: 3) goes on to further define material culture as “the array of artifacts and cultural landscapes that people create according to traditional, patterned, and often tacit concepts of value and utility that have been developed over time, through use and experimentation.” It is “these artifacts and landscapes,” he states, which “objectively represent a group’s subjective vision of custom and order.” Furthermore, they reflect the belief patterns of the individuals who made them and, therefore, serve as symbols of that particular culture. Material culture, therefore, is more than a technological solution. Rather, according to Richardson (1994: 158), “as a component of human activity, material
culture communicates.” As he states, “In producing artifacts, we etch, write, and inscribe the communication onto the landscape.” By means of studying the cultural landscape and its material culture, we can attempt to read the behavior patterns and the ideas in peoples’ minds of a particular society and, thus, analyze them in an historical, or even contemporary, context (Glassie 1985; Prown 1988; Richardson 1994). Prown (1988: 18), perhaps, most concisely sums up the concept of material culture, by defining it as “the study through artifacts of the beliefs — values, attitudes, and assumptions — of a particular community or society at a given time.”

In this way, the materials left from societies of the past, or present, whether they be shapes of fields, modified landforms, houses, bridges, corrals, docks, temples, factories, prisons, junkyards, graveyards, highways, trails, etc., serve as historical texts. As Glassie (1975: 17) said, “Artifacts are worth studying because they yield information about the ideas in the minds of people long dead.” As opposed to written texts and records, which reflect the biases of a minority of upper class individuals, artifacts of material culture reflect the ideas and behavior of a much broader variety of peoples within a society. For this reason, they have become considered by those interested in less-biased accounts of folk societies as a more democratic form of representation (Glassie 1975, 1988; Schlereth 1985a, 1985b). For as Glassie (1988: 82) claims in regard to the human activities which produce material culture, “Plowing, strip mining, laying brick upon brick in mortar, weeding, bulldozing: these are as much historical acts as scratching a pen over paper.”

According to Deetz (1996: 259), material culture is the most objective and most immediate source that we have of the past. This is why he said “Don’t read what we have written, look at what we have done” (Deetz 1996: 260).
The Structuralist Approach

The approach to material culture study based on viewing artifacts as symbols of a language that communicate the ideas and behavior patterns of a particular culture is derived from structuralism. The structuralism of linguists such as Ferdinand de Saussure and Noam Chomsky, and the anthropologist Claude Lévi-Strauss has provided scholars such as Henry Glassie and Jay Edwards a powerful method for studying material culture, especially artifacts of the built environment. Borrowing from Saussure’s linguistic theory, Lévi-Strauss takes this synchronic, rule-based approach beyond linguistics to postulate an unconscious mental structure, realized in myriad sociocultural manifestations, that is capable of generating patterned cultural behaviors, including built forms. Additionally, these unconscious mental structures are comprised of binary oppositions that represent universal characteristics of human thought. He applies this approach to spatial organization and, consequently, reanalyzes earlier ethnographies of the built environment (Lawrence and Low 1990). Just as for language, the configurations or properties of an artifact correspond to patterns in the mind of the individual producer, or producers, and the society of which he, she, or they were a part. In this way, humans express their need to structure the world through forms as well as language. This is the basic premise of the structuralist approach to material culture (Prown 1988).

Edwards and Glassie have taken structuralism even further and applied it to their studies of material culture, especially the built environment. Like others in the study of material culture, their quest has been for cultural belief systems, that is, the patterns of belief of a particular group of people in a certain time and place. According to semiotics, artifacts transmit signals that elucidate mental patterns or structures (Lawrence and Low

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Thus, artifacts are “cultural releasers,” according to Prown (1988: 22). Similar to structuralism, semiotic approaches liken the built environment to a language. While a language is constituted of sign systems or codes, material culture is also comprised of symbols that act as codes to interpret cultural belief systems (Lawrence and Low 1990; Rapoport 1982). Richardson (1987: 387) confirms this by stating that, “Mind consists of the back and forth gesturing with symbols – words, of course, but also stylized actions, and artifacts.” He also mentions that “the mind is as exterior and as public as behavior and that the artifact is part of that exterior, public mind.” According to Prown (1988: 23), “Artifacts can yield evidence of the patterns of mind of the society that fabricated them…”

The Concept of Folk Housing and Its Place Within the Built Environment

Among those artifacts upon which cultural anthropologists (e.g. Edwards), folklorists (e.g. Glassie), cultural geographers (e.g. Kniffen, Jordan, Gritzner, Winberry), and, more traditionally, architects (e.g. Rapoport, Oliver, Upton, and many others) have focused, vernacular architecture seems to be the most significant. Schlereth (1990: 8) and Prown (1988: 19-22) concisely summed up the advantages of utilizing folk housing, and material culture in general, for interpreting culture. These include evidential precedence, temporal tenacity, three-dimensionality, wider representativeness, and effective understanding. Upton (1990) agreed that architecture, and more specifically folk housing, strongly demonstrates all of these advantages. As Glassie (1975, 1988) and Kniffen (1979) commonly agree, folk dwellings are often a prominent feature on the landscape, they are abundant, and they more adequately represent of a broader spectrum of society. As Kniffen (1979: 60) stated, “The folk houses were numerous; they were closer to the earth
and closer to the people and I think the folk houses were purer in form.” In Louisiana of the 1930s, Kniffen found a cultural landscape that was unique, compared to that of the rest of the country, especially in regard to variety and abundance of folk dwellings.

Glassie (1975: 12) found that “if artifacts, such as the old houses standing along dusty roads in Middle Virginia, can be read, then history will become a philosophically more plausible pursuit.” Apart from being a prominent part of the cultural landscape, he stresses that folk houses are a more democratic representation of history than mere written documents. In his critique of conventional history, he said that, “the historian may create not a record of what happened in the past, but a serial array of literary scraps that give the reader the sensation of progress. History, as we are redundantly reminded by the orators of the oppresses (and by theoretical inconsistencies), is too much the genealogy of contemporary institutional power and too little the story of people” (Glassie 1975: 9). Glassie (1983) also noted that historically oriented folklorists have concentrated on architecture because the material survives, it is geographically sited, and it is complex. Also, he observed that it is both a work of art and a tool for living, combining aesthetic with utilitarian drives at a variety of conceptual levels. Furthermore, according to Rapoport (1969: 2), as opposed to the high-style architecture of the grand design tradition, folk architecture is much more closely related to the culture of the majority and life as it really lived. For these reasons, these scholars, as well as Edwards, have developed systematic, structuralist-based approaches to reading folk housing as an artifact which communicates patterns of learned behavior and beliefs, culture in other words, of particular societies.
Before elaborating on the structuralist-based geometric approach to reading folk housing, the concept of "folk housing" must be clarified. This particular artifact, in its most abstract manifestation, forms part of what we know as the built environment, a term which geographers often utilize when studying the cultural landscape. In the broadest sense, this refers to any physical alteration of the natural environment through construction by humans. Generally speaking, however, it includes built forms, that is, building types (e.g. dwellings, temples, meeting houses, etc.) created by humans to shelter, define, and protect activity. These can include, also, spaces that are defined and bounded, but not necessarily enclosed, such as a plaza, street, landmark, shrine, or any other defined place that is not sheltered (Lawrence and Low 1990). The building types, on the other hand, are those which normally serve as longer lasting, three-dimensional artifacts capable of studying, without archaeological efforts, long after their human producers have vanished. The built environment, especially building types, can be divided, according Rapoport (1969), into four general categories: primitive, preindustrial vernacular, modern vernacular, and high-style and modern.

The first three built forms can be grouped under the larger category of folk, vernacular, or popular architecture and are the sole focus of this study. These forms are what make up the majority of the built environment of the world even to this day. The two main distinctions in the built environment, then, are the folk tradition and the grand design tradition, to which high-style architecture belongs. All of these forms, whether folk or grand design, however, are related because they are part of a transitional process, which is based on the gradual loss of tradition and the increase of institutionalization. These two occurrences are manifested in their utmost form through the grand design tradition.
reason for this process is threefold. First, a greater number of building types occurs due to increased specialization and differentiation. The second reason is loss of the common shared value system and image of the world, with a consequent loss of an accepted and shared hierarchy and a loss of goals shared by designer and the public. This results in a disappearance of cooperation among the members of the community. The third reason for the disappearance of tradition as a regulator is due to the emphasis which most contemporary cultures place on originality (Rapoport 1969). Nearly all the stages of this process, the transition from one form to the next, can be observed in many places today, including the region upon which this work focuses.

The folk tradition is the direct and unselfconscious translation into physical form of a culture. As Rapoport (1969: 2) stated, “It is the world view writ small, the ‘ideal’ environment of a people expressed in buildings and settlements, with no designer, artist, or architect with an axe to grind.” For this reason folk architecture, which comprises both primitive and vernacular architecture, is regarded as “architecture without architects.” In such a society the built forms clearly reflect a lack of communication with outsiders but, rather, intimate communication among a small enough number of members who know each other well. The built environment reflects further isolation, due to an absence of literary materials. In this way, a folk society ideally is a closed, coherent, self-sufficient group of people and can, thus, be seen as an integrated whole. In sum, folk buildings tend to represent a society that is small, isolated, non-literate, and homogeneous, with a strong sense of group solidarity (Redfield 1947).

For this reason, a clear distinction must be made between folk architecture and popular architecture. Folk architecture is ingenious, spontaneous, and folkloric. It arises as a
symptom of the reality of a well-defined people and it represents this people's historic origins, cultural circumstances, and the synthesis of its origins and influences. Popular architecture, on the other hand, is built for the masses and is composed of mass produced materials (Instituto Nacional de Bellas Artes 1980). This could include, for example, the institutionally-planned workers' dwellings in factory or mining settlements, government-assisted housing projects, suburban-style tract homes, or the buildings housing fast-food and other commercial franchised businesses. Although Upton (1985) and Rapoport (1969) both agree that the vernacular, namely modern vernacular, tradition has been extended to include popular forms, such as motels, fast-food restaurants, and mass-produced middle-class housing, this study will not be extended to include such forms. As Schlereth (1985b: 180) stated, “rural, preindustrial landscapes presumably best preserve artifactual survivals of culture” and “that such a landscape provides the material culturist with superior data for ascertaining a succession of regional cultures across time.” Studies such as I will present here, have the goal of defining culture regions based on folk architecture and must, therefore, concentrate on data having the potential to communicate culture history and diffusion.

Within the folk tradition we can distinguish between primitive and vernacular buildings, the latter being further divided into preindustrial vernacular and modern vernacular. Among the primitive built forms there are very few building types and, rather, a model with few individual variations. These are built by everyone, especially the dwellers, themselves (Rapoport 1969). Being “primitive,” these forms include the building of preliterate societies, past or present, whose general knowledge comes by word of mouth, whose training is by apprenticeship, whose industry is handicraft, and whose tools are pre-
Iron Age (Fitch and Branch 1980; Redfield 1953). As special building tradesman begin to be used for construction of most dwellings, primitive building gives way to preindustrial vernacular. At this level, there is a greater, yet still limited, variety of building types. Consequently, there is more individual variation than in primitive structures. Accepted form among the society, however, is still maintained. Even though skilled tradesmen, e.g. carpenters, masons, etc., become more prevalent, the dwellers often participate in the building and design process and, thus, are more than mere consumers (Rapoport 1969). In this case, iron tools and the measurement systems of civilization allow for factors such as modular building material (e.g. bricks, tile, lumber, etc.) and repetitive structural systems (e.g. arches, trusses, framing, etc.) which are antithetical to the plasticity of primitive structures (Fitch and Branch 1980). A common characteristic of both preindustrial and primitive structures is the utilization principally of materials that the surrounding environment provides (Tamez Tejeda 1993). Even more important is the fact that culture consists of learned modes of behavior that are socially transmitted from one generation to the next and from one society or individual to another and that folk architecture is an essential representation of this virtue (Steward 1986; Rapoport 1969).

As specialization of trades and institutionalization further increase, modern vernacular and high-style architectural forms emerge. This is brought about, also, by the expansion of modern communications and self-consciousness. Most modern vernacular is considered by those such as Rapoport (1969) and Upton (1985) to be an implication of new, currently fashionable forms and is labeled "vernacular" simply because it is unpretentious and not professionally designed by and for an elite class. Under this rubric also, however, are those forms found among preindustrial buildings. Both Tamez Tejeda (1998) and I consider
preindustrial vernacular architecture to include only those structures built of preindustrially
derived materials. Nevertheless, often there are folk builders who continue to build the
same primitive and preindustrial forms, but fail, either partially or completely, to utilize
locally obtained and elaborated materials. Thus, while some traditional, preindustrial
vernacular forms are maintained, others are lost to more currently fashionable ones and,
consequently, become part of the popular, as opposed to folk, built environment. Both of
these scenarios, however, fall under the rubric of modern vernacular architecture. Under
the criteria of this study, however, I will exclude the popular forms from folk, as well as
vernacular, architecture, due to reasons already mentioned.

Belonging to the grand design tradition, the final category constitutes the high-style
and modern built forms. In this category there are many specialized building types, where
each building is an original creation. Thus, they are designed and built by teams of
specialists, often architects. This, again, is due to greater complexity of society and greater
specialization, which require the design of settlements and buildings to become the
concern of professionals (Rapoport 1969). While high-style architecture began with the
erection of the first pretentious monuments during the dawn of civilization, modern
architecture is that which we know as the product of industrialization. While the former
can be derived from or give rise to folk building forms and can be made often of non­
industrial, non-commercial materials, the latter is something that results from individual
creativity and imagination and is normally erected using modern machinery and materials
(e.g. steel, concrete, and glass) (Tamez Tejeda 1993). For this reason, this study will
consider certain preindustrial high-style forms, especially in the case of dwellings, but for
no necessary reason will incorporate any form of modern architecture, industrial or post-
industrial.

The Geometric Approach and the Importance of Culture in
Folk House Classification

This study covers primitive, preindustrial vernacular, and modern vernacular forms,
with the exception of those which fall under the rubric of popular architecture. Certain
high style dwellings will also be considered. Because the house and all its components
usually tends to be the most typical form of vernacular architecture, this is the element
upon which this research will focus (Rapoport 1969). The dwelling best demonstrates the
how humans behave and believe on a daily basis. It is the focal point of important human
needs and activities, such as accommodation, adaptation, communication, production, and
reproduction (Lawrence and Low 1990). According to Heidegger's notion, dwelling
involves the process through which people make their place of existence a home (Seamon
1984: 43). In 1875, Pitt-Rivers urged fellow researchers in the emerging social sciences to
consider material culture as the "outward signs and symbols of particular ideas in the
mind," (Schelerth 1985: 1). Heidegger argued that dwelling is a form of human language
which communicates building, thinking, and creating (Seamon 1984). For him it is the key
to mere human existence. The dwelling is a utilitarian structure that mediates human
interaction with the environment and accommodates behavioral requirements (Lawrence
and Low 1990). For these reasons, Rapoport (1969, 1982) claimed that meaning is
transmitted as nonverbal communication through dwellings.

Among the most notable scholars having already broken ground for applying
structuralism to the study and classification of folk dwellings are Fred B. Kniffen, Henry
Glassie, and Jay D. Edwards. The structuralist approach in architecture requires the identification of cognitive geometric patterns, which are based on rule-governed grammars, just as is linguistics. Two basic kinds of geometric patterns may be combined to define a tradition in folk architecture. Form classes are three-dimensional geometric shapes that persist in cultural tradition through many decades and often over great geographic distance. Plan types are two-dimensional patterns that define the geometry of different spaces and the acceptable order that these spaces may take within any building. While form classes, like style, are external expressions of culture that convey social-symbolic meanings, plan types are internal expressions more subtly linked to the proxemic, fixed-feature spaces and arrangements that have become comfortable and habitual within an ethnic group and are, thus, covert (Edwards 1991). The simplest unit that conforms to the definitions of the tradition and that can stand alone is known as the base module. As the plan types become increasingly elaborate, usually by the addition of rooms or other spaces to the floor plan, internal modular expansion results. As appendages and/or floors are added to the dwelling, modular expansion occurs (Edwards 1991, 1997). These levels of modular expansion demonstrate how form classes and plan types evolve from one simple base module into a complex array of choices.

The further classification of these different levels of modular expansion into plan types and form classes tends to be unique for each case study. Edwards (1988, 1994), for example, distinguished between the evolution from a core plan into a variety of plan types and the evolution of different form classes in his study of Creole houses in Louisiana. He, also, made a clear distinction between internal modular expansion and external modular expansion and how each, respectively, gave rise to a series of plan types and form classes,
in the case vernacular houses on San Andrés Island in the Caribbean (Edwards 1991). In his work entitled *Folk Housing in Middle Virginia*, Glassie (1975) develops a series of rule sets, based on spatial organization, which reveal shifts in plan type and form class over time. From this set of geometric rules, the concept of architectural competence emerges. This enables him to analyze the underlying structure of symbolic oppositions and changes in values and life styles (Glassie 1975).

Despite the fact that he did not adhere so strictly to the rules of structuralism, Kniffen was the founding father of the geometric approach to the study of folk architecture as well as the inspiration for later studies, such as those mentioned above. In his paper “Louisiana House Types,” he developed a set of form classes which were to serve as one component in the regional differentiation of culture in this diverse state (Kniffen 1936b). This, combined with other sets of cultural properties (dialect, food, etc.), would constitute culturogeographic regions (Kniffen 1936a, 1936b). As opposed to other approaches to cultural geographic regional studies which considered all elements of the cultural landscape and were, thus, holistic, Kniffen (1990a) felt that an atomistic approach was more adequate, as he could spend a lifetime just on the analysis of folk dwellings and their complexity.

Later, Kniffen extended his research to encompass the whole eastern portion of the United States. In this research, he eventually was able to utilize form classes and the regions to which they corresponded in order to determine routes of diffusion and, thus, the origins of the different house forms (1990a, 1990b). In these works, Kniffen sought after a sort of base module for his different house forms, under his concept of “initial occupance.” This allowed him to establish a series of hearth regions, or source areas, from which the
initial house forms spread westward and evolved into a variety of forms. Through his principle of “dominance of contemporary fashion,” he was able to further establish folk housing regions throughout the eastern United States, based on families of house forms which became dominant and, thus, moved westward. Perhaps the key idea to all this is that, in this determination of source areas and westward-moving folk house regions, the folk dwelling enabled him to read behavioral patterns such as diffusion and adaptation and, thus, determine a regionality in regard to cultural preferences and beliefs (Kniffen 199b). The goal of this study is like the work of Kniffen, Glassie, and Edwards, to establish a rule-governed grammar, in the form of folk house geometry, and, subsequently, folk house regions, which will provide a component for the future establishment of culturogeographic regions.

However, in order to obtain a complete analysis of a tradition of folk architecture the structuralist approach must contain two major ingredients. First, as was accomplished by Kniffen and Glassie, a detailed comparative analysis of numerous expressions of a similar type must be accomplished. Second, and also very important, an ethnographically oriented historical analysis of the dwellings must be conducted in order understand more about the daily lives and the cultural preferences of the dwellers (Edwards 1997). Edwards (1988, 1991, 1994) was successful in this task. In the case of the region being studied here, a direct ethnography of the present dwellers may be conducted with ease, as many of them continue to lead life styles not remotely different from those of preindustrial societies.

As phases of work by Kniffen, Glassie, and Edwards attest, this geometry-based structuralist approach is a serviceable method for uncovering cultural meanings. As Rapoport (1969) was the first to attest, the geometry of the house, namely form,
effectively communicates other cultural meanings. Constructional components and patterns, such as materials and methods, are more closely related to the natural environment, and an over-emphasis on these can tempt one to fall into an environmental deterministic approach. In the search for cultural behavior patterns and ideas and, ultimately, the determination of culturogeographic regions, Rapoport’s comparative work holds great importance. In *House Form and Culture* (1969), he rejects single-factor deterministic explanations because they are too simplistic. Instead, he favors a multicausal, holistic cultural approach whereby house form is the consequence of a wide range of sociocultural factors together seen in their broadest terms. In turn, physical factors, such as climate, construction methods, available materials, and technology, simply condition form and are referred to as secondary, or modifying, factors. None of these factors can be a single determinant of form. The sociocultural forces, however, are primary factors (Rapoport 1969). The intent of this geometric approach to house form classification in northeastern Mexico, then, is to establish the basis for a sociocultural understanding of the regionalization of folk house forms, rather than to fall into the trap of single-factor determinism.

Although the environmental conditions of the region of study here — northeastern Mexico — greatly affect the rural built landscape, whether they foster a great variety of dwelling forms or they hinder such, history and the diffusion of traditions into this region demonstrate that culture tends to be a primary factor in the variety of house forms. While Prieto and Carrillo (1978) attest that folk housing has been determined by physical conditions, West (1974), Gritzner (1969, 1971, 1990), and Winberry (1969, 1974), have produced scholarly accounts which demonstrate the importance of cultural diffusion in the
evolution of different house types. West (1974), for example, showed that the existence of the flat-roofed adobe dwelling was dependent on the northern migrations of certain indigenous groups, namely the Tlaxcalans, as well as the Spanish movement from Spain, to central Mexico, and finally to Santa Fe and California. He, thus, emphasized the synthesis of these two cultures -- on various occasions through time -- and its impact on the final product. Both Gritzner (1969, 1971, 1990) and Winberry (1969, 1974) demonstrated that the corner-notched log house was brought directly from Germany to central Mexico, and from there diffused west and north all the way to northern New Mexico. At the same time, Winberry (1969, 1974) also showed that this mode of log construction arrived in northeastern Mexico via the United States. Additionally, he traced the transitions which this house type underwent as a result of synthesis with local traditions. Cultural diffusion, then, is what determines the character of a particular house form in a certain region, while environmental conditions provide a certain set of possibilities and limitations (Rapoport 1969).

Culture, therefore, is represented in built form. Cultural diffusion largely accounts for the emergence and existence of particular house forms, because culture is the set of rules and instructions that dictate a particular form a folk dwelling will take. It is the control mechanism, the blueprint. These blueprints are templates that are held in the minds of the builders/occupants and thus are known as cultural cognitive schemata (Rapoport 1982: 15; 1997: 162). This concept explains why people of different cultural groups build the unique forms which they do. Since culture is carried in the minds of people who actively perceive, judge, and act, it becomes represented in their built environment. Furthermore, it is culture that provides the rules, information, instructions, schemata, or blueprints about
how to behave, how to do things, how to build. In sum, when folk peoples build a dwelling or any other structure, they make their decisions based on the set of traditionally transmitted learned instructions except, of course, when they use these rules inaccurately or disregard them all together (Rapoport 1997: 162).

In large measure, folk house forms are physical expressions of mental cultural cognitive schemata. This explains why the built environment communicates human behavior and thinking. Not only do built forms make visible and stable cultural categories, but they also have meaning. When properly decoded they provide an otherwise unavailable insight into the basic socio-spatial concepts of a community (Rapoport 1982: 15). The form of a folk house can be a strong reflection of the needs and minds of those who built it. This, in turn, shapes and directs their behavior (Deetz 1996: 126). Like in many other folk cultures, the folk dwelling forms in northeastern Mexico are full of meaning. Why the roof is pitched or why it is flat, why it expands in a certain fashion, why it may contain an apse on one end, or why it is round, are all expressions of the users’ cultural concepts (Rapoport 1982). Despite many modern changes which have been occurring in the region for the past fifty years and the effect they have had on the built environment, many of the inhabitants continue to adhere to the folk forms prescribed by their cultural cognitive schemata. Culture is ultimately translated into built form through human actions, that is what people do as a result of what is socially shaped (Rapoport 1997:162).

Modernization, Social Change, and Consequences for Folk Housing

Current trends in Mexico’s northeastern borderlands as in the rest of the modern rural world, however, tend to prove that neither climate, available materials, nor traditional cultural cognitive schemata alone can determine house form. Rather, communications and
commercialization have become the key factors introducing new technologies and, thus, ideas and materials, which have modified considerably many people's mental blueprints. As transportation networks to remote rural areas has greatly improved over the last fifty years or so, manufactured materials have made their way cheaply to these areas. These have become the preferred construction materials due to low cost and elimination of labor, which was necessary for the extraction and elaboration of local natural materials. Due to improved communications, values have shifted from vernacular traditions to the keeping up of appearances in regard to material wealth. Concrete blocks (*blocks de concreto*) and corrugated metal roofs (*techo de lámina*) convey greater wealth and, thus, a higher social status than do adobe, stone, logs, wattle-and-daub, or thatch (Boils 1982; West 1969, 1974, 1975; Yampolsky 1993). While traditional construction methods and materials may continue to exist in select areas and among the more economically marginalized people, trendy manufactured materials appear to be taking over the rural landscape at an alarming rate. The adobe of the Spanish conquerors and the various Indian groups, the wattle and thatch of the Huastecs, and the logs of the Germans and the Anglo-American pioneers have already yielded largely to the tin and the cement provided by the industries and promoted by the development agencies.

This form of contemporary social change has occurred not only in northeastern Mexico, but in traditional societies throughout the world. In Latin America, however, considerable changes have affected society since the arrival of the Spanish Conquistadors. These include changes not only in economic production, food production, land tenure, and settlement patterns, but in the built environment, as well. Indigenous built forms, those introduced by Europeans, and combinations thereof continued in a relatively unchanged
state, especially in the context of folk culture, from early colonial times until well into the twentieth century. The process of modernization, however, affected not only urban, elite society, but also much of Mexico's rural folk societies, as well as folk societies around the globe. According to Steward (1967: 7), modernization involves more than the assimilation of a traditional society into a state or transmission of traits of the contemporary industrialized state to an ethnic group. In other words, this is sort of a transition from a Gemeinschaft to a Gesellschaft (Redfield 1947).

Under modernization, members of traditional societies become involved with and independent upon more and more state-level institutions, and they adopt more cultural traits from the national inventories. Applications of science and technology that reach these traditional societies include improvements in industry, communications, transportation, health, economic institutions, agriculture, and even construction of dwellings. Significant modern features include applications of science to farming and medicine with consequent population increase; cultivation of new cash crops; utilization of formerly latent resources, such as oil, minerals, and others; and development of transportation networks that range from roads to airplanes (Steward 1967). These factors have been significant in much of Mexico and have greatly affected the built environment; however, many places, at least in terms of folk dwellings, have resisted certain elements of contemporary social change.

**Why Folk Housing in Northeastern Mexico?**

**A Region Rich in Vernacular Architecture**

Due to the location of Mexico's northeastern borderlands as a convergence zone between the Anglo-American culture to the North and the Latin American cultures to the
South as well as its complex cultural history, this can be considered a region worthy of regional culturogeographic research. Just as Kniffen (1936b) found folk houses to be an obvious and, thus, appropriate material element of the cultural landscape of Louisiana during the 1930s for determining culturogeographic regions, such continues to be the case with the cultural landscape of northeastern Mexico. Although, modern cinder block houses have been a popular means of housing for over the last twenty-five to thirty years throughout Mexico, the existence of folk dwellings is still highly visible even in much of the northeastern region despite its proximity to an industrialized nation such as the United States. In select areas, even the knowledge and construction of these dwellings persist, while, in other areas, there is little or no existence at all of these kinds of structures.

Folk housing of Mexico’s northeastern borderlands clearly represents vestiges from Germanic, Slavic, Celtic, Anglo-American, and various Mediterranean, as well as Native Mesoamerican and North American, cultural spheres and mixtures and variations thereof. The reason for studying vernacular architecture and its historical and cultural background is not to provide a mere description of the borderlands’ cultural landscape nor to simply list and classify house types, but rather to provide one important component in order for an ultimate determination of northeastern Mexico’s culturogeographic regions and, thus, understand the geographic expression of culture. This is an attempt to build upon Kniffen’s (1936) ideas, from his study of Louisiana house types, in a realm far removed from Louisiana where criteria different from his own must be devised. As a region of merging cultural realms, Mexico’s northeastern borderlands region demonstrates a need for a better comprehension of its intra-regional cultural divisions. Due to the persistence of
traditional modes of life in the Mexican republic, the folk house seems to be an adequate tool in which to accomplish such a task.

As West (1969, 1970) indicated in his extensive field notes on house types in Mexico, despite the continuing popularity of commercially manufactured building materials, traditional house types abound. His notes from the early seventies, plus the *Catálogo nacional de monumentos históricos e inmuebles* (INAH 1986) and my own field work in northeastern Mexico in 1997 and 1998, demonstrate that house types and construction materials existent prior to industrialization and modernization in Mexico continue to be present in the contemporary cultural landscape. However, a study such as proposed here is best accomplished sooner than later, as more globally popular building styles and materials are ever becoming more present in the rural built environment (Boils 1982; West 1969, 1974, 1975; Yampolsky 1993).

**Significance and Integrity of the Northeastern Spanish Borderlands**

As mentioned above, Mexico’s northeastern borderlands region has served as a unique region juxtaposed between two major cultures and has been characterized by the intermingling of a number of additional cultures, as well. As will be elaborated in Chapters 2 and 3, this region was once the eastern half of New Spain’s northern frontier, or what Bolton (1979) referred to as the Spanish Borderlands. The region emerged as a separate political, historical entity during the end of the sixteenth century as expeditions began to disperse from Zacatecas in two waves, one in a northwesterly direction toward New Mexico and California and the other in a more northeasterly direction toward Saltillo, Monclova, Monterrey, and San Antonio. The northeastern borderlands became unique as a region first, as missionary territory mainly of the Franciscan order under the jurisdiction
of the Province of Zacatecas, and second, as the all-encompassing Province of the Nuevo Reino de León. The latter subsequently lost territory to the Province of Coahuila, in the early seventeenth century, and to the Province of Nuevo Santander, in the mid-eighteenth century. As colonization pushed further northward in the early eighteenth century, Texas, also, emerged as a separate northeastern New Spanish province.

It was until 1788, however, when the Spanish Crown approved the Comandancia General de Provincias Internas, that these western and eastern portions of the Spanish Borderlands, which were a dependency of the Viceroyalty of New Spain, would be formally divided. The Spanish borderlands would, then, become the Provincias Internas de Occidente, which included the provinces of Alta California, Baja California, Sonora, Nuevo México, and Nueva Vizcaya, and the Provincias Internas de Oriente, which included Coahuila, Nuevo Reino de León, Texas, and Nuevo Santander. After Mexican independence, these entities became the States of Coahuila, Nuevo León, and Tamaulipas, and Texas. Subsequently, Texas became a separate republic and then joined the United States of America in concert with its imperialistic westward expansion.

Even through the remainder of the nineteenth century and all during the present century, northeastern Mexico, namely the states of Nuevo León, Coahuila, and Tamaulipas, has served as a great hinterland, of which Monterrey has been the commercial and industrial center. In 1856 José de Noriega admitted that Monterrey was the “capital of the northern frontier,” as other potential urban centers further northward were effectively eliminated by the Texas’ independence and then the Treaty of Guadalupe Hidalgo. Between 1880 and 1896, the railroads were developed in the region and linked Monterrey with cities such as Nuevo Laredo, Saltillo, Ciudad Victoria, Tampico, and Matamoros.
Subsequently, in the 1930s, the Pan-American Highway linked Monterrey with Mexico City and the United States. Since then, both industry and agriculture have favored the growth and prosperity of the city of Monterrey while, also, strengthening its links with the rest of its hinterland, the northeastern Mexican borderlands. Despite the sterile appearance of this region, minerals such as coal, iron ore, lead, shale for cement, and clay for pottery are found at select points around the region, even in the remote hinterland. Agriculture products, found also throughout the region, include sugar, cotton, corn, citrus fruits, and beef. Furthermore Monterrey, and the whole northeastern region, has benefited economically and has retained its integrity due to its proximity and trade with the United States and the industriousness of its people (Dicken 1939). At present, Monterrey is the third largest city in Mexico, the largest in northeastern Mexico, and still is the commercial and industrial capital of the whole region.

Vernacular Architecture Research in Mexico

As mentioned previously, research involving vernacular architecture in Mexico, including the northeastern borderlands, has engaged Mexican architectural scholars. However, none of these studies have employed large-scale intensive fieldwork. Additionally, none refer to Kniffen’s approach in establishing culturogeographic regionality nor do they attempt any other form of geometric approach. Works by Yampolsky (1981, 1982, 1993), Shipway and Shipway (1970), Moya Rubio (1984), Boils (1982), and Prieto and Carrillo (1978), are little more than photographic essays of vernacular architecture. The latter work does associate folk housing directly with physical determinants such as local natural resources, climate, and vegetation but remains a descriptive survey of house types throughout Mexico (Prieto and Carrillo 1978). López
Morales (1993) simply surveys vernacular architecture on a nation-wide level and presents an extensive historical overview of each region covered. The survey, however, is superficial in that it covers very few—perhaps three or four—villages per region. Támez Tejeda (1993) actually focused his survey on the northeast borderlands region, specifically the states of Coahuila, Nuevo León, and Tamaulipas, and made an attempt to establish a regional geography based on folk house type. This, however, was based more on environmental regions and available materials. Although he strongly favored Rapoport’s cultural approach to determining house forms, he still lacked the perspective of geometry as the ultimate key to the classification of folk house regions. Perhaps, what makes a culturogeographic study, such as proposed here, still so necessary is that all of the above mentioned authors are architects rather than anthropologists or geographers.

Although little has been accomplished on the Mexican front regarding geometric approaches and culturogeographic analyses of folk housing, several U.S. academics made minor attempts at such approaches. These, however, all tend to focus upon one particular house type and one small area of study, i.e. two or three villages. Winberry (1969, 1974), for example, has concentrated upon log dwellings in the Sierra Madre Oriental, south of Monterrey; in the Huastec region; and several other areas throughout Mexico. Gritzner (1969, 1971, 1979-1980, 1990), also, studied log buildings, but in New Mexico, once a part of Spain’s New World colonies but far out of the region of study proposed. While placing emphasis on cultural explanations, these two, however, demonstrated more interest toward construction materials than toward geometric house forms. Though he focused solely on the flat-roofed dwelling throughout northern Mexico, West (1974) sought cultural explanations for the distribution of this dwelling form, regardless of
materials. Additionally, Jordan (1988) focused on the distribution of one particular house form, the parapet gable dwelling, throughout the lower Rio Grande Valley. All of these authors, like Kniffen, apart from being geographers, sought sources of initial occupancy and attempted to trace routes of diffusion to the particular site being studied. Thus, what will be accomplished in this study is a system of classification – based on geometric forms, not materials – of all folk house types in the northeast borderlands regions whereby internal cultural regionality can be understood better.

**Presentation of the Northeastern Mexican Borderlands:**

**The Natural Landscape**

Although culture and history appear to have been the most significant factors in the evolution of folk architecture in northeastern Mexico, physical elements such as topography, climate, and local resources, also have imposed certain constraints and requirements on its development and, thus, have served as secondary conditioning forces. The dominant presence of thick-walled, flat-roofed adobe and stone houses and of the fireplace and chimney both attest to the limited resources and extreme temperatures of the largely dry northeastern region. The wider diversity of house types in the sub-humid temperate and tropical regions, on the other hand, demonstrate a less harsh climate and a more ample supply of various building materials. According to Tamez Tejada (1993), this region consists of four physiographic regions, the plains, or *llanuras*; the coastal lowlands, or *región costera*; the mountainous region, or *sierra*; and the high plain, or *altiplano* (Figure 1.1a). Similarly, Prieto and Carrillo (1978: 56-66) have determined three climatic regions, which are dry, temperate, and tropical. Additionally, Dicken (1939: 128) established four physical regions based mainly on elevation, which include Basin-Range,
Sierra Madre, Piedmont, and Coastal Plains. Tamez Tejeda's (1993) classification, however, seems to be most appropriate for purposes of this study, as each of his regions corresponds to a particular set of available local resources used in house construction, as well as to elevation, climate, and vegetation.

The *llanura* comprises the region between the Sierra Madre Oriental in the southwest and the Río Grande, or Río Bravo, in the northeast and between the desert climates of the altiplano in the west and the coastal region in the east. It varies in altitude from zero to 700 meters above sea level (Figure 1.1b). This region is characterized primarily by a hot, dry steppe climate (Figure 1.1c). The drier interior contains xerophytic vegetation, known as chaparral, or *matorral*, which consists of cacti, agaves, yucca, and thorny trees such as mesquite, huisache, and ancahuita (Figure 1.1d) (Cozzens 1938; Prieto and Carrillo 1978; Tamez Tejada 1993).

The *sierra* pertains simply to the higher elevations of the Sierra Madre Oriental, which extends from northwest to southeast. Elevations range from 1200 to 3200 meters, and the highest peaks reach 3700 meters above sea level (Figure 1.1b). The windward side is that which faces the Gulf of Mexico and is characterized by a temperate climate and forests that yield an abundance of conifers and live oaks. The leeward, or west, side, on the other hand, is dry and cold and only fosters desert chaparral-like vegetation, made up mostly of agaves, cacti, and small, scruby bushes (Figures 1.1c and d) (Cozzens 1938; Prieto and Carrillo 1978; Tamez Tejada 1993).

Juxtaposed between the Sierra Madre Oriental, the Sierra Madre Occidental, the *llanura*, and the Río Grand, the *altiplano* is the most extensive physical region in the Northeast. The majority of the states of Zacatecas, San Luis Potosí, Nuevo León, and
Figure 1.1a: Physical Regions of Northeastern Mexico

Source: INEGI
Figure 1.1b: Elevation and Drainage

**Elevation:**

Contour intervals are 300 meters, with the exception that the 300m contour line has been omitted.
Climate

A(w) - Tropical Wet and Dry
AC - Humid Subtropical
BS - Semi-arid (Steppe)
BW - Arid (Desert)
C - Cool Temperate
C(E) - Highland

*Note: Climate classification based on Koppen and modified by E. Garcia

Literal Titles of Types:
A(w) - Warm Subhumid with Rain in Summer
AC - Semi-Warm Temperate
BS - Semi-Dry and Dry
BW - Very Dry
C - Temperate Subhumid
C(E) - Semi-Cold Subhumid

Figure 1.1c: Climate
Coahuila are within this zone. Situated at between 1000 and 1500 meters above sea level, the *altiplano* is characterized by a dry steppe climate, with cold winters, and is covered by vegetation types which range from scant desert scrub to chaparrals and cottonwood trees. Due to the lack of usable vegetative building materials and the climatic restraints, the variety of house forms is most limited in this region (Figures 1.1a, c, and d) (Cozzens 1938; Moya Rubio 1984; Prieto and Carrillo 1978; Tamez Tejada 1993).

The *región costera* is that strip of low-lying land between the Gulf of Mexico and the *llanura*, which is bounded in the north by the Rio Grande and in the south by the Rio Pánuco (Figure 1.1b). While it has a more sub-humid subtropical tropical climate in the South, further north the climate is the same as that of the *llanura*. Coastal vegetation is much more abundant and includes palms and hardwood trees, such as ebony, *guamuchil*, *coma*, and *barreta*. This more tropical aspect of the coastal region corresponds largely with Huastec culture region, further south (Figures 1.1c and d). Especially here the variety of house types is at its greatest, when compared with the remainder of the northeastern region of Mexico. These conditioning forces, along with the multitude of cultural influences which are elaborated in the following chapters, have produced a region unique to the rest of Mexico, especially in its folk housing and the cultural patterns which this particular artifact communicates.
Antecedents of Mexican Vernacular Architecture

According to Prieto and Carrillo (1978), the current peasant dwelling in Mexico is a product of both cultural background and natural influences. Historically, the rural folk house is a product of two major cultural traditions, pre-Columbian, especially Mesoamerican, and Spanish. Gritzner (1969), Winberry (1968), and Jordan (1988) add further influences from northern Europeans - especially Germans and Austrians - and Anglo-Americans. Physical factors that have conditioned the evolution of the peasant dwelling include climate and available natural resources (Prieto and Carrillo 1978). West (1974) reiterates, however, that the evolution of Mexican folk houses has been dependent more upon cultural factors than upon natural ones; the case of the flat-roofed adobe dwelling provides an example.

As for the architecture of the pre-Columbian peoples of Mexico, much of its description is based on conjecture, due to the perishable materials often used and the consequent lack of evidence. Through such works as the Florentine Codex (1564-1565) however, the Spaniards made detailed accounts of the different dwelling types they encountered, from the humblest to the noblest. In fact, quite a variety of dwellings are described and illustrated, as the Spanish were quite astonished to see not only mean huts of thatch and wattle but substantial houses of fine masonry (De Sahagún 1963; Moya Rubio 1984; Prieto and Carrillo 1978; Yampolsky 1993). Perhaps, the most distinguishing feature that these colonizers noticed was the presence of flat-roofed houses, especially
among the Aztecs and Tlaxcalans. Many individuals, such as Cervantes de Salazar, were impressed with the apparent functionality and efficiency of such buildings and claimed that this method of construction even resembled the cities of Andalucía and North Africa (Kubler 1948).

The diversity of pre-Conquest housing tended to correlate with social status. Similar to many of the rural dwellings seen at present, the majority of the Indians, who were at the bottom of the social ladder, resided in thatch-roofed huts. The geometric forms of these huts were either circular, apsidal, or rectangular. If walled, the various methods of construction included the use of planks, wattle, or bamboo, in either a palisade, interwoven (in the case of wattle), or horizontal fashion. This was often covered with daub and, thus, referred to by the Spaniards as *bajareque* (López Morales 1993a; Mendieta y Nuñez 1939; Prieto and Carrillo 1978; Yampolsky 1993). Additional wall materials included non-corner-notched logs and adobe or stone masonry. In addition to thatch, some roofs were of wood shakes.

The dwellings of those who were of higher social standing were flat-roofed houses of adobe or rubble stone masonry, known as *mamposteria*. These were often plastered with a stucco made of lime, sand, and water, and then painted with a variety of colors based on natural pigments (López Morales 1993a; Mendieta y Nuñez 1939; Prieto and Carrillo 1978; Yampolsky 1993). In many cases, these different classes of vernacular architecture, in form, have continued to survive until the present with surprisingly few modifications, most of all in remote regions where communications are limited (Kubler 1948; Prieto 1978). Perhaps, the most intact and least modified forms of surviving pre-Columbian folk housing include the house built from maguey (*Agave Littaea* and *Agave Agave*) leaves,
found in the Valle del Mezquital (Hidalgo); the apsidal Mayan house, found throughout the Yucatan Peninsula; and derivations of the latter, found throughout the Huastec region (López Morales 1993b).

Most varieties, however, of Mexico’s architecture - whether high style or vernacular - have been subject to a process of syncretization, or “mestizaje,” since the first days of Spanish settlement. This process implies the rapid adoption of Spanish techniques, materials, and styles by the indigenous builders and the consequent modification and alteration of most building forms. In this way, both European and indigenous elements have continued to constitute many varieties of Mexican vernacular architecture since “day one” of the Spanish Conquest (Yampolsky 1993). Thus, many houses built by indigenous people during the last two centuries, such as those mentioned and illustrated by Mendieta y Nuñez (1939), have retained the same basic appearance as during the pre-Conquest periods but, in material composition, have undergone modifications.

Just as quick as the Spaniards began to settle and build in Mexico, the Indians began to copy new construction methods and incorporate these into their own structures. By 1572, they began to use windows and to divide the interior space of their dwellings into separate rooms, each with a particular function (Kubler 1948). In addition, they quickly began to construct corner-notched log cabins with the adoption of more efficient tools, such as the steel ax - hacha - and adze - hachazuela - brought by northern Europeans (Winberry 1969). They adopted new materials, such as the fired clay brick, known as tabique; slate roofing; and clay roofing tiles, which can be the semicircular (teja canalada, also known as teja árabe), flat (teja plana), or flat and grooved with a lip (teja engargolada). Apart from these new materials, the conquerors brought materials that were already known and

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used in a similar form by the Indians. These included adobe bricks, wood, *cal y canto* (stucco made of lime and pebbles), stone, and rammed earth, known as *tapial* in Mexico and *pisé* in Spain (Prieto and Carrillo 1978; Yampolsky 1993). For this reason the process of *mestizaje*, additionally known as *tequitiqui* in Aztec, began almost immediately not only with humans but with their dwellings, as well (Yampolsky 1993).

During the sixteenth century, two basic Spanish houses were transplanted into Mexico, the popular architecture of the poorer rural classes and the high style of the urban elite. While the former consisted of a one- or two-room house made of either solid block stone or wood, the most popular style of the latter was the Andalucian patio house (Kubler 1948; Prieto and Carrillo 1978). Many of the colonial patio houses in central Mexico - with their arcaded galleries, cool, green patios, and iron window grilles - clearly resemble those of Andalucía. A major element of Mexican high style as well as folk architecture, which has continued until the early twentieth century, is the *zaguán*, or vestibule which connects the inner patio with the street. This vestibule, known in Arabic as *ustuwan*, signifies the link between the public outer world and the rest of inner private space of the home, which revolves and is, thus, built around the verdant patio. This courtyard is usually surrounded by an arcaded gallery and contains vegetation and, if possible, some source of water, thereby, providing a form of climate control for the house. This gives evidence of the import of what was a product of the two cultures, Christian Spanish and Moorish/Arabic-derived Mudejar, which had become integrated during the Reconquest period in Spain. The blending of these Old World traditions with the autochthonous cultures which occurred during three hundred years of colonization produced a diverse
range of vernacular architectural styles and forms which characterize the many regions of the Mexican republic (Prieto and Carrillo 1978; Weckman 1992; Yampolsky 1993).

**Culture Groups of the Northeastern Frontier**

Syncretization became even more pronounced in the northern frontier of New Spain, to what we often refer as the Spanish Borderlands. Perhaps the northeastern half of the Spanish Borderlands, once known as the Provincias Internas de Oriente, with its regional coherence best demonstrates this process of syncretization. This process evolved over the last four hundred years with the mixture, or *mestizaje*, of basically four different ethnic groups, in addition to the Huastecs in the southeastern corner of the region, thus, making it five groups of varying ethnic origins. Until the latter decades of the sixteenth century, the various nomadic Chichimec groups were the only inhabitants living in this wild frontier, with the exception of the more sedentary Huastecs who were living further to southeast in the tropical lowlands. As the Spaniards already had been successful in subduing and pacifying the sedentary Mesoamerican indigenous groups of central Mexico, their quest for mineral wealth and their need and desire for controlling the violent, barbaric Chichimec nomads brought them to the frontier regions further north. In order to more effectively execute their scheme of colonization and exploitation, the Spaniards brought with them indigenous Tlaxcalans from central Mexico as well as African slaves, who were imported mostly from the Congo region of that continent (Flores Salazar 1993).

In addition to these five groups, the push westward of the United States during the nineteenth century subjected the northeast Mexican borderlands to the influx of yet another cultural group, especially Anglo-American and other European groups represented in this new North American republic. The influences of these six major ethnic
groups are all represented in several facets of the culture of the northeastern borderlands, also known as “El Gran Norte” or “El Regiomontano” (Flores Salazar 1993; López Morales 1993a). The syncretization of these influences is most visibly and spatially represented in the material features, namely the dwellings, of the cultural landscape. Edwards (1980, 1988, 1993, 1994), Okude (1986), Oszuscik (1988), and Vlach (1975) have contributed further to research on cultural syncretization and how it has effected folk dwellings in the colonial world, however with emphasis on the Caribbean and the southeastern United States.

**Pre-Columbian Cultures of the Northeastern Borderlands**

**Chichimecs**

Unlike the central and southern portions of Mexico, which were occupied by the high civilizations of Mesoamerica, much of this arid northern frontier region was occupied by a multitude of nomadic and semi-nomadic, hunting and gathering tribes, of which have been assigned the broad category of Chichimecs. These tribes were considered as barbaric, savage heathens not only by the Spaniards but also by the more civilized, sedentary groups further south in Mesoamerica, as their name “Chichimec” implies. In Nahuatl, the language spoken by the Aztecs, “Chichimec” simply referred to savage, or barbarian, as was this highly civilized people’s opinion of the more northerly tribes. More literally, “Chichimec” was the Aztec term for “of a lineage of dogs” (Flores Salazar 1993; Valdés 1995; Zavala 1996). The Spanish adopted this term and, also, used with much the same sentiment as they did “bárbaro(a),” or barbarian (Hrdlicka 1971). Among some of the more commonly known tribes of this group were the Apaches and the Comanches.
For the most part, the Chichimecs inhabited caves, simple domed structures covered with straw, or palm-thatched huts with walls of wattle and, sometimes, daub (Kirchoff 1971; Tamez Tejeda 1992; Zavala 1993). As these people very seldom intermarried with the Spanish colonizers and as their numbers diminished due to disease and the rigors of slavery, the disappearance of their culture left few vestiges upon the landscape or the present culture of the northeastern region of Mexico. The only exceptions are the cave paintings and petroglyphs, which can be seen to this day in various locations throughout the region (Tamez Tejeda 1993). Perhaps most common and depicted in illustrations during the beginning of the Spanish Conquest of the northern frontier were the domed structures, which had much the shape of a bell (Illus. 2.1). These structures were formed by placing mats of grass or other vegetation over a framework of carrizo (large reeds) or flexible branches, which were bent with both ends planted in the ground in order to form a dome-like structure (Flores Salazar 1993; Zavala 1996). When at war these nomads would group no more than fifteen of these easily movable dwellings in the form of a crescent (Plate 2.3) or in rows, otherwise they would be dispersed on a more individual basis, depending on where each family was hunting at a particular time (Zavala 1996). In addition to this small, temporary, highly disposable structure, the gabled, thatch-roofed house of wattle, regionally known as jacales, was also common among the Chichimec peoples of northern Mexico for centuries. Unlike the former, however, this one continued to be utilized (and perhaps was adopted) by colonizing populations during the Spanish colonial period and so continues to present times. Also, unlike the bell-shaped hut, which was noticed further to the West (especially present-day Nuevo León and Coahuila), the jacal was, and still is, found further east, in the gulf coastal lowlands of what is presently

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Illus. 2.1: Conception of the domed structures in which various Chichimec peoples dwelled before and during the early years of the Spanish colonial period. Arrangement was usually in a semi-circular fashion.
the state of Tamaulipas (Briscoe 1994; Doolittle 1998; Griffen 1983; Kirchoff 1971; Winship 1904).

**Huastecs**

Unlike the rest of the vast northern frontier of New Spain, the more sedentary Huastecs, however, inhabited the southeastern portion of this region, especially the area that corresponds approximately to the Pánuco watershed. Along with this group were the Otomís, as well. During and prior to the early colonial period, this region specifically included the northern portions of the states of Veracruz and Hidalgo, almost all of San Luis Potosí, and the southern portion of Tamaulipas. The northern frontier of this indigenous nation extended further north of what is now Ciudad Mante to the Río Soto La Marina. At present, a reduced number of these people inhabit areas of eastern San Luis Potosí and northern Veracruz and Hidalgo (Basauri 1990; Laughlin 1969; López Morales 1993a; Manrique C. 1969). This can, perhaps, be attributed to the Chichimec invasions and their subsequent occupation, during the sixteenth and seventeenth centuries, of the entire northern portion of Huastec territory (Stresser-Péan 1971).

Dwellings that bear resemblance of this culture, however, are seen well into southern and central Tamaulipas and even beyond the eastern boundaries of Nuevo León. This is perhaps due to the invasions of the Chichimecs and their subsequent adoption of Huastec cultural traits, including house types and becoming more sedentary. In fact, remains of Huastec ceramics have been found as far north as the southern coast of what is now Texas, thereby implying the diffusion of Huastec traits by Chichimecs far to the north of the Huastec culture hearth. Based on language and culture, the Huastecs are the northernmost group of the Maya-Quiché family (Laughlin 1969; Stresser-Péan 1971). This is
evident in their dwellings, many of which are apsidal on both ends – in the roof and, sometimes, in the floor plan. The palm-thatched roof and lime plastered walls also give a similar outward appearance to those of the Mayan dwellings (see Chapter 7) (Laughlin 1969; López Morales 1993a; Moya Rubio 1984; Prieto and Carrillo 1978; Villa Rojas 1969; West 1969, 1975). Other house types of the Huastecs include the semi-apsidal dwelling; the rectangular, gabled thatch-roofed, wattle-and-daub *jacal*, also known as a *casa de pina*; and the circular hut, or *bohio* (Chapter 7) (Basauri 1990; Laughlin 1969; López Morales 1993a; Prieto and Carrillo 1978; Strésser-Péan 1971). The latter has been associated with the influence of the Aztecs and their round temples, while variations of the former two were also known among the Otomís (Manrique C. 1969; Strésser-Péan 1971). It is these three house types, especially the former two, that have been spread far northward from the Huastec culture hearth and as far as Nuevo León. In conclusion, both Huastecs and Chichimecs were responsible for the vestiges of pre-Columbian material culture that are present in the cultural landscape of much of northeastern Mexico today.

**Colonizing Cultures of the Northeastern Spanish Borderlands**

**The Spaniards**

Perhaps, the most dominant culture group to affect the cultural landscape of Mexico’s northeastern borderlands was that which originated from the Iberian Peninsula. It was the Spaniards, in their quest for minerals and converts, who introduced profound changes in every respect to this region since the middle of the sixteenth century. It was they who, also, introduced additional ethnic groups, among them Tlaxcalans from central Mexico and Africans from the Congo region. Even the Spaniards, themselves, come from a long history of ethnic mixing and, thus, can be said to have undergone processes of cultural
syncretization before they ever arrived to the New World. In sum, the Spaniards are basically a mixture of Indo European, Celts, Phoenicians, Carthaginians, Greeks, Romans, Visigoths, Sephardic Jews, and, finally, Moors, who themselves are a mixture of Bedouin Arabs, Berbers, Africans, and others (Flores Salazar 1993).

The first two ethnic groups to inhabit the Iberian Peninsula were the Celts and the Indo European Semites, who were to mix and become known as the Celt-Iberians. Additionally, the Basques arrived early to the northern part of the peninsula, but their origin is yet unknown. Also, early on, around 1100B.C., Mediterranean peoples such as the Phoenicians and the Carthaginians began to conquer and settle in the region. As the Greeks expanded their horizons, they, also, established colonies in the Iberian Peninsula. Subsequently, the mighty Roman Empire expanded its conquest to the peninsula, establishing the Province of Hispania, the name from which that of the conquering culture of Latin America was given. It was this culture which first left a significant, everlasting mark on the cultural landscape of this region, especially in terms of the built environment. To them we can attribute monumental structures such as aqueducts, bridges, amphitheaters, stadiums, baths, and temples, including the first basilicas of the Christian religion. The first example of the latter is the Church of Saint Peter in Zamora. In addition, the Romans introduced important architectural elements, such as arches and vaults. Roman architecture would continue in Hispania, especially under the austerity of the Benedictines of the Franciscan order. A good example of such austere architecture is the Cathedral of Santiago de Compostela, which was erected during the twelfth century. Prior to this time, however, the Roman Empire had fallen and Hispania fell to the reign of the Visigoths during the fifth and sixth centuries (Flores Salazar 1993; Laws 1995).
The next ethnic group that would contribute significantly to both the culture and the architecture of Spain as well as that of New Spain was the Moors. Under the fervor of Islam, the Arab Islamic Empire expanded its territory through the Maghreb, presently Morocco, Algeria, and Tunisia, and into Andalucia, from where the Moors would set out to conquer almost the entire Iberian Peninsula, in 711 A.D. As the Christian Iberians pushed the Moors southward, they established in 913 the Kingdom of León, which was to become the hearth of the reconquest of Castilian Spain as well as of Spanish Castilian culture. By 1492, the same year Spain set out to discover the New World, it succeeded, also, in overthrowing the Moors completely and restoring the entire Iberian Peninsula, with the exception of Portugal, to Christian Spanish rule (Flores Salazar 1993; Laws 1995).

The Moors, however, left an influential mark in the cultural landscape, especially in terms of architecture. Moorish Arabic architecture survives to present in such monuments as La Mezquita (the mosque) in Cordoba, La Giralda (once a minaret), La Torre del Oro (the tower of gold), and El Alcazar (Arabic castle or fortress) in Seville, and the caliph’s palace of La Alhambra in Granada. The syncretization of Spanish Christian with Moorish Arabic architecture generated two styles known as Mozarabic and Mudejar. The former refers that which was designed by Christians who lived in Arab-ruled territory, while the latter refers to that designed by Muslims living in territory reconquered and ruled by Christians. Examples of Mozarabic architecture include San Miguel de Escalada in León. As for Mudejar, a good example is La Puerta del Sol in Toledo (Flores Salazar 1993; Laws 1995; Toussaint 1946).
Elements of Moorish, Mozarabic, and Mudejar cultures made their way, also, to New Spain and even to the northeastern portion of this New World colony. As for house form, these include flat-roofed dwellings with parapets, courtform dwellings, and the central patio, which serve as a microclimate, source of water, and important living space. Other more style-related elements include curved roofing tiles of clay, recessed drainage gutters, lime-plastered walls, exposed brick work, iron window grilles, and other ornate iron work, such as decorative hinges and nail heads on the front of large wooden doors. These contributions made their way to central and even the northern frontier of New Spain (Illus. 2.2a-g). According to Tamez Tejeda (1993, 1998) and West (1974), the flat-roofed adobe dwellings with parapets, recessed drainage in the walls, central patios, and iron window grilles are very reminiscent of those in North Africa. Tamez Tejeda (1993, 1998) even adds that, due to similar architectural elements of other ethnic groups who participated in the colonization of the Spanish Borderlands and the demands of the harsh climate of this region, the vernacular architecture of the northeastern frontier has come to resemble that of Moorish Andalucia and Morocco more so than that of central Mexico.

In addition to the Moors, the Sephardic Jews came to the Mediterranean Coast of the Iberian Peninsula shortly following the fall of Jerusalem in the sixth century AD. Most converted to Catholicism in the sixteenth century and arrived to the northeastern region of New Spain during the middle and latter part of the sixteenth century. They helped found the towns of Zacatecas, Mazapil, and Saltillo. Additionally they aided in the settling of the Provinces of Pánuco (the Huastec Region) and the Nuevo Reino de León. Their culture, which was characterized by discipline, hard work, and austerity, was often clearly represented in the dwellings of the Northeast of New Spain. Thus, according to Flores
Illus. 2.2a: Moorish/Mozarabic/Mudejar contributions to northeastern Mexican architecture. Ornate nail heads and hinges on the doors of the mission church in Vallecillo, NL (circa 18th century).
Illus. 2.2b. Window grilles on flat-roofed adobe dwelling in Paredón, Coah. (early 19th century).
Illus. 2.2c: Window grilles on large flat-roofed patio townhouse in General Cepeda, Coah. (circa 19th century).
Illus. 2.2d: Verdant arcaded interior patio around which house is centered. This is located in Lampazos, NL (circa 19th century).
Illus. 2.2e: Exposed brickwork around doorway of adobe dwelling remains in Paredón, Coah. (circa 17th century). While the dwelling is much older this form of brickwork became common in northern Mexico during the 19th century.
Illus. 2.2f: Recessed drainage system common in many pre-twentieth century flat-roofed dwellings throughout the region. These are located in Parras, Coah.
Illus. 2.2g: Plasterwork over adobe bricks in Villaldama, NL (dwelling circa 19th century).
Salazar (1993a), Sephardic Jewish contributions to vernacular architecture in this region include a lack of comfortable furnishings, a separate kitchen, lack of ornamentation, and exposure of the building materials of the walls, all which generate a very austere-looking structure.

To add to this austerity, the Franciscans, whose fundamentals are based on poverty, chastity, and humbleness, were the particular order of missionaries responsible for the construction of religious and other buildings throughout the northeastern region. Thus, austere seems to be an appropriate characteristic of the colonizing cultures and one that would inevitably influence the architecture, especially the vernacular architecture, of this region. In sum, the architecture of northeastern Mexico resembles the diverse ethnic background of the Spanish, alone, not to mention other groups, as well. Here, as in Spain, elements of Celt-Iberian, Roman, Moorish, Sephardic Jewish, and Mediterranean cultures, in general, are clearly evident (Flores Salazar 1993; Tamez Tejeda 1993).

**Tlaxcalans**

Additionally, non-Mediterranean cultures are clearly manifested in the vernacular architecture of the northeastern Mexican borderlands. Apart from the already mentioned Chichimec and Huastec influences, the Spaniards introduced two other non-European ethnic groups to this region, among them Tlaxcalans and Africans. The former, a group of Mesoamericans who spoke a Nahuatl tongue, also left their mark on the built environment of the region. Originally from the Lake Texcoco region, the Tlaxcalans, or Tlaxcaltecans as they also known, were a civilized, sedentary people and had formed a powerful state known as Tlaxcala. They were, also, the principle enemy of their neighbors, the Aztecs. Due to their political relationship with the Aztecs, they became particularly beneficial to
the Spanish, taking their side in helping to defeat this powerful indigenous nation. Their assistance to the Spaniards furthermore bought them a privileged position in relation to other Indians and, thus, allowed them certain measures of power and freedom in the new Spanish colony (Flores Salazar 1993; Simmons 1992; Tamez Tejeda 1996).

For the Spaniards, the Tlaxcalans were seen as a group of Indians who perhaps could have a positive influence upon and, thus, the capability to civilize and Christianize the hostile and unruly Chichimecs further north. For this reason, the Tlaxcalans became an integral part of the Franciscan missionary effort in the northeastern Spanish borderlands. In fact, they usually outnumbered the Spaniards themselves and even intermarried with them. This occurred due to small numbers and lack of women among the Spanish population and the incompatibility and decreasing numbers of the non-sedentary Chichimecs. Therefore, the Tlaxcalans have played an important role in the process of mestizaje and, consequently, have become an essential element, perhaps the most important, in the ethnic makeup of the “mestizised” northeastern Mexican population (Flores Salazar 1993; Simmons 1992; Tamez Tejeda 1996).

The role the Tlaxcalans played in the Franciscan missionary effort in the Spanish borderlands was significant. Apart from assisting and serving the Spanish friars, they served as teachers, exemplary farmers, free laborers in the mining camps, and as auxiliary soldiers. Due to the increasing hostility of the Chichimecs, as early as 1591 the Spaniards introduced these Native Americans into the region with the foundation of San Esteban de la Nueva Tlaxcala, near the already existing settlement of Saltillo, then a part of the Province of Nueva Vizcaya. Subsequent to this, in 1598, they aided the Jesuit missionaries
in the foundation of Santa María de las Parras, also in Nueva Vizcaya (Flores Salazar 1993; Nuevo León 1988; Simmons 1992).

Additionally, the Tlaxcalans were an essential element in the founding of many other mining, missionary, and military settlements throughout the region and often were the founders themselves. Several of these boasted the name “Tlaxcala.” Among those founded in the seventeenth century were San Miguel de Aguayo de la Nueva Tlaxcala (presently Bustamante), Nuestra Señora de San Juan de Tlaxcala (now Higueras), Nueva Tlaxcala de Nuestra Señora de Guadalupe (now Guadalupe), and the mission of San Antonio de la Nueva Tlaxcala (now Lampazos de Naranjo). They also discovered and founded the mining centers of Real de Boca de Leones (near Villaldama) in 1690 and Real de Santiago de los Sabinas (near Sabinas Hidalgo) in 1693. All of these settlements were located in the Nuevo Reino de León and, thus, demonstrate the important role this particular ethnic group played in the founding and in the mestizaje of this province (Flores Salazar 1993; Nuevo León 1998; Simmons 1992).

In 1688, they founded the presidio of San Francisco de los Tlaxcaltecas (near present Monclova), in Coahuila. These Indians came to almost all of the other Spanish settlements throughout the region, as well. By the early eighteenth century they aided in the founding of missions and presidios such as Santa Rosa de Viterbio de los Nadadores and San Juan Bautista, on the Rio Grande, in Coahuila, as well as San Sabá and San Antonio de Valero, both in Texas. Meanwhile, much earlier, in the late fifteenth and early sixteenth centuries, Tlaxcalans were establishing themselves in the missionary settlements founded by Franciscan Fathers Olmos and Mollinedo in the Huastec Region. Later, under the colonization scheme of Escandón in the middle of the eighteenth century, the Tlaxcalans,
in large part, would populate the rest of this new Province of Nuevo Santander, previously known as the Seno Mexicano (the Gulf Coast region extending from the Pánuco to the Nueces Rivers). In conclusion, the Tlaxcalans would become an important element, from the colonial period onward, in the ethnic composition of the whole northeastern Spanish borderlands, in addition to the rest of the northern frontier (Flores Salazar 1993; Coahuila 1998; Tamaulipas 1988; Simmons 1992).

The influence that this Mesoamerican people left upon the cultural landscape of northeastern Mexico was significant. Apart from their assistance in the cattle ranching culture established by the Spaniards, they contributed largely to the vernacular architecture of the region, due to their notable skilled craftsmanship as masons, carpenters, and blacksmiths. Just as the Aztecs, the Tlaxcalan form of settlement and domestic architecture were similar to that of the Spanish. Similar to the Spanish their settlements were based on a grid-iron plan in which the plaza was at the center and was surrounded by the place of worship, the market, and the other principle buildings, such as government houses and houses of the nobility (Low 1992; Flores Salazar 1993a). Although the Spaniards had already become accustomed to building gabled houses with curved clay roofing tiles by the time of New World Conquest, the house form of the Tlaxcalans, like the Aztecs, was reminiscent of the earlier Moorish-influenced flat-roofed dwellings in certain districts of Andalucia. Like the Spanish and the Mediterranean Arab cultures, however, they were noted for constructing dwellings of the courtform variety. Again, as in the Spanish and Arab cultures, the house was composed of a given number of rectangular units, depending on the economic status of the family, which were arranged in a rectangular fashion around a central garden, or patio. It was the patio that served as an important family living space.
as well as a symbol for the love of birds, plants, flowers, and nature, in general (Flores Salazar 1993a; West 1974).

More uniquely, the Tlaxcalans had the custom of building their dwellings on a raised foundation (approximately one and a half feet), whereby the sidewalk, or banqueta, and, therefore, the house had to be entered by a small set of steps. This was due, so it is believed, to protection from flooding as well as to religious reasons. As were the general traditions of the region, they, also, used only doors, in place of windows, and constructed walls of adobe or stone that were plastered with lime and sand, known as encalado, and were, yet, austere in appearance (Flores Salazar 1993). Thus, while certain cultural traits, Tlaxcalan or other, stand out, many others are shared among more than one culture, thereby characterizing the vernacular architecture of this region as a true syncretization of multiple influences. In this case, the varieties of folk housing mentioned to this point have become what can be considered better as uniquely northern, or even northeastern Mexican, as opposed to being distinctly Spanish, North African, northern European, Chichimec, Huastec, or Mesoamerican.

Africans

Due to the fact that all European colonial powers were involved, at one time, in the purchase of slaves from Africa, Mexico was not immune to this activity. The failure of the Indians to provide an adequate work force for the Spanish colonies, due to mostly to disease and uncontrollability, gave rise to the Spanish desire to import the more robust and disease-resistant Africans, especially from the Congo region. Thus, an additional ethnic group was introduced to not only to central Mexico, but to the northeastern Spanish borderlands, as well. By the mid-sixteenth century, African slaves were employed in the
mines of Zacatecas and Mazapil and by the early seventeenth century they were serving
mainly as agricultural laborers in the vicinity of Saltillo. Additionally they were to be found
in missions, presidios, and ranchos throughout the northeastern frontier, especially by the
eighteenth century, in places such as San Pablo de los Labradores (now Galeana), in the
Nuevo Reino de León. By the mid-eighteenth century, however, the influx of slaves into
the region, as well as the rest of Mexico, had begun to wane. As the Africans mixed with
the other ethnic groups, namely the Native Americans and, to a lesser extent, the Spanish,
the process of *afromestizaje* was underway (Basauri 1990; Flores Salazar 1993; Valdés
and Dávila 1989). Thus, as with the Tlaxcalans, Chichimecs, and Huastecs, the end result
in the racial and ethnic makeup of the region has been the emergence, over the last four
hundred years, of mestizos, and the demise of these distinct groups, with the exception of
the more recent arrival of the Kickapoos.

Architecturally, a similar process occurred with the African influences as with those of the
Tlaxcalans and other groups. As they been accustomed to build in the Congo region, the
Africans, also, built their round, conical-roofed dwelling to the northeastern region of
New Spain. This was a windowless structure, in which the walls were of wattle and daub,
or *bajareque*, and the roof thatched of royal palm. This was nearly identical to round
dwelling that was common among the Huastecs (Flores Salazar 1993). Although the
Africans were present throughout much of the northeastern borderlands, the round
dwellings are seen today only in the Huastec region and somewhat northward thereof, as
far north as the Soto La Marina River, approximately. This, again, leads to the conclusion
that the dwellings in this region, as well as most of those throughout the New World,
represent an amalgam, or rather a syncretization, of various cultural influences.
CHAPTER 3: A HISTORY OF THE SETTLEMENT AND OCCUPATION OF THE NORTHEASTERN SPANISH BORDERLANDS AND ITS CONSEQUENCES FOR VERNACULAR ARCHITECTURE

Spanish Colonization of the Northeastern Frontier

Later known as the Provincias Internas de Oriente, which would include Coahuila, Texas, Nuevo Reino de León, Nuevo Santander, and the Jurisdictions of Paras and Saltillo of Nueva Vizcaya, the northeastern region of Mexico was part of a new frontier that underwent almost two centuries of conquest by the Spanish. This process began during the late portion of the sixteenth century. From its newly conquered region of control in central Mexico, New Spain, this colonial power established five major forms of settlement that would give rise to a more permanent human-built landscape, in this region of predominantly nomadic hunters and gatherers (Tamez Tejeda 1996; López Morales 1993a). Among these were the presidio (military garrison), the mission, the Real de Minas (mining camps), the rancho (ranching settlement), and the hacienda (large estate). It was these five elements which largely set the foundation for vernacular architecture of the region from the colonial period onward. One result of this architectonic contribution was the flat-roofed dwelling, and its various form classes and plan types. This was, initially and most commonly, based on a courtyard layout, whereby the structure as well as life which occurred within, revolved around the central patio. Apart from adobe, this dwelling was constructed of other materials well adapted to the physical conditions of the region. These included cantera (limestone), stone, and tapial (packed earth) (Bannon 1974; Faulk 1979; López Morales 1993a; Tamez Tejeda 1993).
Many of these architectural elements which the Spanish originally brought to central and eastern Mexico — the first regions of colonization — and which the Tlaxcalans brought, as well, made their way northward with the establishment of the Hispanic frontier. As was the case with the conquest of the rest of the Americas, the northern frontier of New Spain (presently the northern states of Mexico and the southwestern states of the United States) was also colonized with four main motives. These included mineral exploitation, pacification of the indigenous peoples, conversion of these natives to Christianity, and their enslavement. Due to the hostility of the nomadic aborigines in this region and the fear of colonization by other European powers, the Spanish also wanted to create a protective buffer zone while, at the same time, civilize the local inhabitants (López Morales 1993a; Tamez Tejeda 1992, 1993). This pattern of settlement allowed for the evolution of several unique styles of vernacular architecture, which together are most prevalent in what is known, also, as "El Gran Norte." This region encompasses the present northeastern states of Tamaulipas, Nuevo León, and Coahuila, and the far northeastern corner of Zacatecas, where the first conquering efforts of Mexico’s northeastern region originated (Bannon 1974; López Morales 1993a; Moorhead 1975; Powell 1978).

Due to the discovery of a silver lode in what is known as the Bajio (the region which includes the cities of Guanajuato, Taxco, Zacatecas, and San Miguel de Allende) and the increasing hostility of the Chichimecs to the North during the mid and late sixteenth century, the Spanish crown decided to foster a campaign for the colonization of the northern frontier. Fundamental to this quest was the effort to “civilize” the nomadic Indians who inhabited this region. Based on chronology and regional occupation, this campaign occurred in two waves, the first of which was initiated by Viceroy Enriquez de
Almanza in 1568, in an attempt to curtail Chichimec hostility. This wave of colonization was focused on almost everything north of the Bajio, as far north as the provinces of Texas, Louisiana, Santa Fe, and California (presently, the states of Texas, Louisiana, New Mexico, Arizona, Colorado, Utah, Nevada, and California). During the same year, another silver lode was discovered further to the north of Zacatecas at the Real de Minas de Mazapil. It was from this point, also in 1568, that Francisco Cano led the first expeditions into the northeastern portion of the Spanish Borderlands. During this same wave of northward conquest a minor, more short-lived series of expeditions, led fully by missionaries, focused further eastward, on the Huastec Region. The second major advance was centered on the settlement of the Province of Nuevo Santander (presently the state of Tamaulipas), which was still largely unoccupied until the middle of the eighteenth century (Bannon 1974; Faulk 1979; López Morales 1993; Moorhead 1975; Powell 1978; Tamez Tejeda 1992, 1993, 1996; Weckman 1992).

**First Wave of Colonization in the North**

**The Presidio**

This first major wave continued until the end of the eighteenth century and was based primarily on the crown’s interest in mineral exploitation as well as pacification and Christianization of the natives. This effort, however, was continually confronted by attack from various indigenous groups throughout what are presently northern Mexico and the southwestern United States. In this way, settlement patterns and, equally, construction methods tended to favor fortification and, thus, heavy security. Climatic conditions, as well, tended to encourage protection from both the extreme heat and cold of the predominantly desert or semi-desert regions of the North. The result of these factors was
the establishment of *presidios*, or thick, adobe-walled forts, along the *Camino Real* from Zacatecas all the way to Santa Fe, New Mexico, and San Francisco, California. Among these were those which gave rise to the more northerly settlements of El Paso (formerly Paso del Norte) and Santa Fe, which were founded during the last two decades of the sixteenth century (Arnal Simón 1993; Bannon 1974; Faulk 1979; Powell 1978; Moorhead 1975).

Some of these garrisons were the beginnings for what have become the more prominent settlements of Mexico’s northeastern borderlands. Four of these were among the very first European settlements in the region, and all were founded by Don Luis Carvajal y de la Cueva, one of the earliest explorers in the region. They include Santiago de Saltillo, which was founded in 1577; Nuevo Almaden (later to become Santiago de Monclova as well as the first capital of the Province of Coahuila), in 1580; Ciudad de León (later known as Cerralvo and was the first capital of the Nuevo Reyno de León), and San Luis Rey de Francia (later Monterrey). It was these four settlements, in addition to Parras, which formed frontier of northeastern New Spain at that time. The latter two were both founded in 1582. Other towns, originally established as presidios during the seventeenth century, included Santa Rosa, north of Monclova; San Pedro Boca de Leones (now Villaldama), to the North of Monterrey; and San Juan Bautista de Cadereyta, to the East (Figure 3.2) (Powell 1978; Coahuila 1988; Nuevo León 1988; Zorilla 1993). With the ongoing threat of the defiant, unrelinquishing, nomadic Indians, more presidios were established further northward during the eighteenth century in the Provincias Internas de Oriente.
Additionally, with the foreseen threat of the French, the Spanish Conquest pushed forth toward to the Rio Grande, with the establishment of the presidio of San Juan Bautista, on the Coahuila side of the river. Subsequently, the Spanish military pushed forward into Texas and established the presidios of San Antonio de Bexar, Nuestra Señora de Loreto, and San Sabá, further into the yet uncolonized frontier of this new province. Here, as well as in the rest of the northern, these garrisons served as protection for the missions and the mining camps alongside which they were built (Figure 3.1) (Bannon 1974; Gerald 1968; López Morales 1993; Moorhead 1975; Powell 1982; Tamez Tejeda 1992; Weckman 1992).

As a result of the Chichimec War (1550-1590) and the consequent need for security and protection in this new territory, the presidio - along with the misión - was not only the first form of settlement but continued to be the most prominent form of architecture throughout the dry North until well into the eighteenth century. Inspired by Moorish castles and defensive towers, this defensive structure served not only as a safe refuge for travelers but also as a garrison for the training and housing of military forces and as an asylum for domesticated animals and peaceful Indians. The presidio was a place where news was exchanged and commerce and trade occurred. The design was such that this place could resist numerous days of constant attack and could hold, normally, up to eighty people (López Morales 1993; Moorhead 1975; Powell 1978; Simón 1993; Weckman 1992).

According to López Morales (1993a: 345), “the ingredients which modeled the architecture of the presidio, as well as the mission and the rancho, included the desert, adobe, and defense.” The structure was massive and enclosing, and was based on adobe-
Figure 3.1: Presidios in the Spanish Borderlands

Source: INEGI

1. Santiago de Saltillo
2. Nuevo Almaden (Monclova)
3. Ciudad de Leon (Cerralvo)
4. San Luis Rey de Francia (Monterrey)
5. Parras
6. Santa Rosa
7. San Pedro Boca de Leones (Villaldama)
8. San Juan Bautista de Cadereyta
9. San Juan Bautista (Guerrero)
10. San Antonio de Bexar
brick construction. Perimeter walls were high and thick and had watchtowers. The roofs of all the buildings – which were also of sun-dried bricks – inside the fort were made of horizontal log beams, or vigas, which were covered, first, with tightly-placed sticks or cane and, finally, with a mud mixture known as terrado. Thus, the roof was flat and commonly known as an azotea (López Morales 1993; Moorhead 1975; Simón 1993; Tamez Tejeda 1992). This style of architecture was well adapted to the physical conditions of the desert as well as to the violence that plagued the region. As López Morales (1993a: 345) concluded, “the desert imposed rudeness, severity, and simplicity upon the architecture.”

The Mission

As the presidio was established principally for military reasons, the misión was a religious institution and, thus, was distributed throughout New Spain’s northern frontier with the intention of pacifying the indigenous peoples and converting them to Christianity. The mission was a religious, moral, social, and industrial establishment that instituted the colonial system for the control of the population in areas occupied by Indians. A mission, apart from the religious buildings themselves, was a settlement of natives who were gathered by the missionaries, who were Spaniards and often Tlaxcalans, either by enticement – often unsuccessful, coercion, or mere force. Being in a sedentary condition, the natives could, then, serve as laborers in the fields and in other tasks and become more easily converted into Christianity and pacified. Although the mission began prior to the emergence of the presidio, Indian hostilities north of the Bajio region quickly provoked the assimilation of this institution with the more secure, militarized presidio (Bolton 1979; Kennedy 1993; López Morales 1993a)
In the northern Spanish borderlands, the Christianization scheme was divided among two orders of the Church, the Franciscans and the Jesuits. The latter concentrated their missionary efforts in the western provinces of New Spain's northern frontier, which included Alta and Baja California, Sonora, Nuevo México, and Nueva Vizcaya. The Franciscans, with their strict ideals of poverty, chastity, and humility, primarily aided in the missionary and colonization efforts in the eastern provinces, among which were Coahuila, Nuevo Reino de León, Texas, and Nuevo Santander, as well as the eastern extension of Nueva Vizcaya. The only exceptions to this rule were the Province of Nuevo México, where the Franciscans were dominant, and the settlement of Parras (in the eastern extension of Nueva Vizcaya), which was colonized by the Jesuits (Bolton 1979; Gómez Canedo 1984; Kennedy 1993; Tamez Tejeda 1996).

Franciscan missionary effort in the northeastern borderlands, what would later become the Provincias Internas de Oriente, began in Zacatecas, in 1546, with the establishment of a convent by Fray Juan de Tapia. Thus, this became the apostolic center of the Province of Zacatecas, which initially included all the territory of the soon-to-be provinces of Nueva Extremadura, part of Nueva Vizcaya, and the Nuevo Reino de León. Subsequently, Mazapil was to be the main point of entry for expeditions into the northeastern frontier. In this campaign, the earliest missions such as San Esteban de la Nueva Tlaxcala, united with Saltillo, and Santa María de las Parras (a Jesuit mission) were respectively founded in 1591 and 1598. These, however, existed as settlements established under the pioneer expeditions of Alberto del Canto in 1568, in the case of the former, and Francisco Cano in 1577, in the case of the latter. As jurisdictions of the Province of Nueva Vizcaya, Parras and Saltillo did not become annexed to the Province of Coahuila until 1787. Subsequent to
these first two missionary settlements in the Northeast, Don Luis Carvajal y de la Cueva discovered and began a missionary settlement in Valle de Extremadura in 1579. In 1596, Don Diego de Montemayor, who established the Franciscan convent of San Andrés, founded this settlement as the city of Nuestra Señora de Monterrey (Figure 3.2). In the same year this city became the capital of the province of the Nuevo Reyno de León, which, at that time, was to include also the future provinces of Coahuila (until 1687), and Nuevo Santander (until 1748) (Coahuila 1988; Gómez Canedo 1984; González 1867; Nuevo León 1988; Tamez Tejeda 1993, 1996; Zavala 1996; Zorilla 1991).

The missionary campaign continued strong throughout the seventeenth century in the northeastern provinces. In the Province of Nueva Extremadura (later known as Coahuila), Franciscan Fathers Juan Larios and Antonio Balcárcel founded the missions of San Miguel de Luna and San Francisco in the immediate vicinity of Monclova, then known as Ciudad de Guadalupe or, more commonly, Coahuila. Additionally, they founded San Antonio Galindo Moctezuma (Abasolo), San Bernardino de la Candela, San Buenaventura de los Colorados (La Madrid), Santa Rosa de Viterbio de los Nadadores, San Buenaventura de los Contotores (Sacramento), and Dulce Nombre de Jesús de Peyotes (Villa Unión), during the same century. While the latter mission was established further to the North, all of the others were located in the central part of the province (Coahuila 1988; Gómez Canedo 1984; Tamez Tejeda 1996-97). During the government of Don Martín de Zavala in the Province of the Nuevo Reino de León, several missions were founded. Among these settlements were Santa Teresa de Alamillo and San Nicolás de Gualéguas, both in what is now the municipio of Gualéguas thus the name, as well as Santa María de los Angeles de
Figure 3.2: Mission Settlements in the Spanish Borderlands
Rio Blanco (Aramberri), San Pablo de los Labradores (Galeana), San José del Río Blanco (General Zaragoza), San Cristóbal de los Gualahuises (Hualahuises), and Guadalupe de las Salinas (Salinas Victoria) (Figure 3.2) (González 1867; Nuevo León 1988; Tamez Tejeda 196-97; Zorilla 1991).

Apart from Zacatecas and Mazapil, the Huastec region had become an even earlier point of entry, especially for Franciscan missionaries, into the northeastern region. However, these ventures of colonization were, for the most part, non-permanent and never made their way further north of the southern portion of what is now Tamaulipas, due to persistent attacks by a tribe of Chichimecs known as the Janambres and to a lack of precious minerals. For this reason the whole Gulf of Mexico coastal region extending approximately from the Pánuco to the Nueces Rivers, then known as the Costa de Seno Mexicano, was considered for a long time as a very troublesome region. For this reason, also, it was not successfully colonized as the Province of Nuevo Santander until the middle of the eighteenth century. The early colonization efforts of this region were limited mainly to the Pánuco watershed, at that time the New Spain Province of Pánuco (Meade 1978; Saldivar 1988).

The first of these endeavors was led by Father Andrés de Olmos, who, in 1544, established the mission of Tamaholipa, located in the present municipio of Villa González in the northeastern portion of the state of San Luis Potosí. In addition he established several other settlements in the Huastec region, especially in the immediate vicinity of the Pánuco River. Among several of these were Santiago del Puerto (now Pánuco, Veracruz), San Luis de Tampico (Ciudad Cuauhtémoc, Veracruz), and Santiago de los
Valles (now Ciudad Valles, San Luis Potosi) (Figure 3.2) (Meade 1978; Saldivar 1988; Tamaulipas 1988; Tamez Tejeda 1996-97).

Following Olmos, Father Juan Bautista de Mollinedo founded several missions in what would later become the Province of Nuevo Santander and, finally, the state of Tamaulipas. Among these were Conversión y Convento de Tula, Conversión y Convento de Jaumave, and Conversión y Convento de Nuestra Señora de los Angeles de Santa Clara (near present Llera), all founded in 1617. The names of these missions clearly demonstrate their purpose, to convert the Indians to Christianity. In fact, all these missions were located near Huastec settlements. Later, in 1627, Mollinedo founded the mission at Palmillas (Figure 3.2). Additionally he founded mission settlements in other portions of the Huastec. Subsequent to these futile efforts, the focus of the missionary and colonization campaign of the northeastern borderlands lay in the arid mountainous and plateau areas of the Nuevo Reino de León and Coahuila (Meade 1978; Saldivar 1988; Tamaulipas 1988; Tamez Tejeda 1996-97).

With the persistent desire and need to pacify and congregate the defiant, nomadic indigenous peoples of the North, the Franciscans continued their efforts through the end of the seventeenth and well into the middle of the eighteenth century in these two northeastern provinces. In addition, they began the Christianization and pacification process in the new provinces of Texas and Nuevo Santander. Among new missions in the Nuevo Reino de León were Nuestra Señora de Guadalupe de Horcasitas (Guadalupe), Guadalupe (Villaldama), and Santa María de los Dolores de la Punta de Lampazos (Lampazos de Naranjo) (Nuevo León 1988; Tamez Tejeda 1996-97). In Coahuila, which was united with Texas from 1691 until 1722, the Franciscans focussed their efforts near
the Rio Grande with the establishment of the missions of Nava, San Juan Bautista del Río Grande del Norte, San Francisco Solano, and San Bernardo. The latter three were located in the vicinity of the present town of Guerrero (Figure 3.2). Of all these, San Bernardo is the only one which has left a permanent, standing monument on the present landscape (Almaráz 1980; Coahuila 1988; Gómez Canedo 1984; Osborne et. al. 1976; Tamez Tejeda 1996-97).

From this point, the friars set forth their missionary campaign across the Rio Grande and into Texas and founded a series of missions. Among these were San Antonio de Valero (currently known as the Alamo), San José y San Miguel de Aguayo, San Francisco Xavier de Najera, Nuestra Señora de la Purísima Concepción de Acuña, and San Juan Capistrano, all of which were located in the vicinity of present city of San Antonio. Other well known missions included Nuestra Señora del Espíritu Santo de Zúñiga, located in the present town of Goliad, and San Francisco de los Texas, Santísimo Nombre de María, Señora de la Purísima Concepción, and San José de los Nazonis, all located in eastern Texas (Figure 3.2). With the exception of the missions of East Texas, the rest of these continue to leave a permanent mark on the cultural and historical landscape of this state. As for the Provincias Internas de Oriente as a whole, it was the missions of the eighteenth century, if any, which were built of more substantial materials and were characterized by ornate high-style architectural details and, thus, continue to exist as historic monuments on the landscape (Almaráz 1980; Bannon 1974; Osborne et. al 1976; Tamez Tejeda 1996-97; 1997).

Physically, the misión itself was composed of an industrial school, where the congregated Indians worked in tanneries, black and gold smithies, artillery magazines, and
agriculture; the church, which was the central element; and a patio with surrounding buildings and thick, high walls. Thus, often it was the missionaries who governed the indigenous population as well as functioned as civil and religious administrators. Unlike the Jesuits, who were more intellectual and had a reputation for worldly cosmopolitanism, the ideals of the, more often, illiterate Franciscans were based on poverty, chastity, and humbleness. Thus, as a result of these harsh religious ideals as well as the protection needed against the frequent Indian attacks and the climatic extremes of the arid North, mission architecture in the Northeast was austere, simple, massive, solid, and functional. It had a simple, geometric form that demonstrated all of these characteristics. In fact, many of the missions built during the late sixteenth and entire seventeenth centuries were simple structures of adobe with either a flat roof of terrado or a gabled roof of thatch, thus having the humble form of a jical. In the case of the latter, wattle and daub was also common. Others were constructed of stone (Bolton 1979; Flores Salazar 1993a; Kennedy 1993; López Morales 1993a; Tamez Tejeda 1996-97). Illustrations 3.1a-c demonstrate standing examples of such architectural traits. Meanwhile, however, many of the mission buildings, again those of the eighteenth century, were the first examples of high style architecture in the region. Such is the case with Mission San Carlos de Vallecillo (circa 1760-1768), in Vallecillo, Nuevo León (Illus. 3.2a-c), or the Bishop’s Palace, locally known as the Obispado (circa 1787-1788), in Monterrey (Tamez Tejeda 1993, 1996; Flores Salazar 1993b; López Morales 1993a).

The Real de Minas

The very earliest form of settlement and architecture to be introduced into the Spanish borderlands was the real de minas, or mining camp. Soon, however these were to be
Illus. 3.1a: Spanish missions established in New Mexico during the 17th century and in Coahuila during the early 18th century. Jémez Mission, in Jémez, NM - constructed of rubble stone.
Ulus. 3.1b: San Esteban Rey Mission - located in Acoma Pueblo, NM and constructed of adobe brick with mud plaster.
Illus. 3.1c: San Bernardo Mission - located in Guerrero, Coahuila and constructed of limestone masonry.
Illus. 3.2a: 18th century mission buildings with façades containing high style architectural details. Church structure located in Mazapil, Zac.

Illus. 3.2b: This church ruin is located in Guerrero Viejo, Tamps.
Illus. 3.2c: Mission church located in Vallecillo, NL.
accompanied by missions and/or presidios. This began with the discovery of the silver lode in 1546 in what was soon to be the settlement of Zacatecas and, shortly later, in Mazapil, in 1568. From there, mining activities spread northeastward to the, soon-to-be, Province of Nuevo Reino de León, with the discovery of silver and other minerals, such as lead, zinc, copper, and gold, and the immediate establishment of mining centers throughout the province. Among these were Real de Minas de San Gregorio (near Cerralvo), discovered in 1577, Real de Minas de San Pedro Boca Leones (near Villaldama) in 1690, Real Santiago de los Sabinas in (near Sabinas Hidalgo) 1693, and Real de San Carlos de Vallecillo (near Vallecillo) in 1766. Other mineral sources included those at El Rosario (in present Chipinque) and Magdalena (near Abasolo), both discovered during the seventeenth century and that near Lampazos, discovered during the nineteenth century (Figure 3.3) (Bannon 1974; Nuevo León 1988; Tamez Tejeda 1993, 1996).

The northern extension of San Luis Potosí, once a part of the Province of Nueva Galicia, was a particularly rich region in minerals and, thus, allowed for the establishment of several mining centers. Among these were Real de la Natividad de Santa María de las Charcas, established in 1574; Cerro de San Pedro in 1592, which gave rise to the city of San Luis Potosi; Guadalcazar in 1613; Real de Catorce in 1733; as well as several others (Figure 3.3). In several of these centers, this activity was reflected in the somewhat ostentatious architecture of buildings such as churches and casas reales (San Luis Potosí 1988). Places such as Mazapil, Vallecillo, Real de Catorce, and Lampazos demonstrate particularly illustrative examples of such high style architecture (Illus 3.2a-c and 3.3).
Illus. 3.3: 18th century silver mining town of Real de Catorce, SLP. Note the high style architectural details in buildings such as the church.
# Mining Centers
1. Zacatecas
2. Mazapil
3. Real de Minas de San Gregorio (Cerralvo)
4. Real de Minas de San Pedro Boca de Leones (Villaldama)
5. Real Santiago de los Sabinas (Sabinas Hidalgo)
6. Real de San Carlos de Vallecillo
7. Magdalena (Abasolo)
8. Lampazos
9. El Rosario (Chipinque)
10. Cerro de San Pedro (San Luis Potosi)
11. Real de la Natividad de Santa María de las Charcas
12. Guadalcazar
13. Real de Catorce

Figure 3.3: Mining Settlements in the Spanish Borderlands
The Rancho

The fourth Hispanic source of vernacular architecture in northeastern Mexico was the rancho, or ranching settlement. This element arose from the industrial training that the missions provided and, like the two earlier settlement types, became the genesis of many cities and towns throughout northern Mexico and the southwestern United States. Perhaps, one of the most presently intact examples of such an institution is the Rancho de las Golondrinas, located in the pueblo of La Ciénega, about eighteen miles south of Santa Fe, New Mexico. It now serves as an open-air museum of colonial rural life in the Spanish Borderlands. This, just as many early ranchos, was a closed and fortified town. As for the presidio, thick adobe walls and a watchtower, or torreón, protected the settlement from frequent Indian attacks. Access from the outside was provided by a zaguán, which led to the main house and its very large patio. This central courtyard was the focal point around which life on the rancho revolved. Additional components within this fortification included everything necessary for a self-sufficient livelihood, such as corrals, kitchen, open-air ovens, dormitories, store-rooms, a gristmill, corn fields, gardens, fruit trees, and various outbuildings (López Morales 1993a).

This form of settlement was based on an economy of cattle ranching, an activity that has dominated the cultural landscape of the entire Spanish borderlands for the last four centuries. The Spaniards introduced this form of land use here as well as throughout the rest of the drier portions of colonial Latin America, whereby agriculture was secondary and mainly for subsistence, only. In the northeastern borderlands, the cattle culture already was going strong by the seventeenth century, during the government of Don Martín de Zavala in the Nuevo Reino de León (González 1867; Nuevo León 1988). To this day,
many ranchos and rancherias, as they are often known, are loose groupings of modest dwellings, which are dependent upon and surrounded by vast expanses of cattle pastures.

Many of the present cities and towns throughout the northeastern borderlands began during the early stages of colonization as ranchos, which emerged simply due to the important economic activity of cattle ranching. Apart from mining, missionary, or military purposes, the remainder of the settlements throughout the region emerged due simply to cattle ranches or haciendas, most of which were dedicated largely to cattle grazing. Among settlements that emerged as simple ranchos were Rancho Lazarillo (now Allende), which began in 1646, Rancho La Manteca (now Los Herrera), also, in the mid-seventeenth century, Doctor Gonzalez in 1710, Rancho San Antonio de Medina (now Mier y Noriega), Los Aldama in 1822, among many others (Nuevo León 1988). Along with this continued settlement type, more affluent forms of settlement and landholding, namely the hacienda, emerged.

The Hacienda

The hacienda began during the sixteenth century in central Mexico as a grant from the Viceroy to those conquistadores who had lent some kind of service to the Spanish Crown. This form of estate, or mayorazgo, was initiated in areas of cattle production and, since, has been characterized as an economically based institution dedicated to exportable monoculture (García Lazo 1966). By the time the Chichimecs were partially pacified, during the late sixteenth and early seventeenth centuries, this institution was being established in what is now the state of San Luis Potosí. Here, as in central Mexico, the haciendas were dedicated, principally, to the production of either mezcal or pulque, liquors derived from fermentation processes of the juice of the agave plant, in the former
case, or the from maguey, in the latter (Del Pozo Rosillo and Cabrera Ipiña de Corsi 1974). During this time, as well, this form of landholding was becoming present further north in places such as Saltillo. Here, however, the case was different, as the haciendas were large estates devoted primarily to cattle grazing and grain cultivation, especially wheat. Due to the mining crisis during the seventeenth century, the cattle and wheat markets collapsed, while, simultaneously, both transatlantic and interior commerce declined. The hacienda, therefore, became a self-sufficient and semi-autonomous unit, which subsisted basically from corn, wool, and a bonded labor force. This expansive form of landholding, also referred to as a *latifundia*, consequently, became notoriously inefficient, in terms of production. In fact, due, also, to the great expanses of arid, non-arable lands in much of the Spanish borderlands, large proportions of these haciendas were completely unutilized and, therefore, unproductive (Chevalier 1963; Cuello 1990).

As well as being a place dedicated to export agriculture, this was soon to become a major symbol of class differentiation between a powerful elite minority and an oppressed majority of peasants, who were referred to as *peones* (Boils 1982). As the haciendas became less efficient, more isolated, and more autonomous, they continued to resemble landholdings characterized by both capitalism and feudalism. In other words, these were systems of production that did little more than allow for the opulent lifestyle of the landowner, or *hacendado*. The relationship between either the *hacendado* or the *mayordomo*, who was the foreman in the case of absentee landownerships, and the indebted *peón*, who toiled the hacienda land, was one of lord and serf. As the Spanish Crown decreased its supervision of the haciendas and their labor forces, the *hacendados* and *mayordomos*, gained ever increasing power as well as discretion to impose law and
order, thereby tightening the chains of bondage and increasing the abuses toward the 
*peones*. According to Tamez Tejeda (1998), “the *hacendado* had a right to everything, 
while the *peón* had a right to nothing.” Through this and through the other early forms of 
settlement, to a certain extent, the Spaniards managed to transplant their feudal, progress- 
resistant culture in the New World (Chevalier 1963).

It is believed that the *hacienda* was derived directly from the *cortijos* of Andalucía, 
which were large, high-walled estates with pretentious courtform buildings and numerous 
auxiliary structures. Such were popular in Spain during the sixteenth and seventeenth 
centuries. In Mexico these estates experienced their peak during the late nineteenth 
century, a period known as the Porfiriato and as a time when the dichotomy between 
wealthy *hacendados* and landless peons became most acute. This situation fomented the 
Revolution, which took place during the second decade of the twentieth century and, thus, 
signified the demise of the great *hacienda* and its expropriation into communal lands 
known as *ejidos*. Northeastern Mexico was no exception to development, dominance, or 
demise of the hacienda, as these were being established throughout the region from the 
seventeenth through the nineteenth centuries (Chevalier 1963; Del Pozo Rosillo 1973; 
García Lazo 1966; Yampolsky 1993).

The morphology of the *hacienda* was based on a large agricultural estate, on which 
landless peasants labored, and a central core of buildings, known as the *casco*. This 
consisted of the big house (*casa grande*) of the owner, who was known as a *hacendado*; 
administrative offices and living quarters; chapel (*capilla*); patio; housing for the *peones*, 
or workers; commissary (*tienda de raya*); school (*escuela*); and other outbuildings. Such 
auxiliary structures included stables (*establos*), warehouse (*bodega*), tannery, brick-kiln
(ladrillera), blacksmith's shop, granary (troje), and corrals. Due to the economic status of the hacendado, the architecture of the casco was generally lavish and was based on a wide range of styles, including Romanesque, gothic, baroque, plateresque, neoclassical, mudejar, or a combination thereof. Usually, the big house, or casa grande, and the casco, as a whole, were courtform structures situated around arcaded patios, known as claustros, because they had the appearance of a convent cloister. Unlike the presidio or the rancho, the hacienda contained pretentious structures in which the high walls, towers, and ornate gateways were more a symbol of wealth and power than of protection (Garcia Lazo 1966; Del Pozo Rosillo 1973; Yampolsky 1993). Thus the hacienda boasted more high-style architecture than did the other early forms of settlement, with the exception of certain missions. The ruins of many of these structures still can be seen throughout northeastern Mexico (Illus. 3.4a and b, 3.5b-d, and 3.6). While the other early Spanish institutions, especially the mission and presidio were to become less significant by the late eighteenth century, the hacienda would continue to dominate much of the cultural landscape of Mexico, in general, until the Revolution in 1910.

**Second Wave of Colonization in the North**

Unlike the first advance of northern settlement, which was initiated by mineral exploitation, the second wave was instigated primarily by Spanish imperial motives to defend the northern frontier against penetration by Anglo-Americans, French, English, and Russians and began during the eighteenth century (Bannon 1974; López Morales 1993a). While much of this campaign was concerned with what is now the southwestern United States and northwestern Mexico, settlement of the Costa del Seno Mexicano was
Illus. 3.4a: Ruins of hacienda cascos throughout northeastern Mexico. Example of main house building with Porfrian era architecture containing Arabesque arches and an Italian Renaissance-style recessed loggia. It is located in Rinconada, Coah.
Illus. 3.4b: 19th century courtform hacienda with symmetrical façade and centered zagucin. It is located in Hacienda Saucillo de Arriba in Arteaga, Coah.
Illus. 3.5a: Hacienda chapels. Chapel at Hacienda Santa Maria in Ramos Arizpe. Nearly all hacienda cascos had a chapel, many which are still intact, such as this one. Despite more recent modifications, it dates from 18th century.
Illus. 3.5b: Still-used interior of chapel at Hacienda Santa María.
Illus. 3.5c: Ruins of hacienda casco at Hacienda El Muerto in Mina, NL, with its chapel still intact.
Illus. 3.5d: Interior of chapel at Hacienda El Muerto.
Illus. 3.6: Other common hacienda buildings, such as granaries and mills. Note the cone-shaped granary (top) and vault-roofed gristmill (bottom) at Hacienda Cerro Gordo in Mazapil, Zac. Both of these haciendas date from the 18th century.
seen as necessary, additionally, due to the existence of hostile Chichimecs who continued their frequent incursions into territory of the Nuevo Reino de León. For this reason, colonization of what was to become the province of Nuevo Santander in 1748 had begun to take place under Colonel Don José de Escandón during the same year. He founded settlements throughout this newly established province, which would extend from the Nueces River and the Bahía del Espíritu (now Corpus Christi Bay) in the North to the Río Pánuco in the South. It was bounded in the East by the Province of the Nuevo Reino de León and the Sierra Madre Oriental (Figure 3.4) (then known as the Sierra Gorda) (Carrasco 1991; Meade 1978; Saldivar 1988; Tamez Tejeda 1993, 1996; Zorilla 1993).

The first villa, or town, that Escandón founded was Santa María de Llera in 1748. Subsequently, in 1749, he founded a series of towns, among which were Nuevo Santander (now Santander Jiménez), the capital from which he governed the new colony, Altamira, Burgos, Camargo, González, Güemes, Horcasitas, Ocampo, Padilla, Reynosa, and San Fernando de Presas. In addition, he reestablished the seventeenth century mission settlements of Tula, Jaumave, and Palmillas, as villas. In 1750 he founded Revilla (later Guerrero), Soto la Marina, and Santa María de Aguayo (now Ciudad Victoria and the present capital of the state of Tamaulipas). Later, he founded Villa de Escandón (now Xicotencatl) in 1751, and Mier in 1753. Other towns founded during this time include Nuestra Señora del Rosario de Santillana (now Abasolo), Presas del Rey (now Aldama), Tetitlas (now Villa de Casas), Cruillas, and San Domingo de Hoyos (now Hidalgo) (Carrasco 1991; López Morales 1993a; Meade 1978; Saldivar 1988; Tamaulipas 1988; Tamez Tejeda 1996; Zorilla 1993).
Figure 3.4: Early Spanish Settlements in Tamaulipas
Like the other provinces in the Spanish borderlands, Nuevo Santander was characterized by the major forms of Spanish colonial settlement, especially missions, ranchos, reales de minas, and haciendas. In this province, also, Franciscan missions were established during the middle of the eighteenth century, after which the Franciscans would renounce their responsibilities in New Spain's northern frontier, thereby ending the missionary campaign. Among these were Mision de los Indios (in Camargo), Nuestra Señora de Guadalupe and San José Boca de Palmas (both in Villa de Casas), San Juan Bautista de Magiscatzin (in González), Antonio de los Llanos (in Hidalgo), San Juan Nepomuceno de Helguera o de Palmitos (in Santander-Jiménez), La Purísima Concepción (in Mier), San Augustín de Laredo (now Laredo, Texas), Nuestra Señora de la Soledad de Igollo Ocampo (in Ocampo), and El Infiesto (in Soto la Marina) (Carrasco 1991; Meade 1978; Saldivar 1988; Tamaulipas 1988; Tamez Tejeda 1996-97; Zorilla 1993).

As for economic beginnings in Nuevo Santander, minerals such as silver, lead, zinc, copper, and gold, were found in the soon-established mining camps of Real de San José (near San Carlos) in 1766 and Real de San Nicolás de Croix (now San Nicolás) in 1768 (Carrasco 1991; Meade 1978; Saldivar 1988; Tamaulipas 1988; Tamez Tejeda 1996-97; Zorilla 1993). As for land use, the Spanish tradition of cattle ranching was established immediately here, just it had been in Coahuila and the Nuevo Reino de León. As the majority of landholdings and settlements, both ranchos and haciendas, became dedicated entirely to cattle grazing, this was soon to be the primary economic activity of the province. Such establishments were found in or near almost every settlement throughout the province since the beginning of colonization. Under Escandón, however, land tenure was somewhat more communal for the early settlers than was the case in the other
northern provinces. Nevertheless, cattle grazed vast expanses of land, while agriculture was centered around the settlements, thus, leaving an impoverished economy and lifestyle for the province (Carrasco 1991; Cuello 1990. With the exception of modern commercial agriculture, especially citrus crops, cattle ranching continues to dominate much of the economic landscape of most of the northeastern region.

During this second wave of colonization, in Nuevo Santander, as well as throughout the rest of the Provincias Internas de Oriente, these early settlements were becoming recognized as formal urban centers. This involved the emergence of poblaciones, lugares, pueblos amurallados, villas, and ciudades. As ranchos began to be grouped together, such consolidations became known as poblaciones, which were, later, centered around a main square, or plaza. The plaza became the focal point, around which the religious and civil governmental institutions, as well as the homes of prominent, elite citizens, were situated (Low 1992). Toward the end of the eighteenth century, ranchos and lugares, which were very small settlements, tended to become consolidated into fortified pueblos amurallados, or walled towns. These types gave way to the more commonly known villa, or town, and ciudad, or city, which became common through the last half of the eighteenth and during the nineteenth centuries (López Morales 1993a). Among some of the more prominent ciudades to emerge during the nineteenth century were the modern port of Tampico, in its present location on the Río Pánuco; Matamoros, which also became an important port; Ciudad Mante; and Nuevo Laredo, which came about due to the Treaty of Guadalupe and the consequent loss of San Augustín de Laredo to the United States of America (Tamaulipas 1988).
The Post-Colonial Period and
U.S. Influence in Mexico's Northeastern Borderlands

Anglo- and European-Americans

By 1821, the colonial period had come to an end, thus, giving rise to the newly independent Federal Republic of Mexico, while, in 1824, the Province of Nuevo Santander became the State of Tamaulipas, as the Nuevo Reino de León and Coahuila became states as well. Mexico, especially the northeastern states, however, was to have its sovereignty temporarily violated by its neighbor to the North and that nation's imperial conquest, known as Manifest Destiny. Starting in Matamoros in 1846, United States’ troops invaded Mexican territory and captured cities and towns such as Guerrero (Tamaulipas), Reynosa, Ciudad Victoria, Tampico, Laredo, Guerrero (Coahuila), Monclova, Saltillo, Monterrey, and places as far south as Veracruz and Mexico City. In 1848, the Treaty of Guadalupe Hidalgo, signed between the United States and Mexico, prescribed the modern-day political boundary between the two nations and, consequently, signified the loss of Mexican territory to the Anglo-American cultural realm. Thus, the boundary was moved from the Nueces River to the Rio Grande, or Rio Bravo, thereby reducing the territory of the state of Tamaulipas and requiring the transfer of Laredo across the river and the establishment of Nuevo Laredo (Tamaulipas 1988; Zorilla 1993).

This proximity to Anglo, as well as other non-Mediterranean European, influences introduced new elements into northeastern Mexico’s cultural landscape. The intrusion of Americans into the Rio Grande Valley and even into northeastern Mexico was definitely present during the last half of the nineteenth and the beginning of the twentieth centuries. While the occupation of Matamoros, in the state of Tamaulipas, by U.S. General Zachary
Taylor, left clear vestiges in the built environment of this city, and an American hacienda owner from Kentucky introduced the corner-notched log cabin to the Galeana area, high in the Sierra Madre Oriental in Nuevo León. Both events occurred during the middle and later parts of the last century (Zorrilla 1993; Winberry 1968, 1974). At the beginning of this century, settlers from Oklahoma and Texas, also, brought with them the log cabin and the traits of corner notching and deep front porches to the humid tropical Huastec region. This element, later, was fused into Huastec dwelling styles (Winberry 1968, 1974).

Additionally, Jordan (1988) mentions Celtic Breton and/or, perhaps, German, Slavic, and Czech influences in the Rio Grande Valley, due to the presence of parapet gabled houses along both sides of the river and especially between the greater areas of China, Nuevo León, and Burgos, Tamaulipas. While, these multicultural influences are a representation of the cultural and ethnic diversity long characterizing the history of the United State’s population, they are also a product of what Manifest Destiny left upon northeastern Mexico’s cultural landscape. Therefore, these culturally distinct house forms, along with those already extant from the pre-Hispanic cultures, have given rise to a region diverse in folk building traditions, most which remain visible today.

The Kikapoo Indians

Another ethnic group which, also, arrived into northeastern Mexico from the United States during the nineteenth century was the Native American Kikapoo tribe. Due to the colonial motives of the French and English and, subsequently, the westward expansion of the American Union, the Kikapoo, who were of the Algonquin family, were forced off their native lands, which originally include the region around and extending from the Great Lakes to the Atlantic Seaboard. Consequently they resettled in other areas, constantly
being threatened by Manifest Destiny and the American move westward, and finally found
themselves settling in the Mexican province of Texas, between the present towns of
Medina and Eagle Pass. As Mexico lost this territory in 1848 to the United States, the
Kikapoo felt the need to resettle near the present city of Múzquiz in the state of Coahuila,
due to the racist policies of the United States government and their mistreatment by local
Anglo-American settlers in Texas. Their main center of settlement since their arrival to
Coahuila has been in and around the village of El Nacimiento, just northwest of Múzquiz
(Basauri 1990; Claverán; Valdés 1995).

The Kikapoo are traditionally a semi-sedentary tribe who cultivates corn and beans
during the summer and hunt during the winter. Thus, they traditionally remain in the same
settlements during the summer, while in the winter they are more mobile. This lifestyle is
reflected in their traditional folk dwellings, which despite the environmental differences
between the Great Lakes Region and northern Coahuila, have maintain their same basic
forms. There are two basic types, which naturally include the summer house, lasting about
four years, and the winter house, which is much more temporary. The former is a
rectangular gable-roofed dwelling, which often has a more elliptical appearance, due to its
rounded corners. The structure is made of crotched poles support the rafters and the ridge
pole. The roof is of thatch and the walls of sotol palm. The winter house, known as a
wigwam, has a rectangular base and a domed roof, supported by an inner structure of
posts and beams and bent sapplings. The roof and walls are covered mats made of leaves
of cattails (Typha catifolia). Modern society, however, has entered into the Kikapoo
realm, whereby, more recently, they often move northward during the summer to the
Pacific Northwest Region, as well as other northern and western states, where they work
as migrant farm laborers (Basauri 1990; Claverán; Valdés 1995). Due to such changes, they have largely abandoned their folk dwellings in preference for manufactured mobile homes, which they import from the United States.

**Conclusion: Consequences for Vernacular Architecture**

The vernacular architecture that survives today in the northeastern Spanish Borderlands of Mexico is that which was derived primarily from the more austere colonial forms, i.e., presidio, mission, real de minas, and rancho. The architecture of the hacienda, the urban casas reales (governmental palaces and homes of the wealthy), and some of the later missions and cathedrals, on the other hand, is that which usually tends to fall into the category of high-style architecture, due their adornment and design by professional architects. All of these elements, in turn however, represent the multitude of cultural influences, such as Moorish Arabic, Celtic-Iberian, Roman, Sephardic Jewish, and Franciscan, among others, which, over many years, became present in Spain and were, subsequently, transplanted to the New World.

Additionally, the vernacular architecture, in particular, was derived from that of indigenous groups native to the region, such as Huastecs, Chichimecs, and, to a lesser extent, Kikapooos, as well as those groups who were brought by the Spaniards from Mesoamerica, namely the Tlaxcalans, and from Africa. With the westward movement and temporary invasion of the Anglo-Americans following Mexican Independence from Spain, further influences were wrought upon the vernacular architecture of the northeastern region. Some influences became more obvious than did others; nevertheless, the general appearance of the traditional built environment in the northeastern borderlands is that of austerity, functionality, and simplicity. Perhaps, the influences of the Sephardic Jews,
Moors, Franciscans, and Tlaxcalans seem to be most apparent. Additionally, according to Tamez Tejeda (1992, 1993, 1995), the extremes of the primarily arid and semi-arid climates of the region have conditioned the built environment and have, thus, added to these circumstances. However, the traditional architecture of the region is that which demonstrates a true syncretization of both Old and New World traits and, thus, has become uniquely what Tamez Tejeda (1992, 1993, 1995) refers to as “norestense,” or northeastern Mexican.
CHAPTER 4. METHODOLOGY:  
THE FIELDWORK EXPERIENCE AND  
GEOGRAPHIC TECHNIQUES USED

Methodological Steps

In order to accomplish a project as suggested here, the basic methodological steps include the selection of specific settlements and routes in which to survey, a descriptive analysis of the folk houses, and a taxonomy of such based on form classes and plan types, whereby specific regions can be defined. Thanks to West (1969, 1974) and his extensive field research on folk housing throughout Mexico and the inventories taken by INAH (1986), much of the descriptive work has been accomplished. The places selected, however, included not only those where West (1969, 1974) made detailed descriptions but, additionally, those which most accurately represent important activities that have occurred throughout the history of the northeastern borderlands. Thus, continuity in a place is essential, while so is avoidance of those places which have experienced processes of modernization and urbanization. Apart from selection, description, and classification, intensive fieldwork and study of literature were the main elements needed to both understand adequately the cultural processes and diffusions that have taken place and, thus, fill the gaps left by previous researchers of vernacular architecture of the region.

Due to the history of the northeastern borderlands region, important activities that inevitably affect the development of vernacular architecture include the missionary and military campaigns that Spain carried out in its New World colonies and, thus, the establishment of missions, presidios, and ranchos. Due to Spain's major goal of mineral extraction, mining centers were, also, an important component of the cultural landscape.
As the Spaniards set up a society based on large landowners and landless peons, the hacienda was another important element in the settlement history of the region, just as it was throughout much of Spanish America. Important non-Spanish elements include sites of sedentary Huastec settlement as well as settlements established by Tlaxcalans, as the Spaniards introduced them into the region. Also to be considered are the areas of settlement of later groups, especially those from the United States and Europe. Due to their historic significance, places such as these should imply more direct information as to the origin and diffusion of particular cultural groups and their contributions toward the built environment. With the element of continuity, from foundation until present, added the evolution and modifications undergone by the folk house types should be understood, thereby facilitating a culturogeographic approach.

The places selected and visited include all of those that were mentioned in Chapters 2 and 3 (See Figures). While most of these towns and small cities boast a wealth of historical dwellings and other buildings, many of these structures have been greatly modified and, thus, have lost much of their ability as artifacts to communicate the ideas in the minds of the people of past cultures. Along with this scenario, many towns, also, have experienced the gradual replacement of folk building tendencies by completely modern techniques, methods, and even whole forms. Thus, vernacular architecture remains only as a vestige of the distant past. Such places that notably communicate an overall loss and/or modification of folk dwelling forms naturally include the larger cities of Monterrey and its surrounding metropolitan area, Cadereyta de Jiménez, Montemorelos, Linares, and Sabinas Hidalgo, in Nuevo León; Saltillo, Monclova, Melchor Múzquiz, Nueva Rosita, Piedras Negras, and Ciudad Acuña, in Coahuila;
Matehuala, in San Luis Potosí; and Nuevo Laredo, Reynosa, Matamoros, Ciudad Victoria, Ciudad Mante, and Tampico, in Tamaulipas. Due to their durability only the historic flat roofed dwellings can be seen in many of these cities, usually in either a heavily modified or museum-like preserved form. All other forms once present have all but disappeared.

Many towns, usually the cabeceras, or seats, of the municipios tend to follow the same scenario. Among these are Cerralvo, China, Galeana, Allende, Hidalgo, Salinas Victoria, and General Terán, in Nuevo León; Arteaga, Ramos Arizpe, San Buenaventura, Cuatrociénegas, Allende, and Nava, in Coahuila; and San Fernando de Presas and Santander Jiménez, in Tamaulipas. Although folk buildings remain in a relatively unchanged state in many other municipal seats, many of these towns, however, lack continuity in folk building trends. In these places, as well as those mentioned above, concrete and steel have given rise to changes not only of materials but of form, as well. For this reason, I, like Kniffen (1936b) in his study “Louisiana House Types,” tended to avoid extensive research in such towns and cities, as these often tend to give a skewed version of the true folk built environment of the region. It was necessary, therefore, to explore more rural areas and even areas immediately surrounding some of the modified and modernized cabeceras. Consequently, it was the multitude of small villages and hamlets, often known as ranchos or rancherías, as well as ejido settlements, which usually demonstrated the richness of northeastern Mexican folk architecture. Notable exceptions to this trend include the relatively sizable historic cabeceras of Parras, General Cepeda, Villa Unión, and Guerrero, in Coahuila; Vallecillos, Lampazos,
Bustamante, Villaldama, and General Bravo, in Nuevo León; and the majority of the *cabeceras* of Tamaulipas.

The general tendency, however, is that the smaller and the more remote the settlement the greater the variety and continuity of folk buildings. Two major regions within Mexico's northeastern borderlands where continuity of folk architecture has become nonexistent include the greater Monterrey area and the whole northeastern corner of Tamaulipas, that is, the area extending from greater Reynosa in the West, to Matamoros in the East, and to San Fernando de Presas in the South. In the latter, even rural areas demonstrate a complete loss of folk building traditions. Figures 4.1a and b demonstrate the places and areas that merited extensive research, as well as those that did not, and routes traveled and surveyed.

The field work necessary in order to be able, later, to establish a folk house classification involved an extensive ethnography, usually, with occupant/owners of folk dwellings. This was extended, when possible, to local craftsmen/builders, as well. The purpose of the ethnography was not only to better understand how the dwellings communicated ideas in the mind and behavioral patterns, but also to get an idea of the dwelling’s age and its form, layout, and material composition. Very important, also, was the necessity to gain an understanding of the changes going in the community and the culture, in regard to modernization and its effects upon building form, methods, technology, and materials. In this way, changes in values and, thus, culture itself could be read. Apart from written field notes, drawings of house plans and photographs of the actual dwellings were taken. Of the 170 houses visited in the entire region of study, all were recorded through written notes from ethnography and through plan drawings. Most
Figure 4.1a: Mexico and the Region of Study
Figure 4.1b: The Region of Study: Routes Traveled and Places Visited
were, also, photographed, and many were photographed from several different angles and some even from inside. Subsequently all written notes, drawings, and photographs were archived into the computer, whereby they could be more easily accessible and efficiently implemented into the manuscript.

The Ethnographic Experience

The analysis and thus the bulk of this study was derived principally from the ethnography itself. All the empirical data, photographs, diagrams, and any other details were products of field experience. The most important, phase of the dissertation began in mid-May and lasted until the end of September of 1998. During this period not every day was spent in the field. Some time was spent in Monterrey and Saltillo where I conducted research in institutions and obtained valuable information from academic professionals. These institutions included the Universidad Autónoma de Nuevo León, the Instituto Nacional de Antropología e Historia, the Instituto Nacional de Estadística y Geografía, the Instituto Tecnológico de Saltillo, and the Archivo Municipal de Saltillo. The academics included mostly architects and historians, notably Antonio Tamez Tejeda and Victor (Erick) Ruiz, both of whom assisted considerably in my ethnography and gathering of data. Monterrey was home for my wife and me for those four and a half months and thus served as a home base from which extensive field trips were conducted.

In order for a written dissertation to be complete and to communicate what the experience was really all about, I will give a narrative of two average fieldwork days. Some field trips would last for one whole day, while others would take from two to ten days, depending on the distance of the destinations from Monterrey. I conducted most of my excursions alone. But other times, my architect/informant, Antonio Tamez, went
along, providing extra information about vernacular architecture and history in the region and introducing places to me he knows well. On long, several-day trips, my wife, Rocío Varela, would accompany me, helping record my field notes and keeping me company.

**Excursion #1**

A normal morning usually began around 7:00AM, when I got up and had a breakfast which consisted of Raisin Bran, a couple slices of papaya or mango, and a cup of instant Mexican Café Combate. All this occurred while frying under the sun which blazed through the large window of the un-air conditioned kitchen. *Hijole*, was it going to be another hot one! Perhaps it was already close to 90 degrees Fahrenheit and surely would be up to 110 or 115 by the middle of the day. After breakfast I gathered my maps, notebook, camera, hat, and gallon or so of water and walked down from our fourth-floor concrete apartment out to the vehicle, which was parked parallel on the street in front of the building. I got into my car, which was a brown 1988 Jeep Cherokee Laredo that had electric windows and locks but for half of the summer had no air conditioning. Fortunately though it was four-wheel drive. I then drove down my street, which was named Calle Filósofos, because all the streets in that neighborhood were named after academic disciplines, e.g. Químicos, Ingenieros, Arquitectos, etc. Too bad I did not live on Calle Geógrafos! My neighborhood was called Colonia Tecnológico, simply because of the proximity of the Instituto Tecnológico de Estudios Superiors de Monterrey, which actually is located just across the Pan American Highway. From there I proceeded down to and through the traffic circle and onto the Pan American Highway, or Carretera México-Laredo as it is more commonly known in Mexico.
That day I turned right on the Pan American Highway and, thus, headed southeast from Monterrey, as my agenda for the day included the highland villages of the Sierra Madre Oriental. I drove on the four-lane, divided highway as far south as El Cercado, just past Santiago, and turned right on the road which heads up to Horsetail Falls. I headed past the falls and further up into the Sierra, where I passed, along with the creek, through narrow gorges that were formed by upturned, towering karst formations. The Sierra Madre Oriental, as a whole, is a marvel of truly fascinating karst topography. Meanwhile, I passed through villages rich with corner-notched log houses and steeply pitched roofs. Also present were many adobe house, which also had pitched, or gabled, roofs that often consisted of wood shakes. Within a short time, a half-hour or so, I arrived to a high valley, much of which once had been a lake and was now dry but full of fertile soils. Here were fields rich with apple and pecan groves, plum trees, nectarine trees, chile peppers, corn, and beans, all of which were surrounded by towering, pine- and fur-clad mountain peaks.

As I entered the village of Laguna de Sanchez, I headed off to the right and up onto a lower ridge which immediately overlooked the rich fields below. When I entered a village, I always took a good drive around the entirety of the place in order to get an idea of the variety of house forms and sizes. I usually selected one or two examples of each major category. For example, I would stop at one gable-entry log house, one side entry log house, one dogtrot log house, one or two small flat-roofed dwellings, one large flat-roofed dwelling, and one side-entry, gable-roofed dwelling that wasn’t built of logs. I tried to be consistent with this rule, except when no occupants were present or I had already studied many other samples of the same house type in other villages. If the
occupants were reluctant to allow me to enter their home and carry on with my ethnography, I knew I must continue to search for another sample of the same or similar house type.

As many houses in the center of the village were built of cement and contained other non-folk characteristics, I headed up the mountain on a winding, narrow dirt road and a short way to the edge of the settlement. I stopped at the first house, which was a four-room long rectangular dwelling with a one-shed roof, that is one that slopes in one direction, usually from front to back. The exterior walls were stuccoed and painted light blue on half and dark blue on the other. Each end had a massive chimney, which I later found out was for cooking. The entrances were all along one side. After I had parked my Jeep, I went and introduced myself to the occupant and told him my name and that I was conducting research on rural house types in northeastern Mexico. I mentioned that I was a graduate student and that I doing this for both the Universidad Autónoma de Nuevo León and Louisiana State University. I said I was interested in the preservation of rural folk buildings, because they are an important aspect of cultural preservation and could be a still-viable means of housing due to comfort and efficiency.

The informant kindly introduced himself as Señor Olvidio Valdez Torres and told me all about his house, his family, and area in which they lived. He talked about the great importance of that large elm tree which shaded the whole front yard area of the house. He referred to this unenclosed area, through which one had to pass in order to enter the house, as the patio. He invited me into the kitchen of his house, where he introduced me to his wife and we began to talk. He talked to me about the dwelling, that is was constructed of both adobe and cantera (limestone), that it was about thirty years old, and
that one half was occupied by his father and the other by he and his wife, thus the reason for the two different colors. The children were grown already and living in Monterrey and Saltillo. He agreed with me that the folk dwellings were much more efficient, that they were cooler in the summer and warmer in the winter than the concrete structures. As I had entered the house I did feel that it was somewhat dark and comfortably cool. After talking about the house and his family, Sr. Valdez led me to his garden plot to show me his crops and tell me about agriculture in general in the area. After our discussion, which took almost an hour, he told me that the neighbors in the area would also be glad to receive me and that I would be welcome in their homes.

I walked across the tiny road over to a corner-notched log cabin and introduced myself to the woman of the house. She said her name was Susana and that her husband was way in the fields working. She was happy to receive me and began to talk to me about her dwelling and explained that her husband built it only a few months ago in somewhat of a hurry and with very limited funds. During this conversation she was cooking tortillas and some sort of soup that was made with small dried fruit seeds. Meanwhile she described the method in which her husband built the dwelling, that he notched the ends of the logs with a chainsaw and that he made the height of the dwelling quite low, as I had to duck my head upon entering. Although the interstices of the walls were chinked with mud, Susana claimed that the house very poorly resisted the cold winter temperatures. She attributed the fact that her six-month-old son froze to death to the poorly constructed walls and the fact that the attic space was not closed off by a lowered ceiling. Finally, she invited me to some of the soup and tortillas, which she had been cooking over an oil drum contraption that was located in the yard in front of the house.
After lunch, which was at about 11:00AM, Susana asked if I wanted to go along with her to take lunch to her father, who lived just up the hill a little ways. I accepted and we proceeded along a small path that led past an old abandoned gable-entry, corner-notched log house and up through a maguey grove to her father’s house. She explained that her father lived solely from the production of pulque, which is derived from the juice of the maguey plant, known as agua miel de maguey. At that time she offered me some maguey juice, which she siphoned out of the heart of the plant and poured into a plastic jug. It was surprisingly tasty and refreshing. After the lesson in the extraction and fermentation of maguey juice, Susana led me to her father’s dwelling, which was a rectangular, three-room long flat-roofed dwelling, built principally of adobe bricks. Upon entering I noticed that the room on the far right had the door and windows boarded up. As Susana was explaining that her brother was mentally sick and thus violent, I heard profanities being shouted from a young man within the boarded-up room. It was indeed sad to see such a poor family and such lack of public medical services. Nevertheless, the house was made entirely of folk materials and built according to folk methods. The roof was of terrado, that is earth placed over wooden beams, known as morillos, and the walls were all of adobe.

Since the father seemed to be in poor health, Susana returned to her house after a short visit, and I got back in the car and proceeded up the road to find another yet different house type. I pulled into the driveway of a side-entry gable-roofed dwelling that was constructed of adobe and plastered with a limey mud, thus the white appearance. The soils throughout the Sierra are very high in lime. Another peculiar aspect of this dwelling was that it had a front porch along one half of the front side. The other half was a closed
room that was used as a kitchen. After I introduced myself in the usual manner to the occupants, one of them led me back to see the rest of the house and meet another occupant who was adding an extra room. This room, however, was a flat-roofed room, just as the room that preceded it. Thus, the older half, only about twenty years old, had a gabled roof and the newer, expanding half had a flat roof. All entrances were along the side and the rooms were all arranged in a linear fashion. After introducing myself to him, he complained of the family’s poverty and the lack of funds to put a roof on that extra room. He asked me if I could ask the government for financial assistance for his community, simply because I told him that I was there on behalf of the Universidad Autónoma de Nuevo León. Little did he know of my complete lack of political power. I could see the need for funding, as both rain and employment were scarce.

After this visit, I visited only one other house, one which was also a side-entry, gable-roofed dwelling having adobe walls and a shake roof. The peculiar thing about this dwelling was that two additional concrete rooms had been added to one end, in linear fashion. The informant, Señor Torres Valdez, described his house, the older gable-roofed part having a lowered ceiling or wooden boards and square beams, or vigas, and an attic, or tapanco, above for storage of com. The most interesting aspect of this interview was the fact that Sr. Torrez admitted the comfort of the older two rooms, only about twenty years, and the relative discomfort of the two newer cinder block rooms, one of which housed the kitchen. He said that when the cement rooms heat up with the heat of the summer days the family retreats to the older rooms in order to cool off. However, he also admitted that the construction of a gable-roofed house with a wood shake roof is far too expensive nowadays, especially because of the strict laws on timber cutting. He claimed
that products such as cement and corrugated metal are far cheaper than traditional materials.

This being the last visit in Laguna de Sánchez, I proceeded back into town and onto the gravel road that leads through villages of the Sierra and finally to Arteaga in the state of Coahuila. For me, the drive was spectacular. The road wound through villages of gabled shake-roofed, whitewashed log dwellings and between towering karst peaks that were clad with evergreens. I stopped in the village of San José de las Boquillas, where I was struck by the abundance of corner-notched log and plank dwellings and the overall lack of flat-roofed dwellings. Many of these log dwellings were of the dogtrot variety. After driving around the village, I parked among a grouping of these log dogtrot dwellings.

As I was walking around I stopped and began to ask a man some questions about who was living in a couple of dogtrots that I had seen and that appeared to be unoccupied. He told me about those dwellings and their approximate age, supposedly around one hundred years, and invited me to his house, which was a sort of elongated version of a dogtrot. This house was said to be about fifty years old and consisted of a line of six corner-notched log pens, each separated by a breezeway. One of these breezeways, however, was quite narrow and had been closed off to form a storage room. Also, one half of the dwelling was currently unoccupied as those family members had moved off to Saltillo. All of the pens, except for the kitchen, had their entrances along the front side. A front porch extended from one end of the dwelling to the other. The gable entrance of the kitchen opened onto one of the breezeways.
After the friendly man led me to his house, he introduced himself as Señor Hector Reyna and began to talk a little about the house and he began to show me around. I was delighted and surprised to see how immaculate and even well decorated the house was and how much Sr. Reyna was proud of it. While he had a quite dignified home, it was obvious he lacked a lot of funds and was of a humble rural agrarian background. The small rooms, however, were arranged neatly with antique furnishings that had been passed down through the family. After the quick tour we started talking about how much house construction methods and forms all together have changed and how it was supposedly cheaper to build of manufactured materials. He definitely agreed with the fact that the folk forms and materials provided a much more comfortable dwelling in which to live and simply attributed the ever more common construction of non-folk dwellings to laziness. Our conversation culminated with a discussion on the loss of values and morals among young people nowadays and how this was the main cause of laziness and thus the loss of certain folkways, among them being house construction. He truly cherished the value of my study and believed that it would lead to success, as he was a man of tradition.

Before I left Sr. Reyna invited into his kitchen for a taste of apple wine, which he made himself and even sold. As I enjoyed the taste of this homemade spirit, while admiring the both modern and traditional kitchen, I decided to purchase a bottle of this delicious liquid. After I pulled out San José de las Boquillas, which was at about 4:00PM, I headed westward through the mountains, crossed the Nuevo León state line, entered the state of Coahuila, and headed straight toward Arteaga. There, I would get the four-lane highway that connected Saltillo and Monterrey and head home. Thus, I left the wooded mountains and valleys of the Sierra Madre Oriental and came out on the dry altiplano that
lay between these mountains and the Sierra Madre Occidental. From there I knew that I
left the relative cool temperatures of the Sierra highlands and the mild dry heat of the
desert only to return to lower altitudes where I was greeted with the suffocating humid
heat and choking pollution of Monterrey, even at 7:00PM!

**Excursion #2**

Another well-representative piece of fieldwork was my two-day trip to General
Cepeda, about thirty kilometers southwest of Saltillo, and the historic settlement of
Mazapil, in northeastern Zacatecas. While I did leave the stifling heat of Monterrey on
this trip, many other trips, namely those around northern Nuevo León and all of
Tamaulipas, involved heat for twenty-four hours. The exceptions of course were after I
got the air conditioning in my car fixed and when I splurged to stay overnight in an air-
conditioned motel. At any rate, on this particular morning I made the ascent from
Monterrey to Saltillo, through which I passed in order to continue westward and then
southward to General Cepeda. Upon leaving Saltillo I was stopped by the Federal
Highway Police, or "Federales." I was pleased to know that he was only checking that I
had my tourist sticker on my front windshield and that the official was delighted with my
command of the Spanish language. This never happened again, except when I got
ticketed by a motorcycle cop in Tampico for running a red light.

Upon arriving General Cepeda, I cruised the town and conducted a reconnaissance of
the dwelling forms. Here, all folk dwellings were of the flat-roofed variety, as was the
case with nearly all settlements of the arid plateau. The only variation was that of the size
and wealth of the homes. The first dwelling at which I stopped had once been of the
wealthier variety. I demonstrated my presence at the entrance to the great zaguan and was
met by a man who claimed to be the caretaker. After my formal introduction, he said he could provide me with no information and that he could not let me in. He said that if I did want to enter and conduct any form of interview that I had to get written permission from the Delegación Municipal, in other words the local authorities. The letters which I carried from LSU and UANL were not sufficient. Then he proceeded to ask me why gringos such as myself come all the way down just to extract information of this type and then said we make fun of the way that Mexicans live, “que se burlan de nosotros (you make fun of us),” he said. After I explained myself he did invite me to see his little garden, or huerto, that he was growing to the side of the house.

Subsequently, I said thanks and that I would come back later with a letter from the authorities and began to make my way to my Jeep. I told him what a beautiful house this was, a large courtform dwelling well built of adobe with a handsome patio and decorative iron window grilles and that it was important to preserve these valuable symbols of historical lifestyles. He retorted that it was nothing, that is was “una chingada,” in other words it was basically dilapidated junk and nothing of which to be proud. This reminded me of another similar experience at rather humble dwelling a few weeks before when I was in a village in northern Tamaulipas. There, I approached a gabled, thatch-roofed house that was constructed of wattle-and-daub, plastered, and very neatly whitewashed. It looked quite picturesque, but the lady of the house, after declining my interview and interest to enter, strongly disagreed. She said that all the whole place, which I thought was quaint, was a disgrace because of all the thatched wattle-daub dwellings. She said “todo esto está jodido,” basically that it is all a messed up and ugly. I definitely gathered
that many people think living in a folk dwelling is humiliating and that they would rather live like Americans.

As I began to leave the caretaker of that great patio house chipped in that I should come back with a bottle of liquor, in addition to the letter of permission. I said OK and began to unlock the car door. He then asked if I was coming back today. I said no. He further asked if I could possibly go to the liquor store right away and bring him back a bottle before I left town. I told him I really did not have the time, that I had to get back to Monterrey. I decided that it was time to find another sample of the same category of house and thus proceeded to another such dwelling on another street. I found another fine courtform dwelling that had a very decorative façade with ornate neoclassical detail and window grilles. I presented myself at the front door, and the lady beckoned me in. She showed me the interior patio and led me back to the kitchen and the traspasio, the area behind the main house that was enclosed by a high adobe wall and service buildings and where the chickens, pigs, dogs, and huerto were kept. She was friendly but not overly talkative. She informed me on what she knew about the house but was not very knowledgeable. As a result of her demonstrated lack of enthusiasm, she expressed no bias or emotion for or against the kind of dwelling in which she lived. This attitude was typical of the majority of my informants. She and her family could be characterized as being of lower middle class standards, but she did say that the house once belonged to and was built about two hundred years ago by a wealthy Spanish family.

I did visit two other dwellings in town before leaving. One was a courtform dwelling of more humble means and another was a linear, three-room flat-roofed house, and thus was much humbler. The visits were unremarkable. I simply introduced myself, being
received in a friendly manner from people who had an indifferent attitude to toward my study and toward their own homes, gathering information, and observing. As I left town I decided to take the more scenic back route to return to Saltillo, when a rainstorm began to dump water. About a kilometer or so outside the city limits I was stopped at a military checkpoint. These are ubiquitous throughout Mexico. I was asked by armed soldiers to take a few elementary school girls to their homes and spare their getting drenched. This I did happily, but unfortunately I was not invited to see their homes or meet their parents. Anyway, it was still raining heavily. I passed through more villages made up of flat-roofed adobe dwellings, conducted a couple of interviews, and proceeded to head south into the state of Zacatecas, where I would spend the night in Concepción de Oro and visit the historic town of Mazapil the following day.

My field experience offered considerable diversity. Informants varied from highly informative to not very informative, from enthusiastic to dull, from friendly and talkative to rude and inhospitable. Working in the field involved driving long distances, getting hot, eating poor food, as well as eating great food, drinking good beer, tequila, pulque, apple wine, and even sherry, and getting a lot of information. Overall it was an enriching experience upon which I will always draw for future work and remember as “good times.”

**Establishment of Folk Housing Regions**

Subsequent to having gathered and entered this wealth of field data into the computer, as well as that from West’s field notes, taken in 1969 and 1975, and the inventory of historic monuments, conducted by INAH in 1986, a means of classifying folk dwellings was established. This process began with the geometric categorization of houses into
form classes, that is, the outward, three-dimensional appearance. The major form classes
easily demonstrated their obvious regionality and, consequently, became known as folk
house form regions, which are a series of overlapping regions. These were further divided
into sub-form classes based on appendages, height, size, location of entrances, or wealth,
or a combination thereof. Subsequently, the major form classes were further classified
into plan types, that is, the two-dimensional floor plan and the different variations of
such. Additional elements such as appendages, construction materials, methods, height,
age, paint, entrances and other piercings, social class, and race or ethnic group were
considered, as well. This allowed for a matching of cultural capability with natural
possibility and thereby a complete understanding of the landscape, as that which is
modified by culture or, rather, as culture modified by nature (Kniffen 1990a).

This task involves not only the utilization of cultural criteria but, also, the observation
of the relationship of the folk dwellings, and, therefore, the particular culture, with the
physical environment. In other words, adaptation to and conditioning by natural elements
such as vegetation, climate, soils, and drainage, play an important role in understanding
cultural processes and, thus, classifying house types (Rapoport 1969). Támez Tejeda
(1993) has accomplished most of this task by simply studying house types according to
the physiographic regions in which they are located. What he does not do is classify them
according to geometric form or cultural history but, instead, relies on construction
materials and methods.

Work in the field also allowed for the detection of the dominance of particular house
forms in certain regions. Once the geographic distribution of particular house types and
the dominance of certain types were established, these phenomena were mapped. This
then allowed for the demarcation of folk housing areas, which could be compared with physical regions as well as cultural and historical regions, i.e., different periods of Spanish colonization, mining, missionary efforts, military campaigns, indigenous cultures, and influences from the U.S and Europe. With the help of an historical approach, as offered by López Morales (1993), and physical approaches, as contributed by Támez Tejeda (1993) and Prieto and Carrillo (1978), this study should provide a better understanding of northeastern Mexico's cultural geographic regionality. Finally, levels of social change due to modernization and industrialization could be detected as areas of folk building traditions and their continuity, existence, or complete disappearance were mapped. All mapping was made possible thanks to the topographic, vegetation, and climate maps provided by INEGI. Utilization of the computer mapping program ARCVIEW facilitated the processing and display of all cartographic information. Therefore, this study of folk housing based on the geometric approach was taken a step further in the technological sense from those of Kniffen, Glassie, Edwards, and others.

According to geometry, recent fieldwork in the region of study facilitated the establishment of five overlapping folk house form regions based, each with its particular form class family, or families. These include the Pan-Northern, Northeastern, Huastec, Huastec and Sierra, and Border Regions (Figure 4.2). Each region corresponds directly with one particular form class family, with the exception of the Huastec Region, which contains three families. The dwellings of the first two regions are most widespread and numerous, while the latter three occur in much more reduced areas. In establishing the major folk house forms, it was also the first two, the flat roofed dwelling and the gable-roofed dwelling, which were the most obvious on the landscape. Generally, most
Figure 4.2: Folk House Form Regions in Northeastern Mexico
dwellings could be seen as either flat-roofed or gable roofed, both based on a rectangular base structure, from which there were several variations, both in form and plan (Figure 4.3). After having established these two major obvious forms, a rectangular box and a rectangular box with a triangle on top, other more unusual forms could then be easily detected. These included the apse-ended dwellings, basically a gable-roofed dwelling with a rounded end, or ends; the cylindrical-based, conical-roofed dwellings; the high and low hip-roofed dwellings; and the dogtrot dwellings, those that contain two separate units united by a common roof structure (Figure 4.3).

By far, the largest folk house form region is the Pan-Northern Region. This basically refers to all of northern Mexico, from the Gulf Coastal Plain to the Baja California Peninsula, and as far south as the Bajío region (Figure 4.2). This region corresponds with the extension of the flat-roofed and one shed, parapet dwellings, which I have classified as the Form Class A dwellings. The flat-roofed folk dwelling, often known as the casa de cuarto, includes six sub-form classes, which are based on period of time, height, and socioeconomic class (Fig. 4.4a). The first class, A1, corresponds to the true flat roofed dwellings, while the second class, the A2 dwellings, have a slightly sloped, one-shed roof. The slope of these usually varies from ten to thirty-five degrees, that of older houses often being more pitched than that of the newer ones. Class A3 and its subclass A3a, while vernacular in terms of materials and form, normally pertains to higher socioeconomic classes than the former and are, in many cases, designed by architects. While A3 refers to a one-story dwelling, A3a includes the two-story dwellings. The only difference in form of these dwellings from the others in this form class family is size (Figure 4.4a).
Principle House Form Shapes

A. Flat-roofed rectangle

B. Gable-roofed rectangle

Other House Form Shapes

C. Apse-ended rectangle

D. High-hipped rectangle

E. Cylindrical base/conical roof

F. Dogtrot

G. Low-hipped rectangle

Figure 4.3. Detection of Principle Folk House Forms in Northeastern Mexico

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Form Class Family A: Flat-roof Folk Dwelling (Casa de cuarto)

Form Class A1:
Flat roof dwelling  (low roof)  (high roof)

Form Class A2:
One-shed Dwelling  (low roof)  (high roof)

Form Class A3:
Patio-Form Flat-roof Dwelling

Form Class A3a:
Two-story Flat-roof Dwelling

Figure 4.4a. Folk House Forms in Northeastern Mexico:
Pan-Northern Flat-Roofed Dwelling Region

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Smaller, but still widespread, are the form class B, or gable-roofed, dwellings, which are concentrated mainly within the Northeast of the Republic of Mexico. While lying within the Pan-Northern region, the Northeastern region extends from the Gulf to where the semi-arid climate gives way to the truly arid climate (Fig. 4.2). This occurs somewhere to the west of the Sierra Madre Oriental. The gable-roofed dwelling, in Mexico known as the *jacal* or *jacalito*, comprises four sub-form classes, which are classified according to orientation of main entrance, height, and style of roof and gables. Form Class B1 refers to the gable entry dwelling, while B2 is the side entry dwelling. Form Class B1a, usually a gable-entry dwelling, is the story-and-half dwelling, which includes a second floor room that serves as an attic, or *tapanco*, where grain, usually corn, is stored. The latter is further divided into three sub classes, according to the character of the front shed extension, or addition (Fig. 4.4). Class B2a includes a front porch included within the main roofline of the whole house, while B2b has an added front porch shed and, thus, a canted roofline. Class B2c also includes the canted porch addition as well as an extra room, which occupies about half of the appendage. The parapet gable dwelling (B4), which may assume just about any one or combination of the plan types, stands out as unique, with its gables extending above the roofline (Figure 4.4b).

The form class families of apsidal (C), hipped (D), and round (E) dwellings correspond geographically to the region inhabited by the same cultures – Otomi, Pamé, and mainly Huastec – responsible for the existence of such structures. The Huastec region corresponds to southern Tamaulipas, eastern San Luis Potosí, northern Veracruz, and the very northern tips of Querétaro and Hidalgo states, and, for the most part, lies within the tropical humid gulf coastal lowlands (Laughlin 1969; Mendieta y Nuñez 1939; Moya
Figure 4.4b: Folk House Forms in Northeastern Mexico: Northeastern Gable-Roofed Dwelling Region
The family of apsidal dwellings, known as Form Class C dwellings, includes three sub-form classes, based on the existence and number of apses (known locally as *culata*) and whether either roof and base structure or only roof is apsidal (Figure 4.4c). Although these dwellings are basically an extension of the gable-roofed dwelling (B), they are believed to be related to the apsidal Mayan dwellings, as Huastec culture is the northern extension of the Maya-Quiché (Laughlin 1969; Stresser-Péan 1971).

The true, complete apsidal dwelling (Form Class C1), locally referred to as the *casa de culata*, is that which has an apse, instead of a gable, on both ends. Both the roof and the base structure are apsed. The apses either form part of one large room or are separate room additions onto a gable-roofed dwelling. In this case, sometimes the apses lack true walls, thus leaving an open space, which serves as a porch or kitchen. In Form Class C2 only the roof is apsidal. A similar situation occurs with the semi-apsidal dwellings (Form Class C3), which have either an integrated apse in the main room or a separate, added-on room (Figure 4.4c). In conclusion, some dwellings are built at once with one or two apses, while others undergo a gradual process of being transformed from a simple *jacal* to an apsidal or semi-apsidal dwelling. Also, within the Huastec Region are the Form Class E and F dwellings. The former refers to the hip-roofed structure and is restricted almost entirely to northern Veracruz and eastern San Louis Potosí states. The latter form class signifies the round dwelling, which, consequently, has a conical roof and, almost always, a single room (Figure 4.4c).

Due to the influx of a few Anglo-American pioneers into northeastern Mexico around the turn of the century, the isolated Chamal and Naranjo Valleys of the Huastec Region
Figure 4.4c: Folk House Forms in Northeastern Mexico: Huastec Dwelling Forms Region
and isolated areas of the Sierra Madre Oriental contain corner-notched log cabins. While the single-pen log house has been adopted as a *jacal* by the local mestizo population, the dogtrot house, with two pens and a central breezeway, remains as an even more distinctive influence of Anglo-American culture (Winberry 1968, 1974). The dogtrot is also concentrated within the folk housing region known as Huastec and Sierra (Figure 4.2). This form class family (G) contains four sub-form classes, the latter (GC) of which demonstrates a blending of Anglo-American and Huastec cultures. These classes were derived based on roof form and, in the case of Form Class GC, the synthesis of the dogtrot with the semi-apsidal dwelling. The three roof-based form classes include the gable-roofed (G1), hip-roofed (G2), and double-gable roof (G3) dogtrots (Figure 4.4d).

Geographically, the most reduced folk housing region, the narrow strip along the Texas/Mexican border, is characterized by the U.S.-style hip-roofed, or Form Class H, dwelling, which dates from the turn of the century (Figure 4.4e). As the construction of these dwellings was limited to the very early part of the twentieth century, the only structures that remain are limited to the border towns of Guerrero and Ciudad Acuña, Coahuila (Figure 4.2). The heavy industrialization and urbanization of the lower Rio Grande/Río Bravo communities has caused a nearly complete annihilation of this and all other folk dwelling forms. Unlike the other form classes, this one simply demonstrates the immediate proximity of an international border and, thus, the easy exchange of cultural ideas.

The derivation of form class families and regions was mostly accomplished from an etic point of view (a point of view established from an outside observer about a particular society or culture). Based upon my observations and conclusions made from
Form Class Family F: U.S. Influence Dwellings – Dogtrot (Casa de pasillo)

Form Class F1:
Gable roof dogtrot

Form Class F2:
Hip roof dogtrot

Form Class F3:
Double gable dogtrot

Form Class FC:
Semi-apsidal dogtrot

Figure 4.4d: Folk House Forms in Northeastern Mexico:
Sierra and Huastec Log Dwelling Regions

Form Class G: U.S. Influence Dwellings – Low Hip-roofed Dwelling

Figure 4.4e: Folk House Forms in Northeastern Mexico:
Border Region

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ethnography, I invented the form classes based on the criteria to which I have alluded. I identified particular features as distinguishing factors in the case of the Huastec apsidal, round, and hip-roofed dwellings and the Anglo-American influenced dogtrot and low hip-roofed dwellings. As for the two most numerous and widespread forms, the flat-roofed and gable-roofed dwelling, I saw increasing cultural preferences for flat-roofed dwellings, which have been present among the mestizo population since the early days of conquest in the North. Based on West's (1969, 1974, 1975) field observations and my own cultural criteria, these form families, classes, and regions were derived entirely from an outsider's point of view.

On the other hand, there was an apparent difference between gable-roofed and flat-roofed dwellings to the occupants. They knew the obvious difference as well as the cultural and environmental pros and cons of each form. A flat-roofed dwelling was often known colloquially as a casa de cuarto and gable-roofed dwelling as a jacal. However, these names were not consistently used throughout the region, nor was there an apparent geography of such. Additionally, while the apsidal forms were often referred as a casa de culata, they also were grouped often under the broad category of jacal. Thus, the emic perspective (a point of view established by someone of his or her own society or culture – an insider's view) toward these house forms exists but is notably vague, except in the case of the A and B forms. From an etic perspective I labeled the form families in a simple A,B,C manner and the form classes of each family accordingly but with numbers.
CHAPTER 5: PAN-NORTHERN
FLAT ROOFED FOLK DWELLING REGION

Often thought to be the most common folk house type in all Mexico, the box-like flat-roofed dwelling is dominant, primarily, in the northern portion of the republic. While it tends to be more common in the drier central and western portions of northern Mexico, it, nevertheless, surpasses environmental boundaries and occurs further east, nearly to the Gulf Coast, as well. In some areas, usually the drier areas, it is very dominant or nearly unanimous, while in others it exists along with several other house types. Though uncommon in northern Mexico and nonexistent in the northeastern region before the Spanish Conquest, thereafter it was to become a commonplace feature on the cultural landscape and one that even began to displace other traditional dwelling forms throughout the region. As a dwelling type believed to have its origins in at least three different cultures, this began as one that was easily adapted to dry climates, while, on the other hand, it more recently seems to be a dwelling that easily adapted itself to prestige values regardless of climate. For this reason, as tends to be the case with other folk house forms, as well, human behavioral patterns, culture in other words, have been greater factors in the distribution of the flat-roofed dwelling than have physical factors.

**Origins and Dispersal of the Flat-Roofed Dwelling**

As mentioned in Chapter 2, the flat-roofed folk dwelling has been popular since ancient times, especially in the dry world, and has made its way from Central Asia, through the Middle East and North Africa, finally to the southern portion of the Iberian Peninsula, simply by means of cultural diffusion. Perhaps the Arab-Islamic culture with its religious fervor and thirst for conquest was the main agent responsible for the spread,
through expansion diffusion, of this simple, functional rectangular-shaped dwelling. From southern Andalucia, the idea was shipped across the Atlantic to Spain's new colonies.

However, this basic house form had already been long known among certain New World indigenous cultures. As explained earlier, this dwelling was already common among the Mesoamerican civilizations of central Mexico (e.g. the Aztecs and Tlaxcalans). Additionally, however, it was known among more northerly cultures, such as the Anasazi and Pueblo Indians of New Mexico and Arizona and the Mayo, Yaqui, and Pima Indians of northern Chihuahua and Sonora. Sites such as Casas Grandes, in Chihuahua, Homolovi Pueblo, in Arizona, and the numerous Indian pueblos and archaeological sites throughout New Mexico and southern Colorado, attest to the pre-Hispanic existence of such dwellings. Doolittle (1998) also attests to its early existence in Sonora. The box-like flat-roofed dwelling appears to have been the dominant house type of most of the sedentary indigenous peoples who occupied what is now Chihuahua, Sonora, Arizona, New Mexico, and southern Colorado. Thus, at the time of Conquest, the flat-roofed dwelling was found at two extremes of the colonial Spanish borderlands, in the Central Valley of Mexico among the Aztecs and Tlaxcalans and far to the north, among the farming cultures of the American Southwest and northwestern Mexico. The intermediate and eastern regions, however, did not experience the introduction of this house form until Spaniards and Tlaxcalans began colonization of New Spain's northern frontier.

The Spanish colonization campaign in the northern borderlands became represented on the cultural landscape through the earlier mentioned settlement and building forms
(e.g. presidio, mission, rancho, real de minas, and hacienda). It was these which gave rise to the wide distribution of flat-roofed dwellings throughout most of northern Mexico, from as far south as the present states of Aguascalientes, Jalisco, Guanajuato, Querétaro, and Hidalgo, and as far north as New Mexico and central and western Texas. While, after the sixteenth century the Spaniards tended to erect tiled gable-roofed structure in central Mexico, in the northern frontier they, along with the Tlaxcalan, Mexica, and Otomi Indians, continued to prefer flat-roofed dwellings. Furthermore, they merged this flat-roofed rectangle with that of the northern sedentary indigenous peoples.

According to West (1974), defense and prestige seem to be the two main promoters of the flat-roofed dwelling in the northern frontier. Just as the Aztecs appreciated this form of dwelling for its defense qualities, so did the Spanish colonizers who were pushing northward among the ever threatening attacks from the nomadic Chichimec peoples. Also, just as the Aztecs and other central Mexican peoples revered the flat-roofed dwelling as the one that belonged to noble class, this was to become preferred among settlers in the North, not only for defense but also for its prestige value. For this reason, when affordable, preference was given for the construction of rectangular, flat-roofed structures as opposed to the thatched gable-roofed dwellings, which have always been common mostly among people of lower socioeconomic classes. In this way, as Tamez Tejeda (1993) concluded, the Spanish, apart from adopting indigenous built forms, were erecting a landscape that was more reminiscent of Moorish Andalucia and North Africa than of re-conquered Andalucia, the rest of Spain, or even post-sixteenth century central Mexico. In conclusion, the flat-roofed dwelling, as a synthesis of primarily Spanish,
Aztec, Tlaxcalan, Pueblo, Yaqui, and Mayo, and Pima elements, is a clear example of the legacy of “mestizised” folk architecture in northern Mexico.

Due to the values of prestige and defense, presidios, missions, ranchos, mining camps, and haciendas, all included primarily flat-roofed dwellings. Given the frequent Indian hostilities in the North, defense was an important quality in any form of settlement or structure. The harsh climatic conditions of the predominantly dry northern frontier further, with its temperature extremes and intense solar radiation, made this an adequate architectural form, just as in the drier regions of much of the Old World. For this reason, mission, presidio, and ranching settlements all incorporated this popular form. Like the Aztec nobles, Spanish nobility also preferred flat-roofed buildings for their haciendas and for their urban residences and offices, known as casas reales or casas señoriales. If only a gable-roofed dwelling could be afforded it was usually temporary and, at some point in time, was replaced by a more substantial flat-roofed structure. Even though this was a dwelling of prestige, early Spanish grain farmers and ranchers often employed this form in their humble frontier settlements. Thus, the flat-roofed dwelling has been characterized, in northern Mexico, both as one of social prestige and as one of humbleness and austerity, conditions that the northern frontier environment imposed on the settlers.

While the frontier conditions in northern Mexico fostered the extensive dispersal of the easily adaptable flat-roofed dwelling, so did most of the cultures occupying the region. Thus, the spread of this architectural form tended to follow the routes of Spanish colonization. From the early mining settlements in the Bajio region and Zacatecas, the flat-roofed dwelling made its way into northeastern Mexico, first to Parras, Saltillo,
Monclova, Monterrey, and Cerralvo, and shortly later to the rest of the region, finally making its way into more recently colonized Tamaulipas. Soon, ranchos, haciendas, and casas reales, throughout rural and urban areas of the whole region were adopting this form of architecture. Remnants of many haciendas, can be seen throughout the region today, while quite a few, at least parts of such, are still being inhabited, usually by people of marginal economic standing (Illus. 5.1). Currently, in northeastern Mexico, the flat-roofed dwelling can be found everywhere, except in the Huastec region, that is, in historic terms, the southeastern portion of Tamaulipas – roughly everything south of the Soto la Marina River and east of the Sierra Madre Oriental. This region, also, corresponds approximately with the only portion of the sub-humid tropical climate in northeastern Mexico. That is not to say, however, that climate is the main reason for the absence of flat-roofed dwellings in this particular area, as these can be found in other relatively humid areas, as well. This varies slightly from West’s (1974) version of the distribution of the flat-roofed dwelling and, thus, confirms his theory that prestige has allowed further eastward expansion of such (Figures 5.1 and 5.2).

The flat-roofed folk dwelling is a perfect example of the more important role which culture plays, as opposed to the natural environment, in the geographic distribution of folk housing forms. Going back to Rapoport (1969), this house form demonstrates clearly how the environment can be an important conditioning factor. This seems to explain why this dwelling form is more dominant in some areas than in others. While harsher dry climates usually tend to limit the variety of house forms, more humid climates tend to allow a greater variety. In the northeastern borderlands, the flat-roofed folk dwelling is by far the dominant form of the central plateau, known in Mexico as the altiplano, which is
Illus. 5.1: Remains of hacienda *casco* at Icamole, NL. Row of attached rectangular flat-roofed rooms, each which currently serves as a separate dwelling. Note the recessed drainage and the painted plaster (made of mud and lime), which covers the adobe walls.
Figure 5.1: Distribution and Dominance of the Flat-Roofed Dwelling
Figure 5.2: Distribution of the Flat-Roofed Dwelling in Northern Mexico in the Early 1970s, According to Robert. C. West
characterized by a desert climate. For example, the towns such as Parras and General Cepeda, in Coahuila, and Mazapil and Cedros, in northeastern Zacatecas, are entirely composed of flat-roofed structures, modern or old. No other folk house forms exist in these towns, not to mention many of the surrounding *rancherias* and *ejidos* (Illus. 5.2). Further east, in the dry steppe, mountain, temperate sub-humid, and tropical sub-humid climates, competition increases and the flat-roofed dwelling progressively becomes accompanied by other forms (Figure 5.1). Thus, while physical factors such as climate and vegetation either allow for diversity of house forms or limit such, culture ultimately explains their overall distribution.

**Form Classes and Plan Types of Flat-Roofed Dwellings**

While the flat-roofed dwelling represents a variety of cultural influences and an extensive geographic distribution, it also has evolved into an ample variety of forms and plans. Although it is commonly referred to as the flat-roofed folk dwelling, especially by West (1974), its roof can be either completely flat or can have a variable amount of pitch but always lies within parapets, at least on three sides. Nevertheless, in either situation, it retains its rectangular, box-like appearance and is often referred to as a *casa de cuarto*, regardless of whether the roof has a slope or not. As plain and simple as this dwelling may seem, it also varies in height, usually according to the socioeconomic standing of the original occupants and whether it is in a rural or urban context. It can vary from a humble one-room structure to a grandiose courtyard mansion, depending upon both the extension of the floor plan and the level of design. In either case, however, it remains to be a vernacular and even folk dwelling due to its material composition, construction techniques, and basic geometry. In the case of historical northeastern Mexico, the hand of
Illus. 5.2: Entire village of Cedros, Zac. Just as many other towns and cities throughout the truly arid portions of northern Mexico, it contains only flat-roofed folk dwellings, as seen here.
an architect simply would “put the icing on the cake” so to say. Just as a cake is a cake, adobe or stone walls are adobe or stone walls, and earthen roofs upon wooden beams do not change either. The ornate decorative details are what change only the superficial appearance, but not the form.

**Form Class A1: The Flat-Roofed Dwellings**

The humbler flat-roofed dwellings, which tend to be the majority, correspond to form classes A1 and A2 and, thus, include the simplest form, or base module, the one-room box. Both of these form classes have experienced similar expansions of the base module into various floor plans, thus giving rise to an array of plan types for the flat-roofed folk dwelling. While A1 refers to the true flat-roofed dwelling, A2 refers to the same box-like dwelling that has a roof sloping in one direction, in other words, a one-shed roofed dwelling. The Form A1 dwellings can often, but not always, be clearly differentiated into two further sub-form classes, based largely on height. The squatty-looking low-roofed dwellings tend to vary from 7 to 9 feet in height, while the higher roofed dwellings usually vary from 10 to 14 feet. In historical terms, the A1 dwelling, especially the lower roofed version, appears to have been the norm among the first settlers during Spanish colonization in northern Mexico, as well as among the above mentioned indigenous peoples in the western portion of the Spanish frontier. Perhaps the A2 and A3 dwellings were also present at this time but information regarding this matter appears scarce, with the exception of the known existence of *casas reales* and haciendas. In the early colonial period, however, these also were often much humbler structures than those of later times, namely the eighteenth and nineteenth centuries (Illus. 5.3 and 5.4).
Illus. 5.3: Conception of a seventeenth century hacienda, by architect Franklin Fernández Escamilla (Zavala 1996). Note the simplicity of the buildings and the relatively low level of the roof of the main house.
Illus. 5.4: Casa señorial built in the late eighteenth century in Cedros, Zac. Although built somewhat later and belonging to the A3a Form category, its simplicity and austerity (i.e. lack of any ornate façade decoration) mimics that of many A1 dwellings. It is differentiated from the latter, however, due to its complete courtform plan, center zaguán, and second story.
Not only were the living quarters of the early presidios and missions of the more squatty flat-roofed version, but so were many of the individual dwellings of many of the very first Spanish farmers and ranchers throughout Nueva Galicia (modern states of Jalisco, Aguascalientes, and Zacatecas), the Bajío Region (states of Guanajuato and Querétaro), and Nueva Vizcaya (states of Durango, Chihuahua, and Coahuila). By the early seventeenth century, under the government of Don Martín de Zavala, the flat-roofed structures made their way into the Nuevo Reino de León, where before only gable-roofed jacales were the norm. As the jacales were, and largely still are, considered as poorer, more temporary structures, Zavala was partially responsible for bringing skilled craftsmen with knowledge of the techniques of flat-roofed dwelling construction from Zacatecas and the Bajío cities to the Nuevo Reino de León. The Tlaxcalans, who were being introduced to the region at this time in large numbers, also have been credited for the appearance of the A1 Form Class structures. This house form, however, was still largely common only among those who could afford it, as the majority of people continued to dwell in the much cheaper and more precarious gable-roofed jacales.

While early construction methods and materials (e.g., adobe) usually permitted only lower roofed structures, later materials, especially sillar (cut blocks of soft limestone), slowly gave rise to higher roofed structures by well into the eighteenth century. However, the large majority of the flat-roofed folk dwellings constructed at present and during the last half of this century appear much more like those early ones of the sixteenth century, with their lower roof height. Illustration 5.5 demonstrates a hypothetical flat-roofed dwelling typical of a somewhat economically better off rural family during the sixteenth century in the Nuevo Reino de León. Apparently, this dwelling form has been
Illus. 5.5: Conception of a typical seventeenth century rural house, by architect Franklin Fernández Escamilla (Zavala 1996). Note low roof and symmetrical façade with a door flanked by a window either side.
maintained, having undergone little change, to the present day, as Illustrations 5.6a and b demonstrate. For this reason, the later evolved dwellings of higher roof height appear to be an earlier house form than the lower roofed ones, as one often will see taller structures in the historic town centers and more squatty-looking ones in the new colonias (neighborhoods) and rural rancherias (Illus. 5.7). Thus, the taller flat-roofed dwellings seem to have been popular from the mid-eighteenth to the early twentieth centuries, while the lower ones have had a much longer duration as well as a notable recent popularity. According to extensive fieldwork, this appears to be a result of cost reduction in terms of both labor and economic resources on the part of the dweller/builder.

Other notable differences between the taller and shorter flat-roofed dwellings, apart from history and urban versus rural location, include placement of doors and windows, plan type, and geographic distribution, to some extent. A more typical piercing arrangement of the low flat-roofed dwelling tends to be that in which the front side contains one centered door flanked by a small window on each side, such as in Illustrations 5.5 and 5.6. On the other three sides, in the case of a simple rectangular plan, windows and doors are often scarce or non-existent. Another arrangement often seen is that in which each room contains one door and one window (Illus. 5.11) In the case of a two-or-more-room dwelling, the order is usually symmetrical and, thus, could have a window/door/door/window or door/window/door/window arrangement (Illus. 5.8). The placement of openings, however, usually tends to vary according to the floor plan of the house and its occupants' personal preferences. Often there are only doors along the front, as is normally the case for the taller flat-roofed dwellings (Illus. 5.9). Along with only doors, many of the higher roofed dwellings also have windows that have the same full
Illus. 5.6a: Present-day rectangular flat-roofed dwelling of adobe. Symmetrical façade and low roof similar to dwelling in Illus. 5.5. The dwelling is currently under construction. It is located in former Hacienda Bosque de Abajo, in Ramos Arizpe, Coah.
Illus. 5.6b: Symmetrical window/door/window façade of flat-roofed adobe houses in Laguna de Sánchez, NL (top), and Paredón, Coah. (bottom). The symmetrical portion of the top dwelling is only one room of a three-room dwelling. The parapets on this dwelling are capped with a thin layer of cement. While still symmetrical, the bottom dwelling, unlike the top, has only a door in the middle room and one window for both side rooms. Top house is about 18 years old while bottom one was built in early 1998.
Illus. 5.7: Roof height variations in flat-roofed dwellings. Notice the difference in height between the typical older (i.e. 75 to 150 years) urban flat-roofed dwelling on the plaza in Rayones, NL (top), and the much newer (i.e. 1997) rural flat-roofed dwelling in the ejido village of Dolores, NL (bottom). Also notice the lack of exterior plastering over the wall materials (in both cases adobe), a trend more common in rural than in urban areas.
Illus. 5.8: Façade symmetry of two-room flat-roofed adobe dwellings. The first house (top) is located in the roadside village of Las Colonias in the municipio of Saltillo, Coah., and was under construction at time photo was taken. The second (bottom) is located in the rancho of Mezquite in the municipio of Arteaga, Coah., and is approximately twenty years old. Note also the older gable-roofed jacal, which now serves as storage, next to the dwelling.
Illus. 5.9: Older flat-roofed dwellings with door-only façades. Many of these one-room dwellings usually have two doors on the front side. Note the examples of the row of separate, one-room, attached dwellings in Villaldama, NL (top), and the detached one-room dwelling in Guerrero Viejo, Tamps. (bottom). Both date from around the turn of the century.
length as doors, whereby the only distinction of being a window is by the protective iron grille and a slightly raised threshold (Illus. 5.10). As a generalized conclusion, throughout the Pan-Northern Region one will find taller flat-roofed dwellings with door-only façades, usually those built during eighteenth, nineteenth, and early twentieth centuries, in urban centers. On the other hand, the lower flat-roofed dwellings with doors and small windows across the façade are to be found in more peripheral or rural locations. It is these that have been common from the very early days of Spanish colonization up to the very present. Other than these usually notable differences, the rectangular flat-roofed box with parapet walls, regardless of roof height and door placement, comprises one major form class, A1 dwellings, of which there are various plan types, all based on a simple one-room rectangular base module.

**Form Class A2: The One-Shed Roof Dwellings**

The A2, or one-shed roof, dwellings, mimic the A1 dwellings, with the simple exception that they have a roof which slopes downward to a varying degree, usually, from front to back. However, in certain rural dwellings the direction of slope can be just the opposite, as the traditional notion of front and back is often lost (Illus. 5.11). Like the true flat-roofed dwellings, the one-sheds can also be distinguished between high-roofed and low-roofed. The same pattern, in regards to urban versus peripheral and rural location, prevails as well. Also, just as with the flat-roofed dwellings, the taller structures tend to have door-only façades, usually one or two doors per room, while the lower ones often have a symmetrical door/window arrangement (Illus. 5.12). The other major difference between lower and higher-roofed one-shed dwellings is that the slope of the former tends to be more gradual, i.e. ten to twenty degrees, than the latter, which can
Illus. 5.10: Façade of flat-roofed dwelling in Melchor Ocampo, NL, with two evenly-spaced door-sized openings. The right opening, as well as that on the left end wall, however, is closed off to access by an iron grille and has a slightly raised threshold, thus making both of these windows.
Illus. 5.11: Three-room one-shed roof dwelling, in which roof slopes downward from back to front, instead of the reverse. The door on the left is that which leads from one of the bedrooms out to the goat pen. The right side, where the woman is standing, is the main vehicle parking and entrance area and where the main gate to the homestead is located. From this side the main entrance leads into the kitchen, which serves as the main room of the house. The dwelling is located in the municipio of Mazapil, Zac. and is approximately 40 years old.
Illus. 5.12: Symmetrical fronts on one-shed roof dwellings. The top dwelling, located in the village of Palmar, in San Nicolás, Tamps., is a one-room structure with a window/door/window façade. The bottom dwelling, located in Ejido San Antonio, in Jaumave, Tamps., is a two-room structure with a window/door/door/window façade. Both of these structures were built within the last ten years.
sometimes be up to at least forty degrees (Illus. 5.13a and b). In general, however, the patterns seem to been the same in both A1 and A2 form classes.

In fact, there is little difference in form between A1 and A2 dwellings, with the exception of the roof slope. Expansion, in terms of plan type, varies little. What do differ are the reasons for slope versus flatness along with the geographic distribution. The A1 dwellings are usually found further west in the arid and semi-arid climate regions. While the A2 dwellings are also common in these regions, they are also found in the more humid eastern portions of the Pan-Northern Region and, in fact, are often the only form of flat-roofed folk dwelling in much of these areas. In other words, in many settlements further east, there are one-sheds but very few, if any, true flat-roofed dwellings (Figure 5.3). While the older and taller flat-roofs tend to be existent, whether being majority or the extreme minority of all folk dwellings, completely throughout the Pan-Northern Region, the one-sheds of the same category are found only in historic town centers further east. Such places include Aramberri, Iturbide, and Doctor Arroyo, in Nuevo León, and Burgos, San Carlos, Ciudad Victoria, Bustamante, Jaumave, Palmillas, Tula, and Ocampo, in Tamaulipas. The more recent and current trends, however, favor the lower structures with only slightly sloped roofs. While the newer and lower A1 forms are distributed only in the arid and highland climate regions, the A2 forms of the same category are found along with the A1 forms as well as by themselves in the more humid eastern portions of the Pan-Northern Region (Figure 5.3).

The reasons for these trends in the distribution of flat-roofed dwellings, in general, are based mainly on prestige. As West (1969, 1974, 1975) admitted and as many dwellers now confirm, the flat-roofed dwelling, despite the level of comfort which it may or may
Illus. 5.13a: Varying degrees of slope in roof of one-shed dwellings. Roof slope of at least 40 degrees. The dwelling is located in Vallecillo, NL, and is at least 50 years old.
Illus. 5.13b: Gradual roof slope. The slope of the roof in the middle and bottom dwellings, located in Vallecillo, NL, and Jaumave, Tamps., is a less pronounced 20 or 25 degrees. Both of these three structures are approximately between 50 and 100 years old.
Figure 5.3: Distribution of Flat- and One-Shed Dwellings

Source: INEGI
not provide, conveys a sense of social prestige. For this reason, this house form has made its way from its more arid western and central Mexican origins toward much more humid areas further east. This was occurring even long before West visited the northeastern region during the late 1960s and early 1970s, as humble one-shed dwellings were abundant in Matamoros, Tamaulipas, during the 1930s (Illus. 5.14). In fact, for many families, this form has replaced the gable-roofed jacal, which has always been regarded as a pauper’s dwelling. In many cases dwellings which once had gable roofs were simply converted to one-shed roof structures, simply by removing the roof and gables and laying a slightly sloped roof (Illus. 5.15a and b). This occurred not only for prestige but also due to low maintenance and economic cost of one-shed roofs. The gable roof, especially when made of thatch, which it often was, would need periodic replacement, due to both leakage and wind damage, and also would cost more, as such a roof requires more material, in terms of area, than a flat or one-shed roof. This phenomenon of replacement of gable-roofed houses by flat-roofed, especially one-shed, folk houses has been most noticeable in the highland Sierra region of Nuevo León and in much of the lower plains of eastern Nuevo León and north-central Tamaulipas (Figure 5.4).

**Plan Types and Living Space Arrangements of A1 and A2 Dwellings**

Despite the minor differences between flat-roofed and one-shed dwellings, the base module and the plan variations from such, as well as extra appurtenances, decoration, and construction materials, tend to be common among both form classes. Similar to the earlier forms of northern frontier structures, the flat-roofed folk dwelling, in the case of the more economically privileged farmers, ranchers, and city dwellers is based on a courtform plan. If not in the form of a complete surrounding square, the house is usually
Illus. 5.14: Photograph taken in 1936 by the MacKrell family. This demonstrates the common existence of Form Class A dwellings, especially those of the one-shed (A2) variety, in places as far east as Matamoros, Tamps., even during the early twentieth century.
Illus. 5.15a: Gable-roofed dwellings that become flat-roofed dwellings. Example of a gable-roofed dwelling that was converted twenty years ago into a one-shed dwelling. The gables and thatched roof were removed and replaced by a slightly sloping tin roof, which is surrounded on three sides by parapet walls. This can be noticed in the end wall, where the sloping crack shows the transition from the plastered adobe, below, to the plastered, smooth concrete blocks of the added parapet, above. This dwelling was built in 1916 and is located in Los Aguirre, Allende, NL.
Illus. 5.15b: Example of a one-shed adobe dwelling that was converted from a gable-roofed structure about 8 or 10 years ago. This, however, is unnoticeable. It is located in Ejido Santa Cruz, just north of Ciudad Victoria, Tamps.
Figure 5.4: Distribution of Flat-Roofed Dwellings Converted from Gable-Roofed Dwellings
U-shaped or L-shaped, as is more normally the case, with a central patio. In the latter case, the enclosure of the patio is often completed by a wall, or muro. Access to the patio and the rest of the house is provided by a zagüán, in the case of wealthier or extended door or gate in the muro, known as a portón, or simply through the main room of the house. In the case of most peasants this house type begins as a rectangular single or double room dwelling with no patio. As wealth is accumulated, extra rooms, which are built as separate entities often with only exterior access, are added and situated around a central open space. Figure 5.5 demonstrates the variety of plan types, which are based on levels of modular expansion, among the Form Class A dwellings. These added structures usually serve as granary (troje), kitchen (cocina), and storage (bodega), while the original house usually remains as the living room (sala) and bedroom (pieza or recámara) (Tamez Tejeda 1992; West 1974). Again, this is a generalization of the way in which rooms are added and how they are utilized, as at times houses immediately can begin with more than one module and, thus, as a Plan Type II, III, IV, V, or possibly VI.

**Plan Type I: The Base Module**

Although the central-patio plan types occur in many of the A1 and A2 dwellings, non-courtform plan types characterize these houses more often, especially in the case of less economically privileged dwellers, who tend to make up the large majority of most rural areas, and most of Mexico, in general. Plan type I, the single-room rectangle, is the base module from which all other types evolve, and a very common plan type among flat-roofed folk dwellings of both A1 and A2 form classes. It is within this one-room dwelling that most living activities, especially sleeping, cooking, and eating, occur. Usually one end serves as sleeping quarters for all family members, while the other serves as the
Figure 5.5: Plan Types of the Flat-Roofed (A) Dwellings
kitchen and eating area. In many cases a simple partition made of wood, fabric, or, sometimes, concrete blocks, is erected in order to formally divide these two areas. In this house plan type, a main single front door usually is placed in the middle of one of the long walls, thereby allowing the main entryway to bisect the dwelling into its two major parts. In the case of a double entry type I dwelling, each of the front entrances gives direct access to either the kitchen or the sleeping area, which often doubles up as a living/guest receiving area during the daytime. Side and back doors are, also, sometimes present to give further access to the well-utilized door yard space around the house.

Figure 5.6 demonstrates examples of how the plan type I dwelling functions, in general terms, and Illus. 5.16 reveals the fronts of these dwellings.

The exterior space around the house, sometimes in front and usually in back, is also important, as this is where activities such as laundry washing, relaxing and socializing, and sometimes even cooking and bathing take place. The exception to this rule is when the main dwelling is accompanied by separate unattached structures, for example an older jaca that often tends to serve as a kitchen, as the family becomes economically able to build a more prestigious, and often more substantial, flat-roofed or one-shed dwelling. A common trend, except in a few of the driest portions of the desert region, is that a family either will abandon or convert its humble gabled-roofed dwelling and build a flat-roofed (A) dwelling, which will further receive additions as funds become available. Chapter 6 elaborates more upon this process.

Plan Type II

From the single-room rectangular base module, the flat-roofed and one-shed dwellings often tend to expand in a linear fashion, at least during the early stages. This level of
Figure 5.6: Examples of Plan Type I Flat-Roofed Dwellings
Mus. 5.16: Fronts of Plan Type I flat-roofed dwellings demonstrated in Figure 5.9. Top is single-entry flat-roofed stone dwelling in Vallecillo, NL, and bottom is double-entry flat-roofed adobe dwelling in Bustamante, NL.
modular expansion corresponds to the Plan Type II dwellings. These occur by adding rectangular rooms to the original room, whereby the house continues to maintain its rectangular, linear plan; only it becomes longer (Figure 5.7). Often these extra rooms are added as separate modules, that is, without direct access to the other rooms. Instead, each door opens to the exterior, usually the patio area, whereby the rooms are attached to each other but without interconnecting doorways (West 1974). This is by no means, however, always the case, as many flat-roofed dwellings throughout the northeastern region have interconnecting rooms.

Unlike in the Plan Type I dwellings, the kitchen becomes a separate room, whether it previously occupied a separate more precarious structure or it shared space with the family's living and sleeping activities. Often the kitchen is transferred from a previous room of the same house structure to a new addition room. The reason for this is due normally to allow the original room to serve as either a bedroom or living room, or a combination thereof. Another reason could be due to the family's desire for a new, modern kitchen. Thus, they abandon or convert the old kitchen, which had either a fireplace or hearth for cooking, and construct a new one that contains modern appliances (e.g. electric or gas range and refrigerator). Extra bedrooms and/or storage rooms are added further to the house, as necessity increases and funds permit. In this way, some of the older rooms can be converted into other rooms needed for other functions, such as dining, socializing, watching television, etc. Some Plan Type II houses can have lineal extensions of up to six rooms or more (Illus. 5.17). In many cases, as extra rooms are added onto a house that already has at least two rooms, extension can take place in an L-shaped, and eventually in a U-shaped, pattern.
Figure 5.7: Examples of Plan Type II Dwellings
Illus. 5.17: Example of a lineally extended Plan Type II flat-roofed stone dwelling, located in the rancho of Chapula in the municipio of Saltillo, Coah. Dwelling has six rooms, not including the small bathroom added to the side.
If there is ample space on the house lot, which is often referred to as the solar, the house will be extended backward; if not, it will be extended in a linear fashion and, thus, will remain a Plan Type II dwelling. Naturally, if extended backward, the house will begin as an L-shaped, or Plan Type III, and perhaps evolve subsequently into a U-shaped, or Plan Type IV, dwelling. Usually, only in the case of the more luxurious Form Class A3 dwellings does the house plan evolve into a complete courtform layout, or Plan Type V, whereby the patio is surrounded by rooms on all sides. More often, these more humble dwellings remain in the Plan Type I, II, III, or IV stages. In any of these cases, however, the nature of the dwelling becomes more introverted, whereby it more easily communicates an enclosed interior world, dedicated to family living, from a separate outside world. This is accomplished by the dwelling itself as well as often by a fence or high wall, which, all together, help to surround a patio-like space. A large portion of folk houses throughout the northeastern borderlands demonstrates this cultural trait, in some fashion.

Also, instead of extending an already existing "L" plan or beginning such, rooms are added directly behind the front rooms, usually in the case of a two-room dwelling. In this way, the dwelling becomes two rooms wide and two rooms deep and, thus, looses its courtform appearance and function all together. In more recent cases, however, not all flat-roofed dwellings maintain these specific patterns of modular expansion. Many times rooms are added haphazardly onto the rear or sides of the original flat-roofed folk dwelling, and often these represent more modern, non-folk methods and forms. Both of the characteristics tend to demonstrate the increasing loss of importance of the traditional Mediterranean and Hispanic dwelling that functioned as a separate intimate world, in
which family life revolved around a central protective space closed to the rest of the world.

**Plan Type III and the Emergence of the Courtyard**

As the dwelling is extended to form an “L”, “U”, or complete courtform floor plan, a central patio, or courtyard, becomes more distinguished. This becomes the place where activities such as clothes washing and gardening take place and where the water well, if necessary, is located. Normally the patio is located in back of the house, whereby access to such is through a *zaguán* or, in more simple cases, through the main room of the house. Some more recent trends in building or renovation, however, demonstrate that this rule can be broken, thereby allowing the main front entry into the house to be accessible via the patio (Illus. 5.18). In the older courtform houses, especially those built prior to the twentieth century, the patio signified, and often still does, both a verdant space and a source of water that act as a climate control for the dwelling, just as in the patio houses of southern Spain and northern Africa. As one peeks through an open *zaguán* of a patio home in arid northern Mexico, often a striking sense of lushness is felt, such a contrast from the dry, dusty environment that surrounds these tiny niches. Such space is either dedicated to the production of food crops and herbs and, thus, serves as the dooryard or kitchen garden (Illus. 5.19a and b and 5.20), or is purely a place of ornamental landscaping. The first scenario signifies a practical purpose, while second implies a place of relaxation and leisure, for it is this type of patio which has much the appearance of a miniature version of the park-like plaza, an element so essential to the Spanish American urban landscape.
Illus. 5.18: L-shaped, Plan Type IIIa, dwelling, located near ex-hacienda settlement of Icamole, in the municipality of García, NL, in which main entry is through the patio.
Illus. 5.19a: Patio usage of L-plan dwellings. Lush, green patio of wide L-shaped dwelling. This serves as a dooryard garden that provides food crops and herbs and, therefore, is functional. It is located in San Antonio de las Alazanas, Arteaga, Coah.
Illus. 5.19b: Lush, green patio of narrow L-shaped dwelling. This, also, serves as a dooryard garden that provides food crops and herbs. It is located in Mazapil, Zac.
Illus. 5.20: Rear of the lush patio of the dwelling shown in Illus. 5.19a. This is the utility area, which is easily accessible to the kitchen. Note the kitchen entrance and exterior of the bread oven to the left. At the back wall is the rear gate and the bathroom, on the right side. As in many L-shaped dwellings, the rear and one side are enclosed by a privacy wall. This is the same dwelling located in Mazapil, Zac.
Naturally, this tends to be common primarily in the more affluent Form Class A3 dwellings. In most of the more recent (i.e. twentieth century) L- and U-shaped dwellings, on the other hand, the patio space functions merely as a barren utility space, where washing takes place and dooryard animals, such as chickens and pigs, are kept. In this particular case, the patio almost always lacks privacy walls and, thus, all together loses both its function as a climate control and as a completely private family space protected from the outside world, traits that are all so common of the traditional Mediterranean-style courtyard. The true courtform dwelling, with its green park-like interior space, is, better yet, absent from much of the folk built environment, at present, and is seen more often as a relic of the older high-style patio homes of the more affluent classes.

In the case of the Plan Type III, or L-shaped, dwellings, the patio can be either a square or nearly square space enclosed by two approximately equal-length wings of rooms and, sometimes, high enclosing walls on the other two sides. This is usually the case for urban houses, which are built side-by-side, whereby all appear to be attached to one another, thus, forming a continuous row of adjoined houses along the street. In this way, the patio is enclosed by rooms on two sides, the neighbor’s house wall on one side, and a privacy wall on the back side, which often contains a gate that leads into the fields and pastures behind the homes. Among the less pretentious dwellings, however, one, or both, of these privacy-giving walls is absent, especially when the patio space is located in front of the dwelling and in more rural or dispersed settlements. In this case, the idea of the patio becomes much less apparent and simply tends to form part of the greater house lot, which often has little form of enclosure other than a fence of barbed wire, ocotillo stems, or living cacti. Figure 5.8 and Illus. 5.21 illustrate the variety of L-shaped
Figure 5.8: Examples of Plan Types IIIa and IIIb Dwellings
a. Paredón, Coah. (wide L, IIIa)

b. San Antonio de las Alazanas, Coah. (wide L, Plan Type IIIa)

Note: space enclosed within L has no use (not a patio)

p. Paredón, Coah. (wide L, IIIa)

d. Mazapil, Zac. (narrow L, IIIb)

e. Mazapil, Zac. (narrow L, Plan Type IIIb) (illustrated in Figures 5.19 and 5.20)
Illus. 5.21: Barren and unenclosed space within the L of Plan Type III A Form dwellings. While that in the top two dwelling (located in Ejido San Lorenzo, San Buenaventura, Coah.) serves as the patio and has direct access to house, especially the kitchen, that in the bottom dwelling (located in Paredón, Coah.) neither serves as a patio nor has direct access to any room of the house. In the latter case it is dead space, most of which the massive chimney occupies.
dwellings and the relationship of these with the patio. In any case the patio always maintains its link to what is often the most important room of the house, the kitchen. For this reason, the patio often serves as and, thus, is referred to as the dooryard or, better yet, kitchen garden (Illus. 5.20).

While some houses have a square patio and two equal-length wings, others, due to the shape of the solar, are narrow in width and extend in greater length from front to back. Thus, I have labeled the former as “wide L,” or Plan Type IIIa, dwellings and the latter as “narrow L”, or Plan Type IIIb, dwellings (Figure 5.8). While the Type IIIa plans tend to be common among detached dwellings in less congested settlements, the Type IIIb plans are found almost solely in more dense urban settings. In the case of the former, however, this is not always the rule, as many urban homes, also, tend to conform to a completely square lot. While both Types IIIa and IIIb are common among A1 and A2 Form Classes, the latter tend to rarer among the A3 Forms, as narrow lots, also, tend to be less common among affluent families than among more economically challenged homeowners. While the wide L plans sometimes allow for a zaguán (Illus. 5.22) and/or a symmetrical front, the narrow L plans often allow for neither. Thus, by looking at the front of a Plan Type IIIb house, one is often fooled into thinking that it is merely a Plan Type I, as the width of the lot usually allows for only one room to face the street. The Plan Type IIIa dwellings, on the other hand, are often more recognizable even from the street, especially when a zaguán is present.

**Plan Types IV and V**

If space allows, the L-shaped floor plan is often extended into a U-shaped, or Plan Type IV, dwelling. This often further helps to enclose the patio space. In many of such
Illus. 5.22: Zaguán of a ten-year-old, Plan Type IIIa dwelling. This provides main access from the street, and from the kitchen (door at right), to the private interior patio, in this case, a kitchen garden full of herbs, fruits, and vegetables. Same house as that featured in Illus. 5.19 (top) and Figure 5.12b. It is located in San Antonio de las Alazanas, Arteaga, Coah.
houses a true Mediterranean-style courtyard, with water well and vegetation, is present, while in others the patio only serves as a barren work space or as the main point of access to the rest of the dwelling (Figure 5.9 and Illus. 5.23). The pattern of whether or not the enclosure is complete is the same for this plan type as for the former. Older, as well as more affluent, homes usually have their patio enclosures completed by a privacy wall and gate, while the patios of newer or humbler dwellings are left with unimpeded access.

While this house plan is becoming ever less common in present times, the next level of modular expansion, the complete courtform Plan Type V dwellings have ceased to be implemented in house building trends since the beginning of this century. Simpler plans, principally Types I through III, tend to be more common in recent constructions. The complete courtform floor plan, that is, with rooms on all four sides, can be generalized as a common and necessary characteristic uniquely of the more affluent, high style, Form Class A3, dwellings. Nevertheless, on an occasional basis, a more humble, folk dwelling void of architectural details can have a complete courtform plan (Figure 5.9 and Illus. 5.23).

**Plan Type VI and Non-Folk Expansions**

More recent expansions of flat-roofed folk dwellings tend occur in the form of adding two rooms behind two already existing rooms. In this way, a Plan Type II dwelling is extended to form a Type VI dwelling. This plan is found often in more recent flat-roofed folk dwellings; however, some of those built within the vicinity of the turn of the century, especially in urban settings, have four interconnecting rooms, all of which show their age, arranged in a square plan (Figure 5.10 and Illus. 5.24). In this case, the idea of a central patio is absent. Instead, the patio, which includes the washing and work space, animals,
Figure 5.9: Examples of Plan Types IV and V Houses
Patio area, which extends back to rear of lot
(washing, utility area, fruit trees, vegetable garden)

abandoned room (in ruins)  kitchen

abandoned room (in ruins)  living room/bedroom

neighbor's house

Street

Dwelling located in San Buenaventura, Coah.

Figure 5.10: Example of a Plan Type VI Dwelling
Illus. 5.23: U-plan dwellings having interior patios enclosed by rooms on three sides. The plastered and painted adobe (top) dwelling has a rear patio, which also serves as the main — and now only — point of access to the house, while the stone dwelling (bottom), which is abandoned, once had a patio that was completely isolated from street access. While patio in the first dwelling is purely a work space with about two plants, that in the second appears to have served as a traditional courtyard, especially due to the presence of the water well, or noria, in the center. The top dwelling, located in Barrio Ojo de Agua, in Parras, Coah., is over 75 years old while the bottom one, located in Vallecillo, NL, was built during the nineteenth century.
Illus. 5.24: Side of a two-room by two-room (four-room), Plan Type VI one-shed adobe dwelling. While the front part of the house is approximately 20 years old, the rear 2 rooms are a much more recent addition. It is located in the rancho of El Remolino, in the municipio of Zaragoza, Coah.
and dooryard garden, is the remaining space of the solar behind the house. This particular arrangement of rooms must be distinguished from other haphazard ways of attaching extra rooms behind or beside the house, especially when this form of expansion entails the construction of non-folk structures, which is normally the case. For this reason, I have chosen to avoid classification of such forms of expansion.

**Form Classes A3 and A3a: The High-Style Patio Houses**

While the highly decorative courtform casas reales of the urban elite and haciendas of the elite landowners, or latifundistas, were built of the same material and with the same techniques of the rest of the flat-roofed folk dwellings, they can be classified into a separate form class, the Class A3 dwellings. This is due to their high style architectural adornment and their significantly greater size. At times, they can include a second level, usually unlike those of the other forms, and, thus, become classified as Form Class A3a. In addition, the A3 dwellings always follow a courtform plan, whereby the central patio serves, or once served, as the source of water (Illus. 5.25) and of greenery, usually in a purely aesthetic sense. In these upper class dwellings, the kitchen garden, as well as animal and utility area, is usually located in a space completely behind the house known as a traspatio. On occasions, this can be found behind and, also, to one side of the main house, whereby it wraps around from back to side (Figure 5.11). Because of the usually ornate detail that adorns the façade, the hand of an architect, or some sort of professional designer, was always present in the design and construction of this class of dwelling. Again, the A3 dwellings tend to be a relic of the past, as the construction of these, along with much of the ultra-wealthy landed gentry of the Porfrian period, met its final days
Illus. 5.25: Interior patio of Form Class A3, Plan Type V dwelling. While the patio basically lacks any form of greenery, it still serves as a source of water (note the well) and social gathering, as well. According current occupants, the dwelling was built and designed by a noble family from Spain about one hundred fifty years ago. View is taken from the rear passageway, which leads from the patio to the traspatio, or back patio area. It is located in General Cepeda, Coah.
Figure 5.11: Examples of Plan Type Varieties in A3 Dwellings
with the onslaught of the Mexican Revolution, during the second decade of the present century.

The large majority of presently intact A3 dwellings date from sometime during the nineteenth century, while a lesser quantity date from the seventeenth or early twentieth centuries. Most urban centers throughout the region, large and small, still contain large numbers of these structures, many of which have been extremely modified during the last half or more of this century. While practically all towns, especially municipio seats, or cabeceras, contain mostly these kinds of structures as part of their built environment, at least in the historical downtown sector, even most of the large cities bear large numbers of these, as well. Monterrey and Saltillo, for example, continue to maintain, and even restore, their historical districts, which cover an area of up to four square kilometers. Because of their easily accessible location, these are practically the only class of dwellings of which there has been any form of formal documentation, such as date - or rather century - of construction, materials, floor plan, and illustration of façade (INAH 1984). Often, these are so present and used for various activities, both residential and commercial, that one easily tends to forget their significance as part of the vernacular built environment.

Again, in most cases the A3 dwellings tend to follow a courtform plan, in which life within these homes revolves around a central, verdant patio. The specific Plan Types can range from II to VI, with the first and the last having much fewer cases. After all, the A3 dwelling is normally distinguished from the other classes, partially due to its courtform plan. In any case, however, there is always a distinguished private patio area located either within and/or behind the dwelling and, therefore, protected from the public, outside
world, whether by the house itself or by privacy walls and walls of neighbor’s dwellings. Often, but not always, these interior patios are surrounded by portales, or arched galleries, either on all sides or only on one side, usually the side closest to the front entrance (Illus. 5.26). When a second story is present, the same plan of the first floor tends to be repeated. In this case, the zaguán simply becomes a hallway or another bedroom. Figure 5.11 demonstrates select examples of three different plan types (III through V) of A3 dwellings. There exist, however, many other variations of these plan types among the higher style flat-roofed dwellings.

Perhaps, along with the patio-centered plan, the zaguán, or vestíbulo, is the other major element, in regard to floor plan components, which is also worthy of differentiating form classes within the flat-roofed dwellings. The A3 dwelling most commonly, as seen from the street, has a symmetrical, or nearly symmetrical, façade, whereby the entrance to the zaguán is offset on either side by an equal, or nearly equal, number of windows (Illus. 5.27a and b). Recent modification, however, has altered many of these façades, whereby windows have been added, subtracted, reduced or increased in size, or converted to doors, and the original symmetry, thus, has been lost (Illus. 5.28). As for the zaguán itself; however, an common characteristic, at least in the case of the higher style, A3 homes, is the arch - either full or segmental – marking the front door and that marking the entry to the patio or the gallery before the patio (Illus. 5.29a-c). Unlike the front door, the latter is without door leaves. In the large hacienda homes and in some of the earlier patio town homes, this arched passageway contains a set of wide double doors, thus, signifying a vehicle entry into the patio and, ultimately, traspatio area (Illus. 5.30). On the other hand, the zaguán in the majority of the homes of the urban elite simply serves as the main
Illus. 5.26: Courtyard of an eighteenth century courtform A3 dwelling. This has an arched gallery, or portal, on the side facing the front of the house. The house is now abandoned and is located in Mazapil, Zac.
Illus. 5.27a: Symmetrical façades A3 Form dwellings. One-story, A3, dwelling, located in Parras, Coah. Zaguán entrance is the large doorway between the two windows on either side. Circa eighteenth century.
Illus. 5.27b: Two-story, A3a, dwelling, located in Lampazos de Naranjo, NL. Zaguán entrance is located in the middle and is repeated in the second story in the form of a window that is taller than the others. Circa late nineteenth century.
Illus. 5.28: Modifications made to the façade of a once elite dwelling in Mazapil, Zac. While the two windows to the right of the zaguan entrance appear to have been reduced in size, to the right of them a door has been added. This leads into the post office, which currently occupies a portion of the building. Circa eighteenth century.
Illus. 5.29a: Arches which signify passage from the *zaguan* to the patio. *Zaguán* of L-plan courtform dwelling. This one dates from the nineteenth century and is located in San Antonio de las Alazanas, Arteaga, Coah.
Illus. 5.29b: Zaguán of full courtform dwelling, located in General Cepeda, Coah.
Illus. 5.29c: Zaguán of full courtform dwelling, located in General Cepeda, Coah.
Illus. 5.30: *Zaguán* of story-and-a-half, L-plan, flat-roofed adobe dwelling that once served as a passage for vehicles. This can been seen by the presence of the two large door leaves. Within each of these large leaves is a smaller leaf for human-only passage. At present, only humans use the entrance. Dwelling is approximately a century old and is located in San Antonio de las Alazanas, Arteaga, Coah.
pedestrian entrance, or vestibule, to which it is often referred, to the house. In recent
times, most of those immense homes that once had a vehicle entry to the patio have had
both their patios and zaguanes modified to something more aesthetic, whereby vehicles
can enter no longer. For those that have not undergone such change, the patio tends to
serve as a roofless garage, especially in the case of those once fine residence that have
been converted into lodging accommodations.

While most of these A3 dwellings began immediately with a courtform plan, others
have evolved from a Plan Type II, whereby the original dwelling contained only a zaguán
and usually two or more other rooms in the form of a simple rectangle. As seen in Figure
5.13a, the width of this simple front rectangle appears to have been doubled, whereby the
zaguán was flanked by two rooms – one behind the other - on each side. While this
appears be a Plan Type VI arrangement bisected by a central hallway, I have avoided its
designation as a separate plan type, as I have seen no examples, in documentation or
fieldwork, of a home with exactly this plan. The zaguán was the central element that
distinguished the house as an A3 Form and from which forth the house has been
expanded (Morales Padilla 1997). In other words, the zaguán almost never loses its
function as the central point of access to the dwelling. Therefore, along with the patio, it
is central and fundamental to the A3 Form Class.

Common Appurtenances: The Chiminea and Its Importance for the Kitchen

Along with the patio, whether a central courtyard or a simple, utilitarian yard space in
front, behind, or beside the house, the kitchen occupies perhaps the most important part
of the house. In northeastern Mexico, among those flat-roofed dwellings in which the
kitchen is incorporated in the main house and not in a separate gable-roofed jacal outside,
there are three major classes of cooking facilities, not to mention the more recently popular modern cooking appliances that are becoming ever present. These include the interior cooking hearth and smoke vent, the interior hearth with stovepipe, and the external chimney, all of which are referred to as the chiminea. The first includes a raised hearth, usually made of adobe or fired brick, which contains several depressions, known as fagones, which serve as small fire pits for cooking. The second also includes a raised hearth of either adobe or brick, which is either located in the corner in the form of a right triangle, connecting the two walls, or along the wall and jutting out into the room in the form of a square. In either case, a fire is placed atop the hearth, which has an arrangement of stones or bricks in which to support a piece of cookware. In order for smoke to escape, a recent modification has been to extend a metal stovepipe from the hearth to the roof (Illus. 5.31). While the former is of Spanish origin, the latter appears to be derived from the ancient aboriginal, especially Tlaxcalan, three-stone hearth, or tecuile, which also lies upon a raised interior chiminea (West 1974). According to recent fieldwork, both of these hearth types are commonly referred to as the fogón.

In the case of the exterior chimney, on the other hand, the cooking hearth is raised but also lies on the outside of the wall. Therefore, the wall must contain a square opening that permits access to both the hearth and the chimney (Illus. 5.32). These chimneys are usually massive in structure and are nearly ubiquitous throughout the arid, semi-arid, and highland regions of northeastern Mexico. Thus, they are found usually only on adobe and stone dwellings and are made of the same material as the rest of the house. In order to keep out rain, they are topped with either two adobe bricks or two slabs of shale or flagstone (Illus. 5.33a-c), which lean upon one another. The origin of this variety of
Illus. 5.31: Interior chimney and stovepipe located in the corner of the kitchen of a three-room, linear flat-roofed adobe dwelling. The house was built in early 1998 and is located in Paredón, Coah.
Illus. 5.32: Fireplace indentation in the kitchen wall of two-room, linear flat-roofed adobe dwelling. This small waist-high fireplace serves as a cooking hearth which is part of a massive adobe chimney, placed on the exterior of the wall. An exterior view of this chimney is featured in Illus. 5.33. The dwelling located in the ejido of Dolores, in Doctor Arroyo, NL.
Illus. 5.33a: Massive exterior chimneys. Chimneys constructed of adobe. Note that they are capped with the more common two adobe bricks, which lean upon another. The top dwelling, also featured in Illus. 5.32, is located in Dolores, Doctor Arroyo, NL, and bottom dwelling, which is at least 60 years old, is located in Laguna de Sánchez, Santiago, NL.
Illus. 5.33b: Chimneys constructed of *sillar* (top) and limestone (bottom). The dwellings are located in Villa Unión, Coah. and Vallecillo, NL.
Illus. 5.33c: Chimney constructed of adobe and plastered with a cement mixture and painted. The dwelling is located near Burgos, Tamps.
chiminea appears to have been derived from influences from north of the Rio Grande, perhaps due its introduction from Texas, where early Anglo settlers built outside chimneys on log cabins. After all, this feature is found uniquely in northeastern and, in isolated occurrences, in north-central Mexico (West 1974). While this is a unique feature of northeastern vernacular architecture, its presence and distribution, as compared with the other two forms of folk cooking facilities, appears to depend more upon the level of the family’s economy than upon geography.

In any case, the chiminea of northern Mexico, whether internal or external, symbolizes not only a cooking facility, but, also and necessarily, a source of heat needed during the windy cold fronts often common during winter. For this reason, the chiminea is an essential and central feature to the kitchen, which, in turn, is the center of the home, apart from the patio and the zaguan, if even present. By observing the various floor plans presented throughout this section of the chapter, one can note the important accessibility, which is allowed to the kitchen, from the rest of the house, as well as the utilitarian areas of the patio (Morales Padilla 1997).

Decoration of the Form Class A Dwellings

Again, perhaps the third major element that distinguishes the A3 Form Class from the A1 and A2 Classes is the level in which the façades, as well as the interiors in many cases, are ornately decorated, that is whether an architect or other professional artisan was responsible for such adornment. As for the A3 dwellings, most, but not necessarily all, have their exteriors adorned with a wide possibility of architectural styles. These range from the Spanish Plateresque, popular during the eighteenth century in Mexico (see Illus. 5.28), to Classical Revival and Mexican Baroque all popular during the nineteenth
century. The latter two styles are what seem to be the most widespread in northeastern Mexican higher style vernacular architecture. The Neoclassical style is distinguished by features such as pilasters, usually located on corners and sometimes around doors and windows, and friezes, which rest upon the pilasters and adorn the parapet (Illus. 5.27a and 5.34a and b). The Baroque style is usually reduced to ornate designs around windows and doors (Illus. 5.34a and b). Much less common and usually only on some of the most luxurious dwellings are Italianate adornments (Illus. 5.35).

Also common during the nineteenth century and unique to northeastern Mexico was a particular style in which the decorative pilasters flanking either side of the windows and doors and corner columns, as well, extend to the top, or near the top, of the parapet, where they are capped by a wider capital (Illus. 5.36a and b). While the origins of this style are unknown, Monterrey architect Antonio Tamez Tejeda (1993, 1998) speculated that North Africa, especially Morocco, could be a possible region of genesis. After all, he also admitted that, in many aspects, the vernacular architectural styles of North Africa have been repeated in northeastern Mexico’s built environment, as even its physical environment is very reminiscent of North Africa (Tamez Tejeda 1993, 1998). Ultimately, except in rare cases, all dwelling façades, regardless of style, are heightened by an offset wainscoting, which is referred to as a rodapie. While of the same color as the other offset adornments, like them it consists of raised, textured plaster, unlike the rest of the normally smooth, plain plastered wall. In original cases, this rodapie consists of a construction material that is distinct from the rest of the wall and often forms part of the house foundation. This trait, original to the Mediterranean region and common throughout Latin America, has been combined with the above mentioned styles, original
Illus. 5.34a: Neoclassical and Baroque façade trim on flat-roofed dwellings. Dwellings located in General Cepeda, Coah., and Melchor Ocampo, NL. Note that that pilasters are of the Neoclassical style and window and door surrounds are of a very simplified Mexican Baroque style. Note, also, the variety in the use of color.
Illus. 5.34b: Dwellings located in Melchor Ocampo, NL. Note that the decorative surrounds are raised on both of these.
Illus. 5.35: Italianate façade adornment of two-story, high style patio dwelling located in Lampazos de Naranjo, NL.
Illus. 5.36a: Unique decoration in which pilasters extend nearly to the top of the parapet. Ruined adobe dwellings located in Bustamente, NL. Note the capitals on top of pilasters.
Illus. 5.36b: Ruined sandstone dwelling located in Villanueva de Camargo, Tamps.
to North Africa and the Classical Mediterranean, to compose a vernacular architecture to which Tamez Tejeda (1993) refers as uniquely “Norestense.”

While, again, most of these styles, at least in their more refined form, are characteristic mostly of the elite A3 dwellings, some of the more humble A1 dwellings, of any plan type, also adopted these styles on their façades, especially during the previous century (Illus. 5.34a and b). Nevertheless, the majority of these humbler homes either boast only simplified versions of usually Neoclassical designs or no design whatsoever; whereby they are characterized far more by austerity than by style. In the former case, the pilasters, friezes, and door and window surrounds, and rodapie are expressed simply with paint, rather than in the more ornate and costly bas-relief plaster form. Therefore, these houses are characterized by a two-tone façade, in which the main color, normally but not always white, is offset by a usually vibrantly colored rodapie and trim along corners and parapets and around doors and windows. These colors normally include yellow, red, green, or blue. However, many other combinations of colors are sometimes possible (Illus. 5.37a and b). Another common trait is that the colored border and rodapie are actually offset further by being raised from the rest of the surface; however, there are no ornate details whatsoever, thereby still giving the dwelling an austere appearance. In the case of the undecorated dwellings, only one color adorns the plastered walls, or, in the case of the humblest of structures, neither plaster nor paint is present (Illus. 5.38a and b). More recent styles, namely during the 1920s, have been reduced to the parapets, which have been molded to Art Nouveau and Art Deco designs (Illus. 5.39).

As for the interiors of the A Form Class dwellings, decoration is present only in select A3 dwellings. This is reduced to the arched portales around the patio, oil-on-canvas
Illus. 5.37a: Simplified neoclassical designs painted onto a plastered façade. Dwellings located in Mazapil, Zac. and Paredón, Ramos Arizpe, Coah. Note that sometimes the corners are simplified further by painting a straight angle rather than being rounded.
Illus. 5.37b: Dwelling located in El Remolino, Zaragoza, Coah.
Illus. 5.38a: Simple two-tone façades with highlighted borders. Dwelling located in General Cepeda, Coah. and Vallecillo, NL. Note the simplicity and austerity of this form of adornment. Plaster surface was painted (top), or the bare stone surface was painted (bottom).
Illus. 5.38b: Dwelling located in Mazapil, Zac. Note that only the door and window surrounds are painted, while the rest is left as bare stone.
Illus. 5.39: Art Deco styled parapets. Dwelling is located in San Carlos, Vallecillo, NL.
paintings on ceilings, ceramic tile floors, and painted plaster walls. In the majority of all folk and vernacular dwellings and even in many A3 dwellings, however, plastered and painted interior walls are about the only details that exist (Illus. 5.40). While plain white tends to characterize most of these, a little extra money often allows for other colors, such as blue or yellow, or for two-tone walls (Illus. 5.40). The latter case implies a commonly red or blue rodapie along the bottom third of the walls, whereby the remainder are white (Illus. 5.40). Only the humblest of the humblest dwellings have unplastered walls on the inside. Even many houses that lack plaster on the exterior do have it on the interior walls. Thus, while decorative features, by themselves, do little to determine cultural regionality, they, together with plan arrangements, especially in terms of courtyards and zaguanes, help to distinguish form classes, which, in turn, demonstrate regional patterns.

**Materials and the Natural Environment**

Construction materials, in the case of the A as well as the other form class families, generally demonstrate that house form regions surpass environmental zones (Figure 5.12). Again, according to Rapoport (1969), culture is what influences form the most, while the natural environment and the materials it beholds for the house builder are what condition and, thus, allow or inhibit the number of possibilities available for folk houses. The construction of flat and one-shed roofed houses involves an ample variety materials. As for the walls, these include adobe, rubble stone, cut stone, and, much less frequently but more recently, brick, logs or plastered palisade cane poles (West 1974). While the rubble stones include a variety of sedimentary and igneous rocks, cut stone specifically includes sandstone (arensica), flagstone (piedra laja), limestone (cantera), and siller. The latter refers to a form of soft limestone bedrock, heavy in clay content, which is cut
Illus. 5.40: Interiors of flat-roofed adobe dwellings. Both are plastered with mezcla and painted. The top dwelling has a two-tone interior with offset rodapie, while the bottom one is painted with a single color. Note, also, the ceiling/roof construction in which either hewn vigas (top) or round morillos (bottom) support the terrado roof. Dwellings are located in Paredón and General Cepeda, Coah.
Figure 5.12: Distribution of the Flat-Roofed Dwellings in Relation to Environmental Zones
in large blocks directly from the ground. These high plasticity, calcareous soils are referred to as *caliche*, or *tepetate*. The cut blocks of this soft, clayey parent material are commonly known as *silla* or *terrón*. Nowadays, however, the most common material for the walls of flat-roofed dwellings is cinder block, which, in the case of those houses having taken on a non-folk, modern form, causes the structure to completely become non-vernacular. The form is usually lost when a cement roof (*placa*) which extends beyond the walls replaces the parapets. In less common circumstances and in places where flat-roofed, especially one-shed, dwellings have more recently invaded, due to popularity and prestige, materials such as logs, wattle, and brick are utilized, as well. In this way, this particular form, as dictated by cultural preference, appears to be unhindered by the regional physical environment, due to the wide variety of materials employed.

Perhaps the most common traditional wall material to be used is adobe, which can be seen in flat-roofed and one-shed dwellings throughout the entire Pan-Northern region (Illus. 5.41a and b). More common areas where adobe is used, however, include the arid Altiplano, where it is dominant, the temperate sub-humid (highland), where it is seen in conjunction with rubble stone, *silla*, and log, and the steppe (semi-arid) climate regions, where it is seen in conjunction with stone, primarily *silla* (Figure 5.13). This, in fact, became the popular building material, subsequent to adobe, during the beginning of the eighteenth century in urban centers, mainly throughout Nuevo León and north-central Tamaulipas, such as Monterrey, Cerralvo, Linares, Montemorelos, Ciudad Victoria, and many others, due to its greater strength and durability (Illus. 5.42a and b). By the mid-nineteenth century, it was beginning to replace the use of adobe construction, whereby dwellings of this more ancient material began to be outnumbered by those of *silla*. This
Illus. 5.41a: Flat-roofed dwellings constructed of adobe bricks. Dwellings located in Estación Catorce, SLP and Villaldama, NL.
Illus. 5.41b: Dwelling under construction located in Pablillo, Galeana, NL. In this case, the mortar includes tiny fragments of slate, in addition to mud.
Illus. 5.42a: Flat-roofed dwellings constructed of silla. Dwellings constructed between 50 to 100 years ago. Note that the top dwelling was once completely plastered with mezcla. Dwellings are located in Rancho Rincón del Potrero, Villaldama, NL and Melchor Ocampo, NL.
Illus. 5.42b: Newly constructed dwelling located in Real de Catorce, SLP.
Figure 5.13: Distribution of Flat-Roofed Dwelling Building Materials in Relation to Environmental Zones
period also marked the emergence of the higher roofed A1 and A2 dwellings as well as a greater popularity of multistory dwellings, because *sillar* appeared to be more capable of supporting structures of greater height than adobe (Zavala 1996).

Also, during the previous century, even more localized resources, such as shale and sandstone, had become more widely employed in construction than adobe. Places where shale was, and still is, abundant and, thus, also used include Sabinas and Vallecillo, in Nuevo León, and San Nicolás, in Tamaulipas. Vallecillo, for example, appears as a settlement that was entirely erected, or rather reconstructed, from the nearby flagstone formations, as adobe was previously the more common material (Illus. 5.43). The settlement that appears to have been constructed purely from the surrounding sandstone formations along the Rio Grande is Guerrero Viejo, which has been inundated by the Falcon Reservoir since the 1950s and had its inhabitants relocated to the nearby Nueva Ciudad Guerrero, in the state of Tamaulipas (Figure 5.13) (Illus. 5.44). Materials such as *cantera* and rubble stone have been utilized on a lesser scale (Illus. 5.45 and 5.46). The latter, however, is used quite often in the Sierra and the arid Altiplano, especially in the case of Real de Catorce, in San Luis Potosí, a mining town built entirely of this material, after it replaced the popularity of adobe, here also (Figure 5.13).

The less common materials, such as brick, log, and wattle, became utilized as the flat-roofed dwelling became popular further east in the steppe and humid subtropical coastal plains and in the highland, or Sierra Madre Oriental, region. Also along the Rio Grande, due mainly to the popularity of technologies developed to the north of the river and imported to Mexico, the fabrication and use of brick became popular during the previous
Illus. 5.43: Flat-roofed dwellings constructed of limestone. Both are approximately 100 years old and abandoned and are located in Vallecillo, NL.
Illus. 5.44: Flat-roofed dwellings constructed entirely of sandstone. Note that they were plastered completely with mezcla. Now they are in ruins, as this settlement, Guerrero Viejo, Tamps., was inundated during the 1950s from the Falcon Reservoir. Note the level that the water once attained (top).
Illus. 5.45: Flat-roofed dwelling constructed of *cantera* limestone. It is approximately 50 years old and is located in Cieneguilla, Santiago, NL.

Illus. 5.46: Flat-roofed dwelling constructed of rubble stone masonry, known as *mampostería*. It is only about 5 years old and is located in Real de Catorce, SLP.
century, especially in settlements such as Camargo and Mier, Tamaulipas (Illus. 5.47).
Due to both the prestige and ease of construction, along with the low cost of the material,
logs have been used, in the Sierra region, not only in the construction of gable-roofed
dwellings, but in one-shed dwellings, as well (Illus. 5.48). This is due, additionally, to the
lower level of economic cost and manual labor that a low, one-shed dwelling entails, as
opposed to one with a gabled roof, which naturally requires a greater quantity of logs and
roofing material. Also, due to low cost and ease, wattle and daub have become popular
not only in the construction of gable-roofed jacales, but in one-shed houses, as well, for
the same basic reasons. This wattle daub structure is further plastered and painted, just as
many A Form Class dwellings throughout the region, thereby camouflaging this crude
building material.

While the wall materials of many dwellings, whether of adobe, stone, sillar, or logs,
are left exposed, many are also finished with some form of plaster-like surface. In the
case of the adobe dwellings the walls are often first covered with mud (*barro* or *lodo*)
and, then, plastered with a mixture of lime (*cal*) and sand (*arena*), known commonly in
the region as *mezcla* or *sapeo* (Illus. 5.49). In some cases, especially with the houses built
of sillar, small pebbles, known as *canto rodado*, are incorporated into this mixture for
greater durability. This particular form of plaster, or stucco, is known as *cal y canto*.
More common now, however, is the addition of manufactured cement to the mixture. The
stucco can be textured in two different ways, usually to offset the borders and *rodapie*
from the rest of the wall. The former usually has a rough texture, made by throwing the
wet stucco at the wall, while the latter is made smooth; however, the reverse scenario is
also common (Illus. 5.50). This major part of the wall is often painted white, simply with
Illus. 5.47: Flat-roofed dwellings constructed of brick, during the late nineteenth century. Note that neoclassical details are incorporated simply by raised brickwork. The top dwelling contains only a frieze and is painted, while the bottom one has both frieze and pilasters. Both dwellings are located in Villanueva de Camargo, Tamps.
Illus. 5.48: L-shaped one-shed dwelling with two recent additions constructed of corner-notched logs. The original part of the dwelling is constructed of adobe. The log rooms are less than a year old, while the adobe section is about three years old. Dwelling is located in Los Mimbres, Galeana, NL.
Illus. 5.49: Lime- and sand-based mezcla that serves as plaster over stone, adobe, or wattle-daub walls. Note that the plaster, or stucco, is painted in both of these structures and note the adobe bricks beneath, in the bottom image. Dwellings are located in Melchor Ocampo and Bustamente, NL.
Illus. 5.50: Exterior stucco work in which the main surface of the wall is offset from the trim by having a rougher surface texture. Dwellings are located in Melchor Ocampo, NL, and Estación de Catorce, Real de Catorce, SLP.
more lime, while the borders, rodapie, and any other adornments are usually painted a different color. Traditionally, paints were made of lime and natural pigments derived from soils, oxides, or sulfates, which produced mostly whites, ochres (oxide red), greens, and blues. Nowadays, however, it has become more popular and, of course, easier to buy chemically manufactured paint and pebbles, known as cal y canto.

As for the roof, the traditional materials include either hewn or sawn wooden beams (vigas) or round logs (morillos), which are covered with either thin sticks, cane poles (carrizo), or wood planks and, on top of this, a mud/straw mixture, known as terrado. In order to prevent leakage and last longer, this terrado is further sealed with a lime and sand mezcla or, more common presently, with a cement mixture (Illus. 5.51a and b). Drainage is aided by long drain spouts leading from the parapet either down incised drains in the wall or through pipes that hang out from the wall (Illus. 2.2f and 5.52). This particular roofing technique is always necessarily the case with the flat-roofed, A1, houses, that is again, if the dwelling is truly folk (López Morales 1993; Tamez Tejeda 1992, 1993.

In the case of the one-shed, A2, houses, the beams – or rafters in this case – traditionally were covered with carrizo lathing and either grass or palm thatch. In the Sierra region, even wood shingles were used. More recently, however, sheets of corrugated tin (lámina) lay atop the rafters themselves. According to recent fieldwork, this is much cheaper and more labor saving than laying a roof of terrado. Therefore, this seems to be the answer, at least in recent times, for the increase in the appearance of one-shed as opposed to flat-roofed dwellings. While a well-made roof of terrado will drain well and last long, so will a slanted tin roof. The latter, however, will require much less
Illus. 5.51a: Support structure for terrado roof. Use of vigas. Note the viga beams, upon which flat boards and terrado, which is long gone, lie (top). Note the indentation in the parapet that holds the vigas and the terrado. Also, note that the vigas were improvised with the use of railroad ties, as this settlement subsists because of its location at an important rail line junction (bottom). Atop these lie lathing made of ocotillo stems and terrado. Dwellings are located in Vallecillo, NL, and Paredón, Ramos Arizpe, Coah.
Illus. 5.51b: Use of *morillos*. Note that these round *morillos* will support carrizo lathing and terrado, in this adobe dwelling under construction. Dwelling is located in Sacramento, Coah.
Illus. 5.52: Flat-roofed dwellings of stone with drainage pipes extending from the parapet far enough to keep dry the sidewalk. This street scene is located in Real de Catorce, SLP.
labor, maintenance, and, therefore, money. In this way, one form has become more popular than another, due to convenience. After all when the roof becomes slanted, so does the parapet, at least in Mexico, thereby altering the three-dimensional outward appearance of the dwelling somewhat.

Along with the appearance, the general construction of this house form well reflects the austerity and harshness imposed by the desert or steppe. Whether of adobe, stone, or silla r, the house demonstrates the ability of the region’s inhabitants to adapt its form and space to the environment and the use of local materials. The thickness of the wall materials and the multi-layered flat roof provide a thermal function, thereby making this house type quite suitable for the extreme hot summers and intense solar radiation, as well as for the often cold and windy winters. Additionally, the use of few and small windows mitigates the intense heat of summer and the cold of winter (Illus. 5.53) (Cozzens 1938; Moya Rubio 1984; Prieto and Carrillo 1978; Tamez Tejada 1993; West 1969, 1975; Yampolsky 1993). As Tamez Tejada (1993) claims, “it ‘knows’ how to let in light and natural ventilation while avoiding direct sunlight or direct gusts of wind.” Thus, the flat-roofed dwelling, in many cases, can be classified as ecological architecture that agrees with the physical environment (Tamez Tejeda 1993).

On the other hand, as this house form more recently has become popular in more humid regions further east and high in the mountains, adopting the different locally available materials on its way, cultural values, rather than ecological adaptability, tend to be what these particular dwellings, as symbols, are communicating, now. Prestige and convenience are what the A dwellings in these regions are symbolizing, as all dwellings previous to these had either gable, apsidal, and/or conical roofs. These, however, were
Illus. 5.53: Small windows common of flat-roofed dwellings, especially the older ones. This one is approximately 200 years old. Dwelling is located in Real de Catorce, SLP.
becoming, and still are, perceived as poor, while, at the same time, more expensive and labor consuming. In conclusion, the flat-roofed dwelling, especially in the last century or so, appears to have far surpassed physical environmental barriers at the demand of sociocultural preferences (Figure 5.13).
FOLK HOUSING IN NORTHEASTERN MEXICO:
A KEY TO CULTUROGEOGRAPHIC REGIONALIZATION

VOLUME II

A Dissertation

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in

The Department of Geography and Anthropology

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CHAPTER 6: NORTHEASTERN GABLE-ROOFED JACAL REGION

The second of the two most common folk houses in Mexico’s northeastern borderlands is the gable-roofed dwelling, which, like the flat-roofed dwelling, is based on a simple rectangular base module. While this house form is found to be most common in the more humid Gulf Coastal lowlands, or llanuras, from the Rio Grande Valley of Texas to Veracruz and Hidalgo, it is also quite common in the semi-arid plains and in the Sierra Madre Oriental of Tamaulipas, Nuevo León, Coahuila, and San Luis Potosí. Additionally, although not so commonly, it exists occasionally in the desert areas of Coahuila, Zacatecas, and San Luis Potosí, after which it becomes more popular again further westward in the Sierra Madre Occidental of Chihuahua, Durango, Zacatecas, Aguascalientes, and Jalisco (Figure 6.1). While this house form, like the flat-roofed form, spans a variety of environmental zones, naturally it can be constructed of a wide variety of materials, to the extent that it often is difficult to classify these distinct structures as all part of one form class family.

Unlike the flat-roofed dwelling, which has diffused geographically under sociocultural demands, the gable-roofed dwelling has experienced the opposite scenario for the same reasons. In other words, rather than acquiring a level of prestige, it has been regarded, since the dawn of Spanish colonial settlement in northeastern Mexico, as a symbol of poverty and backwardness and, thus, always has been at the mercy of the more popular flat-roofed dwelling. Throughout northeastern Mexico and in the Rio Grande Valley of Texas this house type is commonly known as a jaca, a word of plural meanings in the vernacular architecture of Mexico and even New Mexico. The term “jaca” had its
Figure 6.1: Distribution and Dominance of the Gable-Roofed Dwelling
beginnings in the early colonial period of the Nuevo Reino de León, especially in Monterrey and the few other early settlements of the colony. It simply referred to any house that lacked a flat-roof of terrado but, rather, had a gabled roof, which was thatched with reeds (carrizo), grass (zacate), sabino leaves, palm fronds (palmito or palma real), among many other local vegetative materials. While the wall materials generally consisted of wattle and daub or palisade log or cane, adobe or stone could be used, as well. The fact was that the roof was two-shed, known regionally as a techo de dos aguas (Zavala 1996).

According to Jackson (1952), the term “jacal” was derived in Mexico from the Aztec (Nahuatl) xacalli (xamitl – adobe, straw, reed, or bamboo; calli – house), thereby referring to either an adobe or straw house or, better yet, a humble dwelling. In New Mexico it signifies a structure, either flat- or gable-roofed, with palisade log walls, while in Mexico it often means a thatched-roofed dwelling. The American word “shack” appears to have been derived from this word and its Mexican usage, as well (Gritzner 1969: 47; Jackson 1952: 32). In conclusion, a jacal in Mexico generally signifies a dwelling that is both constructed of locally available materials and humble, at times even miserable. Thus, it is often used, only in Mexico, in the same manner as the English-language word “hut.” Since a gable-roofed house is considered more humble and less prestigious than a flat-roofed house, especially in northern Mexico, this tends to be the more specific definition of the term “jacal,” as this often, but not always, constructed of more perishable materials and in a more precarious manner.

Additionally, in the southern portions of Tamaulipas and in San Luis Potosí, the gable-roofed dwelling is called, in a less demeaning sense, a casa de piña. This denomination is
derived from the gable itself, which appears as an inverted pineapple, or piña (West 1969). The gable is additionally referred to in this region as tijeras, or scissors. This terminology, on the other hand, is more of a simple description of what the house is, a gable-roofed structure, and, thus, has a less derogatory connotation than the term “jacal.” Nevertheless, while the casa de cuarto, as the A1 and A2 dwellings are often called, tends to be common among lower middle classes, as well as many peasant farmers, the jacal or casa de piña is normally characteristic of the lowest socioeconomic classes (Cozzens 1938; Moya Rubio 1984; Prieto and Carrillo 1978; Tamez Tejeda 1992; West 1969, 1975; Yampolsky 1993).

**Origins and Distribution of the Gable-Roofed Dwelling**

According to historical accounts, made by early Spanish explorers (Winship 1904: 116), and ethnographic evidence (Briscoe 1994; Hinton 1983; West 1974), the roots of the gable-roofed jacal were purely indigenous, as it had been a common house type among native groups of northern Mexico for centuries. In fact, it still is common among all lower socioeconomic populations, as the majority of the indigenous peoples belong to this category (Doolittle 1998; West 1974). Doolittle (1998: 24) further ruled out the possibility of any Spanish influences after completing an extensive landscape survey of the entire Iberian Peninsula, during a period of two months. While dwellings of the vastly distributed Chichimec groups were generalized as having been simple, temporary domed huts, the gable-roofed jacal also was known among them, especially in areas further east such as along the lower Rio Grande and in the Tamaulipas mountain range (Griffen 1983). Additionally, they were common among groups such as the Hastec and Otomi, as they still are. Perhaps it is in the Huastec region where this particular house form
originated and, later, was adopted and carried further north by invading Chichimecs. Here and further north in the lower Rio Grande Valley, as well, the early indigenous jacal was described as a gable-roofed structure having a thatched roof and walls of wattle-and-daub, not at all different from those which stand today (Carrasco 1991; Laughlin 1969; Manrique 1969; Stresser-Péan 1971). Among the peoples of the desert areas were gable-roofed dwellings with walls of either stone or yucca stems and thatched roofs of maguey leaves, much as seen today, especially in the Mezquital Valley, in the state of Hidalgo, in the case of the latter (Moya Rubio 1984; Prieto and Carrillo 1978; West 1974). As Spanish colonizers began to establish settlements in the Nuevo Reino de León, during the late sixteenth and early seventeenth centuries, and in Nuevo Santander, during the middle and late eighteenth century, limited economic resources permitted them to construct only simple, more perishable jacales. More substantial flat-roofed structures of adobe or stone were not seen until these colonies became somewhat more productive in terms of agriculture and mining. While flat-roofed dwellings had become widespread in the Nuevo Reino de León by the onset of the eighteenth century, in Nuevo Santander they did not begin to appear until nineteenth century. Here, however, the jacales continued to be the dominant house form, as they have up to the present day. Zorrilla (1993) believed that this was due to the laziness and delinquency of the majority of colony’s inhabitants, coupled with the low economic productivity, in agriculture and in mining, of this region’s lands. After all, here, as well as in early Nuevo León, the buildings, including churches and casas reales, were described as temporary-looking structures, which were built of precarious and perishable materials. They were characterized as crude, humble structures, which adequately reflected the both the austerity and poverty, even misery, of their
occupants. With the emergence of flat-roofed dwellings, consequently, a clear distinction between higher and lower socioeconomic classes began to be recognized (Carrasco 1991; Meade 1978; Zavala 1996; Zorilla 1993). While the *jácal* began to diminish in importance in Nuevo León by the early twentieth century, it continues to be ever present and commonly utilized throughout most of Tamaulipas. This, perhaps, reflects the difference in the present socioeconomic situations of each of the two states.

In addition, apart from the indigenous contribution, the common presence of the gable-roofed dwelling, namely that which is constructed of horizontal, corner-notched logs, in the highland Sierra Madre Oriental can be attributed to settlers from the United States. According to Winberry (1968, 1974), the American-style log cabin was introduced into the Sierra region of south-central Nuevo León by pioneers from Texas during the late nineteenth century, whereby the techniques of building such a house were adopted and further dispersed by the local mestizos. While this dwelling, especially in the beginning, was characterized by the distinct pioneer American log cabin form (e.g. wide eaves and gallery), it easily fits into the classification of a northern Mexican-style gable-roofed dwelling. The positioning of entrances and, thus, the general floor plan and levels of expansion follow that of all the other *jácales*. The only apparent difference is the material and techniques of which it is constructed and the common presence of the front porch (Winberry 1968, 1974). This, however, is often present on *jácales* of adobe or stone, as well. Among the terminology of local inhabitants of the Sierra region the log dwelling, while having other names, is often included, with the rest of the gable-roofed houses, as a *jácal*. What is unique and distinct from the regular *jacal*, or Form Class B dwelling, is the corner-notched, log dogtrot house, which tends to be even more common.
in select areas of the humid tropical lowlands of southern Tamaulipas and eastern San Luis Potosi. This, however, will be treated with greater depth in Chapter 8.

While the greater concentration of gable-roofed dwellings tends to be in the somewhat more humid Gulf Coastal lowlands and highland Sierra Madre Oriental, its overall distribution attests that sociocultural criteria are still the ultimate explanation for folk housing regions. After all, the region of the Form Class B dwellings does include parts of the arid Altiplano and the semi-arid portions of coastal Tamaulipas. The fact that it, like the flat-roofed dwelling, transverses many environmental regions, also demonstrates the greater importance of cultural over physical explanations. At present, the gable-roofed jacal is dominant throughout most of Tamaulipas and the Sierra of Nuevo León and a fraction of Coahuila. It competes, however, with other dwellings, such as the apsidal dwelling in the Huastec region in southern and central Tamaulipas, and with the flat-roofed dwelling in north-central and northern Tamaulipas. Except in the Sierra, where it continues to compete with the flat-roofed houses, it is far outnumbered by these in the semi-arid and arid portions of Nuevo León and Coahuila (Figure 6.1). Thus, while prestige tends to explain largely the extension of the flat-roofed dwellings, it is poverty which explains the also vast distribution of the gable-roofed dwelling, especially in areas where it is not the dominant house form.

Form Classes and Plan Types of Gable-Roofed Dwellings

Unlike the A dwelling, the gable-roofed jacal, or B dwelling, tends to expand in a much different manner. While a single flat-roofed dwelling has the possibility of growing from a one-room house to a full courtform, patio home, a single gable-roofed structure can, at most, expand in a linear fashion, usually to an extent of two or three rooms,
occasionally more. Further enlargement of the home occurs in a dispersed fashion. In fact, most flat-roofed structures are found as groups of several one- and/or two-room structures, all of which belong to the same family. Often, a jacal may be found aside a flat-roofed dwelling, as often occurs in the highlands, or along with apsidal and/or round dwellings, as is the case in much of Huastec region. In the former case, the jacal, which often once was the original dwelling, presently serves as the kitchen. This is a common occurrence. In the latter case, its uses become much more flexible, whereby it can serve as kitchen, sleeping quarters, or even both. In other cases, it is found by itself or grouped only with other gable-roofed jacaless. In sum, this particular house form family, unlike the flat-roofed forms, is most often encountered within small groups of separate structures, which, at times, belong to separate form class families.

Among the gable-roofed dwellings, there are three easily distinguishable form classes. Unlike the flat-roofed dwellings, however, structures belonging to both the B1, or gable-entry, and the B2, or side-entry, Form Classes are encountered commonly within a single homestead. Again, in other cases, one or both form classes may be found accompanied by structures of any of the other form class families, depending on the region. Another common occurrence, namely among the side-entry and parapet gable, or B3, dwellings, is the combination, in a single house structure, of one of these with a flat-roofed structure, thereby creating a mixed flat/gable-roofed, or Form Class MAB, dwelling. These tend to occur mostly in north-central and northern Tamaulipas and in northern and eastern Nuevo León. For this reason, in addition to looking separately at the distinct form classes, the different varieties of dispersed and mixed dwelling arrangements must be analyzed, as well.
As for the classification of plan types, these tend to coincide largely with the different form classes. Being that the form classes and sub-form classes depend on front-door placement and addition of appurtenances, respectively, this naturally affects the floor plan in a direct way. Only the parapet gable, or Form Class B3, dwelling tends to follow the same floor plan of the B2 Form, as it also is a side-entry dwelling. Thus, unlike the A dwelling forms, the B Form Classes are allowed little in terms of modular expansion and, consequently, are limited in variety of plan types. Only the MAB Form Class dwellings have the occasional tendency to expand in a connecting, modular fashion, thereby forming multiple plan types. This, however, occurs only because it is a mixed dwelling and one that is mixed with the flat-roofed form. Figure 6.2 demonstrates the variety of plan types and how they closely relate with each of the form classes. For this reason, in this chapter, plan types are treated together with form classes, while specific examples of dispersed plans are considered, as well.

**Form Class B1: The Gable-Entry Dwellings**

While many gable-roofed dwellings have doors on both gable ends and sides, in most cases a clear distinction can be made as to where the main entrance and, thus, the front of the house is located. As most of these dwellings are rectangular, but not square, and all have two-shed, gabled roofs, it is usually obvious as to whether the front is on the end or on the side. While most of these structures form part of a larger home, that is a group of separate structures occupied by one family, often a nuclear family, occasionally they are found standing alone. Since the gable-entry, or B1 Form Class, dwellings tend to have fewer chances of being expanded, these are less often found unaccompanied by additional structures. When they are encountered as a single dwelling, on the other hand,
Form Class B1:
Gable-entry Dwelling

Form Class B2:
Side-entry Dwelling

Form Class B2a:
Side-entry Dwelling with built-in porch

Form Class B2aa:
Side-entry dwelling with canted porch

Plan Type I:
Single-room rectangle with gable entry

Plan Type II:
Single-room rectangle with side entry

Plan Type IIa:
Single-room rectangle with side entry and porch

Form Class B3:
Parapet gable dwelling

Figure 6.2a: Plan Types of the Gable-Roofed (B) Dwellings
Form Class B2b: Side-entry with room/porch addition

Plan Type IIb: Single-room rectangle with room/porch addition

Plan Type IIr: Single-room rectangle with rear shed addition

Plan Type IIIs: Single-room rectangle with side shed addition

Plan Type III: Multi-room rectangle

Plan Types IIIa,b,r,&s: Repetition of Plan Type II

Form Class MAB: Mixed Flat-roof/Gable-roof Dwelling

Can include Plan Types II – IV of B Form Classes

Figure 6.2b: More Plan Types of the Gable-Roofed (B) Dwellings
this often signifies a family of extremely low and precarious socioeconomic standing. More commonly, at least two jacales are found belonging to a single nuclear family. Both of these can be gable-entry dwellings or one or more of each. After all, a structure having the main, and often the only, entrance on its shorter, gable end functions more efficiently as a single-purpose shelter, such as a sleeping quarters or a kitchen, but not both. The latter case tends to be more common among this particular form.

The B1 Form houses tend to occur most often as auxiliary structures of a larger dispersed house plans, whereby these serve as kitchen, storage room, extra sleeping quarters, or bathing facilities. In other words, they are often encountered as secondary buildings located either beside or behind the main dwelling, in the case when such a main house actually exists. In a dense, urban situation, they are almost always located behind a main house and serve as a secondary, single purpose structure. Another common characteristic, however, is that they are more common as rural rather than as urban dwellings, especially when they serve as something other than a kitchen. In rural situations, however, they can have multiple, but usually separate, functions. Also, when found in rural areas they can vary from precarious to substantial structures, depending on their use, while in urban situations they tend to be older and more dilapidated than the main structure, which faces the street (Illus. 6.1). In conclusion, the generalization is that the gable-entry house is encountered, nowadays, either as an older, secondary structure in the back of an urban solar, or as either an older or even recent structure of various uses in rural areas. Overall, however, the continued construction of these structures tends to be reduced, presently, to the rural areas of central and southern Tamaulipas and the
Illus. 6.1: Variation in the quality of construction of gable-entry *jacales*. The first (top), which is located in a small *ranchería* just outside of Sacramento, Coah., is a precarious structure with walls of carrizo and roof of grass thatch. This demonstrates the low economic situation with which the family began; however, it is now being replaced by a flat-roofed dwelling, located in front. While the second dwelling also belongs to a poorer rural family, its appearance is somewhat more substantial. Located in Ejido La Muralla just outside of Ocampo, Tamps., it is constructed palisade tree trunks and daubed over with mud. Serving as the kitchen, this structure forms part of a home, which is an arrangement of four separate dwellings.
southeastern corner of Nuevo León. This is due to the ever increasing popularity of flat-roofed dwellings and, even more so, modern, non-folk forms.

As a second floor is added to the gable-entry dwelling, it becomes a story-and-a-half, or B1a, dwelling, because the addition of this second story involves only a half wall, whereby the space under the roof composes the remainder of this upward addition. This extra story, which is known as a tapanco, or attic, appears to have been dedicated solely to the storage of grains, namely corn (Illus. 6.2a-c). While such dwellings have a greater opportunity of standing alone, most have long gained either a flat-roofed room addition or a separate flat-roofed room. Thus, all of these houses tend to show their age, as none have been constructed since the turn of the century. Additionally, they are found only in a reduced portion of the Sierra Madre Oriental of Coahuila, specifically within the anticlinorium valleys of the Municipio of Arteaga. While many other gable-roofed dwellings have a tapanco dedicated to grain storage, this cannot be noticed from the outside, as the walls have not been extended beyond the main story; therefore, they are cannot be classified as B1a Forms (Illus. 6.2a-c).

**Form Class B2: The Side-Entry Dwellings**

Unlike the gable-entry dwellings, the side-entry, or Form Class B2, dwellings are designed to more efficiently house multiple functions, although not necessarily all do. Therefore, the possibilities of B2 dwellings standing alone as complete homes are considerably greater than for the B1 structures. In most of Tamaulipas and in northern and eastern Nuevo León, often the historic urban centers contain older (i.e. fifty years or more) side-entry gable-roofed dwellings, which tend to function much as the older, taller flat-roofed houses. That is, these particular B2 dwellings are encountered with their main
Illus. 6.2a: Gable-entry with *tapanco* beneath roof gable. Adobe dwelling with upper half story. Thus, it is a B1a form. Dwelling is located in San Antonio de las Alazanas, Arteaga, Coah. The gable entry so happens to be on the opposite end.
Illus. 6.2b: Corner-notched plank dwelling with upper half story. Thus, it is a B1a form. Dwelling is located in San Antonio de las Alazanas.
Illus. 6.2c: One-story palisade pole-and-daub dwelling with small tapanco. Thus, it is only a B1 form. It is plastered with mezcla. Dwelling is located in Ejido Guadalupe Victoria, Ocampo, Tamps.
entrance, or more likely two main entrances, opening directly onto the sidewalk, or *banqueta*, and, thus, facing the street. In this way, the façades of these urban dwellings tend to mimic those of many of the older, urban flat-roofed houses, as often there are only doors, and no windows, along the front (Illus. 6.3a and b). Although these appear as substantial dwellings, they are still considered to be less prestigious and more hassle, in terms of maintenance, than the A dwellings. Thus, many of these eventually become, or already have been, converted into flat-roofed dwellings.

Like the urban one-room, flat-roofed dwellings, the urban one-room, side-entry, gable-roofed dwellings contain a floor plan, in this case Plan Type II, whereby each end has its designated purpose. One end may be the kitchen and the other the living and sleeping area. Also, like in the one-room A1 and A2 dwellings, the plan either will be bisected by a single front door or will have two front doors, leading separately to the kitchen and the sleeping area. A partition may or may not be present. In this case, the patio will be located behind the dwelling and, thus, like urban flat-roofed dwellings, will serve as a more personal, private space, away from the public outside world. Thus, with the exception of the gabled roof, which perhaps was at one time cheaper and more efficient for water drainage than a flat roof, this is a repetition of the urban A1 or A2 dwelling (Figure 6.3).

When expansion becomes necessary and affordable, this usually gains only one extra room, thereby separating bedroom and kitchen. This corresponds with Plan Type III, which can imply either another side-entry room or a gable-entry room, as well. As the main entry tends to be in the side-entry room and the occurrence is not so common, the overall form class remains the same, B2 (Figure 6.4) (Illus. 6.4a and b). Often, when a
Illus. 6.3a: Urban side-entry gable-roofed dwellings. Dwellings located in the town of Llera de Canales, Tamps. Both are over fifty years old and have double-entry, door-only fronts. Both have walls of adobe, which is plastered with mezcla and painted with lime.
Illus. 6.3b: Dwelling located in the town of Vallecillo, NL. This side-entry dwelling has only one door and no windows on its front. While there is, also, an entrance on the gable end, it is not the principal one, as it was not even open or unlocked at time of visit, as was the side entrance. Dwelling is over fifty years old.
Illus. 6.4a: Two-room, side-entry, gable-roofed dwellings. Double-entry dwellings. Both of these were built during first half of twentieth century. They are located in Congregación Juarez, Cerralvo, NL, and Llera de Canales, Tamps.
Illus. 6.4b: Single-entry, two-room, Plan Type III, B2 adobe dwelling. Note that the kitchen lacks a front door and is smaller than the other room. This dwelling dates from the early twentieth century and is located in Bustamante, NL.
Figure 6.3: Example of a Plan Type II, B2 dwelling

Figure 6.4: Examples of Plan Type III, B2 dwellings

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second room is added, this can take place as a flat-roofed room. When the house gains more than two rooms or expands into an "L" or a "U", it almost always becomes a mixed flat/gable-roofed, or MAB, dwelling. The exception to rule is if the Plan Type II or III, B2 Form dwelling obtains a simple shed addition to the rear or side, thereby becoming a Plan Type IIr, IIs, IIIr, IIIr, or a combination thereof. As these are only simple shed additions, the house still lacks consideration as a mixed dwelling, but remains a side-entry, gable-roofed (B2) dwelling that has received minor shed appendages.

In rural situations, on the other hand, the side-entry dwellings are encountered as relatively recently constructed houses (i.e. within the last thirty years or so), which tend to be more common among economically disadvantaged populations. In this case, they are set back from the street or road and accompanied either by a gable-entry gable-roofed, apsidal, or round dwelling. Thus, the patio space usually lies in front of the house, between it and the road. In addition, unlike the urban dwellings, the façade is normally characterized by some sort of symmetrical door/window arrangement (Illus. 6.5). These arrangements, in terms of both façade and house dispersal, are very common in central and southern Tamaulipas and in the highlands of the Sierra Madre Oriental. After all, these portions of northeastern Mexico tend to be some of the most impoverished in the region of study, whereby those few who are somewhat better off economically tend to dwell in something completely non-folk or, with the exception of the Huastec region, in an occasional flat-roofed dwelling. This conclusion was made based on both my observations and verbal declarations from most local inhabitants in regard to dissatisfaction with their current economic situation.
Illus. 6.5: Symmetrical façade of side-entry, gable-roofed dwellings. They are both of wattle-and-daub and are accompanied by additional structures. They are located in Tres Palos, Cruillas, Tamps.
Sub-Form Classes of B2 Dwellings

While the greatest concentration of Form Class B dwellings occurs in central and southern Tamaulipas, normally only those in the Sierra region have been expanded to include a front gallery addition. A few examples can be found, however, in the lowlands, as perhaps the tradition diffused there from the Sierra or from another point of American influence, such as the Chamal Valley in Tamaulipas. While many of the B2 dwellings in the Huastec of Tamaulipas and the plains of northern Nuevo León and Tamaulipas do have wide eaves, those in the Sierra often have a porch, locally known as a portal, spanning their front sides. This appears to have been an Anglo-American introduction, as those B2 dwellings having front galleries are almost always constructed of corner notched logs or planks. While the tradition of the gable-roofed log dwelling and the porch were introduced by American settlers during the latter part of the nineteenth century, the local mestizos quickly adopted this and, at times, continue to construct such dwellings. Those constructed during the last twenty years or so, however, tend to belong to the porchless, B1 variety.

While the older, original side-entry log dwellings usually had their porches included as an extension of the same roofline of the house (Sub-Form Class B1a), the more recent ones had their galleries added with a canted roof (Sub-Form Class B1aa). This refers to a slightly less sloped roof added on top the eave of the house roof. In either case, the gallery functions as an important component of the house (Illus. 6.6a-c). The gallery not only functions as a sort of hallway from which to access the various rooms of the house, but it also and importantly functions as a place of social gathering, among family and/or visitors, and relaxation. Additionally it serves as a place in which to store tools and other
Illus. 6.6a: Side-entry gable-roofed dwellings with front porch. Two-room, linear, B1a form dwelling. This is a corner-notched plank structure located in San José de las Boquillas, Santiago, NL.
Illus. 6.6b: Detached two-room, B1a form dwelling. This is a corner-notched plank structure located in San José de las Boquillas, Santiago, NL.
Illus. 6.6c: Blaa dwellings. Note canted porches. The top dwelling is a palisade pole- and-daub structure, located in Ejido La Muralla, Ocampo, Tamps., and the bottom one is a corner-notched log dwelling, located near Tejocote, Santiago, NL.
farm implements, which can be hung from the posts or from the rafters of the eaves. In conclusion, the front gallery tends to communicate cultural activities similar to those that the Mediterranean-style patio implies.

While occurring less often in the lowlands or plains and among the non-log dwellings, the B1a and B1aa Sub-Forms, on the other hand, tend to expand from one room to at least two or three, sometimes four. In general, both Plan Types IIa (single-room) and IIIa (multiple-room) are common among these particular dwellings (Figure 6.5). When this form of house contains only one room, another structure, usually of the gable-entry variety is usually present. Otherwise, in the case of the multiple-room dwellings, accompanying structures tend to be absent, except when all the dwellings of an extended family are grouped together. As expansion occurs, the modules added may not necessarily be of the side-entry variety, but, rather, gable-entry (Figure 6.4). Additionally, rooms may be added whereby a space is left between the new and previous rooms, thereby becoming not only a unique plan type but, also, a separate form class, of which Chapter 8 will elaborate.

While a full front gallery tends to characterize many side-entry log dwellings in the Sierra, unique to this region are those side-entry gable-roofed dwellings, in which both a gallery and a small room occupy the front shed addition. In other words, one half of the front addition is a room, usually a kitchen, while the other half is the porch. Due to their distinct external appearance, these dwellings can be classified as a separate Sub-Form Class B1b (Illus. 6.7). The roof of this double-purpose front shed addition appears always to be canted rather than incorporated into the house's roofline. This form, however, tends to be common not only among corner-notched log dwellings, but among adobe and stone
Figure 6.5: Example of a Plan Type IIIa, B2aa dwelling

a. Tejocote, Santiago, NL
Illus. 6.7: B1b form dwelling. Note that the canted front addition, contains both kitchen and porch. Dwelling is of rubble stone and is located in Laguna de Sánchez, Santiago, NL. While the portion shown is of the B2b sub-Form Class, it has received flat-roofed adobe additions, thereby making it a MAB dwelling, as well.
structures, as well. In most cases it corresponds uniquely with Plan Type IIb, whereby there is only one main room behind the tiny front kitchen and porch, however, further side-entry room can be added to this plan. These can be of the same or of an all-together different form class family. Apart from these front additions, rear and/or side shed additions can also be added; however, this normally occurs in the absence of a front shed. Thus, Plan Types IIr, IIr, or IIrs can occur among B2 structures, but I have not seen this among the Sub-Forms.

**Examples of Dispersed House Arrangements**

A common occurrence among the gable-roofed dwellings, as well as other forms, in Mexico is the dispersed house plan, whereby one family, usually nuclear, occupies several unattached structures, as opposed to a single dwelling in which all, or most, rooms are connected to one another. These arrangements can occur in almost any fashion and can be composed of multiple house forms. While the flat-roofed dwellings are found most often in single, connected units, they, also, can be accompanied by unattached structures, such as other flat-roofed dwellings, as mentioned in the previous chapter, or gable-roofed structures, which is the more common scenario. This type of arrangement occurs mostly in the Sierra and somewhat in the plains of north-central Tamaulipas and the piedmont and plains of eastern Nuevo León. In a few cases, both flat- and gable-roofed dwellings can be accompanied, also, by apsidal structures. This arrangement, along with pure gable-roofed dwellings, tends to be quite common in the Huastec region and in central Tamaulipas. The gable-roof only pattern occurs also in north-central Tamaulipas and eastern Nuevo León. For these reasons, the study and classification of folk house forms in northeastern Mexico, and perhaps in many other regions of the world,
especially tropical and sub-tropical, differs considerably from the approaches taken in the United States or Europe. After all, there the activities of the home are contained usually in a single dwelling, with the exception of outbuildings (e.g. barns, storerooms, grain sheds, etc.) common in many agrarian societies. In much of northeastern Mexico, however, especially in the tropical and sub-tropical lowlands of Tamaulipas and parts of Nuevo León, not only barnyard functions are housed in separate shelters, but so are main daily activities such as cooking, eating, sleeping, washing, bathing, relaxing, and socializing.

**Gable/Flat Roof Arrangements**

In the piedmont, juxtaposed between the high Sierra Madre Oriental and the Gulf Coastal lowlands, in the Sierra, and somewhat in the lowlands, one commonly encounters nuclear family homes, which are composed of both a one-shed or flat-roofed and one or more gable-roofed dwellings. A common case is that in which the structures are grouped, whereby they surround a common patio space, which is open on two sides and lies in front of the dwellings, that is between them and the road or driveway. In other cases, the *jacal* is located behind the flat-roofed structure (Figure 6.6) (Illus. 6.8). In either case, the generalization is that the *jacal* is the older of the structures and that which is used as a kitchen. Also, in these situations, it is commonly of the gable-entry, or B1, form. Again, dispersed arrangements such as this, are found more commonly in rural areas or in small settlements of agrarian-based inhabitants, such as *ejidos* and *ranchos*. Additionally, when found in the Gulf Coastal lowlands of Tamaulipas and eastern Nuevo León, the gable/flat roof arrangement normally implies that the flat-roofed dwellings are constructed entirely of cement and are of a completely non-folk form.
Figure 6.6: Examples of Gable/Flat-Roofed Dwelling Arrangements
Illus. 6.8: Gable-roofed/one-shed dwelling arrangement. Home located in Rancho Nuevo, Tula, Tamps.
Gable-Roof Only Arrangements

Perhaps more common, both in the coastal lowlands and in the piedmont and the Sierra are house arrangements containing only gable-roofed jacales. These occur as either groups of only gable-entry structures or as a mixture of both form classes. In the former case these can be either lined side-by-side in a row, facing each other, or catty-corner to each other, whereby they halfway surround a sort of patio space. Other less common arrangements include those in which they are lined parallel but not in an even row or simply in which they are placed in some haphazard fashion, where they usually surround a common, somewhat central patio space (Figure 6.7) (Illus. 6.9a-c).

In the case of the gable-entry only arrangements, whether log cabins in the Sierra or wattle-daub, thatched huts in the coastal lowlands, immediate distinction of each structure’s purpose is often unrecognizable, as all normally look alike. Upon closer examination one can determine a kitchen for its chimney or stovepipe and assume that the other structures house sleeping quarters and/or storage. Further distinction depends upon personal entry into dwellings or questioning of occupants. Arrangements that include both gable- and side-entry dwellings, on the other hand, facilitate a quicker distinction among the functions of different structures. The common occurrence is that the side-entry structure is located in front and the gable-entry dwelling in back. While the former usually serves as sleeping quarters and, sometimes, living room, the latter functions as the kitchen. If more than one structure is present, this particular arrangement is always the case in urban situations and occurs often in rural villages, as well.

Also common in rural settlements, is when the side-entry structure is set back from the road and placed catty-corner to the gable-entry structure, thereby creating a front patio.
Figure 6.7: Examples of Gable-Roofed Dwelling Arrangements

a. Ejido San Antonio, Jaumave, Tamps.

b. Ocampo, Tamps.

c. Ejido La Muralla, Ocampo, Tamps.
Illus. 6.9a: Gable-entry, gable-roofed dwelling arrangements. Dwellings located in Valle Hidalgo, Allende, NL, and San Carlos, Tamps. In the top image, the kitchen is the structure to the right and the bedroom to the left. Both structures in top photo are of wattle-and-daub. In the bottom image, the kitchen is of wattle-daub and the main bedroom is of adobe. The third, dilapidated-looking, wattle-daub shelter was a bedroom; now it is abandoned.
Illus. 6.9b: Dwelling located in Santa Anita de Peñasco, Galeana, NL. Both images portray the same home, which is composed completely of gable-entry, gable-roofed log dwellings. In the top image both structures are bedrooms and in the middle the structure in the foreground is the kitchen.
Illus. 6.9c: Dwelling located in Tres Palos, Cruillas, Tamps. This arrangement is composed of both a gable-entry structure, which is the kitchen, and a side-entry structure, the bedroom.
space, which often serves as a dooryard garden (Illus. 6.10). In this case as well, the kitchen usually occupies the gable-entry dwelling. This, however, is not always the case. At times, the main dwelling, usually the side-entry structure, houses the kitchen, along with the sleeping and living quarters. A series of gable-entry structures, which serve as storage, extra sleeping, and bathing facilities, may be located beside and/or behind this main side-entry house (Illus. 6.11a and b). While these various structures all house essential daily activities, the occupants spend much of their time in the immediate space outside these units. After all, the shelters often are occupied only for sleeping or cooking. Everything else takes place outside, in the patio.

In many cases, regardless of arrangement type, the immediate patio space in front, beside, and/or between structures is covered by an arbor-like *ramada*, which provides shade and, thus, a comfortable place in which to relax, socialize, or conduct chores such as washing laundry (Illus. 6.12a-d). While this is often placed directly in front of the entrance to the dwelling, usually the kitchen, it can be located to the side of the house, as well, especially when the arrangement of the structures allows for a central patio space. Perhaps, even more common is when it is placed between two houses that face each other, whereby it connects them and, thus, provides complete shade from entrance to entrance. When present, this is a vital part of the total home, as this where people can convene and spend much of the day, when not working in the fields or cooking in the kitchen, in relative comfort. Here they are protected from heat and sunlight and yet receive cross breezes that house walls often impede. Therefore, such structures tend to be found mostly in the hot subtropical and tropical Gulf Coastal lowlands. One can conclude, thus, that the *ramada*, so common in this warm region, functions very much
Illus. 6.10: Dooryard gardens. Note the garden at top with its wide variety of edible plants. These include pumpkin, lime, oranges, guayaba, peach, and bananas. This is located in Ejido San Antonio, Jaumave, Tamps. The garden of the bottom dwelling, on the other hand, contains mostly ornamental plants. This is located in Ocampo, Tamps.
Illus. 6.11a: Outbuildings. Dwellings located in Tres Palos, Cruillas, Tamps., and Cruillas, Tamps. In top image, note the array of outbuildings behind side-entry, gable-roofed dwelling. Gable-entry structure in the foreground is the *troja*, for corn storage. Note that it is raised up off the ground and supported by crotched corner posts. All structures are of wattle-and-daub construction. In bottom image, the precarious gable-roofed stone structure at right is the kitchen, which is located behind a mixed flat/parapet gable-roofed dwelling. At left is the water well, or *noria*. 

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Illus. 6.11b: Dwelling located in Ejido Narcizo, Hidalgo, Tamps. This gable-roofed, wall-less structure serves as a washing place of an arrangement of gable-roofed and semi-apsidal structures.
Illus. 6.12a: The *ramada*. Note its location in front of the main entrances to the dwelling. Dwellings are located in the *ranchos* of Palmar and El Gavilán, San Nicolás, Tamps. Both are constructed of wattle-and-daub.
Illus. 6.12b: Dwellings located in rancho of Guadalupe La Joya, General Terán, NL, and Palmillas, Tamps. Notice the ramada located in front (top) and beside (bottom) the kitchen structure of each of these homes. Note, also, the outhouse structure, located to the right of the ramada. The top dwelling is made of wattle-and-daub and the bottom one of adobe.
Illus. 6.12c: Dwellings located in Tres Palos, Cruillas, Tamps., and El Gavilán, San Nicolás, Tamps. Note that *ramada* in top photo is covered with palm fronds and, like many others, it is positioned in front of the kitchen entrance. Note tiny separate kitchen of wattle-and-daub (top).
Illus. 6.12d: Dwelling located in El Gavilán, San Nicolás, Tamps. Note that this ramada is covered with scraps of tin and cardboard roofing materials, as opposed brush, sticks, leaves, and/or palm fronds, as seen in the previous illustrations.
like the gallery, or *portal*, in the Sierra or like the patio in many of the courtform dwellings in the cities and towns and in the arid regions. Nevertheless, such structures are encountered, at times, in the Sierra or in the arid Altiplano.

Other structures, apart from the *ramada*, kitchen (*cocina*), and sleeping quarters (cuarto, pieza, or recámara), include the bathing facilities (*bano*), outhouse (*letrina*), tool and junk storage shed (*bodega*), and grain storage shed (*troja*) (Illus. 6.11a and b). While the first two are almost always present, an increasing number of homes have acquired modern facilities. This tends to be more the case in Nuevo León and northern Tamaulipas, however. Otherwise, the outhouse continues to be an ubiquitous feature throughout rural Mexico. This often includes little more than a hole in the ground, a board on which to sit, and a precarious wall or even a curtain for just a touch of privacy. At other times, this can be a roofed structure in the form of a small gable-entry structure or simply a shanty. The storage facilities, especially the *troja*, or *troje*, are becoming rare among homes these days. The *troje*, unlike the other structures, is encountered often as a small gable-entry structure that is raised from the ground (illus. 6.11a and b). That is, a raised wooden floor is supported by each of the four main corner posts. The rest of the dwellings, on the other hand, almost always have floors of tamped earth. Nevertheless, as subsistence farming becomes ever more precarious and marginalized and people are forced into other or additional occupations, more and more homes are seen without so many auxiliary buildings.

**Gable-Roof/Apsidal/Round Hut Arrangements**

Apart from being accompanied by flat-roofed or other gable-roofed structures, the B dwellings also can include apsidal and/or round structures in their greater arrangements.
The common occurrence is that either one or the other, but not both, accompanies the gable-roofed dwelling. As the apsidal and round structures have their roots in Huastec culture, these arrangements are found almost uniquely within this culture's historic region of dominance, that which includes all central and southern Tamaulipas, eastern San Luis Potosí, northern Veracruz, and the northernmost tips of Hidalgo and Querétaro. Chapter 7 further elaborates upon these form classes and their common arrangements.

**Form Class B3: The Parapet Gable Dwelling**

As opposed to almost all of the other gable-roofed folk dwellings, which owe their roots mainly to indigenous influences, except for the corner-timbered log houses, the parapet gable, or B3 Form, is believed by Jordan (1988) to contain traces of northern European cultures, which made their way to the Rio Grande Valley. While this dwelling always tends to be of the side-entry variety and follows the same rules of such, in terms of door placement and internal floor plan (Plans Types II or III), in an urban context, it varies simply due to its roof. Rather than extending a few inches, or about a foot, beyond the gabled wall and, thus, resting upon such, the roof lies below the tops of the gabled ends, thereby allowing the gables to extend above the room in the form of parapets (Illus. 6.13a-d). This consequently gives the dwelling much the appearance of the parapet gabled dwellings of Scotland, Ireland, Brittany, and Andalucía. Partly for this reason, Jordan (1988) and Newton (1973) attribute this characteristic in house form to influences from northwestern Europe.

Additionally, Jordan (1988) acknowledges the presence of multiple ethnic groups, in addition to Anglos and Hispanics, in the lower Rio Grande Valley of both Texas and Tamaulipas. Among these groups were African-Americans, Seminole Negroes, Chinese,
Illus. 6.13a: Parapet-gable dwellings. Dwellings located in Cruillas, Tamps., and Melchor Ocampo, NL. Note the incised roof which lies beneath the gable walls, thereby creating gabled parapets on each end. Each of these dwellings once had a thatched roof, which was protected on the gable ends from heavy rain and winds. Both are between 50 and 100 years old.
Illus. 6.13b: Dwellings located in San Carlos, Vallecillo, NL, and Ejido Lázaro Cárdenas, Cruillas, Tamps. Both are between 50 and 100 years old.
Illus. 6.13c: Dwellings located in Ejido Lázaro Cárdenas, Cruillas, Tamps., and at the El Remolino turnoff between Allende and Ciudad Acuña, Coah. Note the uncommon porch addition on the front of the bottom dwelling.
Illus. 6.13d: Plan Type II parapet-gable dwelling. Note the one-shed kitchen addition of this plastered adobe parapet gable dwelling. It is located in Melchor Ocampo, NL.

Illus. 6.13e: Plan Type III parapet-gable dwelling. Note, by the middle parapet and the length, that this parapet gable dwelling is two rooms long. It is located in Cruillas, Tamps.
Vietnamese, Germans, Czechs, Poles, Wends, French, Swedes, French, Irish, and English, the latter three being the most numerous. While exact origins are debatable, Jordan's theory, however, states that the parapet gable form was introduced to the Rio Grande Valley by a Breton circuit priest, Pierre Yves Keralum (1817-1872), who came to carry out missionary goals of the Oblate order in the region during a period from 1852 to 1872. Known for his qualities as an architect, stonecutter, and mason, he erected structures such as the La Lomita chapel, located in Hidalgo County, which is believed to be the first structure in the Rio Grande Valley of this particular form (Jordan 1988).

In either case, the parapet gable dwelling can be seen as one which, like the flat-roofed dwelling originally, became easily adapted to the ecology of the region. This is demonstrated by the fact that the parapets conveniently serve to anchor down the roofing material, originally thatch, and protect it at the gable ends from wind and rain. As this was necessary in the wet maritime climate of northeastern Europe, so was it in the semi-humid subtropical lowlands, which cover much of the lower Rio Grande Valley. While gales and rain are common in northwestern Europe, so are heavy winds and rain from the annual tropical storms and occasional hurricanes. Therefore, the Hispanic population, as well, continued the tradition of parapet gables well into the early twentieth century. Local occupants south of the Rio Grande, while knowing nothing of the form's European origins, even attribute this curious aspect simply to functional reasons.

Unlike the flat-roofed or the other gable-roofed dwelling forms, however, this particular house form never experienced such a great level of diffusion, as few are found outside the immediate lower Rio Grande Valley. At present, the westernmost point at which a B3 dwelling has been found is near the rancho of El Remolino, on the main
highway between Ciudad Acuña and Allende, in Coahuila (Illus. 6.13c) (Figure 6.8). The southernmost location is the ejido settlement of Lázaro Cárdenas, in the municipio of Burgos, Tamaulipas. The remainder of these, at least those still intact, is reduced mainly to rural settlements in the northeastern municipios of Cerralvo, Melchor Ocampo, Los Herrera, General Bravo, and China, in Nuevo León, and the counties of Starr and Webb, in Texas. It is not surprising to see that a large number of these have been abandoned and are becoming part of an ever-disappearing form class.

As for plan type arrangements, the parapet gable dwelling is often found by itself or as part of a mixed dwelling. Rarely is it found accompanied by auxiliary structures, except for maybe one B1 Form kitchen. While the most common floor plan is the single-room, or Plan Type II, two or more rooms, all in a linear, side-entry fashion (Plan Type III), may be possible, as well, just as is the case with the regular side-entry (B2) dwellings (Illus. 6.13e). Rear and/or side shed additions, also, may be present but rarely -- I have only seen two cases -- does one find any front appendages, such as a gallery (Illus. 6.13c and d). Almost half of the B3 dwellings seen and studied in the field, however, are two-room structures in which one of the rooms is of the flat-roofed variety.

**Form Class MAB: The Mixed Dwellings**

Form Class MAB signifies the mixture of flat- and gable-roofed forms into one single dwelling structure, which may normally assume a multi-room, usually two-room, rectangle, sometimes with rear or side shed appendages, or an “L” plan type. Such a mixture occurs with parapet gable forms as well as with regular side-entry, or B2, forms, thereby permitting more specific MA1B3 and MA1B3 Forms. The former case is found only in the northeastern municipios of Nuevo León and occasionally in the panhandle.
Figure 6.8: Distribution of the Parapet Gable Dwelling
municipios of Tamaulipas. The latter case tends to be unique to the Sierra of Nuevo León and Coahuila (Figure 6.9). In either case, nearly all dwellings of this form category were constructed during the late nineteenth or early twentieth century. A few exceptions can be seen in the Sierra, where flat-roofed rooms, either of adobe or cement block, recently have been added to older gable-roofed dwellings.

The reasons for this combination of house forms are varied and often unclear. In the Sierra the gable-roofed dwelling, whether alone or mixed with a flat-roofed dwelling, serves the purpose of housing grain storage space in its attic, or tapanco. As fewer families have the necessity of grain storage and the prestige, economy, and ease of the flat-roofed structure becomes more apparent, subsequent additions to the home rarely tend to have gabled roofs (Illus. 6.14). In the lowlands, among the parapet gable/flat roof mixtures, both gable- and flat-roof rooms appear to date from the same period, near the turn of the century or slightly earlier (Illus. 6.15a-c). However, the reasons for such a mixture remain unclear, as all of these particular dwellings were found to be unoccupied or completely abandoned. After all, this area, along with the rest of the immediate border region, is characterized by people who either live for periods of at least six months per year in the United States or who migrate permanently to this country. Further information upon this topic will be elaborated in Chapter 9.

As for the plan types, these coincide more adequately with those of the A Form Class dwellings, namely Types II, III, and rarely IV. The parapet gable/flat roofed dwellings of the lower Rio Grande Valley conform solely to a two-room Type II plan. The gable/flat-roofed dwellings in the Sierra, on the other hand, are found commonly in either a Type II or III plan. While most of the older (i.e. early twentieth century) dwellings tend to have
Figure 6.9 Distribution of the Mixed (MAB) Dwelling

Source: INEGI
Illus. 6.14: MAB form dwellings of the Sierra. The gabled portion of this MA1B1a dwelling (top) in San Antonio de las Alazanas, Coah., is nearly a story and a half and has a tapanco for grain storage. The ground floor now serves as a dining room, as the kitchen was moved in the new flat-roofed cement block addition to the left. Note the existence of a large zaguan, thus denoting the relatively higher standard of living of the family. The entire dwelling has an L, or Type III, plan. The new flat-roofed adobe room additions to this B2b dwelling in Laguna de Sánchez, NL (bottom), have extended it specifically to a MA1B2b dwelling. The last addition is still under construction.
Illus. 6.15a: MAB form dwellings of the northern semi-arid plains. MA1B3 dwelling located in Cruillas, Tamps. It is noticeably constructed of limestone and *cal y canto* and is between approximately 50 and 100 years old.
Illus. 6.15b: MA1B3 form dwellings located in Los Aldama, NL. Note that they contain a parapet gable room in addition to the flat-roofed room. In the bottom image, note the uncommon style of placing the chimney almost flush with the wall rather than completely on the outside. This and the flattened bottom corners of the parapets give an even stronger hint of Western European origin. They are both between 50 and 100 years old.
Illus. 6.15c: MA1B2 form dwelling located in El Fraile, Allende, NL. Note that it contains a regular side-entry gable-roofed structure attached to the flat-roofed structure.
“L” plans, those more recently being extended tend to occur in a linear fashion and sometimes gain up to four or five rooms (Figure 6.10). Here, B2a, B2aa, and B2b dwellings participate in this class of modular expansion, as well. Furthermore, the Plan Type III dwellings can include a zaguán and, therefore, be common among upper middle class families, while those of the Plan Type II variety, even when extended, tend to belong to humbler families. In either case, these mixed dwellings clearly demonstrate the significance of modular expansion among the folk dwellings of northeastern Mexico.

**Common Appurtenances: The Chiminea**

Regardless of the form or plan type, some form of *chiminea* is an essential component of almost all gable-roofed dwellings. After all, in the case of dispersed house arrangements the kitchen is most often located in the gable-roofed structure, except in the case of some of the Huastec arrangements, where it may occupy a round hut. Unlike the *ramada*, which is essential to most dwellings of the hot lowlands, the chimney is common everywhere. The only houses where it may be missing are those having adopted modern kitchen appliances, and even many of these demonstrate the combination of both modern and traditional cooking facilities. As for the flat-roofed dwellings, several varieties of the *chiminea* can occur. Again, socioeconomic situation and/or geographic region can be very influential as to the variety of cooking facilities the kitchen may have.

For the gable-roofed dwelling even more varieties of *chiminea* are possible than for the flat-roofed dwelling. As for the massive exterior chimney the same rules apply as for the flat-roofed forms. Again, they are concentrated mostly within the plains and coastal lowlands of northern Coahuila, Nuevo León, and Tamaulipas. The same reasons seem to apply as well. After all, the precursors of these supposedly were attached to gable-roofed
Figure 6.10: Examples of Plan Types II and III, MAB Dwellings
log cabins in Texas (West 1974). Due to the relatively frequent cold fronts that attack much of Mexico’s northeastern borderlands, it is easy to conclude that this structure was needed and that it, therefore, allowed the dwelling to become more easily adapted ecologically to the region within which it is concentrated.

The structure itself appears as if it had been taken from a flat-roofed dwelling, as it does not differ. The outside is massive and access from inside the kitchen is the same, a waist-high fireplace recessed in the wall (Illus. 6.16a-c and 6.18a-c). Only in some of the parapet gable dwellings is the chimney set more within the wall, rather than being placed completely upon the exterior of the wall (Illus. 6.15b). As for materials, the chimneys in the higher plains of northern Coahuila and Nuevo León are either of adobe or of the same varieties of stones of which the house is made (Illus. 6.16a-c). In the gulf coastal lowlands of Tamaulipas, on the other hand, materials, also, often mimic those of the rest of the house, which, however, commonly consist of wattle and daub. While most of the wattle-and-daub chimneys follow the same characteristics of the massive chimneys, such as wide, rectangular base that tapers toward the flu, others can have rather unique, imperfect form. Sometimes seen are wattle-daub chimneys that are somewhere between round and octagonal with a cone-shaped top (Illus. 6.17). While the normal rectangular chimneys often hide their wattle-daub construction, some are left unplastered, with the wattle completely exposed. In other cases, especially in the plains of eastern Nuevo León, the chimney of a wattle-daub house may be constructed of a more substantial material, such as stone or adobe (Illus. 6.16a-c). In any case, this form of chimney continues to a unique feature of the northern, and sometimes central, portions of the three northeastern Mexican states of Coahuila, Nuevo León, and Tamaulipas.
Illus. 6.16a: Massive exterior chimneys tapering toward the top. Adobe chimneys and walls. Note that the top one is plastered, while the bottom one is exposed, perhaps due to abandonment and neglect. Dwellings are located in San Marcos, Vallecillo, NL, and Villa Unión, Coah.
Illus. 6.16b: Wattle-and-daub chimneys and walls. Note that the top one is plastered, while the bottom one has been left exposed, perhaps due to lack of funds. Dwellings are located in Ejido Guadalupe La Joya, General Terán, NL, and El Gavilán, San Nicolás, Tamps.
Illus. 6.16c: Stone chimneys. Note that the top chimney is of bare flagstone, while bottom one is of plastered stone. Of the latter, note that the walls are of plastered wattle-daub. Dwellings are located Ejido Guadalupe La Joya, General Terán, NL, and Ejido Lázaro Cárdenas, Cruillas, Tamps.
Illus. 6.18a: Raised fireplace cooking hearth of gable-roofed kitchens. Walls and exterior chimney of wattle-and-daub. Note the presence of the horizontal poles and how they bulge through the plastered wall (bottom). Also, note that the chimney is always located to one side, principally due to the presence of a king post in the center of the gable wall. Floors are generally of earth (top). Dwellings are located in Ejido Guadalupe La Joya, General Terán, NL, and El Gavilán, San Nicolás, Tamps.
Illus. 6.18b: Indigenous-style *tecuile* within exterior wattle-and-daub chimney. Dwelling is located in Palmar, San Nicolás, Tamps.
Illus. 6.18c: Walls and exterior chimney of adobe. Note that the chimney can be located in the middle rather than to the side, due to absence of king post. Note, also, here and in top photo of previous page that modern appliances (note the gas stove) are used along with the traditional hearth. Dwelling is located in Congregación Juarez, Cerralvo, NL.
While the large exterior chimney is always located on the gable end of the structure, the interior forms can be located either along the side or on the gable end. These forms include the interior hearth, a stone circle on the ground, an overturned washtub as hearth, or even the cast-iron wood burning stove. While the large, exterior chimney is found only further north, the other forms tend to become more dominant as this chimney becomes ever less common further south. The interior hearth is very similar to that in the flat-roofed dwellings, that is when it has a stovepipe to carry smoke outside the kitchen. Unlike the flat-roofed dwellings, this hearth normally takes the form of a square, rather than right triangle, and can be placed along the side or gable wall or in the corner. In cases even more unlike the gable-roofed dwelling, the hearth completely retains its traditional form and, thus, lacks any form of smoke escape mechanism. Rather, the smoke simply escapes through holes in the top of the gable and through the roof itself, which is usually thatched in this case, thereby leaving the entire kitchen black with soot (Illus. 6.19 and 6.20). While most common in the semi-humid tropical lowlands, this scenario can be found, also, in the Sierra. In this case, the smoke must escape through a roof of wood shakes, more often than thatch. Such a hearth, with or without stovepipe, is commonly known under a variety of names, of them being chiminea, fogón, and lumbre.

Another common form of cooking facility, especially further south toward and within the Huastec region, is the over-turned, round washtub, which has its base pierced with three holes that serve as burners. This is usually placed in top of a stone or earthen platform. The fire itself lies within the space of the over-turned washtub. While this, also, is known under the three names mentioned above, another more common and more distinguishing term for such a contraption is hornero. Also, in the Huastec region and
Illus. 6.19: Interior raised adobe hearth of gable-roofed adobe kitchen. Note, due to lack of chimney, smoke can only escape through the spaces between the gable and the rafters and through the *padilla*-thatched roof. Dwelling is only one year old and is located in Ejido Alvaro Obregón, Tula, Tamps. Note that the floor is of earth.
Illus. 6.20: Interior raised hearth made of earth and supported by wood posts. Note the existence on tecuile-like stones upon the hearth and the fact that here, also, the smoke escapes simply through a hole in the top of the gable and through the roof thatch. Dwelling is constructed of wattle-and-daub.
further north, as well, a simple circle of usually three stones is placed on the floor. This is common usually among the poorest kitchens and is known as a tecuile, however, the other three names are used often, as well. The stones, or sometimes cinder blocks, surround a small fire and support the cooking pots or skillet. Finally, common especially among corner-timbered log kitchens is the cast-iron wood burning stove. If not a simple hearth, the wood burning stove is what most structures of this nature house. Perhaps, this is due also to Anglo-American influences, as the wood stove is found only in the same region in which the log house is distributed.

While such kitchens are considered poor and primitive, they continue to be popular due to conservatism and personal taste for food cooked over wood than for that cooked over gas or electricity. However, many homes demonstrate a preference for both traditional and modern, as many have two separate kitchen structures, one modern and one with some form of hearth, or one kitchen with both stove (usually gas) and hearth. In the plains of northern Tamaulipas and Nuevo León, where single dwellings are more the norm, the one, combined kitchen tends to be more common, even to the extent that the hearth space is covered up and seldom used. This is perhaps due to such strong influences from north of the nearby border, as will be elaborated further in Chapter 9. Further toward and within the Huastec, on the other hand, if and when a modern kitchen can be afforded, it normally occupies another structure apart from the old kitchen. Again, the common denominators of kitchen facilities tend to be based on popular cultural influences, often from the North, together with conservatism, usually stronger further south, and economic standing.
Decoration of the B Dwellings

While the form of cooking facilities often depends upon socioeconomic standing, so does the manner in which the dwellings are finished, whether they contain some form of decoration or simply none at all. As the gable-roofed dwellings tend to fall in the humbler category of housing in northeastern Mexico, the norm in terms of wall preparation and decoration is that the materials are either completely exposed or that they are plastered and usually painted white. Many structures, however, have been plastered, often simply with mud, and left without paint, thereby having a very earthy appearance, as if they emerged directly from the ground, itself (Illus. 6.21). Being popular among many jacales, wet earth is applied often applied to log structures, thus, giving them an earthy appearance, as well. As the earth in much of the Sierra is heavy in lime, however, this often applied with the intention hiding the natural look of the logs and thereby giving the walls a whiter, more finished appearance (Illus. 6.22). In any of these cases, resources are traditionally limited to earth, water, and lime.

Nevertheless, some B dwellings contain façades adorned with offset, painted borders resembling a simple form of neoclassical design, similar to the case of many flat-roofed structures. In fact, especially in regard to more urban dwellings, the only apparent difference between a flat-roofed dwelling and a side-entry gable-roofed dwelling is the roof. Otherwise, the painted, and even sometimes raised, borders and rodapie remain the same, regardless of form (Illus. 6.3 and 6.23). The obvious difference would be the lack of a cornice or frieze, which are often present on flat-roofed parapets. Naturally, lacking among all gable-roofed dwellings are the ornate, high-style adornments present on many of the A3 houses. In conclusion, at least among the humble, folk dwellings, particular
Illus. 6.21: Gable-roofed dwelling constructed of horizontal wattle-and-daub and plastered with plain mud. It is approximately 35 years old and is located in La Almandre, Burgos, Tamps.
Illus. 6.22: Corner-timbered log dwelling that has been plastered with a homemade paint made by mixing water and lime-rich earth. Roof is covered with wooden shakes. Dwelling inlocated in Tejocote, Santiago, NL. Note, also, the doll-house, at right, which is a replica of the local log folk houses.
Illus. 6.23: Gable-roofed dwelling constructed of horizontal wattle-and-daub, plastered with a cement *mezcla*, and painted in a neoclassical fashion. It is approximately 35 years old and is located in La Almandre, Burgos, Tamps. It belongs to the same complex as the one shown in Illus. 6.22.
house adornment styles tend to be common among multiple house forms, thereby
signifying a general cultural element that surpasses even form and that is, better yet,
encountered throughout the Latin World.

**Materials, Construction, and the Natural Environment**

What definitely does not surpass house form is the natural environment and the
materials it provides for house construction. Like the flat-roofed dwellings, the walls of
these, also, are constructed of the same variety of materials, including cement block. As
is the case with the A dwellings, the use of these materials seems to correspond with the
options provided by the environment. Therefore, the B dwellings behold a large variety
of appearances, whether of corner-notched logs, wattle-and-daub, palisade poles or
bamboo, adobe, stone, or sillar (Illus. 6.24a-c). Nevertheless, they remain gable-roofed
dwellings that always have their gables on the short ends. The most to which the
environment tends to be capable is the limit or abundance of materials at hand and
perhaps the level of dominance the form enjoys in regard to other forms.

For natural reasons, adobe and stone prevail further to the arid West, while wattle-and-
daub (*bajareque*), corner-notched palm logs, and palisade cane (*otate*), bamboo, and tree
trunks prevail in the more humid Gulf Coastal lowlands (Cozzens 1938; Tamez Tejeda
1992, 1993; Prieto and Carrillo 1978; Yampolsky 1993). The same goes for the use of
corner-notched pine, spruce, fir, and oak logs high in the Sierra, a technique believed by
Winberry (1968, 1974) to be introduced by Anglo-Americans at the turn of the century
(Figure 6.11). Roofing materials, also, demonstrate choices provided by the physical
environment. Thatch is found where palms, grasses, or yuccas are available, this being in
the humid lowlands, in the case of the former two materials, and in the arid region, in
Illus. 6.24a: Construction materials of gable-roofed jacaless. Dwellings constructed of adobe (top) and stone (bottom). Dwellings are located in San Carlos, Tamps., and Vallecillo, NL.
Illus. 6.24b: Dwellings constructed of sillar (top) and palisade poles (bottom). They are located in Iturbide, NL, and just south of Llera de Canales, Tamps.
Illus. 6.24c: Dwellings constructed of wattle-and-daub (top) and corner-notched logs (bottom). They are located in Villa Unión, Allende, NL, and Laguna de Sánchez, Santiago, NL.
Figure 6.11a: Distribution of Gable-Roofed Dwelling Building Materials in Relation to Environmental Zones:
Logs and Rubble Stone

Source: INEGI
Figure 6.11b: Distribution of Gable-Roofed Dwelling Building Materials in Relation to Environmental Zones:
Adobe, Stone, and Sillar
latter case. High in the Sierra where timber is available wood shakes were once the norm (Tamez Tejeda 1992, 1993; Prieto and Carrillo 1978) (Figure 6.11). Tin sheeting, however, tends to be the preferred material of the last thirty years or so, regardless of region.

The Gulf Coastal Lowlands

House Framing

As a consequence of the wide variety of materials utilized in gable-roofed dwellings throughout northeastern Mexico, the methods of construction are diverse, as well. Throughout the Gulf Coastal lowlands, especially in the tropical Huastec, and to a lesser extent in the northern plains along and to the south of the Rio Grande, jacales that have walls of vegetative materials are common and, in the case of the Huastec region, dominant. Consequently, a frame that consists of vertical forked posts (horcones) and horizontal wall plates and tie beams is responsible for support of the roof structure. The structure typically contains an horcón at each corner and sometimes one or two extra in the middle of the long sides. These are more specifically referred to as horcones menores, and, in turn, are what support the wall plates (soleras or cruceros), which further support the tie beams (morillos) and rafters (latas). Finally, the purlins, or better yet lathing (largueras, atravesenas, or varillas), which hold the roofing material, lay across the rafters (Illus. 6.25a and b and 6.26a-e). Occasionally, one purlin on each shed will lay beneath the rafters for further support, thereby making necessary a double set of rafters on either gable end.

In addition to these elements, a king post (horcón mayor) is present, in most cases, at the gable end and is what supports the ridgepole (madre, caballete, or simbra), that upon
Illus. 6.25a: Forked post construction. Wattle-and-daub houses. These have the need for forked posts in order to support the roof structure. The dwellings are located in Ejido Guadalupe La Joya, General Terán, NL, and Palmillas, NL.
Illus. 6.25b: Corner-notched log house. While there is no need for the forked king post, its builders must have felt that the ridgepole needed extra support. Dwelling is located in Tejocote, Santiago, NL.
Illus. 6.26a: Roof construction of gable-roofed dwellings, as seen from the interior. Wattle-daub dwelling located in Ejido Narcizo, Hidalgo, Tamps. Here, there is the need for a king post. Note ridgepole, upon which rest the rafters and upon these the lathing, to which the thatch is fastened.
Illus. 6.26b: Wattle-daub dwelling located in Tres Palos, Cruillas, Tamps.

Illus. 6.26c: Adobe dwelling located in San Carlos, Tamps. Here, there is no need for any forked posts.
Illus. 6.26d: Use of *quites* for rafters in dwelling located in Bustamante, NL. Note that the rafters can become hollow because insects tend to eat the soft, succulent core.
Illus. 6.26e: Use of *quiotes* in dwelling located in San Carlos, Vallecillo, NL.
which the top ends of the rafters rest. Sometimes, a king post is present within the middle of the house, as well, especially when the structure is more than three times longer than it is wide. Often, upon the tie beams rest queen posts (cabrillos), which add further support to the ridgepole (Illus. 6.25a and b and 6.26a-e). For each tie beam there can be either two queen posts, which both meet at the ridgepole; three queen posts, one supporting the ridgepole and the other two supporting certain rafters; or simply a single queen post supporting the ridgepole. In some cases, these rest on each of the end tie beams, as well, and, thus, take the place of the king posts. This roof structure is basically the same for all gable-roofed dwellings. The major difference is that those dwellings with walls of more substantial materials, such as adobe, stone, sillar, or corner notched logs, lack horcones all together. In addition, tie beams are lacking on the short ends, as the gable walls, themselves, support the ridgepole. In these dwellings, as well as in some wattle-daub or palisade houses, interior ties beams are absent, also (Illus. 6.26a-e). Nevertheless, this rule often is broken, as some jaca les of adobe or corner-notched logs, also, bear king posts, most of which can be seen clearly from the outside, on their gable ends (Illus. 6.25a and b).

As for those houses with a complete horcón frame construction, vegetative materials make up the entirety of both the walls and the frame. The horcones, themselves, can come from a wide variety tree trunks, which have been cut so as to leave the crotch at one end, whereby this can hold the horizontal roof-supporting members. Among the more popular trees used for this purpose in the tropical lowlands include ebony, palo de arco, live oak (encino), palo de amole, palo blanco, chijol, and sabino (Mexican bald cypress). Further north and northwest in the semi-arid plains and lower Rio Grande Valley, trees
such as huisache and mesquite tend to be more common, along with ebony, *palo blanco*, and *chichequilla* in the intermediate areas between humid tropical and semi-arid regions. Limbs, saplings, and trunks from these trees are often used in the rest of the roof frame, as well. Additional materials include *quites* (flower stem of either the yucca or agave plant), and *otate* (a kind of bamboo) which are used for the rafters, and *carrizo* (a tough reed), *cihuapatl*, and *ojancho*, used for the purlins and lathing (Illus. 6.26a-e).

**Wall Construction**

Construction of the walls involves use of the same variety of materials mentioned above and takes place in many distinct forms. Among the more common walls are structures of palisade, woven, and horizontal wattle, poles, or logs. Palisade structures are quite common throughout central and southern Tamaulipas and the rest of the Huastec. Materials for the palisade, sources of which come from the same variety of trees and other plants, are present in the form of flat boards (*tablas*), round tree trunks or bamboo poles, split palm tree (from the royal palm) or *aquiche* trunks, or thin tree saplings or branches, wicker, or *carrizo* reeds. The latter materials simply are referred to as *palos verticales*; *otate* or *bambú*, in the case of bamboo, or *raja de palma*, in the case of split palm logs (Illus. 6.27). The palisade walls of the thinner materials tend to be considered under the wide classification of wattle-and-daub, or, often, just wattle.

These vertical elements are fastened together with a series of horizontal bands, or *fajas*, usually made of saplings, branches, wicker (*mimbre*), or lianas (*bejucos*), which additionally fasten the whole structure to the *horcones*. The saplings and branches typically come from the *ojancho* tree. For further binding purposes these elements and, more commonly, fibers from lianas, *ixtle* (from the leaves of different varieties of the
Illus. 6.27a: Gable-roofed dwellings with walls of palisade materials. Dwellings located in Abritas, Ciudad de Maíz, SLP, and Sacramento, Coah. In these images wood poles (top) and *carrizo* (bottom) are used.
Illus. 6.27b: Dwellings located in San Blas, San Buenavntura, Coah., and Ejido Guadalupe Victoria, Ocampo, Tamps. Palisade materials in these dwellings include wood poles (top) and olate (bottom).
agave plant, namely the lechugilla), and samandoque (from the leaves of the yucca plant). These, additionally, are used to bind members, such as rafters, purlins, and roof thatch. In more contemporary cases, sometimes, the split palm logs or the bamboo will be placed horizontally and, thus, be fastened to the main horcones with nails.

Other common wall types include the varieties of wattle-and-daub, known throughout Mexico and Central America as bajareque, construction. One particular variety involves a horizontal layering of sticks, or wattle, which are help in place by small vertical posts, or rods. Both of these components often involve the same variety twigs, branches, and sapling as mentioned above. While this is relatively common in the Huastec region, it tends to be even more common, and often dominant, in the semi-arid scrub-brush plains further north and northwest (Figure 6.12). This refers specifically to north-central Tamaulipas and northern and northeastern Nuevo León. Here, even more common materials used, along with the others, are the ocotillo and creosote plants, for their long spiny stems. This form of construction is commonly referred to as a cercado (like a fence, for its appearance) or simply as leña acostada (horizontal kindling) (Illus. 6.28).

Another form of wattle-and daub, or bajareque, construction is a horizontal mesh of interwoven wattle, much like basket weaving (Illus. 6.29). While the interwoven wattle usually consists of wicker, lianas, or thin branches or saplings of the ojancho tree, due to their flexibility, the vertical posts about which the wattle is interwoven consist of tougher tree branches or saplings. This mesh is further interwoven about the horcones. This method of wall construction is abundant throughout the Huastec region, including most of southern Tamaulipas, and is commonly known as tejido (Figure 6.12).
Figure 6.12a: Distribution of Vegetative Wall Construction Techniques: *Leña* and *Tejido*
Figure 6.12b: Distribution of Vegetative Wall Construction Techniques: *Cajón*, Palm Log, and Palisade
Illus. 6.28: Wattle construction of gable-roofed dwellings, whereby horizontal sticks are placed between two rows of vertical posts. Both dwellings are located in Ejido de las Ollas, Linares, NL.
Illus. 6.29: Wattle-daub construction of gable-roofed dwellings, whereby horizontal sticks are interwoven between a single row of vertical posts. Dwellings are located in Llera de Canales, Tamps., and El Gavilán, San Nicolás, Tamps.
A once common form of watt-daub construction included a method, in which horizontal lathing, or \textit{barrotes}, is bound or nailed to both sides of the vertical wall posts, or \textit{varillas}, and the \textit{horcones}. The barrotes are usually spaced about half a foot apart and consist of either carrizo or tree branches or saplings. The space between these two sets of lathing is filled with a variety of materials, usually mud, rocks, and sometimes adobe bricks (Illus. 6.30a and b). This wall structure is known as either \textit{cajón} or \textit{cajoncillo} and, at present, tends to be reduced to older dwellings, at twenty years old, located to the south and southeast of Ciudad Victoria, in places such as Llera, and in other locations throughout the Huastec region, outside of Tamaulipas. At times, this forms only part of the wall structure, when it is added to the exterior of a wall made of pure horizontal sticks. Such a method is simply known as \textit{cajón sobre leña acostada} and tends to be most present in the Sierra Chiquita of north-central Tamaulipas (Figure 6.12). In conclusion, many possibilities for filling the space between the supporting crotched posts exist, especially in the Gulf Coastal lowlands of Tamaulipas and in the rest of the Huastec region.

The wattle walls, regardless of the specific type, are often daubed, thus the term “wattle-and-daub,” but this is not always the case. Many houses bear walls of exposed, un-daubed wattle. On the other hand, many others have their walls daubed with mud, whereby the house takes on an earthy appearance, often with some of the wattle still visible (Illus. 6.31a and b). Yet, others have their wattle-daub walls further plastered with more mud, a lime and sand \textit{mezcla}, or a mixture thereof (Illus. 6.31a and b and 6.32a and b). Even many are whitewashed with lime and some even painted with two different colors, including, at times, a decorative pseudo-neoclassical border and \textit{rodapie} (Illus.
Illus. 6.30a: Wattle-daub construction, whereby the interstices of two rows of horizontal sticks, which are fastened to a single row of vertical posts, are filled with stones, earth, vertical adobe bricks, or a mixture of these. Dwellings located in San Antonio Rayón, Gonzales, Tamps., and Llera de Canales, Tamps. This particular form of wattle-daub is known as cajoncillo.
Illus. 6.30b: Dwelling located in El Gavilán, San Nicolás, Tamps. The structure has walls of horizontal sticks, over which *cajoncillo*, has been placed, in the case of the front wall.
Illus. 6.31a: Wattle-daub walls plastered with mud. Dwelling located in La Unión, Allende, NL. Note that only the front wall is plastered, while the others are left with the material exposed.
Illus. 6.31b: Dwellings located in Ejido Narcizo, Hidalgo, Tamps., and Guadalupe Victoria, Tamps. Note that only the front wall is plastered, while the others are left with the material exposed.
Illus. 6.32a: Walls of gable-roofed dwellings plastered with *mezcla* and painted. Dwelling is located in El Gavilán, San Nicolás, Tamps.
Illus. 6.32b: Houses having two colors with an offset trim. The bottom dwelling has two different textures, as well. Dwellings are located in El Fraile, Allende, NL.
6.23 and 6.32a and b). The daubing and plaster on these, as well as any other, wall types is commonly known as either sapeo or enjarro. Thus, the wall is either sapeado or enjarrado.

The Palm Log House

Along with the numerous palisade and watt-daub jacales, much of the Huastec region is dotted with palm log houses as well (Figure 6.12). This particular form of wall construction, which was introduced by American settlers from Oklahoma and Texas in 1903 and thereafter in Chamal, Tamaulipas, and San Dieguito, San Luis Potosi, demonstrated a direct utilization of the natural resources available as well as conservation of newly introduced traditions from other cultural regions. These settlers made use of logs from the royal palm tree in the construction of their traditional houses. Thus, the use of corner notching and the presence of a deep front porch characterized this house type. The roof was gabled and canted to include the porch overhang, just as in the southern United States; however, here the roof was usually of thatch, instead of shingles. This form is locally referred to as casa de huacal or casa de trozos, in the Naranjos Valley, and casa de cartón or cuartón de palma, in the Chamal Valley. In this way the Anglo-Americans made complete use of local materials, while still preserving their traditional house form (West 1969, 1975; Winberry 1968, 1974). The use of palm logs continues to be popular among, at times, and can be found outside these initial areas and as far north as the municipio of Soto la Marina, Tamaulipas.

Roof Thatching

As for the roof, the unanimous form of covering, especially in the Gulf Coastal lowlands, tends to be thatching. Just as is the case with the other components of the jacal
in this region, thatching materials are of a wide variety, including palm fronds, grasses, yucca leaves, carrizo reeds, and even sugar cane (Illus. 6.33a-c). In more humid areas and even in some portions of the semi-arid brushy plains, especially near rivers, streams, or in well irrigated areas, palm fronds are a popular roofing material. Palms most commonly utilized include the royal palm (palma real), especially in the more humid tropical areas; the sabal palm (a variety of palmetto, referred to as palmita or palmito), used both in humid and semi-arid regions; and the soyate (a small palmetto), common in the semi-arid northern plains. Grass (zacate) is also a popular material for roof thatching, especially throughout north-central and northern Tamaulipas and northern and northeastern Nuevo León. Among the different varieties are zacate gringa, zacate cortador, zacate tinajero, tule, and padilla, the latter of which grows in tufts of barbed-edged spines.

Several varieties of the agave plant are popular, as well, for roof thatching. Leaves, or pencas, of the maguey plant, while not common in the region of study, compose the roof of one of the most unaltered indigenous dwelling types, the gable-roofed stone jacal of the Valle de Mezquital, in the state of Hidalgo. Another variety of agave is the sotol palm, with its long, thin blades growing in grass-like tufts. While regular sotol has smooth blades, or leaves, the blades of the sotol chino are clad with tiny barbs. Both of these tend to be more common in the drier portions of the Sierra Madre Oriental and the windward slope of this mountain range. The leaves, or spines, of the yucca plant, which is also a variety of agave, are exploited for their roof thatching potential throughout the arid portions of the Sierra and Altiplano and the semi-arid scrub plains, even as far east as the semi-arid portions of the coastal lowlands in Tamaulipas. Carrizo, in its softer form,
Illus. 6.33a: Roof thatching. Use of royal palm (middle) and palmetto (bottom). Dwellings are located in Ejido San Antonio, Jaumave, Tamps., and Valle Hidalgo, Allende, NL.
Illus. 6.33b: Use of grasses, such as *padilla* (top). Dwellings are located in Ejido Alvaro Obregón, Tula, Tamps., and Sacramento, Coah.
Illus. 6.33c: Use of soyate palm. Note the preparation of the material for use in construction. Dwelling located in Rancho Nuevo, Tula, Tamps.
is utilized in these areas, as well. This is referred to commonly as *palma yuca*, or simply *palma*, as well, thereby confusing the distinction between leaves of a palm tree and those of the yucca plant. Especially throughout Tamaulipas, sugarcane (*hoja de caña*) is employed in roofing, as well, due to its widespread production throughout the state. Thus, while an ample variety of resources are employed in roofing houses, as well as erecting or walling them, the same form, nevertheless, remains constant despite both the materials and the physical region.

**The Sierra, Altiplano, and Northern Plains**

**The Log House**

While the folk architecture of the dry leeward side is comparable with that of the Altiplano, the construction methods and materials used on the windward side are what distinguish the *Sierra* from all other physiographic regions (Cozzens 1938; Prieto and Carrillo 1978; Tamez Tejada 1992). Many, but not more than half, of the gable-roofed folk dwellings of the windward *Sierra*, in terms of materials, respond directly to the environment and, thus, conserve their natural appearance through the direct use of cut pine, fir, spruce, and oak logs and wood shake roofs (Figure 6.11). The log gable-roofed house, known as *casa de madera* (wood), *casa de morillos*, or *casa de trozos* (literally, logs or trunks in the latter two), is found in the highland Sierra region of the states of Nuevo León and Coahuila. This house type is based on a rectilinear plan and form which is very similar to that of the traditional thatched gable house but, instead, is composed of horizontal logs which are corner-notched, thereby eliminating the need for corner post support (Illus. 6.34a and b). In fact, even these houses are commonly referred to as *jacales*, as well. The roof is, also, gabled and often of either palm, grass, yucca, or sotol.
Illus. 6.34a: Corner-notched log and plank construction in gable-roofed dwellings in the Sierra Madre Oriental. Use of logs. This eliminates the need for corner posts. However, some log dwellings present the perceived need for king posts. Some of these retain their original shake roofs. Dwellings are located in Mimbres, Galeana, NL, and Tejocote, Santiago, NL.
Illus. 6.34b: Use of planks. Dwelling located in La Peñita, Santiago, NL.
thatch, but some are covered with wood shakes (tabletas). This method of roof covering is known as tejamanil (Tamez Tejada 1992; Winberry 1968). According to Winberry (1968, 1974), both the shake roofs and the corner-notched log construction were introduced to this particular region by an American hacendado, John Hibler. He was from Paris, Kentucky and was who took ownership of the hacienda of Pablillo in the 1880’s. The local inhabitants of the region quickly adopted this building technique and carried it as far north from Pablillo as San Rafael and Arteaga, just to the south and east of Saltillo, utilizing the abundant timber sources throughout this forested region. Thus, the log house truly represents what nature offers and has, therefore, become easily adapted to the regional environment.

Adobe and Stone Jacales

In addition to log dwellings, many gable-roofed structures in the Sierra have walls either of adobe, rubble stone, sillar, or cantera (Illus. 6.35a and b). The latter two elements, however are rarer and are only found on houses older than sixty years, more or less. Walls of these more solid materials, as well as those of corner notched logs, eliminate the need for a post frame construction. Rather, the roof frame, including the ridgepole, simply rests directly upon the walls. Nevertheless, some of these structures are found with king posts. In the case of the corner-timbered log house this appears to be due to custom, in this case the perceived necessity of having a king post to further strengthen the roof support. In the case of adobe, stone, or even concrete block jacales, the use of both king post and corner and side forked posts signifies that the structure was begun without enclosing walls, thus the need for posts, and that the walls were filled subsequently (Illus. 6.36). Such a dwelling is built in a precarious manner and, therefore,
Illus. 6.35a: Gable-roofed dwellings constructed of stone. Use of limestone. Structures are located in Mier y Noriega, NL, and Vallecillo, NL.
Illus. 6.35b: Use of sandstone. This structure was once a parapet-gabled dwelling. Note the incised rims of the gables. It is located in the now abandoned city of Guerreo Viejo, Tamps., which was relocated to its present site, Nueva Ciudad Guerrero, Tamps.
Illus. 6.36: Gable-roofed dwelling constructed of cement block. Note the precarious manner of construction of this dwelling and the fact that it was a simple structure supported by forked posts and was subsequently walled with cement blocks. The *jacal* is located in Sacramento, Coah.
tends to house the most economically disadvantaged, and often landless, families. This is the case of almost any portion of the northeastern region.

In the Altiplano, where gable-roofed dwellings are quite few, and in the plains of northern Coahuila, Nuevo León, and Tamaulipas most gable-roofed roofed dwellings are either of adobe, sillar, or a variety of stones, including rubble stone, shale, limestone, sandstone, or at times, a mixture thereof. In the coastal lowlands the adobe and stone gable-roofed dwellings tend to be, at times, outnumbered by those of wattle-and-daub. In the piedmont, on the other hand, adobe tends to be the dominant material (Illus. 6.11). If the walls are of adobe, often a base wall, or foundation, is constructed of stone. Sometimes, this base wall material extends half way to the top. While many of these walls are left exposed, many also are plastered with either mezcla (lime, sand, and sometimes cement) or cal y canto and painted. Some of the adobe dwellings, especially those of the parapet gable variety, are covered with an additional layer of stone masonry and plastered.

In any of these houses, however, the roof can be either of thatch, usually yucca, grass, sotol, carrizo, or occasionally palmetto or soyate, or of wood shakes (Illus. 6.37). The latter material, however, is absent in the semi-arid lowlands and plains of north-central Tamaulipas and the more humid lowlands of the rest of Tamaulipas and the entire Huastec region. Also, the rules for the particular roof thatching materials used on adobe and stone dwellings are the same as for all the other gable-roofed dwellings mentioned earlier, yucca, grass, carrizo, and sotol, in the drier areas and palms, sugarcane, and some grasses in more humid areas (Illus. 6.34a-c). Thus, the only main difference between
Illus. 6.37: Use of shakes, or *tabletas*, on gable-roofed adobe structures in the Sierra. Note that the walls of the bottom dwelling are more crudely plastered than those of the one in the top image. Dwellings are located in San José de las Boquillas and Laguna de Sánchez, Santiago, NL.
these dwellings and those constructed either of palisade, wattle-daub, or logs, is simply the material, but never the form.

**Conclusion**

Just as the flat-roofed folk dwelling, the gable-roofed dwelling transverses multiple environmental zones (Figure 6.13). Nevertheless, this house form appears to adapt well to certain climatic conditions. With its pitched roof it is suitable not only for the frequent heavy rains of most of the Gulf Coastal lowlands and portions of the Sierra, but also for the searing heat that afflicts most of Mexico’s northeast borderlands. Perhaps, however, socioeconomic and cultural reasons explain even more adequately the distribution of this dwelling form. Again, this tends to be a form of shelter, which, since the beginning of Spanish colonization, has been upheld as a degrading, impoverished way in which to live. Even among the Aztecs and other advanced central Mexican indigenous peoples, such as the Tlaxcalans, flat-roofed dwellings housed the noble classes, while gable-roofed and all other forms of shelters housed the masses of common people. Throughout the colonial period travelers and government officials described the majority of dwellings and even important buildings, such as churches and governmental palaces, of the countryside and villages as humble, miserable jacales, especially in Tamaulipas. Every family who must reside in such a dwelling, since long ago, has the desire and hope that it will be temporary, that is, until a flat-roofed house can be afforded. Still, today one encounters, especially in the drier regions where a gable-roofed dwelling is unnecessary environmentally, humble structures of this form. Most of these structures, especially at present, are low and very shoddily constructed. In most cases, however, the gable-roofed jacales appear as substantial dwellings in which the eaves of roof are at least eight or ten
Figure 6.13: Distribution of the Gable-Roofed Dwelling in Relation to Environmental Zones
feet high. Perhaps earlier they had enjoyed preference for their environmental adaptability, except in the arid regions. To this day, many people who live in these or who have shifted to either a flat-roofed or a modern, non-folk dwelling admit the physical comfort that they provide. This, along with cultural conservatism, all so common in many of the Third World’s rural areas, tends to be another explanation of the distribution and continued use, in many places, of the *jacal*. Nevertheless, many people will continue to admit or infer that the gable-roofed dwelling, even when it appears neat, comfortable, and substantial, makes them feel degraded and humiliated. In any case, culture, socioeconomic situation, or a combination thereof, tend to explain why this house form is encountered throughout northeastern Mexico. The environment and the materials that it provides to the dweller, on the other hand, condition the house form and either limit or allow for abundance and variation of such. Better yet, I should conclude that these physical factors better demonstrate how a particular house form, and the culture or society it represents, can exist under many environmental conditions and, therefore, be distributed across a wide range of ecological zones.
Due to the strong semi-sedentary culture that the Huastecs once possessed, in comparison with their less civilized, nomadic Chichimec neighbors to the north, and the present persistence of many of their cultural traits, their folk dwellings, also, continue to dominate the rural landscape of the region which they once controlled. This included everything from the Río Soto La Marina, in central Tamaulipas, to the northern portions of Veracruz, Puebla, Hidalgo, Querétaro, and Guanajuato. In the east this group extended its culture to the piedmont and well into the Sierra Madre Oriental, thereby mixing with other cultural groups such as the Pame and Otomí. At present the stronghold of Huastec culture and ethnicity tends to include the most of the area mentioned above, with the exception of central Tamaulipas (Figure 7.1). However, Huastec house forms continue to be present in central Tamaulipas and even are found, perhaps due to diffusion, further north, in north-central Tamaulipas and in eastern Nuevo León. Nevertheless, the Huastec region, as a whole, presents the most obvious example in northeastern Mexico of a region easily distinguished by a set of common cultural, historical, economic, political, and even environmental traits.

While much of the Huastec region lies outside the historical northeastern Spanish Borderlands, it appears, however, to be the most coherent as both a cultural and a physical region and, thus, a true culturogeographic region. Environmentally, this region is clearly distinguishable from the rest of the arid and semi-arid northeastern borderlands, as it constitutes the limit of the northern tropical humid zone of the American continent and
Figure 7.1: Regions of Huastec Cultural and Historical Influences
the northern geographical extreme of the tropical evergreen forest (Figure 7.1). Additionally, it presents the densest indigenous population of the northeastern region, the rest of which contains a primarily mestizo population. Above all, this region is distinguished by a set of unique forms of folk architecture.

Among the Huastec folk house forms are the gable-roofed, apsidal, round, and hipped dwellings. The first form family has been elaborated already in the previous chapter and is the most common form today. The second most common form family refers to the apsidal dwelling, which comes in three separate form classes. It is this form that is found, even today, far beyond the northern limits of the Huastec culture region, thereby further extending the Huastec folk house region limits beyond those of the main well-known culture region. The round dwelling is encountered throughout the Huastec culture region and as far north as the Rio Soto La Marina, as well. The hip-roofed dwelling, on the other hand, is rare in Tamaulipas, but more common in the southern portions of the Huastec, especially northern Veracruz (Figure 7.2). Thus, in this folk house region, unlike the others, there are three form families, only one of which contains more than one separate form class.

**Origins of the Huastec Dwellings**

As mentioned earlier, the roots of the gable-roofed, apsidal, round, and hipped dwellings are based in the Huastec culture itself. The Huastec culture, however, has its roots in the Yucatan region, as it forms part of the Maya-Quiché culture family. The apsidal dwelling is testimony to this cultural origin. Other cultures that mixed with the Huastec included the Totonacs, Otomi, and Mexica, who all had their origins in central Mexico. With the exception of the Chichimecs, who also added to the ethnic mixing, the
Figure 7.2a: Distribution of Apsidal and Semi-Apsidal Dwellings
Figure 7.2b: Distribution of Apse-Roofed and Round Dwellings

Source: INEGI
Huastec culture, in large part, is included within the Mesoamerican cultural area and was part of that great advanced civilization. The Huastec language, however, is most related to the Maya language. This, along with the obvious similarity in folk house forms, therefore, allows us to attribute the larger part of the origins of Huastec culture to the Maya (Laughlin 1969; López Morales; Stresser-Péan 1971; Villa Rojas 1969).

Around 100 BC the Huastecs were believed to have begun settling in the Gulf Coastal plain, the same time around which the circular, apsidal, and even rectangular, gable-roofed dwellings began to appear. While the round dwelling appears closely linked to the Aztecs and their round ceremonial temples, which were constructed in honor of the god Quetzalcoatl, the both the apsidal and rectangular dwellings were, and still are, common among the Maya cultures. The apsidal dwellings continue to be a common feature of the rural Yucatecan built environment, while the rectangular ones are found further south in Campeche and in Belize. The former are almost identical to those in the Huastec region, with the exception that these are always one room structures, which have, at most, an improvised low partition. On the other hand, those of the Huastec often have apses, which normally serve as completely separate rooms and, sometimes, are even added at a later time to a rectangular dwelling. In addition to these, in the Huastec are the semi-apsidal dwellings, which are one-room structures having an apse on only one end. Furthermore, there are those dwellings that have a double apsidal roof, which rests upon a rectangular base. These often appear much like the hip-roofed dwellings, with the exception that the two ends bow slightly outward, but normally are not as rounded as those of the full apsidal and semi-apsidal dwellings. Nevertheless, the outward appearance of the full apsidal dwellings of the Huastec differs very little from that of the
Mayan dwellings in the Yucatan Peninsula, even in terms of wall and roofing materials (Laughlin 1969; López Morales; Stresser-Péan 1971; Villa Rojas 1969).

**Form Classes and Plan Types of the Huastec Dwellings**

Again, the most common and widespread of the Huastec dwellings is the rectangular, gable-roofed dwelling, which over time has become more popular and, thus has replaced many of the apsidal and round dwellings. While the apsidal structures are cover a wide geographic region, the are far reduced in comparison with the rectangular. The round dwellings have become the least popular, as they are found in only select locations. The result of this gradual, long-term transition in house-form preference is clearly reflected in the dispersed house arrangements. In most cases, the apsidal and round dwellings tend to be accompanied by rectangular ones, whereby the circumstance of either of the former standing alone or accompanied by another non-rectangular structure is rare. As has been the case with many gable-roofed dwellings further north and west, many apsidal and round dwellings also have suffered the consequence of being replaced by a gable-roofed dwelling and, thus, demoted to an auxiliary structure, such as a kitchen, washhouse, storeroom, or spare dormitory.

**C Form Classes**

Unlike the other Huastec form classes, even the gable-roofed forms, the apsidal dwellings consist of a variety of form classes that differ significantly from one another and present complex internal variations, as well. Among these are the full-apsidal (C1), semi-apsidal (C2), and apse-roofed (C3) dwellings. While these are always distinguishable as unique form classes, their outward appearance often communicates very little about the internal composition dwelling as a whole, that is, how it is used, how
it is divided, and how it has evolved in separate situations. Just as is the case with the
gable-roofed dwellings, these tend not expand in modular fashion and, thus, coincide
with one or two unique, separate plan types. Also, like the B dwellings, as the C forms
largely go hand-in-hand with plan types, their only form of expansion occurs as separate
structures are added to the house complex (Figure 7.3). Thus, almost any home
throughout the Huastec folk house region consists of a group of dispersed structures,
which all belong to an extended or even a nuclear family.

Form Class C1

The full apsidal dwelling, or casa de culata, is that which most closely resembles
that of the Huastecs’ ancestors, the Mayans (Illus. 7.1). Those of the Mayans and
sometimes of the Huastecs, consist of a single room containing apses, or culatas, on each
of the short ends. The majority of Huastec full-apsidal dwellings, however, consist of a
rectangular room to which the apses are further added as separate rooms, whether
immediately or at a later date. Thus, in many cases, the C1 dwelling can be the result of
an evolution from a B2 or a C2 dwelling. In other words, some dwellings are built
immediately with two culatas, while others undergo a gradual process of being
transformed from a simple gable-roofed jactal to a casa de culata. This full-apsidal, one-
room dwelling corresponds with Plan Type Ia and is very uncommon in the area of study,
rather it tends to be present further south (Figure 7.2). In this case, the dwelling can
possibly stand by itself and, thus, house both kitchen and dormitory, each occupying its
own end of the structure. A centrally located door on the long side always bisects the
dwelling between these two main uses. In other cases, however, another apsidal dwelling,
especially in the Yucatan Peninsula, is added to the home and serves as the kitchen. Or,
Form Class C1 (*casa de culata*): Apsidal dwelling (both roof and base)

Form Class C2 (*casa de culata*): Semi-apsidal dwelling

Form Class C3: Apse roof dwelling with square base

Plan Type Ia: Single- or multi-room with 2 apses

Plan Type Ib: Separate apse rooms

Plan Type IIa: Single- or multi-room with 1 apse

Plan Type IIb: Single-room with separate apse

Plan Type III: Single-room rectangle

Figure 7.3: Plan Types of the Apsidal Dwellings (C) (Huastec Region)

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Illus. 7.1: Full-apsidal houses. Left apse in seen in bottom image is known as a volada due to its wall-less construction. Note that only a piece of fabric is stretch between the supporting posts. This is the kitchen, in this case. Dwellings are located south of Tamuín, SLP, and in Nuevo Morelos, Tamps.
as is the case in the Huastec, a rectangular, gable-roofed dwelling is added, whereby this becomes the main living quarters and the apsidal dwelling is reduced to being a kitchen or storage shed. As this particular plan type falls outside of the northeastern borderlands states of Coahuila, Nuevo León, and Tamaulipas, however, there will be no further elaboration of such.

The full-apsidal dwelling with separate apses flanking a rectangular room is somewhat more common but still not much so in Tamaulipas. This corresponds with plan type Ib and usually, but not always, implies an evolved, expanded floor plan. In this case, a gable-roofed rectangular structure begins as a both a dormitory and kitchen, whereby at a later date, the apses are added as separate rooms, which often serve as kitchen, on one end, and storage, on the other. These are normally added at different times, whereby the evolution occurs from a B2, Plan Type II, to a C2, Plan Type IIb, and finally to C1, Plan Type IIb dwelling. In most cases, the apses are entered from outside, but occasionally they can be entered from the main rectangular room, as well. The reason for the apsidal additions tends to be due to the personal preference of having the house better protected from the strong winds and rains which periodically afflict the Gulf Coastal lowlands region. In this way, the gable ends are simply covered by a curved wall and curved roof addition, which is added to the existing roof structure, thereby creating extra space as well as extra protection of the gables and roof.

In other occasions, one of the apses may contain no walls but, rather, only posts supporting the apse roof. Thus, the apse, which is known in this case as a volada rather than a culata, simply serves as an open porch (for receiving visitors or resting), work area, or even kitchen. After all, in the tropical warm humid environment walls are needed.
strictly for cultural purposes. At other times, a curtain or some other temporary material covers the space between the posts (Illus. 7.1). In any case, the wall-less apse is still considered as a separate room, as it tends to house a particular function and is roofed. In this way, the overall form and plan type remain unchanged. What changes is the name to which such a dwelling is referred. Rather than being called a *casa de culata*, the one open apse end allows for it to become known as a *casa de volada*. Nevertheless, the C1 dwelling, in any of its variations, tends to be quite rare in the Tamaulipas portion of the Huastec region.

**Form Class C2**

Perhaps the most common of the three house forms, throughout the Huastec region and especially in Tamaulipas and as far as eastern Nuevo León, is the semi-apsidal dwelling, which, also, is known as a *casa de culata*. Apart from the A and B form classes, this is perhaps the third best example of how house form and, thus, culture transverse physical barriers. Perhaps due to Chichimec adoption during and before the early Spanish colonial period, this particular form became popular in places as far west and as far north as the municipalities of Allende, Montemorelos, and General Terán, in Nuevo León, just southeast of Monterrey (Figure 7.2). In fact, these dwellings are seen as a regular part of much of the rural built environment of southeastern Nuevo León and central and southern Tamaulipas. Many house arrangements contain at least one of such structures.

As with other more traditional Huastec dwelling forms, the semi-apsidal dwelling, while still being the principal living and sleeping space in certain areas, has experienced the all too common trend of being replaced by a rectangular, gable-roofed structure and, thus, converted simply into a kitchen or, sometimes, a storage place. Thus, as a general
trend, this form corresponds mostly with older houses, many of which are abandoned and in shambles. Like the *jacal*, it represents in the popular mind a somewhat degrading and backward lifestyle. In fact, along with being referred to as a *casa de culata*, it is often known as a *jacal*, as well. Nevertheless, in many rural localities throughout southern Tamaulipas, many new structures are seen with an apse on one end.

Also, as in the case with the C1 form, two major plan types are present and what differentiate between a dwelling that evolved from a rectangular, gable-roofed structure and one that originally was built with its apse as part of a single room. The latter case corresponds with Plan Type IIa and refers to a dwelling plan that often is capable of multiple forms of linear expansion. That is, a rectangular dwelling can gain an apse, as well as another rectangular room (Figure 7.6). While the entry of the original structure tends to be from the side, that of the extra rooms can be either from the side or from the one gable end. The normal case is that the apse is added to an already existing rectangular plan and is, thus, a separate room, which is often used for storage. Much unlike the Mayan apsidal dwellings, this plan type signifies the addition of an apse to a simple rectangular *jacal* and, thus, a dwelling which only until later became apsidal, or in this case semi-apsidal. Perhaps, in areas further south of the Rio Pánuco another apse, either as an open *volada* or a closed *culata*, will be added to further classify the house as a C1 Form.

Plan Type IIb, on the other hand, refers to a single-room dwelling of which the apse forms an integral part. The entrance can be on either the gable end or along the side; however, the former case tends to be more common. These dwellings have a very minimal tendency of gaining additional, attached units (Illus. 7.2a-c and Figure 7.5). The
Ulus. 7.2a: Semi-apsidal dwellings. Wall construction of wattle-and-daub (top) and bare wattle (bottom). Roofs are thatched with *tule* grass and sugarcane. Dwellings are located in Ejido Guadalupe La Joya, General Terán, NL, and Valle Hidalgo, Allende, NL.
Illus. 7.2b: Wall construction of interwoven wattle. Roof is of palm thatch. Dwelling is located in Chamal Viejo, Ocampo, Tamps.

Illus. 7.2c: Wall construction of adobe. Roof is thatched with royal palm fronds. Dwelling is located in Villa de Bustamante, Tamps.
reasons, in any case, for the existence of an apse on one end are similar to those for the double apsidal dwellings, to protect against wind and rain and to strengthen the structure of the house. However, while being of the same form class and, thus, outward appearance, plan type allows these two dwellings to be clearly distinct. After all, one is originally a casa de culata while the other is an evolution from a rectangular jacal, or casa de piña. Thus, in both the C1 and C2 dwellings, plan type must be what determines whether the form is original or a result of transition from one form to another.

**Form Class C3**

Common throughout the immediate coastal lowlands of the Gulf of Mexico, in Tamaulipas and Veracruz, is the rectangular dwelling having a slightly apsidal roof, in other words, a C3 Form Class dwelling (Figure 7.2). Unlike the other two apsidal dwellings, which both have apsidal walls and roof, these have a hipped roof in which both of the short ends are somewhat curved. While the end eaves can be wide they do not serve as any form of functional space, such as a formal porch or work area. However, they do provide some shade and are referred to as *culatas*, as well. The addition of an apsidal, or any other, room is unknown. If two or more rooms are present, which is possible, the house began with such a plan, all at once. Rather, the apsidal-roofed dwelling tends to function more as a static one- or multi-room hip-roofed or gable-roofed dwelling that has no intentions of expanding in a modular fashion. Consequently, Plan Type III is without variation, except for the level of internal partitioning and, thus, size and, in conclusion, refers to a simple rectangle with a more wind resistant, curve-ended, hipped roof on top. From outside it can appear almost as an apsidal dwelling with square walls or it can fool a person into thinking that it is a hip-roofed dwelling (Illus. 7.3a-d).
Illus. 7.3a: Apsidal-roofed dwellings with square base walls. Dwellings located in Tamuín, SLP, and Pasadita, Aldama, Tamps. Wall construction is of plastered wattle-and-daub. All are thatched with palm fronds. Note that the eaves of the apse ends vary in width, but have relatively little use, regardless of whether entry to the house is from the end or the side.

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Illus. 7.3b: Dwellings located in Pasadita, Aldama, Tamps., and Tamuín, SLP. The dwellings are constructed of plastered horizontal split palm logs (top) and wattle-and-daub (bottom), and are thatched with palm fronds.
Illus. 7.3c: Dwellings located in El Meco, Ciudad del Maíz, SLP, and Nuevo Progreso, Aldama, Tamps. The walls of the top dwelling are of herringbone wattle-and-daub and those of the bottom one are of corner-notched palm logs. Both have roofs thatched with palm.
Illus. 7.3d: Dwelling located in Hacienda La Concepción, Aldama, Tamps. It has walls constructed of rubble stone masonry and a palm-thatched roof.
Nevertheless, the true curvature of the roof structure's ends and the reference to these end eaves as culatas classify it as a C Form Family dwelling.

**D and E Form Classes**

Two other important dwelling forms in Huastec culture, one of which is even found outside the immediate region of Huastec culture, include the hip-roofed, or Form Class D, and the round, or Form Class E, dwellings. These, again, have been subject, especially during this century, to replacement by rectangular structures and are only encountered in select localities throughout certain portions of the Huastec. The hip-roofed, or D, dwellings are almost nonexistent in Tamaulipas, but, rather, a common occurrence in northern Veracruz and somewhat in eastern San Luis Potosí. Only one case has been found in the municipality of Ocampo, Tamaulipas, and is a new structure that involves the use of manufactured cement blocks for the exterior walls and drywall for the interior partitions (Illus. 7.4). The round, or E, dwellings, on the other hand can be found in a greater number of places throughout southern Tamaulipas, not to mention eastern San Luis Potosi. In San Luis Potosí they are quite common but tend to have the greatest density in and around the municipality of Tamuín. In Tamaulipas, they are not uncommon in the municipalities of Nuevo Morelos, Ocampo, and Soto La Marina, the northernmost location (Figure 7.2).

Unlike all other form class families, the D and E dwellings constitute their own single form class. In addition, the floor plans coincide, for obvious reasons, directly with the form. A hip-roofed dwelling can only have a rectangular plan, which can contain multiple rooms solely by means of internal partitioning, but never by expansion (Figure 7.4). Length can vary, but will remain the same from the time of construction. Even less
Illus. 7.4: Hip-roofed dwelling with walls of cement block and roof of palm thatch. Due to size of dwelling, the owner/builder claimed that he used 10,000 palm fronds to thatch the roof. This is a multi-room dwelling, in which the internal partitions are of wood frame and drywall. It is located in Adolfo López Mateos, Ocampo, Tamps.
Plan Type I:
Single- or multi-room rectangle

Form Class D:
Hip roof dwelling

Plan Type I:
Single round room

Form Class E:
Round Dwelling (Bohio/Palapa)

Figure 7.4: Plan Types of the Hip-Roofed (D) and Round Dwellings (E)
possible is the expansion of a round dwelling, which very rarely, either, receives any internal division (Figure 7.4). While plan size can vary, most of these structures are similar in size, just large enough to house a kitchen or a four- or five-bed dormitory. In the case of animal and some storage structures, size can be somewhat smaller, in terms of both plan and height.

As for terminology, the hip-roofed dwelling has no colloquial term, other than a *jacal*, to which it is loosely referred. On the other hand, the round, conical-roofed dwelling is traditionally known as the *bohío*, which is derived from indigenous terminology and often refers to certain forms, usually round, of indigenous dwellings throughout tropical Latin America. Currently, however, the term "*palapa*" has become popular, due to the common presence of the round, thatch-roofed structure, known under the same name, in the beach resorts throughout Mexico. In fact, the term *bohío* is known usually only among more elderly people, while *palapa* is often the only term known by current craftsmen and younger people.

Due to the almost nonexistence of hip-roofed dwellings in Tamaulipas, there will be no more discussion of such; however, the round dwellings are of interest, as in this state they continue to be built and, thus, are somewhat popular. In the municipality of Soto La Marina, especially in the *ejido* settlement of 10 de Abril, local craftsmen continue to construct round dwellings, which usually serve as the dormitory of a two- or three-structure house complex (Illus. 7.5). The reason for the popularity of this particular house form and its use as sleeping quarters appears to be related to physical comfort, as it is claimed to be much cooler than any of the rectangular forms. Other locations where this form continues to be popular among builders include Nuevo Morelos and Ocampo,
Illus. 7.5: Bohios. In the top image it is used as a grocery store and sleeping quarters and in the bottom one it is simply a sleeping quarters. Both are constructed of horizontal split palm logs and thatched with palm leaves. They are located in 10 de Abril, Soto La Marina, Tamps.
especially in the adjoined settlements of Chamal Nuevo and Adolfo López Mateos, in the latter municipality. Here, on the other hand, the round structures are built either as true wall-less palapas, which serve as leisure space, or as kitchens, which usually have a half wall and two entrances (Illus. 7.6). The wall-less place of relaxation and half wall for the kitchen is easily understood and practical in such a warm and humid climate.

Perhaps the greatest concentration of bohios in the Huastec is in the vicinity of Tamuin. Here, however they tend to be found as older structures and are not seen to be under construction or recently built. In this case, also, they serve as kitchens and as storage space. Other uses, in addition to kitchen or storage, especially for the round dwellings in these areas include shelter for yard animals, such as chickens and swine. In any case or location, however, the round dwelling is never found as an entire dwelling, rather it is always part of a multi-structure house complex belonging either to an extended or nuclear family.

**Dispersed House Arrangements**

Again, the multi-structure house complex tends to be the unanimous living arrangement, when folk housing is being considered. These arrangements can belong to an extended or even a nuclear family. In the case of the extended family, extra dwellings are added to an already existing complex and, thus, tend to occupy the same plot of land or an adjacent plot. These extra structures can belong to either the sons or daughters, who may or may not be married and have children. Usually the sons and/or daughters have their own extra kitchen and, sometimes, other auxiliary structures, but sometimes even the kitchen is shared among the whole extended family. In the case of a nuclear family, on the other hand, the house complex usually consists of two structures. Only when the
Illus. 7.6: Round palm-thatched kitchen structure with split palm log walls of only half-height. This allows for escape of both heat and smoke and needed cross breezes. It is located in Adolfo López Mateos, Ocampo, Tamps.
family is just beginning and very poor is there only one structure; however, at the present
time no such circumstances were encountered in the extensive field surveys.

Among those arrangements containing some form of apsidal, mostly semi-apsidal in the case of this study region, or round dwelling at least one gable-roofed dwelling is present. On the other hand, the case of an arrangement containing both a round and an apsidal structure is possible but very uncommon. Also relatively uncommon is a complex with only apsidal structures, and non-existent, at least in Tamaulipas, is a case where only round structures make up the complete arrangement (Figure 7.6). Normally a complex with a gable-roofed dwelling will include either a round or an apsidal dwelling. Among those containing apsidal dwellings the kitchen can either occupy this or one the gable-roofed dwellings. The same goes for those complexes with round structures. All seems to depend on a combination of personal taste and regional location, to some extent.

For example, in Ejido de las Ollas, Nuevo León, the kitchen occupies the semi-apsidal casa de culateda, while the bedrooms occupy a gable-roofed jacal. On the contrary, in Villa de Bustamante, Tamaulipas, the gable-roofed structure houses the kitchen, while the semi-apsidal one houses the sleeping quarters. Again, in 18 de Abril, Tamaulipas, the bohio is used for sleeping and the gable-roofed jacal for cooking, but in Nuevo Morelos or Adolfo López Mateos, the case is completely reverse. In conclusion, the form of structure in which each of the major activities of daily life will be housed depends largely upon the desires and needs of the occupying family. Figures 7.5 and 7.7 and Illus. 7.7a and b) demonstrate a few examples of the endless possibilities of dwelling arrangements and uses.
Figure 7.5: Examples of Gable-Roofed/Apsidal Dwelling Arrangements
Figure 7.6: Example of an Apsidal-Only Dwelling Arrangement

Chamal Nuevo, Ocampo, Tamps.

Figure 7.7: Examples of Gable-Roofed/Round Dwelling Arrangements

a. Abritas, Ciudad del Maiz, SLP

b. Nuevo Morelos, Tamps.

c. 18 de Abril, Soto La Marina, Tamps.
Illus. 7.7a: Dispersed dwelling arrangements. Arrangement of a gable-roofed structure with a semi-apsidal structure. In this arrangement, located in 10 de Abril, Soto La Marina, Tamps., the kitchen occupies the gable-roofed structure and the dormitory occupies the apsidal structure. The structures are constructed of nailed, horizontal split palm logs.
Illus. 7.7b: Arrangements of gable-roofed structures with round structures. In the top complex, located in Nuevo Morelos, Tamps., the gable-roofed dwelling houses the dormitory, while the bohio houses the kitchen. Construction is of palisade split oak logs. Roofs are of palm thatch. Note the two round structures in the bottom image that serve as kitchen (larger one) and storage (smaller one). This complex is located just south of Tamuín, SLP.
In any case, the kitchen is usually traditional, unless it is housed in a rectangular gable- or flat-roofed structure, in which case it can contain modern appliances. On the contrary, a non-rectangular kitchen will contain either a raised hearth, a three-stone tecuile, or an overturned tin washtub (Illus. 7.8a-c). While all of these are known under interchangeable terms such as fogón, lumbre, or chiminea, the overturned washtub is always known, in addition, as an hornero. In no case, however, is an exterior, Anglo-style chimney encountered, not in an apsidal, round, nor a gable-roofed dwelling and not in the Huastec culture region of southern Tamaulipas or anywhere further south.

**Materials, Techniques, and the Natural Environment**

As for materials and building techniques, these differ very little from those mentioned in the previous chapter. With the exception of stone, all the other materials used in the gable-roofed dwellings are applied to the apsidal houses, as well. Even cement block is used in those dwellings in which only the roof is apsidal. As with the jacales, the walls of the semi-apsidal dwelling come in adobe, bare wattle, wattle-and-daub, pole-and-daub, or split palm logs. The vegetative wall forms can consist of materials that are placed in horizontal, palisade, or, in the case of thin wattle that consists of sticks, saplings, or tree limbs, interwoven fashion (Illus. 7.3, 7.4, and 7.9a-c). Whether large poles or thin wattle is being used, the tree and plant resources are the same as those utilized for the rectangular jacales.

As for the bohios, all the same materials, except for stone, adobe, or cement block, are used for construction of the walls and are presented in the same variety of methods (Illus. 7.5 and 7.10). However, the round dwellings very rarely have the exterior, or even the interior, of the walls covered with daub and plaster. While the full apsidal structures do
Illus. 7.8a: Interiors of kitchen structures. Incomplete wall height of round structure. Walls are constructed of palisade split palm logs. Cooking facilities include a chiminea or fogón. Structure is located in Adolfo López Mateos, Ocampo, Tamps.
Illus. 7.8b: Near complete wall height of round structure. Walls are constructed of palisade tree saplings. Cooking facilities include the wood-burning tin washtub stove, or hornero. Structure is located in Abritas, Ciudad del Maíz, SLP.
Illus. 7.8c: Semi-apsidal kitchen of wattle-and-daub with modified version of a *tecuiile*. Here cinder blocks, instead of stones, are used to support cookware. Dwelling is located in Ejido Narcizo, Villagrán, Tamps.
Illus. 7.9a: Construction materials of semi-apsidal dwellings. Walls of interwoven wattle. Note that the walls of interwoven wattle are further filled with vertical wattle. Dwelling is located in Chamal Viejo, Ocampo, Tamps.
Illus. 7.9b: Materials prepared for construction of interwoven wattle walls on semi-apsidal dwelling. Note the bundle of wattle sticks propped against the tree. Same dwelling as in Illus. 7.10a.
Illus. 7.9c: Dwelling consisting of both horizontal split palm logs and palisade poles. Note the split palm logs leaning against the wall (right). It is located in Chamal Nuevo, Ocampo, Tamps.
Illus. 7.10: Round dwellings with walls constructed of palisade wattle (top) and split palm logs (bottom). Note the whole palm log (bottom), which is soon to be split into several planks and used. Dwellings located in Abritas, Ciudad del Maiz, SLP (top) and 10 de Abril, Soto La Marina, Tamps. (bottom).
present cases with daubed and plastered walls they very seldom are of stone and never of adobe. The apse-roof only and hip-roofed structures can have walls of either palisade or horizontal wattle or wattle and daub, as well as of stone or even cement block. A few cases have been seen even with walls of horizontal, corner-notched palm logs. Adobe has not been seen by myself or by Dr. West. Thatch of the same varieties of grass, palm, or yucca spines is almost always the material used for roofing, with the exception of a few cases where sheet tin is used instead.

The framing of both the roof structure and the supporting walls, in the case of those constructed of vegetative materials, follows the same idea as that in the gable-roofed dwellings. The only obvious difference is the curvature of the roof on the ends of apsidal structures and the obvious curvature of the conical roof of the bohio, or palapa. As for the apsidal dwelling, again, the culata is either added to the existing gable end, or ends, or is incorporated, at once, into the whole structure. In the former case, a set of forked posts is placed in a semi-circle and a set of rafters and curved purlins is attached to the end of the ridgepole and the end rafters of the gable. The end wall remains unchanged (Illus. 7.11). In the latter case, however, the whole structure is built together, at once, whereby there is no end wall, at least where the culata is present, but, rather, an interior king post, the top to which the apse rafters are attached (Illus. 7.12).

The round dwellings present three scenarios in regard to the roof structure. The roof can be support by a center king post, a center queen post resting on a horizontal beam, or viga, or no center post at all, just self-supporting rafters. In Tamaulipas, however, only the latter case is represented (Illus. 7.13a and b). Rafters, which are known as cañas, rest upon the separate wall plate beams, which, in turn, rest upon the circle of horcones, and
Illus. 7.11: Semi-apsidal dwelling, in which apse was added to a side-entry gable-roofed dwelling. Note the structure of the culata and how it was simply added to a previously existing structure. Rectangular room was once a bedroom, and the culata served as storage space. Materials of side walls are of interwoven wattle-and-daub, while those of the ends and the culata, which is now in ruins, consist of palisade pole-and-daub. Dwelling is located in Palmillas, Tamps.
Illus. 7.12: Interior structure of single-room, or Plan Type IIa, semi-apsidal dwelling. Note king post, which supports the ridgepole, which, in turn, supports the top ends of the rafters of the apse. Dwelling is located in Villa de Bustamante, Tamps.
Illus. 7.13a: Common roof structure of *bohios* in Tamaulipas lacking center post support. Structure serving as kitchen. The roofing materials consist of *otate* for the rafters, *carrizo* for the purlins, or rather lathing, and royal palm fronds for the thatch. It is located in Aldolfo López Mateos, Ocampo.
Illus. 7.13b: Structure serving as sleeping and living space. Note the television. The roofing materials include wooden poles for the rafters, thin strips of wood for the lathing and palm fronds for the thatch. Note, however, difference between this roofs and that in Illus. 7.14a in the manner in which the thatch is attached to the lathing. The dwelling is located in 10 de Abril, Soto La Marina.
support each other at the top, where they all meet at the apex. Upon the rafters rest the purlins, which are known as *huiles*. The methods and materials of thatching remain the same as for the other forms, only the apex is further protected either by the traditional overturned clay pot or, more recently, by a tire. Another difference is that the walls, rather than being simply called *mueros* or *paredes*, are known as the *cercos*, due to its often incomplete height and, thus, fence-like appearance.

While the non-rectangular Huastec folk house forms tend to be reduced to the Gulf Coastal lowlands and plains, they, nevertheless, are encountered in a variety of ecological zones. The semi-apsidal dwelling not only occurs in the humid tropical lowlands, but, also, in the semi-arid plains of north-central Tamaulipas and eastern Nuevo León and in the piedmont of the Sierra Madre Oriental of Tamaulipas. While the round dwelling is concentrated in the humid tropical Huastec culture region, it is encountered as far north as the Río Soto La Marina, area around which is characterized by the transition to a semi-arid steppe climate (Figure 7.8). Also, while these constitute the more traditional dwelling forms, they, nevertheless, continue to be used and constructed in select localities throughout this vast region. As both the round and apsidal forms are found in humid as well as semi-arid climates, this is again proof that cultural preference of a particular house form surpasses environmental constraints.
Figure 7.8: Distribution of the Apsidal and Round Dwellings in Relation to Environmental Zones
House forms in Mexico’s northeastern borderlands have been both directly and indirectly influenced by the United States since at least the 1840s. First, portions of Mexico were occupied by U.S. forces, and half of Mexico’s territory was lost to the United States. After the U.S. Civil War small numbers of settlers came from the American South to the region in search of new opportunities (Polk 1965). With them they brought their own ideas and customs and, thus, their own forms of folk housing, which at that time was still largely the log cabin (Winberry 1968, 1974).

The two most common forms of folk housing were the simple one-room, gable-roofed dwelling and the dogtrot. This peculiar form involves two one-room units, which are separated by a central breezeway, often known as a dogtrot, and connected by a common roof and, often, a common raised floor. This is a form that has long been known in Scandinavia, for at least one thousand years, and, later, diffused to North America and became popular among the pioneer settlers of the Upland South, including places as far west as central Texas. As mentioned in Chapter 6, settlers mainly from Texas and Oklahoma introduced this form, along with the construction technique of corner timbering, to the Sierra Madre Oriental and the tropical humid lowlands of northeastern Mexico (Figure 8.1). The corner notching technique is one which has been known since before the time of Christ and is believed to have originated in Siberia and made its way westward into European Russia, Scandinavia, and other parts of central and western Europe (Jordan 1985; Jordan and Kaups 1987; Kaups 1981; Wright 1958).
Figure 8.1: Distribution of Dogtrot and Low Hip-Roofed Dwellings
This technique further made its way from Germany to central Mexico and from there it spread to select areas throughout this country and made its way as far north as New Mexico (Gritzner 1969, 1971, 1979-80; Winberry 1968, 1974). The northeastern borderlands regions, thus, presents a unique case in which, unlike the rest of Mexico, the technique was introduced directly from the United States and became utilized not only in the coniferous wooded mountain regions, but, also, in the humid tropical lowlands. Here, a unique case occurred in which the stout, almost woody, trunks of the royal palms were employed in such building methods (Winberry 1968, 1974). This demonstrates a very perfect example of how a tradition of a particular culture is maintained despite the drastic difference, from the cultural hearth, in physical environment and materials available. Not only is the environment of the people who introduced this house form and building technique considerably different from that of the humid tropical Huastec region, but it is completely unlike the taiga of Scandinavia or Siberia.

Also introduced from the United States, but on a much more limited scale than the dogtrot or the parapet gable forms, was the low hip-roofed dwelling. This form, however, made its way only as far as the Mexican side of the Rio Grande and, at present, can be observed only on a very reduced scale in Guerrero and Ciudad Acuña, Coahuila (Figure 8.1). This influence appears to have occurred shortly following the turn of the century and simply represents the ease in the transfer of cultural ideas across an international boundary line (Támez Tejeda 1998). Unlike any of the other forms, except the gable-roofed dwelling, this one appears to be disappearing rapidly in an industrializing and modernizing region, where modern foreign ideas are replacing ever so quickly the relics of a bygone era.
The Dogtrot and Its Distribution

Due to the influx of a few Anglo-American pioneers into northeastern Mexico around the turn of the century, corner-notched log cabins, since then, have been present in the isolated Chamal and Naranjo Valleys of the Huastec Region and in isolated areas of the Sierra Madre Oriental (Figure 8.1). While the single-pen log house has been adopted as a *jacal* by the local mestizo population, the dogtrot house, with two pens and a central breezeway, remains as an even more distinctive influence of Anglo-American culture (Winberry 1968, 1974). This family (F) contains four form classes, the latter (FC) of which demonstrates a blending of Anglo-American and Huastec cultures. These classes were derived based on roof form and, in the case of Form Class FC, the synthesis of the dogtrot with the semi-apsidal dwelling. The three roof-based form classes include the gable-roofed (F1), hip-roofed (F2), and double-gable roof (F3) dogtrots. Plan Types are basically classified according to the treatment of the central breezeway (Figure 8.2).

As for materials, logs, which are given a double notch at the corners, are nearly unanimous (Illus. 8.1). What distinguishes the logs in the Huastec from those in the Sierra is that the logs of the former are of royal palm and those of the latter are usually of pine, spruce, fir, or oak (Winberry 1968, 1974). In addition, hewn planks of the same materials are common, as well, in the Sierra. The only case in which logs are not used is the semi-apsidal dogtrot, in which case a daubed and plastered palisade of *otate*, wood poles, or split palm logs is employed. Naturally, the traditional roofing material of the Sierra dogtrot is wood shakes, while that of the Huastec dogtrot is palm thatch. Again, this demonstrates how one particular culture, that from the prairies and piney woods of Texas and the rest of the Upland South, imposed its preferred house form in two
Figure 8.2: Plan Types of Dogtrot (F) Dwellings (Huastec and Sierra Regions)
Illus. 8.1: Corner-notched palm log dogtrot dwelling. Most dogtrot houses are constructed of corner-notched logs, whether in the Sierra or in the Huastec, where palm logs are used, as is the case here. The most common form of notching, in either case, is double, as can be seen here. The palm logs are more susceptible to interior decay, due to their attractiveness to insects that feed on the juices contained in the palm trunks. This can be noted on the ends of the logs. This, however, does not appear to progress to a stage whereby the strength of the walls is jeopardized. This dwelling, which is located in El Meco, Ciudad del Maiz, SLP, is approximately 10 years old. Many older ones can be seen throughout the region.
completely different natural environments. At the same time, however, that form simply incorporated the local materials available, thereby becoming compatible with each of those environments. Additionally, the dogtrot demonstrates how the host-culture of the region, in this case either the descendents of the Huastecs or the mestizos, has adopted a particular house form and further modified it according to its own traditions.

The Sierra

According to Winberry (1986, 1974), in the Sierra the corner-notched log dwelling, including the dogtrot, was introduced by an American hacienda owner in the settlement of Pablillo, in the Sierra Madre Oriental of Nuevo León. From there the dogtrot diffused to other points in the Sierra, namely in the village of San José de las Boquillas, in the municipality of Santiago. Non-dogtrot log dwellings, however, are distributed in several more places throughout the Sierra, such as Laguna de Sánchez, Tejocote, La Nogalera, La Ciénega de Gonzalez, San Isidro, and La Peñita, all in the municipality of Santiago, Nuevo León. Such structures are also common in the villages of Santa Anita del Peñasco, Santa Clara, San José de Martha, Ciénega del Toro, and Los Mimbres, in the municipality of Galeana, Nuevo León, and in San Antonio de las Alazanas, in the municipality of Arteaga, Coahuila. The dogtrot, at least at present, is reduced to the one mentioned village in the Sierra of Nuevo León (Figure 8.1).

While many of the log dwellings are constructed at once or expanded into linear plans, in San José de las Boquillas, NL, several of them are constructed uniquely as dogtrots. Most of these consist of two pens with a central passageway. One, however, is a dwelling having two breezeways and multiple rooms aligned in a linear fashion. This presents an example of a dwelling that evolved into both an extended plan and a dogtrot form, as the
rooms were added in such manner that a space was allowed between them. One of these spaces serves as a completely open breezeway, while the other has been closed off on both sides as a storeroom. The entire structure is linked not only by a common, extended roof and foundation, but a long front gallery, as well (Illus. 8.2). The other dogtrots also have had their breezeways closed off, whereby such spaces serve as the main entrance room and living area (Illus. 8.3). One house has its dogtrot closed on one side whereby it serves as a storage shed and entry area, as well.

Just as in Scandinavia hundreds of years ago, some of the dogtrots, both in the Sierra and in the Huastec, have evolved rather than having been constructed all at once. In this case, a gable-roofed (B) dwelling was expanded by adding a separate structure, which furthermore was connected by a common roof to the original structure (Jordan and Kaups 1987). Thus, the dwelling evolved from a B1 or B2 Form to an F Form. This was the case with the elongated dwelling in San José de las Boquillas and occurred, as well, in El Meco, San Luis Potosí, in which a gable-roofed adobe kitchen was added to a gable-roofed log pen, whereby a central roofed passageway was created. Whether evolved or not, the dogtrot dwellings remain easily distinguished by their unique form.

The Huastec

Preservation of nineteenth-century Anglo-American pioneer traditions, in the Huastec region is accounted for with the presence of the double-pen, or dogtrot house, which is known, here, as a casa de paseo. Along with the single-pen and extended log dwellings, the dogtrots are encountered in somewhat larger numbers in the Huastec than in the Sierra. Two major areas in the Huastec boast dogtrot house forms. These include the Chamal and the Naranjos Valleys. In the former they are found in settlements such as
Illus. 8.2: Extended dogtrot dwelling constructed of corner-notched logs. Note the long gallery along the extent of the front side (top and bottom). Note also the two breezeways (top), the one at right being used as storage and the one at left, which is left open and acts as extra living space between the gable-entry kitchen on the right and the two front side-entry bedrooms on the left. Extension on gable end is a form of ramada covered with tin sheeting (bottom). The dwelling is at least 50 years old and is located in San José de las Boquillas, Santiago, NL.
Illus. 8.3: Corner-timbered log dogtrot with wood shake roof. In this case, dogtrot is closed off and appears, at present, to serve as storage space. Note that the logs in this dwelling and the one in Plate 8.1 are plastered with earth and lime, in order to give a more finished appearance. This dwelling is located in San José de las Boquillas, Santiago, NL, and is believed to be approximately 100 years old.
Chamal Nuevo and Adolfo López Mateos, Ocampo, Tamaulipas. In the latter they are more abundant and are found specifically in the towns of Nuevo Morelos, Tamaulipas, and El Naranjo, El Meco, and Salto de Agua, in the municipality of Ciudad del Maiz, San Luis Potosí (Figure 8.1).

As in the Sierra, many of these structures have their breezeways closed off, mainly due to the family's growth and consequent need of extra space (Illus. 8.4). Many, however, remain with their breezeways open and used for both work and resting space. Also, as needed, auxiliary structures, usually jacales of some form, accompany the dwelling. In fact, most of the dogtrot seen contained not kitchen, but, rather, only two bedrooms and perhaps a living room, which occupied the breezeway. The kitchen, on the other hand, tends to be located behind or to the side of the main dwelling and often occupies a gable-roofed structure constructed of a material other than that used for the dogtrot. Many dogtrots, additionally, have received modern non-folk room additions or separate structures of concrete, as well. Also, the log dogtrot, especially in the Naranjos Valley, has become popular in the past twenty years as a novelty and, thus, common among non-folk populations, as well.

Unlike in the Sierra, the dogtrots in the Huastec come in a greater variety of forms, based on the style of the roof. While in the Sierra the roof is always gabled at the short ends, in the Huastec, it can be gabled, hipped, or double gabled (Illus. 8.5a and b). The latter case refers to those dogtrots in which each of the two separate log pens has its gables facing front and back rather than toward the sides. The breezeway, in this case, is usually closed off as a separate room, the entry room, and is covered by a roof connecting the two pens, each with their separate gabled roof structure. The closed breezeway is
Illus. 8.4: Corner-notched palm log dogtrot, in which central breezeway is closed in to serve as living room and extra sleeping space. Note that the main front door (open) leads into the former breezeway and the rest of the house, as well. Breezeway was walled in with cement blocks. Dwelling is located in El Meco, Ciudad del Maíz, SLP, and is approximately ten years old.
Illus. 8.5a: Dogtrot dwelling forms. Gable-roofed, corner-notched palm log dogtrot with roof thatched of palm. Note the open central breezeway between the two log pens (top). Note the interior of the open breezeway (bottom). Here the pens once were separate completely until united by common roof. Dwelling is located in Adolfo López Mateos, Ocampo, Tamps.
Illus. 8.5b: Corner-notched palm log dogtrot with hipped roof (top) and with double gabled roof (bottom). Both of these have closed in breezeways. The dwellings are located in Nuevo Morelos, Tamps., and El Meco, Ciudad del Maíz, SLP.
usually recessed, as well, from the front of the two pens. This form, however, is rare and was not to be seen outside of the San Luis Potosí portion of the Naranjos Valley.

As the local inhabitants adopted the idea of corner-timbered log construction, however, the house began to lose its American form and, thus, be modified by that of the local culture. Therefore, it is not uncommon to see corner-notched log houses - and even dogtrot houses - with apsidal roofs and culatas, constructed of palisade poles, added to the ends, thereby creating a further form class (Illus. 8.6a-c). Also seen are simply rectangular dogtrots that are constructed of some other non-log material such as adobe (Illus. 8.7). In this way, the casa de culata and the casa de piña have adopted the American dogtrot form (West 1969, 1975; Winberry 1968, 1974). This transitional blend is another example of the syncretization of cultures, in whichever physiographic region, and its impact on the rural built environment of Mexico. However, it is also an example of how the more humid regions abundant in vegetation clearly foster a greater variety of house forms and transitions from one form to another more so than the arid regions, which provide limited resources and impose many restraints on variety of form.

**The Border Region**

Geographically, the most reduced region, the narrow strip along the U.S./Mexican border, is characterized by the U.S.-style hip-roofed dwelling. As the construction of these dwellings was limited the very early part of the twentieth century, the only structures that remain are limited to the border towns of Guerrero and Ciudad Acuña, Coahuila (Figure 8.1). The heavy industrialization and urbanization of the lower Rio Grande, or Rio Bravo, communities has caused a nearly complete annihilation of this and all other folk dwelling forms. In addition, many of these dwellings, which are still intact,
Illus. 8.6a: Semi-apsidal dogtrot dwelling. Apsed end on one of the pens. The roof is thatched with palm leaves. The house, which is located in Chamal Nuevo, Ocampo, Tamps., is approximately 30 years old and now only serves as storage, as a new non-folk, concrete dwelling now houses both the kitchen and living quarters.
Illus. 8.6b: Palisade split palm log walls that are daubed and plastered with a lime mixture.

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Illus. 8.6c: Existence of a breezeway.
Illus. 8.7: Gable-roofed dogtrot with walls constructed of adobe and roof thatched with tule grass. Dwelling is located in Llera de Canales, Tamps. and is approximately 37 years old.
are encountered either in a dilapidated condition, abandoned, or occasionally inhabited. In the former two cases this due, again, to the popularization of other forms, mostly non-folk or flat-roofed. The latter case usually represents the fact that many residents of the border region work periodically across the border. This situation will be elaborated further in the next chapter. For these reasons, little information was obtained or available in regard to this particular house form.

This one and only form class (G) contains three plan types which include a basic single- or multi-room rectangle, a rectangle with a rear shed appendage, or an "L" plan (Figure 8.3). Wall materials are limited to stone or adobe and those of the roof to either sheet tin or wood shingles. The walls are further plastered with a lime-based mezcla or with cal y canto and painted. In fact, the way in which they are decorated mimics that of the urban flat-roofed and side-entry gable-roofed dwellings. Usually the rodapie and pseudo neo-classical style trim and door and window surrounds are offset by both paint color and texture of plaster from the rest of the façade. The only major difference between this and the other forms occupying the same towns is the low-hipped roof and the American-style double-hung windows (Illus. 8.8a and b). Unlike the other form classes, this one simply demonstrates the immediate proximity of an international border and, thus, the easy exchange of cultural ideas. Both this and the dogtrot form classes, however, are extremely reduced in number and unpopular, especially when compared to the A, B, and even C Form Classes. Perhaps, both of these will face the same destiny that the unique dwelling forms of the Kikapoo tribe in northern Coahuila already have faced - complete disappearance.
Plan Type I: Single or Multi-room rectangle

Plan Type Ir: Rectangle with rear shed appendage

Plan Type II: L

Figure 8.3: Plan Types of the Low Hip-Roofed Dwelling (Border Region)
Olus. 8.8a: Low hip-roofed, U.S. influenced dwellings. Rectangular-plan dwellings. Note rear shed addition in bottom dwelling. With the exception of the hipped roof the houses appear much like urban flat-roofed and side-entry gable-roofed dwellings. They are all constructed of either adobe or sillar and are plastered and painted as to give a pseudo neoclassical appearance. Note the remote attempt of the trim to convey the appearance of pilasters and frieze. The roof is of sheet tin and/or wood shingles. Dwellings are located in Guerrero, Coah., and date from the turn of the century.
Illus. 8.8b: L-plan dwelling. It is located in Guerrero, Coah., and dates from the turn of the century.
While most of northeastern Mexico's folk house forms transverse multiple environmental zones and, thus, communicate cultural norms rather than simplistic physical determinants, modernism and industrialization tend to surpass, at least partially, both of these elements. In northeastern Mexico, it is accurate to conclude that a transition from Gemeinschaft to Gesellschaft has occurred. In other words, many traits of a modern, industrialized, or rather industrializing, society have overcome those of the rural traditional societies. The tribal societies, furthermore, have all but disappeared from this particular region, whereby only a few vestiges, such as language, food, and house forms, survive on a small scale. Naturally, this social and cultural transition has affected the folk built environment to a considerable extent. Such changes, however, tend to be more acute in some areas and less in others.

Perhaps a most accurate conclusion concerning the folk architecture of northeastern Mexico was that derived by Támez Tejeda (1998), who claimed that while folk housing has largely succumbed to contemporary non-folk forms, at the same time, folk forms have persisted strongly to the point of simply incorporating modern, industrially-elaborated materials. In other words, although many houses are constructed of factory-made cinder blocks, cement foundations, steel rods, and corrugated tin roofing, many of these maintain the same folk form. That is, a flat-roofed casa de cuarto with its parapets, a gable-roofed jacal, or even an apsidal casa de culata or hip-roofed dwelling can contain walls of cement block and, in some, cases roof of tin or cardboard sheeting. While the materials may not be derived directly from the local environment or elaborated by
traditional means, the form can remain same. Therefore, an interesting trend in social change has been occurring, whereby the use of folk materials is compromised, either partially or completely, by manufactured construction materials. The form, however, continues to be present.

Depending largely on location, this particular form of transition is accompanied by other trends, as well. In certain areas, folk house forms persist along with the complete use of locally available and traditionally derived materials. Also, houses presenting a combination of both traditional and modern materials are seen on a regular basis. On the other hand, more and more houses are seen to be of the complete non-folk category. That is, neither form nor material composition is folk or vernacular. When folk form is compromised, the house is completely non-folk. This happens when the house assumes none of already mentioned folk forms common to northeastern Mexico, but, rather, when it takes on a completely modern form. To be more specific, this includes houses having an overhanging cement roof, in place of a roof surrounded by parapets, along with a recessed corner porch and, if present, non-traditional ornamentation (Illus. 9.1a). Also, becoming more present in the region are houses which mimic the modern suburban homes in the United States (Illus. 9.1b). In any case, both the plan type and external form appearance of these dwellings is quite remote from any of those pertaining to the folk forms.

**Folk Housing and Culture Change in Northeastern Mexico**

Much like many other regions in Latin America, in Mexico’s northeastern borderlands a process of culture change has characterized the society of this region for the last half of this century. Again, the arrival of the Spaniards and the indigenous peoples from central
Illus. 9.1a: Non-folk dwellings. Dwellings located in Estación Aldama, Los Aldama, NL, and Valleclillo, NL. Note the overhanging concrete roof in both dwellings. The top dwelling also, has a corner porch, which is completely non-folk. The bottom dwelling demonstrates how a ruined folk house was reconstructed in a very non-folk fashion, due to the cement blocks and concrete roof. The satellite dish atop the roof attests to further culture changes occurring within the region.
Illus. 9.1b: Dwelling located in Los Aldama, NL, demonstrates the strong influences from across the border that have pervaded the region. Note the roof structure, trim shutters, and aluminum windows.
Mexico which the Spaniards brought with them to the northeastern borderlands, which began over four hundred years ago, wrought tremendous changes on the previously existing indigenous societies of the region. This gradual process of ethnic mixing, or *mestizaje*, between primarily the Hispanic and American Indian cultures continued well into the nineteenth century. Nevertheless, according to Steward (1967), this emerging *mestizo* culture, which affected almost all facets of society, here and in most of the rest of Latin America, continued to behold only the characteristics of a traditional society. The traditional societies of northeastern Mexico, and most other regions in Latin America, did not become threatened by non-traditional influences until the elements of modernization and industrialization were introduced. For most rural areas throughout this part of the world, these processes did not take their effect until well into the twentieth century (Steward 1967, 1986).

While the railroads were introduced during the last part of the nineteenth and around the turn of the twentieth century, in terms of the built environment, they did little more than introduce a few American-style buildings around the train station areas of the towns through which they passed. After all, until the Revolution in 1911, the rural landscape was characterized principally by a few haciendas of a landed elite and the otherwise ubiquitous humble folk dwellings of a largely landless class of *peones*, who were dominated by these *hacendados*, or *latifundistas* (Boils 1982). Even thereafter, when many haciendas were expropriated divided into communal lands, known as *ejidos*, the same system of a few large wealthy landowners and a vast majority of small farmers and ranchers, *ejidatarios*, and landless peasants, most of whom continue to live in muddling
poverty to this day, has persisted. Modernization, nevertheless, made its way sooner or later to even some of the poorest sectors of rural northeast Mexican society.

According to Steward (1967), the process of modernization and the changing effects that it has on traditional, or folk, societies begins with the state and its institutions. The Spanish colonial or any other pre-industrial state has had no such altering effect upon the community-based folk societies of rural Mexico than has the modern industrial-motivated state of the twentieth century. In order for a state to successfully carry forth its process of industrialization, the hinterlands of the urban centers must become involved. For reasons of needed increased production of capital, methods of natural resource exploitation must be made more efficient. Therefore the state must extend industrialized technology to the rural sectors of the economy, especially agriculture. As government agencies began to disseminate industrial and technical knowledge to the rural sectors, several institutions of the state began to effect profound changes upon the traditional societies. Among these were farming methods, education, transportation, communication, and health (Steward 1967). Northeastern Mexico presented no exception to this rule.

As a result of these institutions, profound alterations of the region's rural societies occurred. For at least the past three or four decades the impacts of modernization by means of the state institutions have taken their toll on the rural built environment of much of the region. Perhaps the most significant changing forces can be attributed to the impacts caused by the institutions of health, communications, and transportation. While more efficient communications and transportation networks, namely roads, allowed for the introduction of manufactured building materials, health and agricultural organizations strongly promoted the use of these materials. These state agencies, like many others
throughout the developing world had the goal of basically eliminating folk dwellings from the landscape and replacing them with "modern," "sanitary" concrete houses, in the same way they replaced subsistence agriculture with money-making cash cropping systems, such as those proposed by the Green Revolution. These government officials reported that folk dwellings were unsanitary, due the vegetative materials used in the walls and roofs, as well as the earth floors and adobe walls (de la Cajiga D. 1947). For this reason, as concrete dwellings became more common upon the landscape, the rural societies became pervaded with these outside ideas that such houses were not only healthier in which to live, but that they represented a less degrading life style, as well.

Another important agent of culture change, in some places perhaps more significant than the Mexican state agencies, is the mere proximity of the international border, delimited by the Rio Grande, between Mexico and the United States. Since the latter part of the nineteenth century the agricultural fields of the Rio Grande Valley of Texas have been a vital source of income for many inhabitants of Mexico’s northeastern borderlands. At least on a temporal basis, and sometimes permanently, many of the region’s inhabitants have been able to take advantage of the convenience of working in the United States, legally or illegally, and earning U.S. dollars, many of which make their way back to Mexico. For this reason, much of the cultural landscape of northern and northeastern Tamaulipas and northern Nuevo León and Coahuila is characterized by the ubiquitous non-folk concrete and American-style houses.

This is also the reason that so many dwellings, while not completely abandoned and dilapidated, were found unoccupied at the time I conducted fieldwork. As most neighbors mentioned, "Oh, nobody is home over there because they are over on the 'other side'
working for several months,” or that “they went over there to work on a more permanent basis.” Nevertheless, the neighbors will admit that “Fulano (such and such) works in the United States and brings back dollars to construct his grand, modern cement house.” The people will brag or jealously report about how their lucky neighbors, family, or friends have been working in the U.S. and are able to come back and live in something nice and modern, something other than a poor, degrading jicalito. While manufactured building materials, such as cinder blocks and corrugated tin and cardboard roofing, are readily available throughout northeastern Mexico, those who have been able to work in the States often return to Mexico with materials such as asbestos roofing shingles and aluminum windows (Illus. 9.1b). This way their home will look more “American made,” and, thus, carry more prestige within the community.

In conclusion, forces from both state and international levels have played an important role in the alteration of northeastern Mexico’s traditional societies. Today, and even thirty years ago, these culture changes are easily revealed in the cultural landscape and in ethnographies conducted among rural communities. The changes which both the Mexican state institutions and the wage jobs in United States have accomplished at the community level are clear. Roads that now lead to almost every rural settlement, remote or not, allow for cheap transportation of cheaply massed produced building materials. Nowadays, with improved roads, concrete blocks, reinforced cement construction, and tin roofs can be seen in previously unimaginable places, especially in remote mountainous or sparsely populated, arid locations. Technology has been extended to some communities even so that the materials, e.g. concrete blocks, are produced right there in a local plant. This
increased accessibility to such materials, along with accessibility to dollars, in some cases, has given many rural peasant families their dream.

In these communities, it is commonplace to hear one say, "I want my casa de material." This refers to such a house that is constructed of steel-reinforced cement, cinder blocks, and a roof of either corrugated tin sheeting, known as lámina, or clay tile and poured cement, known as hormigón or, more commonly, placa. When one asks why, the common reply is "Oh, because that is what everyone else is building," "It is more modern," "It requires much less labor and maintenance than a house built of traditional, locally encountered materials and, thus, is easier and quicker to build," or even replies stating that "it is cheaper." All of these answers convey the general fact that many people perceive houses constructed of massed-produced materials as more prestigious and, thus, a symbol of success, as well as comfortable, cheap, and more labor-free than the traditional dwellings. After all, cement houses generally require less ongoing maintenance than those of traditional materials, a quality highly valued in today's society in both rural and urban situations. For many people, the more modern and non-folk the form of the house the better. A house having a garage, a recessed front porch, multiple rooms, and, ultimately, a second floor or an American appearance is a symbol of true success, at least in most communities today. This leads one to conclude that many of northeastern Mexico's communities have undergone considerable culture change and, thus, a true process of modernization, whereby the traditional societies, in all cases, have been altered and, in some places, annihilated. Nevertheless, many areas demonstrate that folk traditions continue alongside with modern changes.
Persistence of Traditions and Folk House Forms

While considerable alterations have been afflicted by modern society upon those rural, traditional societies of northeastern Mexico, folk house forms, nevertheless, continue to form an important component of the cultural landscape of much of northeastern Mexico. Some of these forms have been altered with the incorporation of industrially massed produced materials, again known simply as materiales, while others continue to be constructed of the traditional materials provided by mother-nature. Also, while some areas demonstrate a mere existence of folk house forms, others prove that traditional culture continues to be strong, in the case where folk houses continue to be constructed. In other areas folk houses, in form and in construction, are basically absent from the landscape, thus, signifying a complete culture change and loss of tradition. In the case of those areas where folk house forms are either existing or persisting, uses of both folk and non-folk materials are found. Among the A, B, C, and D Forms, dwellings can be constructed of either class of materials, or sometimes of a mixture of both. The remaining forms, on the other hand, when found, are constructed only of traditional materials. Of these, however, only the round, E Forms continue to be built.

The Flat-Roofed Dwellings

Among the flat-roofed, A Form Classes, adobe and sometimes even stone or silar continue to be popular materials with which to build. Especially throughout the arid, desert and Sierra regions of Coahuila, Zacatecas, and San Luis Potosí flat-roofed dwellings built with these materials are encountered regularly, new as well as under construction (Figure 9.1). In these areas stacks of adobe bricks and construction sites are almost ubiquitous, even in unimagined locations, such as those within the vicinity of
Figure 9.1: Regions of Continuance, Existence, and Absence of Folk Housing
Saltillo and along the highway between Saltillo and Monterrey (Illus. 9.2a and 9.3). Even in the lowland humid and piedmont areas of Tamaulipas the occasional stack of adobes can be found (Illus. 9.2b). Here, flat-roofed dwellings continue to be constructed of wattle-and-dauber, as well. In places such as northern San Luis Potosí one will often encounter craftsmen elaborating and constructing with both *silla r* and rubble stone (Illus. 9.4).

The reasons for such a continued persistence of this folk tradition, apart from culture itself, are comfort and efficiency. While the concrete dwelling may be more prestigious, almost any country person will admit that a home constructed of adobe is much more thermal and, thus, efficient than one built of cement. They will admit that it remains warm during the cold season and cool during the hot season. They realize that the cement dwellings, on the other hand, are like ovens during the summer and ice boxes during the winter. If they choose to build their new home or additions of cement, it is usually because that is just the thing to do and that it is labor-saving and, thus, cheaper in one respect. Also, they will simultaneously admit that an adobe structure is more thermal, but that a concrete structure lasts longer and requires less maintenance. Therefore, it is not uncommon to find houses in which both concrete bocks and adobe bricks are being used (Illus. 9.5a and b).

**The Gable-Roofed Dwellings**

The case with the gable-roofed, B Form dwellings is very similar to that of the flat-roofed dwellings. Throughout the tropical and sub-tropical lowlands of Tamaulipas and eastern Nuevo León, gable-roofed *jacales* constructed of the various forms of wattle-and-dauber, pole-and-dauber, split palm logs, and adobe are not uncommon features to be found
Illus. 9.2a: Construction sites in which piles of adobe bricks are present. Sites are located in Estación Catorce, Real de Catorce, SLP. These attest to the fact that construction with adobe continues to be popular.
Illus. 9.2b: Dwelling located in Ejido Santa Cruz, Hidalgo, Tamps. Note the presence of gathered sugarcane leaves ready for thatching.
Illus. 9.3: Flat-roofed adobe dwellings under construction. Note that construction in all of these lacks use of any modern materials, except perhaps for a cement foundation. All of these are located in the vicinity of Saltillo, Coah., and, thus, within a region of industry. The dwelling in the bottom photo is located near both a paper plant (in right background) and a steel mill. Specifically, these are located, from top to bottom, in Rinconada and Hacienda Bosque de Abajo, Ramos Arizpe, and Las Colonias, Saltillo.

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Illus. 9.4: Construction of a wall using cut blocks of *sillar*. Site located in Cedral, SLP.
Illus. 9.5a: Dwellings being constructed of both adobe and cement. Dwellings containing one room with walls of adobe and one with walls of cement block. Both adobe rooms have roofs of *morillos* and *terrado*, while one cement room has roof of cement (top) and the other of corrugated tin (bottom). These are located in Sacramento, Coah., and Rinconada, Ramos Arizpe, Coah.
Illus. 9.5b: Dwelling being constructed of adobe with reinforcement columns of steel rods and poured cement. It is located in Pablillo, Galeana, NL.
on the landscape (Figure 9.1). Roofs thatched of different varieties of grass, palm and yucca, are common as well (Illus. 9.6a and b). The reasons for the persistence of these building methods, again, are due simply to a strong adherence to tradition, comfort, and lack of finances among the least economically advantaged families. While building with traditional materials often can be expensive nowadays, those people who continue to live in locations where the natural resources are at hand and labor is cheap, if not that of the occupants themselves. Dwellers throughout the region will admit that the *jacal* is much cooler during the hot, humid summers than any flat-roofed dwelling, whether of cement or adobe. This is naturally because the warm air rises into the space, or the *tapanco*, below the roof and, thus, is not trapped within the living space as it is in a flat-roofed structure. This is the reason many people prefer to have the kitchen, if nothing else, in a gable-roofed structure, so all the heat from cooking will rise into the roof space. Almost anyone throughout the Gulf Coastal lowlands, who dwells in a flat-roofed concrete house, will admit to having to place their bed outside on a hot, steamy summer night in order to be able to sleep. If a *jacal* accompanies the cement house as extra sleeping quarters, this will more likely getting used, instead. In this way, one tends to ask why in the world anyone would build a concrete house.

Nevertheless, the same reasons apply: prestige, low maintenance, low labor input, and, consequently, relative low cost. Again, while the *jacal* may be more comfortable, it continues to convey poverty and shame. For these reasons, house complexes containing *jacales* may often contain a flat-roofed concrete dwelling as the main structure. Many of these complexes, also, may have two or more gable-roofed structures in which one is built of cement block and the other of adobe or wattle-and-daub. In this way, the gable-
Illus. 9.6a: Gable-roofed dwellings under construction. Adobe and palisade. Top dwelling complex, located in Rancho Nuevo, Tula, Tamps., includes both gable- and flat-roofed structures of adobe, which are currently being built. Note the materials, in the foreground, ready for use. These include bundles of grass for thatching, carrizo for lathing, logs for morillos, and adobe bricks for the walls. Bottom dwelling complex, located south of Llera de Canales, Tamps., on the Pan American Highway, includes a gable-roofed structure being constructed of palisade poles.
Illus. 9.6b: Gable-roofed dwellings being constructed of interwoven sticks (top), and palisade cedar poles (bottom). Note simple roof structure, containing a king post at each end, a ridgepole, rafters, and purlins. Structures are located north of Llera de Canales, Tamps., on the Pan American Highway, and Santa Anita de Peñasco, Galeana, NL.
roofed form is not lost, only the materials vary (Illus. 9.7). Even a traditional massive
chimney, which is all so common in northern Mexico, can be of cement block and
maintain, at the same time, its folk form (Illus. 9.8). When plastered little difference can
be noticed between a cement, adobe, or, sometimes, even a wattle-and-daub dwelling,
especially if plastered with a cement mixture.

Also, many of these gable-roofed dwellings are roofed with metal, especially the
recently built ones. This is due naturally to low maintenance, as the thatch must be
replaced about every five or ten years, depending on the material. Many others have
thatched roofs, which are later covered with tin, in order to extend the life of the thatch
and, thus the roof as a whole (Illus. 9.9a and b). Nowadays, thatch can be expensive, due
to the scarcity, in some places, of the material and the time and labor which such a
tedious process requires. Nevertheless, anyone will admit that a thatched roof acts as a
form of air conditioning, especially when it absorbs moisture, while a tin roof only
transmits heat to the interior of the house. Such conflicts between the factors of tradition,
comfort, and efficiency, and those of prestige, low maintenance, low cost, and low labor
input, are clearly represented on the cultural landscape, as dwellings built of traditional
materials are found hand-in-hand with those of industrial products. Even cases in which
the dwelling walls are of adobe or wattle-daub and the roof of tin, or the reverse, the roof
of thatch and the walls of cement blocks, are very common. All tends to depend, again,
on the personal tastes, needs, and limitations of the builder/occupant.

**The Huastec Dwellings**

As for the rest of the Huastec dwellings forms, all three of these continue to be
popular among house builders. In Tamaulipas, however, the apsidal and round dwellings
Illus. 9.7: Use of concrete blocks in gable-roofed dwelling construction. Top and bottom images demonstrate dwellings that maintain their gable-roofed _jacal_ form, but are constructed of cement blocks. Note that the bottom dwelling is still a _jacal_ even though constructed of cement block and roofed with tin. Note the albedo produced by the tin. These dwellings are located in Ejido Santa Cruz, Hidalgo, and Ejido San Antonio, Jaumave, Tamps.
Illus. 9.8: Massive exterior chimney constructed of cement block, attached to gable-roofed adobe dwelling. Note that the chimney maintains its traditional form. Dwelling is located in Congregación Juárez, Cerralvo, NL.
Illus. 9.9a: Gable-roofed dwellings with corrugated tin roofing. Dwellings are located, from top to bottom, in Burgos, Tamps., and Guadalupe La Joya, General Terán, NL. The parapet-gabled dwelling (top) had its original roof replaced with corrugated tin. Note, also, the non-folk, concrete addition to the side. The other dwelling (bottom), which is constructed of wattle-and-daub, has had tin placed over the existing thatch.
Illus. 9.9b: Dwellings located in Llera de Canales, Tamps., and Tres Palos, Cruillas, Tamps. Gable-roofed dwellings of wattle-and-daub with roofs of corrugated tin. Roof of top dwelling contains tin placed over existing thatch, while that of bottom dwelling was constructed only with tin from the beginning.
are the most common. While the semi-apsidal dwellings, and to a lesser extent the apse-roofed dwellings, are seen regularly throughout much of Tamaulipas, many of these tend to be older, at least ten years or more. However, especially nearer or within the tropical lowlands, they are found, at times, as new structures. While builders of the these particular dwelling forms continue to use only traditional materials, many of the older forms are found to be roofed with corrugated tin or cardboard, which is treated with petroleum byproducts for longer duration (Illus. 9.10). As for concrete block walls, these are found only among the square-based, apse-roofed structures (Illus. 9.11). In conclusion, the three Huastec dwelling forms tend to show a stronger persistence of tradition in both form and materials, while the A and B Forms have a much greater tendency to incorporate modern, non-traditional construction methods and materials.

**Persistence, Existence, and Extinction of Folk Housing Traditions**

While the arrival of Spanish conquerors to northeastern Mexico greatly altered the existing traditions and societies, no force has had such a changing effect on the region’s cultures as have the influences of modernization and industrialization, which were introduced, during the twentieth century, by the institutions of the Mexican state. The nearness of the United States, again, had a tremendous impact of regional culture, as people easily crossed border either legally or illegally in order to work for dollars, which, in turn, bought them a higher lifestyle back in Mexico. While these factors altered considerably the lives and often the form of shelter of many of the region’s inhabitants, strong traditions, some of which originate from the pre-Hispanic period, still persist, especially in terms of folk house forms. Even though folk and non-folk house forms often
Illus. 9.10: Semi-apsidal dwelling of adobe with roof of corrugated cardboard over grass thatch. Cardboard can last up to about 10 years. Dwelling located in Ejido de las Ollas, Linares, NL.

Illus. 9.11: Apse-roofed dwelling with walls of cement blocks and roof of palm thatch. It is located south of Tamuín, SLP.
exist side-by-side, the current state of the built environment seems to be most adequately represented on a regional basis.

**Regions of Folk House Absence**

In some areas folk housing has all but disappeared, while in others it still exists or even continues to be constructed as a popular form of living. After a careful landscape survey, I can easily conclude that the proximity of the United States perhaps has had the strongest impact on folk housing, for it is near the border where the traditional forms of shelter exist only as much older or dilapidated houses or are completely absent. All along the border folk houses are very seldom seen, except in towns such as Guerrero, Coahuila, and Villanueva de Camargo and Mier, Tamaulipas. Here such houses usually are at least fifty years old. In the cities, as is the case in almost any urban area today, folk housing is all but nonexistent, except for the historical districts in Matamoros, Monterrey, Saltillo, and the rest of the smaller cities of the northeastern region. In these urban areas and along the border, many of the historic folk dwellings that do exist have been modified to the extent of not being recognized, as they have been modernized or converted into businesses.

Apart from the industrialized metropolitan area of Monterrey, the only areas where folk house forms are absent include the metropolitan area of Tampico, for the same reasons, and the whole northeastern corner of Tamaulipas extending from the border at least one hundred kilometers south to San Fernando de Presas (Figure 9.1). The latter case is due to a combination of industrialization, principally the heavy concentration of the *maquiladoras*, and commercial agriculture. Other areas of heavily commercialized agriculture, namely the corridor of large citrus plantations between Monterrey and
Linares, demonstrate a gradual loss of folk building traditions and, rather, only a mere existence of older, i.e. twenty years or more, folk dwellings.

**Regions of Folk House Existence**

Naturally, this gradual loss of such traditions, whereby a few folk houses are standing here and there, occurs on the periphery of the border region and of northeast Tamaulipas, where such dwellings have all but vanished from the landscape. Specifically, this region of only continued existence refers to most of northern Coahuila and Nuevo León and north-central Tamaulipas (Figure 9.1). In Coahuila, this particular phenomenon extends only as far south as the Monclova area and in Nuevo León as far south as the citrus area between Monterrey and Linares. In Tamaulipas, the state of the folk built environment is the same all the way to the Río Soto La Marina, with the exception of the off-highway villages in and around the Sierra Chiquita. Along with the strip along the border this same region, in all three states, also produces large numbers of migrant workers, or *pasaporteados* as many of these people are labeled, who work periodically in the United States. Many towns and villages throughout this region of continued folk house existence and along the border often appear as ghost towns, as many of their inhabitants were across the border at the time of my visit.

**Regions of Continued Folk House Construction**

Generally, the regions of folk house absence or existence-only tend to be concentrated not only nearer and along the border and in cash cropping or industrialized areas, but, also, along the major highways. However, there are several major exceptions to these rules, especially the last two. While areas of continued folk house construction are conceptualized as being remote from urban, industrialized centers or from major
transportation routes, new and under-construction folk houses can be found along certain highways and even close to major urban centers. On the Pan-American Highway, between Linares and Ciudad Victoria, several construction sites were noticed where both flat- and gable-roofed dwellings were either new or being built, as were piles of adobe bricks. Also, being built along this major route were gable-roofed jaca les of cement block. Both forms of adobe dwellings also were seen in ejidos and ranchos along the main highway between Ciudad Victoria and both the state line and city of San Luis Potosi. Wattle-and-daub, pole-and-daub, and split palm log construction continues to be popular along many of the highways of southern Tamaulipas, namely those between Ciudad Victoria and Ciudad Mante, Ciudad and Ocampo, and Tampico and Soto La Marina (Figure 9.1).

Apart from Tamaulipas, other areas where folk housing continues to be a popular form of construction include the Sierra and the arid Altiplano (Figure 9.1). While the flat-roofed dwelling, predominantly of adobe, persists as the most common form of folk construction throughout the Piedmont, Sierra, and Altiplano regions, gable-roofed forms, sometimes even of corner-notched logs, are a quite common occurrence, as well. The common case is that a new kitchen will be housed in a gable-roofed structure, while a new bedroom, or bedrooms, will be housed in a flat-roofed structure. Again, this is explained by the need for a place to which heat can escape, in the case of the kitchen, and the low cost, lower labor input, popularity, and prestige, in the case of the bedrooms. After all, a gable-roofed form allows for a less stifling kitchen, but a flat-roofed form, due to its volume, requires less building material for both walls and roof. Nevertheless, in the arid Altiplano, the flat-roofed folk dwelling is practically unanimous, except among the
humblest families, who, perhaps due to tradition and perception, construct a low-lying gable-roofed structure built of precarious materials and techniques. However, this is hoped to be only temporary, thus only a rickety shelter is needed and can be afforded at the time.

Apart from tradition, the most common reasons for the persistence in construction of folk dwellings in these regions appear to be low cost and comfort, especially in the case of adobe in the Piedmont, Sierra, and Altiplano, and in the case of vegetative materials in the tropical Gulf Coastal lowlands. Again, the airy gable-, apse-, and conical-roofed wattle and thatch houses help mitigate the stifling heat of the lowlands, while the thermal flat-roofed adobe houses keep out summer sun and heat, as well as winter wind and cold. In fact, the latter absorb sunlight during the day in winter and transmit heat through the roof and walls to the interior of the house during the cold night. In summer, the walls transfer cooler air captured during the night to the interior of the house during the day. For this reason, although cement remains the most popular building material in metropolitan areas, in the immediate vicinities of cities such as Saltillo and Torreón, Coahuila, flat-roofed adobe dwellings under construction are encountered on a regular basis (Figure 9.1 and Illus. 9.2a and b). These even exist in industrialized areas and along important transportation routes such as that between Saltillo and Monterrey. Adobe bricks even are manufactured and sold throughout these areas, due simply to their low cost and the comfort which they provide the dweller.

**Conclusion: Tradition Versus Modernization**

Despite the fact that much of Mexico's northeastern borderlands functions a hinterland to the country's third largest urban center and, perhaps, first or second most important
and modernized industrial center, certain traditions remain strong, namely those regarding lifestyle and, most of all, shelter. The proximity of one of the world’s greatest industrialized nations, also, plays an important role in many facets of the region’s culture and society. In fact, the way of life of most of the region’s inhabitants, both urban and rural, has changed dramatically during the last half of this century. Many older citizens even will admit that they have seen a tremendous loss of tradition, especially in terms of values and morals, among younger people nowadays. In their estimation, today’s younger generation lacks the value of hard work, that, on the other hand, people want everything easy nowadays. According to an informant who lives in a log dogtrot house high in the Sierra, food production, especially subsistence agriculture, has suffered at the hands of a “lazy” generation that has been heavily influenced by the evils of urbanization.

For this reason, folk housing, also, has been sacrificed, because it requires too much labor. People would rather spend money on manufactured materials than take the time to extract them from the earth and elaborate them with their own labor. They would rather live in a house that is easier to build and that appears like a “city house” than live in one which actually provides more comfort and is more efficient in regard to climate control. According to this informant as well as others, including vernacular architecture specialist, Antonio Támez Tejeda, much of today’s rural society, has been corrupted by the impacts of industrialization, urbanization, and modernization. This leads one to conclude that a transition from folk to modern society – from *gemeinschaft* to *gesellschaft* – has occurred.

On the other hand, however, with the exception of certain areas, traditional house forms persist and, in many areas, continue as a popular method of construction. While
some technique and materials have changed, such as the incorporation of manufactured materials and the reduction in the thickness of adobe walls, the general forms and even outward appearance of the materials, in many cases, often hardly vary from those of four or five hundred years ago. In the Huastec region of Tamaulipas, for example, both subsistence agriculture and house construction continue to follow the principles of astrology, as this was the ancient indigenous custom. Here, such ancient customs prescribe that all construction materials, e.g. wood, palm logs, palm fronds, and olate, must be cut immediately after the first quarter moon. This is when, it is believed, that the materials are harder and more mature and, thus, more resistant to decay caused by rot or by insects and worms. Customs and beliefs such as this continue throughout much of the northeastern region. One still can encounter craftsmen who continue to make adobe bricks, cut stones, construct roofs of terrado, cut bamboo, cane, and other vegetative resources, and thatch roofs. Such trades are still alive. Perhaps the greatest worry on part of both academics and peasants is that ever growing urbanization and popularity of "modern-looking" homes eventually could spell the demise of tradition and, thus, folk housing, as well. Nevertheless, on the eve of the new millennium, folk housing is far from dead in many areas.
CONCLUSION

Due to the widespread persistence and continuing viability of folk dwellings throughout the northeastern borderlands of Mexico, this particular element of material culture has become useful in distinguishing regions based on different cultural influences and social values, which, in turn, serve as an important component of culturogeographic regions. As a common element on the cultural landscape of this particular country and region, folk housing is an appropriate item to utilize in this type of study, because its geometry reveals cultural preferences. As opposed to construction materials, which are largely and traditionally determined by natural environment, geometry demonstrates how practitioners of a particular culture are accustomed to a particular shape and layout of their shelters (Edwards 1997; Rapoport 1969). Decoration does not completely demonstrate cultural preferences either but, rather, corresponds more to socioeconomic criteria, which, naturally, can vary among one particular culture. On the other hand, the geometric, three-dimensional form and its array of two-dimensional plans can often encompass several physical geographic regions. Thus far, this study has revealed regions of Northern Hispanic, Huastec Indian, and Anglo-American influence - regions, which seldom respect environmental boundaries. For this reason, it is culture history as opposed to any other modifying factor, which makes folk houses an important element in regional cultural geographic studies.

Objectives Accomplished

The objectives proposed in this project were successfully fulfilled. First, empirical field data permitted the classification of the various dwelling forms in the region. With
the help of previous classification methods by Kniffen, Glassie, and Edwards, I was able to derive seven basic form class families of dwellings based on the external three-dimensional appearance. Some of these families could be divided further into separate form classes. I established aspects of cultural and historical significance for each form family.

The two most extensive forms, the flat-roofed and gable-roofed dwellings, revealed differential levels of prestige which one form had over the other for the mestizo population. Although the gable-roofed dwelling is still engraved in the cultural cognitive schemata of many inhabitants in Tamaulipas, the general preference since the early days of colonization of the region has favored the flat-roofed forms over the gable-roofed ones, in a social sense. The flat-roofed house has diffused since the very beginning of Spanish colonization from the Central Valley of Mexico, where it was common among the Aztec and Tlaxcalan nobility. In the humid subtropical lowlands of Tamaulipas it symbolizes an attainment of a certain measure of wealth and prestige. On the other hand, since colonial times, the gable-roofed dwelling has always symbolized low socioeconomic status. It has signified either social subordination or simply a temporary means of shelter while something better is awaited. These two forms, thus, communicate how both long-lasting tradition and, to a certain degree, modernization and urbanization exist side-by-side in northeastern Mexican society. They also revealed a multitude of cultural influences and thus were strong examples of cultural syncretism. Each form class remains a symbol of cultural preferences and social identity.

I quickly discovered that the apsidal, hip-roofed, and round forms were surviving symbols of indigenous culture, namely Huastec. They still signify the persistence of
indigenous culture in a region not so remote from centers of modern industrial development. Even though most of the elements of ancient, tribal-based Huastec society have all but vanished, the landscape of this particular portion of northeastern Mexico demonstrates persistence of the historical attitudes of socio-cultural subordination and marginality. While not as extensive, on a regional scale, as the flat- and gable-roofed forms, these forms, additionally, prove that physical factors simply act as modifiers, rather than determinants, of folk housing trends.

The dogtrot and low hip-roofed forms were symbols of a once strong Anglo-American influence. These forms, along with the parapet gabled dwelling, all attest to the multitude of cultural influences that diffused from the United States into Mexico. While the former two forms are symbols of the Anglo-American influence in northeastern Mexico, the latter signifies the cosmopolitan character which once characterized the lower Rio Grande Valley. Here, influences came from far away places, such as Celtic Brittany. In conclusion, these, as well as all the other forms, serve as true communicators of culture, as it is culture that determines how its members prefer to be sheltered, more so than climate or local available resources.

The form classes were distinguished further by their array of plan types. The flat-roofed forms were all characterized by plans which either expanded in modular fashion or at least had the potential to do so. While some began with the simple base module others began with a more developed and extensive floor plan. Extension almost always occurred in an attached modular fashion. All the other forms, namely the gable-roofed, apsidal, and round form classes corresponded with usually only one plan type, as these dwellings very rarely expanded in a connected modular fashion. Expansion in these cases
occurred in a rather dispersed manner. A house did not consist of one structure but rather a group of several separate one-room structures, each with its particular function. Often more than one form family was represented in a single home. Because this region still offers a considerable wealth of folk architecture, this particular element of material culture continues to serve as a symbol which we may use to read historical influences, socioeconomic configurations, and current preferences and values among the region's inhabitants.

Such fieldwork also allowed for the diagnosis of the current status of folk housing in northeastern Mexico. Nowadays, however, folk housing throughout the world is becoming an "endangered species," due to the impacts of industrialization, modernization, and urbanization. Folk societies have been eroded and, furthermore, replaced by urbanized societies. Even in northeastern Mexico, society has undergone the transition of being centered upon the rural community to being centered upon the cities. Here, focus has turned away from the community and toward principally the metropolitan industrial complex of Monterrey and the international border, here being the maquiladoras of Matamoros and Reynosa or the dollar-paying jobs in the United States. Naturally, folk housing has been affected to a considerable extent, especially near the border and around Monterrey. There it has nearly vanished. Nevertheless, fieldwork proved that traditions live on. Unlike many industrialized countries, such as the United States, folk house forms, often constructed of traditional materials, continue to be popular among house builders and occupants throughout the developing world, including northeastern Mexico, despite its proximity to, and involvement with, the industrialized world.
While these folk house forms demonstrate clear regional variations in culture, they also demonstrate regional variations in the impacts that the processes of modernization and industrialization have had upon traditional societies. They prove that these processes have lead to the demise of folk housing traditions in most areas near urban, industrial regions, however, at the same time, they prove that certain traditions can survive despite these contemporary influences. For example, while folk housing has nearly vanished near the border and around much of Monterrey, it persists along important arteries of transportation, such as the Pan American Highway from Linares to Ciudad Mante, and around cities such as Saltillo, which is only sixty kilometers from the great industrial complex of Monterrey. In sum, local social and economic conditions tend to explain the current trends in folk housing in Mexico’s northeast borderlands. In this way, the region, perhaps like many others, can be characterized as one in which the forces of tradition and modernization coexist, while, at the same time, they both persist.

As for the future of the region, further modernization and exposure of its inhabitants to the industrialized cultures of Monterrey and the United States eventually could lead to the complete disappearance of folk housing. Continued construction of folk dwellings, especially in the arid Altiplano and in the tropical Huastec regions gives hope that this may not occur anytime in the near future. In the end, this study has demonstrated again that folk architecture truly can serve as a useful element in the determination of contemporary culturogeographic regions of Mexico’s northeastern borderlands.

In addition to the work accomplished, however, considerable research in this topic and in this region lies ahead. Due to the fast pace of modernization and the ever-growing popularity of concrete dwellings, a study which focuses on folk housing as a viable and
efficient alternative to inefficient concrete dwellings and as an important component of sustainable development is needed. In addition, further research is needed on each of the different folk house forms and regions in order to gain a more complete understanding of the origins and diffusions of each. A more adequate analysis of the Huastec dwelling forms could be gained through a study that dealt exclusively with the entire Huastec culture region. Due to the lack of information on the low hip-roofed dwellings of the border region, much more research is needed in this area. In order to understand the trends that have occurred with folk housing in the Rio Grande Valley, more research is necessary here as well, but on both sides of the border. Perhaps, the most significant outcome of this study, however, is that it serves as a foundation upon which to begin these further needed research projects.

**Folk Housing in Northeastern Mexico and Where It Stands in the Face of General Folk Housing Scholarship**

While research on vernacular architecture has been more common among architects, architectural historians, and folklorists, it has enjoyed the attention and interest of both cultural geographers and anthropologists for over a century. Geographic research in this particular area first became noticeable with August Meitzen's work on settlement patterns in Germany. While he was the Prussian commissioner for land consolidation and not a professional geographer, he did contribute to research on village types and folk architecture. In his classic work of 1895, which in English is titled *Settlement and Agrarian Character of the West and East Germans, of the Celts, Romans, Finns, and Slavs*, he classified settlement patterns according to the ethnic groups revealed in the title. He examines the house types correspondent to each of these patterns. These, he believed were true symbols of the ethnic landscape; they were "the embodiment of a people's
soul” (Jordan 1985: 3). He was one several German scholars responsible for introducing
the theme of cultural landscape into geography (Jordan 1985: 3; Jordan et al 1997: 119).

Later, by the 1930s the study of folk housing became incorporated in cultural
geography in the United States with the works of Fred B. Kniffen. As elaborated earlier,
Kniffen was the first to pioneer an atomistic approach to regional geographic studies. He
realized that it was difficult for one person to cover specific details on every aspect of the
geography of a particular region, thus he opposed the traditional holistic approaches to
regional studies (Kniffen 1936). My work on folk housing in northeastern Mexico, in this
way, provides a heavily detailed account of folk housing regions, which will contribute to
a future combined study revealing complete culturogeographic regions. Unlike Kniffen,
however, I rely heavily upon ethnography and thus go beyond the windshield survey to
which Kniffen limited himself.

After Kniffen, additional geographers including Robert C. West, John J. Winberry,
Charles F. Gritzner, Allen G. Noble, and Terry G. Jordan have contributed to research on
folk housing in cultural geography in ways that have informed my efforts in northeastern
Mexico. These scholars contributed heavily to the field during the 1970s and ‘80s. West
(1974) focussed on one particular house form, the flat-roofed dwelling, in Mexico.
Winberry (1968, 1974) focussed exclusively on a particular construction material and
 technique, corner notched logs, and covered every region in Mexico in which dwellings
of this nature formed a considerable part of the cultural landscape. Gritzner (1971, 1979-
80, 1990) also focussed on log buildings but in the Hispanic Homeland of northern New
Mexico.

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Jordan is another major contributor to folk housing research in the field of cultural geography. Perhaps most outstanding is his work on log buildings and the process of their diffusion from the Old World to and throughout North America. Apart from ethnicity and diffusion, he looks at cultural ecology, namely the process of adaptation. In addition to his articles he has contributed several volumes to these research topics. These include *Texas Log Buildings: A Folk Architecture* (1978) and *American Log Buildings: An Old World Heritage* (1985). Other works, such as *North American Cattle-Ranching Frontiers: Origins, Diffusion, and Differentiation* (1993) and *The Mountain West: Interpreting the Folk Landscape* (1997), which he co-authored with John T. Kilpinnen and Charles F. Gritzner, also contribute greatly to pioneer folk housing of the North American landscape. Additionally, Jordan (1988) conducted research on another form of dwelling, the parapet-gable dwelling of the Lower Rio Grande Valley. He has approached the folk dwelling as a symbol through which to read culture and interpret the cultural landscape.

Non-geographers who have contributed specifically to seeing the folk house as a symbol of culture, reflecting ethnicity, diffusion, and adaptation, include Henry Glassie, Dell Upton, John M. Vlach and Jay D. Edwards, among others. Similar to Kniffen,
Glassie, a folklorist, Vlach, an architect, and Edwards, an anthropologist, have devised various methods of classifying folk houses based on geometry, mainly looking at house form. The latter two have also, through their various works, contributed greatly to research on vernacular architecture as a symbol in which to understand the certain processes of cultural diffusion, adaptation, and most of all syncretism. Like Jordan and Noble, Upton, an architect, looked at the vernacular architecture of the many ethnic groups which make up North America in the work he edited, titled *America's Architectural Roots: Ethnic Groups that Built America* (1986). The field of folk housing research has been interdisciplinary.

While many may think that research on folk housing is in a senescent stage, they are wrong. True, it has become less popular in geography than in the early days when Kniffen pioneered such studies, which then passed down through West, Winberry, Gritzner, Jordan, and Noble. However, Jordan and Noble have kept such studies going on through the ‘80s and ‘90s and geography as an academic discipline has increased and expanded considerably since the days of Kniffen. Considering the quantity of professional geographers in the United States today and the increasing number diverse research areas, folk housing still retains a place within the field.

Articles on folk housing regularly continue to appear in geographical journals such as the *Journal of Cultural Geography* and the *Geographical Review*. For over the past ten years geographers have contributed articles about folk housing to these journals, among them being James J. Parsons and Daniel Arreola. The journal, *Material Culture* (formerly *Pioneer America*), features articles on material culture studies. Over seventy percent of them are focussed specifically on folk housing. A good portion of its steadily contributing
authors have been geographers, including Kniffen, Jordan, Wacker, Gritzner, Noble, and Kaups. Authors from other fields include Glassie, Vlach, and Upton. *Winterthur Portfolio* is another outlet primarily dedicated to vernacular architecture research and features scholars such as Edwards, Vlach, and Upton, but does not attract the work of geographers. Unfortunately, the forefront geographical journals such as the Annals of the Association of American Geographers and the Professional Geographer have not published articles on or related to folk housing for nearly the last decade and a half.

**My Research and the Future**

It is my hope that this research on folk housing in northeastern Mexico will be valuable in carrying on one of geography's great traditions. I feel that I have been able to support Kniffen's ideas of the geographical significance of geometric folk house classification and I have attempted to improve upon them. Like Kniffen, I established a set of overlapping folk house regions. Combined with other non-architectural aspects of culture, these regions constitute what he termed as “culturogeographic regions” (Kniffen 1936, 1965). For example, just as the Tidewater folk house region coincides somewhat with a certain dialect region, the Huastec Apsidal, Hip-Roofed, and Round Dwelling Region coincides considerably with the region of historical Huastec indigenous influence. The other folk house regions coincide with various cultural and/or social values, as I have explained throughout the course of the dissertation.

I, however, have gone beyond Kniffen's windshield survey in order to understand better the cultural preferences of the people who occupy the folk dwellings. Additionally, I have built upon the ideas of scholars outside the discipline, namely Glassie, Vlach, Upton, and Edwards. This helped me to improve upon Kniffen’s method of classification.
and see the importance of both form class and floor plan and how they affect each other. I have emphasized the idea of the folk dwelling as a symbol for understanding ethnicity, cultural diffusion, adaptation, initial occupancy, and cultural syncretism just as did Kniffen, Winberry, Gritzner, Noble, and Jordan. I feel that my own classification of folk house form regions has made possible the comprehension of how these regions coincide with regions other cultural and social aspects, whether they are prestige, history, ethnic background, migration patterns, or industrialization.

My work, however, is far from concluded. While I was able to establish some correlation between the folk housing regions and other aspects of culture, more research is needed on these other non-architectural cultural traits. Also, further research is needed in order to understand the ethnic and historical background of various folk house dwellers throughout the region. More effort could be dedicated toward a more adequate understanding of the emic view on house form and its relation with other cultural and social values. While I looked into the cultural history of the various ethnic groups of the region, more intensive research is lacking on the full history and processes of diffusion. This will more precisely link my folk house regions with other cultural aspects and a more adequate establishment of culturogeographic regions.

I intend that this study will pave the way for future research in using folk house form in order to understand better the processes of adaptation, diffusion, and syncretism. This should also provide a means to understand the cultural cognitive schemata that are held in the minds of those who build and occupy folk dwellings. Apart from the objectives mentioned, the major goal of this dissertation is to add to the studies on folk housing
accomplished to this point and to keep alive this tradition of research both in cultural
geography and as an interdisciplinary sub-field.


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ACAQUITA – variety of wood used for ceiling beams in flat-roofed dwellings.

ADOBE – adobe (sun dried brick made of mud and straw).

ALMENDRILLA – stone used in foundations and window and door jambs.

AQUICHE – tree from which poles for palisade walls are taken.

ARCO – arch.

ARCO DE MEDIO PUNTO – semi-circular arch.

ARCO REBAJADO – segmental arch.

ARENISCA – sandstone, used for wall construction.

ATRAVASEÑA – lathing made of carrizo, which is used in roofing gable-roofed, hip-roofed, apsidal, or round dwellings (usually of carrizo, oyancho, or cihuatapete) (see also varrilla).

ATRAVESEÑO – horizontal wooden rods for binding palisade walls.

BAJAREQUE – wattle and daub wall construction (wattle can be either in palisade construction, laid horizontal and supported by wall posts, or interwoven).

BAMBÚ – bamboo.

BARRO – mud, used for daubing walls of wattle construction (see also lodo, soquote).

BARROTE – 1. horizontal wattle used on gable-roofed, hip-roofed, apsidal, or round dwellings (usually of carrizo, oyancho, or cihuatapete) (see also varrilla). 2. Hoops of saplings or branches which hold together the palisade wattle or poles on a round dwelling (see also faja). 3. Hoop which is placed near the apex of the conical roof of a round dwelling.

BEJUCO – large vine which is used to bind poles or wattle in palisade construction and also to tie roof thatch to the lathing.

BLOCK – concrete block.

BOKIO – round dwelling with apsidal roof (see also palapa).

CABALLETE – ridge pole of gable-roofed or apsidal dwelling (see also simbra, viga madre).
cabraillo – king post that extends only from tie beam to support ridge pole.

cadena – wall plate.

cal y canto – stucco made of lime mortar and small rocks and pebbles.

canal – rain spouts, commonly found on flat-roofed dwellings (pl. canales).

canoa – rafter for conical roof of round dwellings.

cantera – limestone, used for house wall construction.

canto rodado – smooth, rounded stone, used for house wall construction.

caña – rafter for conical roof of round dwellings (see also canoa).

carrizo – variety of reed used as matting which is laid over wooden ceiling beams in order to support the mud roofing mixture in flat roofed dwellings or as lathing on gable-roofed and apsidal dwellings.

casa de dos aguas – gable-roofed dwelling (see also casa de piña, jacal).

casa de cuarto – flat-roofed or one-shed dwelling (see also cuartón).

casa de cuartón – corner notched palm log dwelling (see also cuartón de palma, casa de huacal).

casa de culata – house which is apsidal on either one or both ends.

casa de galera – house with apsidal roof and square or rectangular floor plan which has wide eaves on ends.

casa de huacal – corner notched palm log dwelling (see also casa de cuartón, cuartón de palma).

casa de leña – house built of wattle and daub, in which wattle is horizontally laid.

casa de madera – corner notched log dwelling of the sierra (see also casa de trozos).

casa de pasillo – dogtrot house.

casa de piña – gable-roofed dwelling (see also casa de dos aguas, jacal).

casa de trozos – corner notched log dwelling (logs either of palm or pine).

cercado – palisade wall.
chichequilla – tree from which forked posts are taken.

chiminea – 1. Chimney. 2. Cooking hearth, made of stone, mud, or adobe (may or may not be linked with a chimney or stove pipe) (see also fogón, lumbre).

cimiento – foundation.

claravoya – small, diamond or triangular shaped window in gable.

cocina – kitchen.

cuarto – room, bedroom.

cuartón – one- or two-room flat-roofed or one-shed dwelling.

cuartón de palma – corner notched palm log dwelling (see also casa de cuartón, casa de huacal).

cubierta – roof.

culata – apsidal end which either replaces or is added on to a gable end of a dwelling.

culata cuadrada – house with a square or rectangular floor plan and apsidal roof.

culata redonda – semi-circular apse, in which both roof and floor plan are apsidal.

ebano – Ebony, which is used as poles in palisade construction.

embonar – to notch a log.

embone – saddle corner notch in a log dwelling.

encadenar – to corner notch logs.

encadenamiento – corner notching of logs.

enjarrado – daubed wall (see also sapeado).

entablerado – boards placed horizontally on top of roof beams that serve to support terrado of flat-roofed dwellings.

entornado – mixture of straw and mud used for filling and/or covering wattle-daub walls.

entretejido – interwoven wattle (usually carrizo) between thin vertical rods of same material.
**envratado** — wattle wall (sticks laid horizontally).

**faja** - Hoops of saplings or branches which hold together the palisade wattle or poles on a round dwelling (see also **barrote**).

**galera** — wide eaves provided by apsidal roof whereby apses extend beyond ends of square or rectangular floor plan.

**hierro** — iron, which was used for window grilles.

**horcón** — forked post which supports a horizontal beam (pl. **horcones**).

**horcón madrero** — king post (see also **horcón mayor**).

**horcón mayor** — forked king post, which supports the ridge pole (see also **horcón madrero**).

**horcón menor** — forked corner or side post, which supports the wall plate (see also **toldera**).

**hormigón** — mud and straw mixture that is placed on top the **carrizo** or boards of the flat-roofed dwelling (see also **terrado**).

**hornillo** — cooking hearth, usually made of adobe, stone, or mud (see also **chiminea, fogón, or lumbre**).

**huil** — horizontal lathing of conical roof to which thatch is tied (pl. **huiles**).

**huisache** (*Acacia, spp.*) — wood often used for forked posts.


**ladrillo** — brick.

**lámina** — corrugated sheet of tin, zinc, or iron used for roofing.

**larguera** — purlin.

**lata** — rafter.

**leña** — 1. Firewood. 2. Horizontally-laid wattle used in house walls as well as fences.

**lodo** — mud, used for daubing walls of wattle construction (see also **barro, soquote**).

**losa** — roof of clay tile.

**lumbre** — cooking hearth, made of stone, mud, or adobe (see also **fogón, chiminea**).
mampostería – rubble or cut stone masonry

mezcla – stucco made of lime, sand, and cement (literally “mixture”)

mezquite – mesquite, used for door and window frames, door leaves, vigas, and morillos.

mimbre (Acacia, spp.) – wood often used for forked posts.

mollejón – stone used for wall construction.

montante – transom, which is often in the form of a fanlight.

morillo – 1. rounded wooden ceiling beam (basically a log) used in a flat-roofed dwelling or as a rafter in a pitched-roof dwelling. 2. Tie beam.

mortero – mortar.

ojancho – tree (also known as ojanto) from which saplings or branches are used as wattle.

otate – variety of cane (Arundo donax) which grows in stands much like bamboo.

padilla – kind of grass used for roof thatching.

palapa – 1. round dwelling with conical roof (see also bohío). 2. round structure with conical roof that is often used for pleasure or for tourism purposes (usually lacks full-height walls).

palisado – palisade wall construction (materials can be of wattle, hardwoods, bamboo, otate, carrizo, or split palm logs).

palma – palm fronds for roof thatching which come from a variety different species, most commonly the palmetto, cohune palm, or royal palm.

palma yucca – yucca plant or joshua tree, spiny leaves of which are used for roof thatching.

palmito – fronds for thatching which come from the Sabal, sp.

palo blanco – Celtis reticulata tree, trunks of which are used for forked posts.

piedra – stone.

piedra amolar – stone used in walls, door and window jambs, and foundations.

piedra azul – stone sometimes used in the rodapié.

piedra laja – flat layers of travertine rock, used for house walls and sidewalks.
pieza – bedroom (see also recámara).

piña – gable.

placa – flat roof made of clay tile and poured concrete and usually extends beyond wall plate (this is common of non-folk dwellings).

portal – 1. porch, gallery. 2. the wide arcaded gallery found in wealthy patio homes.

quiote – tall flower stem of agave species that is often used for the rafters in gable-roofed dwellings.

raja de palma – split logs of the royal palm, which are used as a wall material, either nailed horizontally or in palisade construction, in gable-roofed, apsidal, or round dwellings.

ramada – flat-roofed porch structure or arbor made of forked posts, wall plates, and covered with saplings, leafy branches, or palm fronds.

recámara – bedroom (see also pieza).

rueda – main bottom purlin on which conical roof of round dwelling rests.

sabino – Mexican bald cypress (Taxodium mucronatum), wood of which is used in framing posts of gable-roofed, apsidal, or round dwellings. Also, it is used for doors, window frames, and vigas.

sala – living room.

samandoque – fiber obtained from a species of yucca that is used to bind roofing thatch to the lathing.

sapeado – daubed wall (see also enjarrado).

simbra – ridge pole of gable-roofed or apsidal dwelling (see also caballete, viga madre).

sillar – soft limestone which hardens after exposure to air after having been quarried in the form of large blocks (see also tepetate, terrón).

solera – 1. wall plate. 2. Space under wide eave of sides of apsidal, hip-roofed, and gable-roofed dwelling.

solero – forked corner and wall posts (see also horcón menor).

soquote – mud, used for daubing walls of wattle (see also barro, lodo).

sotol – kind of palm used for thatching.
soyate — kind of palm used for roof thatching.

tabique — large fired clay brick.

tableta — roofing shakes, usually of pine.

tapanco — attic or upper story (usually half story), normally where grain is stored.

tapia — rammed earth wall construction (in Spain, known as pise).

teja — clay roofing tile.

teja canalada — semi-circular clay roofing tile.

teja árabe — semi-circular clay roofing tile.

teja plana — flat clay roofing tile.

teja engargolada — flat, grooved clay tile with a lip on overlapping side.

tejamanil — roof of wooden shakes.

tepete — soft limestone which hardens after exposure to air after having been quarried in the form of large blocks (see also sillar, terrón).

terrado — mud and straw mixture that is placed on top the carrizo or boards of the flat-roofed dwelling (see also hormigón).

terrón — soft limestone which hardens after exposure to air after having been quarried in the form of large blocks (see also sillar, tepete).

troje — usually a separate structure where grain is stored. Sometimes it can be an attic or an upper story where grain is stored.

trozo — log cut from a tree.

trozo de palma — log cut from a royal palm tree.

tule — kind of grass used for roof thatching.

varrilla — 1. lathing used on gable-roofed, hip-roofed, apsidal, or round dwellings (usually of carrizo, ojancho, or cihuatate) (see also atravaseña). 2. horizontal wattle used on gable-roofed, hip-roofed, apsidal, or round dwellings (usually of carrizo, ojancho, or cihuatate) (see also barrote).

viga — hewn, squared wooden ceiling beam used in flat-roofed dwellings.
viga madre – ridge pole of gable-roofed or apsidal dwelling (see also simbra).

zaguan – vestibule which connects the inner patio of the house with the street (doorway usually arched). In upper-class homes prior to the twentieth century, thus was often wide enough for passage of vehicles (similar to the port-cochere of townhouses of New Orleans and France).

zacate – grass, different varieties of which are used in roof thatching.
APPENDIX B: GLOSSARY OF APPLIED ARCHITECTURAL TERMS

Arabesque – Intricate and fanciful surface decoration generally based on geometrical patterns and using combinations of flowering lines, tendrils, etc., covering the surface with a network of zigzags, spirals, etc.

Baroque – The architecture of seventeenth and part of the eighteenth centuries. It is characterized by exuberant decoration, expansive curvaceous forms, a sense of mass, a delight in large-scale vistas, and a preference for spatially complex compositions. According to the number of these and kindred qualities present, a building or national style of architecture may be called Baroque, i.e. Mexican Baroque.

Neoclassical – A revival or return to the principles of Greek or Roman art and architecture.

Gable – The triangular upper portion of a wall at the end of a pitched roof.

Gabled Roof – A pitched, or two-shed, roof.

Hipped Roof – A pitched roof that has sloping ends rather than gabled ends and thus has four sheds rather than two.

King Post – A post standing on a tie- or collar-beam and rising to the main bay divisions of the space below.

Mozaribic – The style evolved by Christians under Moorish influence in Spain from the late ninth to the early tenth centuries that mixes Moorish and Romanesque influences.

Mudéjar – 1. Spanish Christian architecture in a purely Moslem style. 2. Style evolved by Moslems in Spain following the Reconquest of 1492.

Plateresque – Ornate architectural style popular in Spain during the sixteenth century. It characterized by a lavish use of ornamental motifs – Gothic and Renaissance – unrelated to the structure of the building to which they are applied. Literally it means “silversmith-like.”

Purlin – A horizontal timber laid parallel with the wall plate and the ridge beam part way up the slope of the roof, resting on the principal rafters and forming an intermediate support for the common rafters.
APPENDIX C: GLOSSARY OF SETTLEMENT TERMS

**Hacienda** — a large estate owned by a landed elite that is usually dedicated to an activity that is extensive in land use and low in production output, such as cattle ranching. It contains a workforce that is often terminally indebted to the owner. In northern Mexico, many rural settlements evolved from former haciendas.

**Hacienda Casco** — The population center of the hacienda, containing the buildings which house the owner’s and foreman’s houses, company store, chapel, schoolhouse, stables, corrals, granary, and workers’ dwellings.

**Mission** — settlement established by Catholic missionaries during the Spanish colonial period, which contained the church, living quarters for the clergy, and all other buildings necessary for the subsistence of an entire community. Indians often lived in these settlements as servants and farmers for the support of the mission.

**Presidio** — a military garrison established during the Spanish colonial period for protection of the missions from Indian attacks.

**Rancho** — 1. ranch, usually dedicated to cattle raising, in Mexico. 2. rural settlement in northern Mexico that emerged from a large ranch and the population that once lived and worked there. 3. modern rural settlement dedicated to cattle ranching activities and usually characterized by a minimum level of subsistence. It is often called a rancheria.

**Real de Minas** — mining center during the Spanish colonial period.
VITA

Scott S. Brown was born in Houston, Texas, and lived there until the age of ten, after which he lived in Albuquerque, New Mexico, for two years, and San Antonio, Texas, for another year and a half. Subsequently, he moved with his family to Smithville, Texas. He completed his secondary school education there, at Smithville High School, where he graduated as Valedictorian in May, 1988.

His higher education began at the University of Texas at Austin during the summer of 1988. This is where he began his career as a geographer, as his major was in Geography and his minor in Anthropology. His international experience began while at the University. First, he participated on an archaeological excavation with the Department of Classics at a Neolithic site outside of Crotone, Italy, during the summer of 1990. Subsequently, he went on a study abroad program to the Universidad de Costa Rica, where he studied during the fall semester of 1991. He received his Bachelor of Arts degree from the University of Texas at Austin in October, 1992.

He returned to Costa Rica in July of 1992 where he attended the master’s program in geography, Maestría Centroamericana en Geografía, at the Universidad de Costa Rica. He did his thesis, which was written Spanish, on the agrarian transition in the Nicoya Peninsula, Costa Rica. He married Rocio Varela-Soto, a native Costa Rican, on January 28, 1995. He received his Magister en Scientiae degree from the Universidad de Costa Rica in May, 1996. He previously began his doctoral studies at Louisiana State University in the fall semester of 1995. His dissertation dealt with folk housing in northeastern Mexico. He is currently a candidate for the degree of Doctor of Philosophy.
DOCTORAL EXAMINATION AND DISSERTATION REPORT

Candidate: Scott Stuart Brown

Major Field: Geography

Title of Dissertation: Folk Housing in Northeastern Mexico: A Key to Culturogeographic Regionalization

Approved:

[Signatures of Major Professor and Chairman, Dean of the Graduate School]

EXAMINING COMMITTEE:

[Signatures of committee members]

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July 28, 1999