SPIRIT OF PLACE AND THE EVOLUTION OF THE VERNACULAR HOUSE IN
KINNAUR, HIMACHAL PRADESH, INDIA

by

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B.S., University of Massachusetts, Amherst, 1995
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AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

DOCTOR OF PHILOSOPHY

Department of Geography
College of Arts and Sciences

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2012

Abstract

India is a country rich in religious beliefs, with a cultural landscape infused with symbolic meaning. The nation is currently experiencing great advances in development, standard of living, and connectedness to global markets and cultures. For remote communities, the spread of global ideas can significantly impact traditional customs and distinctive landscapes. Vernacular houses, meaning those particular to a region and culture, and built with local ingenuity, are vital contributors to sense of place and cultural identity. India's remote mountainous regions in particular, are at a threshold of change in the vernacular landscape. Therefore, my dissertation focuses on Kinnaur district, of Himachal Pradesh, a remote folk region of the Indian Himalaya with a strong vernacular heritage and potential for great change in its cultural landscape. Because architecture is culturally significant and provides a clear medium in which to see changes in the landscape, the purpose of this research is (1) to determine the characteristic features of the Kinnauri vernacular house, (2) to identify the reasons for and process of vernacular landscape change, and (3) to illustrate the potential of decorative or small-scale features as significant components of place-making and enduring vernacular landscapes.

My methods consisted of historical archives, landscape analysis (direct observation, photography, and drawings), and open-ended in-depth interviews with homeowners, builders, and officials. Through these methods, I distilled the characteristics of the Kinnauri vernacular house to eight distinguishing architectural features and determined the three most influential agents that directly impact landscape change and the vernacular house. My final conclusions recognize a paradox in landscape identity and that small-scale features are significant components in place-making. Furthermore, my research highlights the crucial role of ensembles and adaptability in enduring vernacular landscapes. Although homogenization of landscapes is evident across the globe, many places still exhibit individualized characteristics and cultural identity. I contend that the increased ability of small-scale architectural features to adapt to new settings, allows a modernizing landscape to preserve aspects of the vernacular architecture.

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Acknowledgements

All photos were taken by the author unless otherwise noted.

Dedication

Dedicated to the memory of my father, John Malouf, my greatest teacher.

July 11, 1947 – August 24, 2011

Chapter 1 - Our Relationship with Places

The Essence of Place: One Example

The historic Old Town district of Warsaw, Poland, with cobblestone streets and ornate stone buildings, emerged as an architectural and cultural gem within the city. When the Nazis invaded in 1939, Old Town, known as the Jewish Quarter or the Warsaw Ghetto was a thriving community of merchants, bankers, teachers and professionals with the largest urban population of Jews in Europe (Tung 2001). In April 1943, neighborhood residents armed with bricks and homemade bombs fought for 28 days against the German invaders in the first Warsaw Ghetto Uprising. Preservationist Anthony Tung, in his book *Preserving the World's Great Cities*, told the story of the aftermath (see also Briggs 1968).

The response by the Germans was to "quell the rebellion one building at a time" (Tung 2001, 78). The Pabst Plan emerged, named after the German architect Friedrich Pabst, as a strategy to destroy an enemy's cultural identity by destroying its physical manifestations such as architecture and art. The goal was to target iconic buildings as a means of destroying the human spirit, group identity, and emotional attachment to place. The underlying idea is that buildings are in some cases the heart of the community. Therefore, destroying the most meaningful aspects of Warsaw's cityscape would destroy the cultural identity of the Warsaw Jews. Stripping the city of its traditional character through the loss of iconic buildings would kill the spirit of place, quelling the rebellion.

The systematic destruction launched one of the most telling cultural counter-offensives in history. During the war, in covert assemblies, a secret commission on town planning was created. Spontaneous architectural and photographic groups illegally assembled throughout the city, compiling architectural drawings and assuring the training of Warsaw's next generation.

In retaliation to the second uprising that took place in 1944, Hitler issued his order to completely raze the city. The buildings that represented the most significant part of Polish heritage were hit first. Entire block-fronts were destroyed if they created an artistic whole. Corner buildings, with their increased architectural detail were especially targeted and the city's architectural legacy was reduced by 96 percent (Tung 2001).

At the end of the war, people returned to the city and spontaneous rebuilding began. The historic districts, in rubble, were rebuilt piece by piece by volunteers, each building as it was in its exact original location. This allowed Varsovians to feel that they had been given back the place they know – in its same spirit. These buildings were part of their identity; therefore, a new cityscape never could have replaced them.

Introduction

This piece of history, although geographically removed from my study area, clearly illustrates that distinct places are important for the human spirit; so much so that people are willing to risk their lives to defend their place. It also demonstrates that architecture is a significant component in our attachment to place. Iconic buildings and vibrant streetscapes contribute greatly to place distinctiveness (Speake 2007). Furthermore, the presence of tangible objects, such as common vernacular houses, greatly aids in the endurance of sense of place (Lewis 1979b). This dissertation research merges the study of landscape and place and puts *vernacular* (regionally and culturally specific) houses at the center of study.

Places are often what differentiate the experiences of our lives. They are part of our memories and identity. However, scholars contend that distinctive places are less common today than they once were (Relph 1976; Meyrowitz 1985; De Blij 2009). Increased mobility and a car-centered society often receive the blame. Globally, they credit loss of distinction to the spread of Western ideas through globalization and advanced media technology. The outcome is a less distinguishable landscape, one that does not reflect place or local culture, one that makes you feel as though you could be shopping, eating, or driving, anywhere.

Although homogenization of landscapes is evident across the globe, many places still exhibit individualized characteristics and cultural identity. Several scholars are quick to point out that the landscapes have changed but diversity still exists (Riley 1980; Vale and Vale 1983; Zelinsky 2011). And still others make the point that developing countries offer increased opportunity to experience such places and study the process of change (Rapoport 1982b; Shankar 2005).

My research explores one such placeful region of the Indian Himalaya. The remote district of Kinnaur in the state of Himachal Pradesh offers an excellent opportunity to study the vernacular landscape (Figure 1.1). Its long-standing heritage of wood carving and love of ornamentation and decoration has fostered a building tradition unique to the region. Local dialect, distinctive clothing, foodways, and religion all contribute greatly to Kinnaur's identity, while the agricultural lifestyle and extreme terrain have created an intensely placeful landscape. Because architecture is culturally significant and provides a clear medium in which to see changes in the landscape, the purpose of my research is (1) to determine the characteristic features of the vernacular house in Kinnaur district, (2) to identify the reasons for and process of vernacular landscape change, and (3) to illustrate the potential of decorative features as a significant component of place-making and enduring vernacular landscapes.
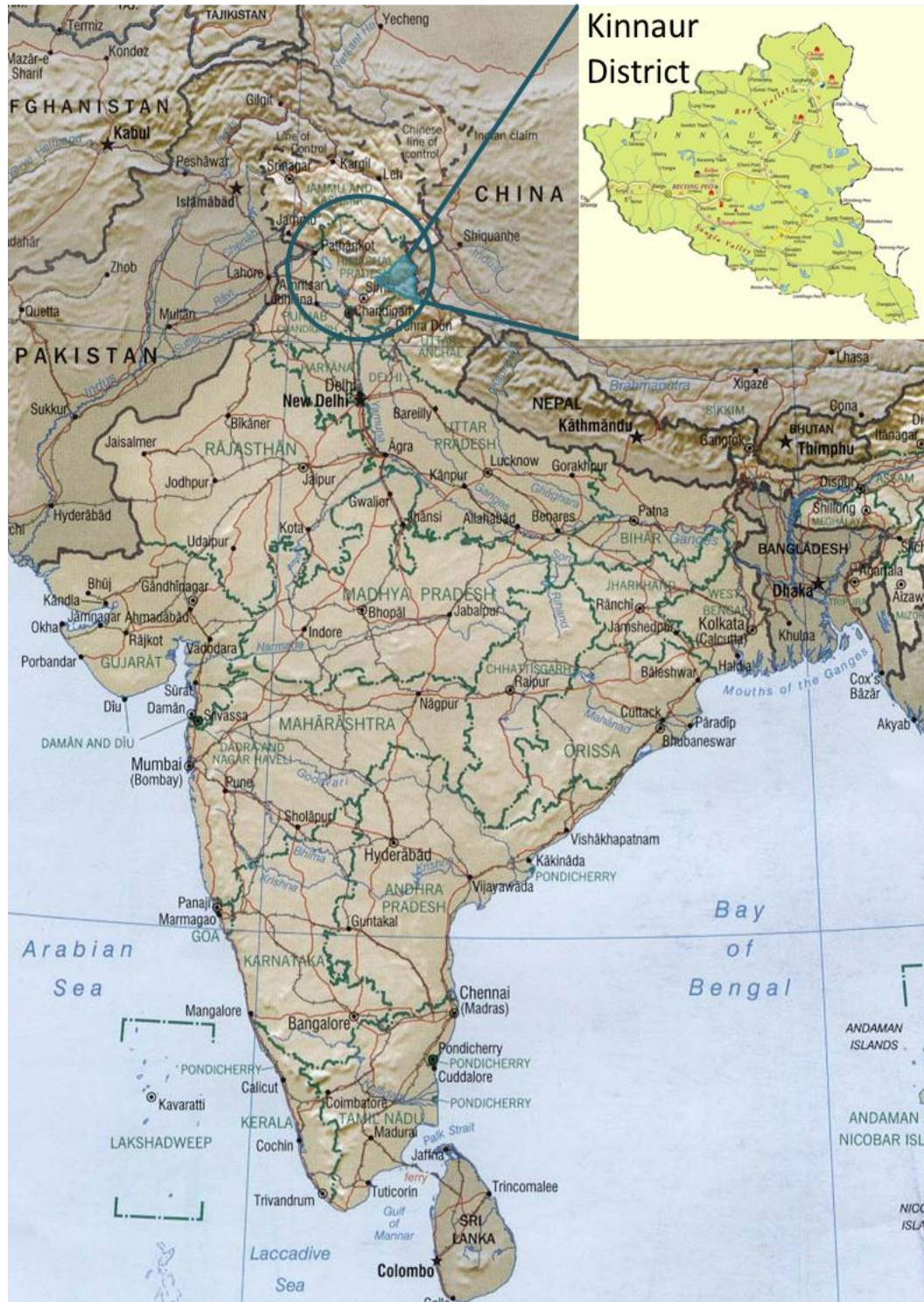
Figure 1.1 Kinnaur District, Himachal Pradesh, India
The image above shows the state of Himachal Pradesh circled, and the research location of Kinnaur district expanded. Maps used with permission from the University of Texas Libraries, University of Texas at Austin and Indian Map Service, Jodhpur, Rajasthan, India (inset).

Placeless Landscapes

"Sense of place" refers to the subjective and emotional attachment people have to place (Cresswell 2004). Geographer Yi-Fu Tuan (1974) used the term *topophilia* to refer to this bond between people and place. Sense of place is not just a form of nostalgia or a mere reminiscing on old times and bygone landscapes (Relph 1993). Geographer Edward Relph argued that distinctive places are necessary for a reasonable quality of life. Distinctive places are manifestations of deeply felt involvement, and for many, this attachment is as important as close relationships with people. Places represent "cornerstones of human existence and individual identity" (Relph 1976, 63). Places are important sources of experiences, and give order and security to our sense of being. Places are where cultures root themselves and so are crucial to our understanding of who we are and where we fit into the world, geographically and socially (Anderson 2010). Therefore, sense of place is something which people cannot afford to do without (Nairn 1965).

Unfortunately, many scholars believe that places "are endangered species" and we suffer from too little sense of place (Lewis 1979b, 34: see also Spencer 1945; Cullen 1961; Relph 1976; Meyrowitz 1985). Geographer Harm De Blij (2009, 3) proposed that "the world, if not 'flat', is flattening under the impress of globalization." He cautioned that flatness is becoming an assumption rather than one of many potential outcomes. In the Western world our lives are more and more apt to take place "in spaces that could be anywhere – that look, feel, sound, and smell the same wherever" we are (Cresswell 2004, 43). Commercial strips, movie cinemas, or hotels are often places that seem detached from the local environment. They encourage placeless geography which "lack[s] both diverse landscapes and significant places" and tells us nothing about the particular place in which we are located (Relph 1976, 79; Cresswell 2004). Even the home is finally yielding to the idea of placelessness (Riley 1980; Zelinsky 2011). What is lost is *genius loci* – the spirit that imbues places with meanings, leaving behind "exchangeable environments" which lack distinction (Relph 1993; 1976, 143). The outcome is a diminished sense of place and attachment to place.

In the Western world, over the last 150 years, distinctiveness has been replaced by standardized landscapes and coherence of place has been systematically fractured.

Improvements in transportation, communication, and an escalation in international styles of planning and architecture have all contributed (Relph 1993; see also Cullen 1961; Relph 1976; Meyrowitz 1985; Zelinsky 2011). In the urban landscape, the architectural homogeneity brought on by increasing globalization is often called the "International Style" because it is specific to no one place (Relph 2009). It is argued that mobility through roads and railways, particularly in America, reduces the significance of home, contributing to placelessness (Relph 1976; Cresswell 2004). Lack of place is a subject that Americans have become familiar with because the growth of car-oriented subdivisions has continued full force since the post-WWII prototypes (Kuntzler 1994). However, alongside increased mobility, a combination of mass communication, and a consumer society has been blamed for a rapidly accelerating homogenization so that a "certain sameness has come to pass" (Relph 1976; Meyrowitz 1985; Cresswell 2004; Zelinsky 2011, 115). During the 1950s through 1980s an accelerated rate of change was evident due to the large-scale impact from television in particular, which has the "unique power to break down the distinctions" between distant places (Meyrowitz 1985, 308). This blurring of geographies weakens the identity of places to the point where they look alike and feel alike so that many people "may no longer seem to 'know their place'" (Relph 1976; Meyrowitz 1985, 308).

Our highly connected world is producing great advancements for much of the population with improved medicine, rural education, transportation, and economic opportunities. This is part and parcel to globalization's tendency to bring with it increased exposure to world media, hip clothing, exotic fast foods, and new technologies – in short, global culture. The way in which places are tied into global flows of people, meanings, and things has led some to perceive an accelerating erosion of place (Cresswell 2004). Now many Western societies lament the standardization and a loss in sense of place which ultimately promote erosion of local cultures (Relph 1976; Cresswell 2004).

If place determines our experience as Cresswell (2004) argued, what happens when there is no place? Do people have fewer meaningful experiences? A placeless world may maintain life, but makes for a very unsatisfying existence (Cullen 1961). Robert Riley (1980) warned that we may need to learn how to cope with a landscape that is more transitory than we have ever experienced (also see Upton 1993). This could lead

to a world in which we feel out of place. "Our world may suddenly seem senseless to many people because for the first time in modern history, it is relatively placeless" (Meyrowtiz 1985, 308). Pierce Lewis argued most urgently that the consequences are horrendous for a lacking sense of place, which will lead to a lack of personal responsibility to place (Lewis 1979b). As the world moves towards increased placelessness, it can shift towards rootlessness, or disorientation (Nairn 1965; Relph 1976). Unfortunately, "the idea that diversities of place continue to play a key role in shaping humanity's mosaic tends to be dismissed by the globalizers" (De Blij 2009, 3).

A Different Perspective on Placelessness

Thomas and Geraldine Vale, who in 1983 re-photographed the East-West transect of US Highway 40, admitted that they looked for the landscape change that Americans expect to hear about – the commercial strips, paved-over farmlands, and abundance of freeways. They acknowledged that these elements are there, but that they are far less dominant and more widely dispersed than expected. They were quick to point out the well kempt houses and first-settlement farm buildings. In their opinion, the photo sites overall revealed "lack of great change" (Vale and Vale 1983, 183).

The Vales hypothesized that Americans by and large, live on the edge of urban growth areas and therefore, have a skewed vision of how abundant growth truly is in the US. In reality, seeing it all in context, at least in 1983, it was full of small towns, farms, and pastures. The transformation of open land into highway and commercial strip is actually a localized phenomenon and not seen across America as a whole (Vale and Vale 1983). They contradicted expectations that pervasive change has led to a sense of sameness in the landscape. They claimed that landscapes of the 1950s may have had a similarly uniform appearance to that which characterizes the houses of American suburbia today. They offered that in the original day of Stewart's publication (1953), elm lined streets in small American towns may have appeared as monotonous at times, as do the fast food restaurants of today's interstates.

Though they admitted that the futures of the small towns and family farms seem threatened, these aspects were still there. In the end Vale and Vale concluded that the American landscape has not been dramatically transformed by commercial development,

eating away at the rural scene. Though they argued for the need to preserve diversities of landscape to satisfy our emotional needs, standardization in their opinion has not obliterated the unique. Instead they characterize the American landscape of their day (the 1980s) and Stewart's day (the 1950s) as a study in diversity.

Differing from earlier noted opinions, several scholars agree that places are still different from each other, although, the differences are much less than they once were (Vale and Vale 1983; Meyrowitz 1985; Zelinsky 2011). Wilbur Zelinsky (2011), in his most recent book, posed an interesting paradox for this situation. He calculated the most numerous category of American places as the "predictable, repetitive entities – neighborhoods and clusters, apartment complexes, strip malls, shopping centers, downtowns, and so on" (Zelinsky 2011, 269). These now resemble one another so closely that they are distinguished only by name. However, he asserted that although the *predictable* places are larger in number, the *unpredictable* places – which include gay and lesbian neighborhoods, fire work stands, local festivals, etc. – are increasing year after year. He offered "a qualified, but decisive, no!" to whether America is becoming placeless (265). He maintained that distinctive cities are not going to become anonymous anytime within the foreseeable future. His perspective differs drastically from others in believing that this country is becoming ever more placeful as the number and variety of unpredictable places continues to grow.

However, he argued paradoxically that America has become homogenous – therefore, "more uniform and more diverse at the same time" (Zelinsky 2011, 265). The places have retained their identity, reflecting placefulness – while at the same time, the country has experienced a "constant homogenization spatially in terms of society, culture, economy, and, most visibly, the built landscape" (2). He argued that those who claim to see placelessness are in fact referring to the repetition of the same manmade features with the predictability of pattern. This he referred to as homogenization and is illustrated by Relph as placelessness.

Relph (2009) who lamented the surge of placelessness, offered an equally contrary opinion. An amount of placelessness is in fact needed. Without the standardization of certain aspects of life we could not relate to new places or ground ourselves if they were all completely different. This would make travel incredibly

difficult because nothing would be familiar (Relph 2009). Place and placelessness are interconnected so that almost all places contain aspects of both in a "geographical embrace" (25). For this reason, Relph argued that place and placelessness exist together on a continuum, in a state of tension (see also Meyrowitz 1985). This allows for place at one end (where the expression of something specific and local is fostered) alongside placelessness (the general and mass produced where distinctiveness is suppressed).

Research Questions

Although the bulk of 'place research' has been conducted in the American arena (Zelinsky 2011), this balance on the continuum of distinctiveness and mundane plays out in landscapes all across the globe. Daily, communities make choices in regard to their landscape. Which factors influence their decisions on this continuum of place and placeless? How do they choose which aspects of culture to retain or abandon, and what is the outcome on house and lifestyle? Through an increased understanding of which landscape components contribute most effectively to placefulness, a desired balance between tradition and modernity can be fostered. This is particularly pertinent for countries such as India, which sit at a threshold of increasing global influence.

J.B. Jackson, one of the most recognized scholars of landscape studies, has written that "we can only start to understand the contemporary landscape by knowing what we have rejected and what we have retained from the past" (Jackson 1980, 119). This calls for inquiry into the process of change. India is experiencing great changes in development, standard of living, and connectedness to global markets and cultures. Its remote mountainous regions are at a threshold of change in the vernacular landscape, providing a perfect opportunity to analyze the vernacular components and their process of modification. The house is a major contributor to placeful landscapes and an indicator of cultural identity. Its modification contributes to cultural landscape change and reflects changes in society. Therefore, in this dissertation, the Kinnauri house is used as a case study in determining the essential qualities that allow a vernacular style to represent a cultural group, play a role in place-making, and accept change in a meaningful way. I employed the following research questions to determine the characteristic features of the

vernacular house in Kinnaur district, to identify the reasons for vernacular landscape change, and to examine the components of place-making:

1) What are the characteristic or distinctive features of the traditional Kinnauri vernacular house, and what are their origins, functions, and meanings?

2) To what extent have the characteristic features changed?
      A) What are the transitional stages of change?
      B) Which elements have changed most drastically or least?
      C) Which ornamental features change or fall from use first?

3) What processes and influences have led to changes in the ornamental and distinctive features of the vernacular house?

The following are some of the additional questions I explored in relation to change in vernacular houses:

1. Have changes taken place in the practices and availability of skilled artisans and if so, how has this contributed?

2. To what extent do cultural conformity, peer pressure and/or pride in local vernacular architecture contribute?

3. Are certain characteristics (e.g. income, education level, work experience outside the state, etc.) evident among families who have either kept or modified traditional vernacular styles?

4. To what extent have changes in religious practices / beliefs contributed?

5. To what extent have changes to infrastructure (e.g. roads, utilities, telecommunications) contributed?

6. Has access to "modern" building materials (e.g. metal roofing, concrete block, panel walls, etc.) increased and if so, to what extent has this contributed?

7. Have restrictions been imposed on gathering local materials (e.g. timber, slate, stone and earth) and if so, to what extent have changes in access contributed?

8. How do geographic principles (e.g. geographic isolation, distance decay) at various scales (household, village, district) help explain the spatial pattern of change?

9. To what extent has tourism contributed to change?

The vernacular house type in Kinnaur is similar in many ways to that found throughout the Western Himalaya. It is not entirely unique to the district of Kinnaur or to the state of Himachal Pradesh. Simplified versions can be found in parts of neighboring state Uttarakhand, as well as scattered in parts of Jammu and Kashmir State to the north.

But this is not unique territory for geographers. For example, Francaviglia (1978) argued that the identifiable house of the Mormons, which he used as an important signifier was in fact not exclusive to the Mormon Cultural Region (see also Lowenthal and Prince 1965). I argue that the Kinnauri house is found with increased carving, in greater concentration, and with a higher occurrence in the Khash cultural region of Himachal Pradesh which includes Kinnaur district. I contend that the common pattern of significant features, used in specific and meaningful combinations, creates an ensemble distinct to the region. Furthermore, and central to this argument, is that most Kinnauras interviewed believe this style is unique to their immediate district and peripheral regions. Therefore, it acts as the important object of affection which Lewis (1979b) deemed necessary for sense of place. He argued that monumental buildings are not enough. Common vernacular houses give distinctiveness to a place and "help tie [the] present to the shared experience of a common past" (42).

Example Studies

Labelle Prussin (1973) and Marcel Vellinga (2004) provided excellent examples of an effective way to study modifications to vernacular homes. They focused on the factors and processes of change, analyzing the influences and the resulting syncretism. Prussin (1973, 1986) investigated the artistic and symbolic nature of the iconic architecture of Mali, West Africa as a reflection of lifestyle, beliefs, and values. She captured the blending over time of native dwelling and Islamic architecture influenced through trade. Similarly, Vellinga (2004) focused closely on social circumstances of migration and increased standards of living as catalysts for change in the Indonesian cultural landscape. He demonstrated how esteem for vernacular architecture manifests in new circumstances, blending old with new in fascinating ways.

My research does not duplicate these studies. Prussin's study in particular looks back on historic changes and interprets the reasons and process. My research is addressing changes that are currently underway, so recent in fact that many Kinnauri residents do not yet see the changes that have taken place from their intimate insider perspective. This offers an interesting and new viewpoint on the process of landscape change. These studies serve as examples for my research because they speak to the

processes of change as they unfold on the landscape. Their works illustrate which factors influence vernacular landscape design and why certain features of the house are modified or fall from use. Although descriptive, they are not laden with description or centered on the house as "artifact". Most important, they approach the landscape as a reflection of the needs and values of the inhabitants and provide a keen depiction of the current vernacular landscape as a syncretic creation.

Significance of Dissertation

Folklorist Henry Glassie (1975) acknowledged that we cannot study change before we know what is changing (see also Relph 1981). Knowing the essential features of a place can help in creating or preserving significant environments (Relph 1976, 1981; Lewis 1979b). This requires a systematic study of the defining elements of a place and their process of change.

Defining distinctive features requires the researcher or policy maker to actively engage the landscape and seek out its nuances and details. By looking closely at the repetitive patterns and comparing these to periphery regions, researchers can determine the extent of the phenomena and have a tangible list of categories to help decipher the characteristics of a region. Geographers and other scholars show that this can be done on various scales from landscape to house (Jackson 1967; Prussin 1973; Zelinsky 1977; Francaviglia 1978; Arreola 1988; Walkey 1993).

In an applied sense, stewards of historic building inventories such as national parks, national historic districts, and world heritage sites must determine what makes their place or their inventory unique and worthy of declaration, interpretation, and preservation. Being able to distill the characteristic, distinctive, or period traits of the landscape and its component material culture is crucial to that field. Characteristic features are likely to reflect the vernacular landscape as a whole, encouraging preservation on the larger landscape scale, rather than focusing too heavily on preservation of only select structures and monumental buildings. Determining distinctive features then allows these institutions to construct bylaws and regulations for future development and preservation.

As will be discussed in Chapter 2, the study of vernacular landscapes and particularly vernacular houses has a long history in geography. Descriptive approaches have been the historic precedent for vernacular landscape study within cultural geography and many other disciplines including architecture, architectural history, folklore, planning, and anthropology. Geographic research on vernacular houses declined in popularity due to a justified de-prioritizing of its descriptive framework. My research on the vernacular landscape and house has an analytical rather than descriptive approach pinpointing the reasons why a landscape changes and the process that it goes through. I approach the transformations of the vernacular house as indicators of social change. I answer the call to study emerging, as well as enduring traditions, and to look critically at the way in which the two interact with each other (Asquith and Vellinga 2006; Oliver 2006b; Heath 2009). Studies that examine modernizing vernacular landscapes are considered rare, even though *hybrids* represent the majority of buildings and landscapes today (Vellinga 2006). A focus on modernizing vernaculars will usher in more action oriented approaches towards vernacular landscapes, which examine them as sources of knowledge that can be integrated with new technologies (Vellinga 2006). My research is applicable to landscapes outside of the Himalaya, and addresses the vernacular/modern hybrid, which will be at the forefront of any contemporary landscape study.

When vernacular architecture is discussed it is "hardly ever regarded as relevant" and more often thought of as an "obstacle in the road to progress" (Asquith and Vellinga 2006, 1). Amos Rapoport (1969), J.B Jackson (1984), Thomas Hubka (1986), Linday Asquith and Marcel Vellinga (2006), and Paul Oliver (2006b) all indicated that vernacular dwellings have been associated with the past, a lack of development, and poverty. This perspective is clearly contested in *Vernacular Architecture in the 21*st *Century* (Asquith and Vellinga 2006), which makes a strong case for the inclusion of vernacular traditions in future environments. My research highlights the contemporary use and value of vernacular traditions, their relevance in today's context, and their inherent ability to adapt to changing circumstances. This approach is different from the opinion of vernacular architecture as timeless and unchanging (Rudofsky 1964), and presents a perspective of vernacular landscapes as dynamic, syncretic, and relevant to all walks of life.

Jackson (1952a) argued that the house is the most reliable indication of man's identity. Yet the process of modifying or abandoning select features of the house remains poorly understood and nearly absent from literature. In this time of increased global migration the study of how people adapt their house – their microcosm – can help them understand what aspects of culture they find valuable. As cultural values are reevaluated and access to outside building materials increases, communities make incremental choices that eventually have wide ranging effects on the cultural landscape, transforming it from vernacular to international.

Little research exists that goes beyond a general description of ornaments and symbols and ties them in with cultural change. Studying these distinctive features in-situ, and examining the process of selection and change before considerable cultural change occurs, allows people to determine which aspects of culture are most necessary, and which will adapt to a modified cultural environment.

Places are the significant theaters of our lives. Enhancing the ability to define spirit of place through developing a sensitivity (Relph 1993) to the aspects that make places unique, can be applied to the planning and development field with impressive results for both built landscapes and human interactions. Scholars have claimed that places and houses are "essentially the same where ever we go" (Jackson 1957, 11), and "related to every other landscape" – sharing characteristics as well as uniqueness, and sharing the same struggles (Jackson 1984, xii; Nairn 1965; Relph 1976). This illustrates that an in-depth study of one landscape can be applicable to a more broad understanding of place. It also clarifies why scholarly research from America or Greece for example, is pertinent to research in India, and vice versa.

The Research Area

India's status as a global player has become more recognized with its increased involvement in international business and media (Athique 2012). Many parts of India are currently experiencing the effects of increasing globalization and a loss of traditional culture. Although development in India continues to progress in an uneven manner, it is leading to rapid changes in people's livelihoods and in the character of settlements. Increased globalization includes changes in vernacular building practices due to the

spread of international building styles. This is seen in urban centers as well as in remote mountain villages of Northern India.

In this research, I investigate Kinnaur district of Himachal Pradesh in Northern India. Himachal Pradesh is a mountainous state in the Himalaya, comprised of relatively isolated tribal villages. This region was chosen due to its high concentration of vernacular landscapes and increasing economic development brought on by hydro-power and horticulture. Kinnaur district is renowned for its woodworking heritage and detailed ornamentation on the traditional vernacular homes. The juxtaposition of a strong folk culture alongside a surging industrial economy suggests that Kinnaur district has considerable potential for rapid and significant cultural landscape change.

My first trip to Kinnaur district was in 2006. This was personal travel and not research related but was the inspiration for this dissertation. I returned to the district during the summer of 2010 for a fact finding visit prior to my research proposal. During this 2010 trip, with the goal of deciding on the best villages for further study, I visited 13 villages in the district, some by bus, many by private taxi, and two on foot. This was determined by their accessibility. The town of Kalpa and its surrounding villages provide an ideal location for my research of Kinnauri vernacular houses. I returned to India in June 2011 and spent several weeks in New Delhi and Shimla conducting archival research before spending six weeks in Kalpa researching its surrounding villages. This was followed by two months of archival research, key informant meetings, and travel in periphery regions, determining that the Kinnauri house was in fact distinct from its surrounding regions.

Kalpa stood out as the best candidate for my base because of its dynamic situation. It is in close proximity to other villages which lie on a continuum in relation to roads and modernization, and it has an element of tourism. The villages have intact vernacular landscapes – still highly traditional with many houses that are characteristic of the typical Kinnauri style with wood carving and slate roofs. Yet, they show a transition towards modern styles. Kalpa is 12 hours by road from Shimla, the state capital of Himachal Pradesh. The village is the jewel of Kinnaur and is very popular with Indian as well as a small number of international travelers. The natural beauty and village landscape are the central draws for tourists. Tourist infrastructure, such as hotels and

restaurants are limited and mostly removed from the center of town. The town has both a Hindu temple and a Buddhist temple. The nearby but relatively remote mountain villages of Kothi, Birlingi, Telangi, Reckong Peo, and Sangla are part of what I call the Kalpa village region (Figure 1.2). They comprise my region of in-depth interviews. Several more proximate villages including Roghi, Kilba, Kamru, Chitkul, Charang, and Kanum (to name a few), along with additional districts and regions, were investigated primarily through landscape analysis with supplementary interviews when opportunity arose.

Within this tight complex of villages, the Kinnaur district capital of Reckong Peo (population 2,968) acts as the central market place. It sits about 20 minutes from the national highway, up a steep, poorly paved road. Continuing up hill, the development of Kothi (population 1,200) is almost contiguous with the district capital. Off the road, several small villages, such as Birlingi and Telingi, are linked by a network of foot paths and were included in this study. The village of Kalpa (population 1,100) is 30 minutes beyond Reckong Peo, ascending the small road which is served by bus (Figure 1.3). Sporadic residential development exists along the road between the towns of Kothi and Kalpa. A seasonal road (closed for most of the winter) stretches out beyond Kalpa to the village of Roghi (population 314), situated at the end of the road. It can be reached by foot in 50 minutes or by sporadic bus service. It is seldom visited and has no tourist facilities.

The towns I analyzed offered an excellent opportunity to examine the effects of globalization on the landscape. Kalpa is the most highly populated *tehsil* (administrative region) in the district . It provides opportunities to study the effects of tourism and to examine an area with increased options for building material choices, but which still has a high percentage of traditional buildings (Handa 2009). The availability of government jobs in Reckong Peo, the strength of private horticulture, and to a lesser extent, income from tourism, have formed the economic base of the region. Most people do not travel very far from home and the Kinnauri dialect is often heard on the street. The surrounding steep hillsides show the impress of orchards and grazing of livestock. The high elevation
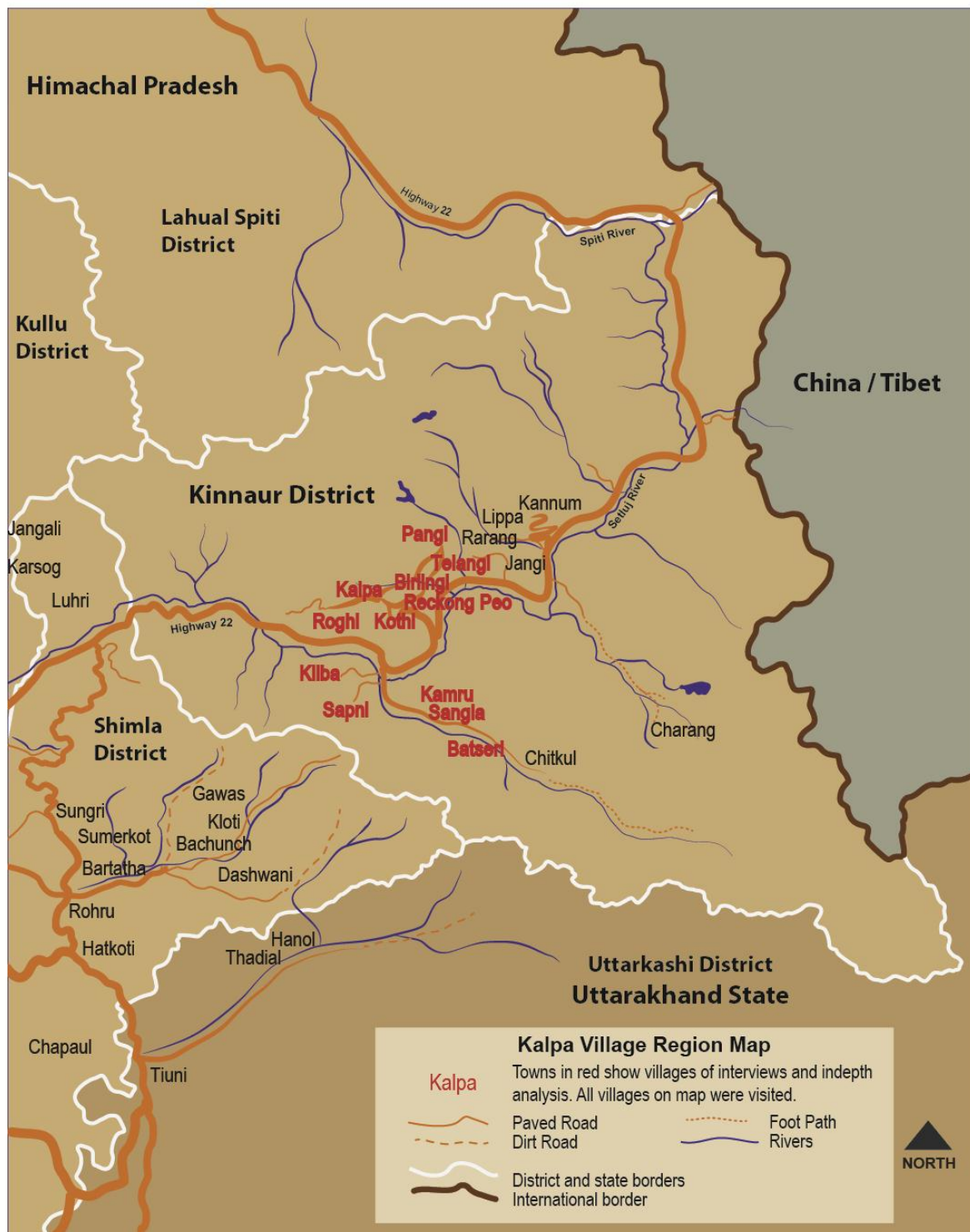
Figure 1.2 The Kalpa Village Region
The image above shows the villages in red that are part of the region included in interviews and landscape analysis. All villages listed were visited. Map by author.

Figure 1.3 Kalpa village
Kalpa, seen here with its surrounding apple orchards and the Kinner Kailash Mountain
Range to the South.

and cold temperatures make life difficult in the winter, when traditional woolen scarves
and the traditional Kinnauri hat set the place apart from neighboring cultural regions.
The tight-knit group associations that are evident in Kinnaur, and the repetition of
architectural patterns make it an ideal location to study changes in the cultural landscape.
Furthermore, scholars agree that changes in cultural aspects of the landscape are more
clearly seen in environments that are in early stages of change, such as in developing
countries rather than in more idiosyncratic western cultures (Rapoport 1981, 1982b;
Shankar 2005; Seamon 1991).

Theoretical Approach

"The facts of geography are place facts" stated Carl Sauer (1925, 26), known as
the father of cultural geography. This sentiment continues to be strongly embraced today
and far reaching. Critical geographer Timothy Cresswell argued that it is the central task

of human geography "to make sense of" places (Cresswell 2004, 12; see also Jakle 1987). But the field does not promote one way of studying the landscape or one method of understanding place. "Seeing or looking carefully at landscape is not a simple matter" (Relph 1984, 214). Great flexibility exists in approaches, and for this reason I employ a mixed theoretical approach.

Aspects of my research are traditional cultural geography based on the chorological framework as it looks at landscape. For example, my research on the ornamental features of Kinnaur approaches place as an object, with a materialistic emphasis of the particulars, and a system of ranking and classifying. There is a chorological sense to the description of features and in doing so, a differentiating of one place from another place. A rough, empirical methodology of taxonomy was used to produce a material understanding of the place of study. Also evident is an analysis of the ways in which a cultural group affects change in their habitat. However, delimitation and diffusion lie outside of my goals. Although I traveled the periphery of Kinnaur, I did so to verify that there was, in fact, a threshold of regional styles and to compare the houses on each side. I did not do so with the goal of plotting the threshold itself. The analysis of reasons for change was primary.

Chorology approaches the concept of landscape as a focus in itself. By contrast, the humanistic approach seeks insight into social processes, placing objects of study in a larger context. This facilitates an understanding of the social aspects and meanings within that place. Emerging in the 1970s in response to the quantitative revolution, the humanistic approach, through the work of Relph (1976) and Tuan (1974), attempted to distinguish place from the chorological concepts of area and region. The humanistic approach puts people in the center of study with a focus on interpretation of meaning. It often emphasizes 'place' as the target of study with two methods of interpretation focusing on either the tangible elements or the human perceptions (Gaile and Willmott 2003). In addition to describing and explaining a place, humanistic geographers want to know what it means, and understand the human consciousness (Gaile and Willmott 2003). For this reason, my research employs elements the humanistic approach through its focus on examining the local perception of the vernacular house and the reasons for changes in the landscape.

Although my work is primarily an analysis of the cultural landscape, I am clearly looking at the social processes that construct a place, and to some extent, lead to a change in place. Therefore, I am open to the idea of structures that inform the decisions of residents. David Harvey argued that with the knowledge of institutionalized structures, the only "interesting question to ask is: by what social processes is place constructed?" (Cresswell 2004, 29). My work investigates government policy and capitalism but is not critical geography, focused on revealing social struggles above all other issues.

In 1984, Anthony Giddens outlined the conceptual approach of structuration theory as an approach at the crossroads of humanistic and critical theory (Cloke, Philo, and Sadler 1991; Cresswell 2004; Warf 2006). It gives equal importance to human action and underlying social structures, creating a duality of interconnectivity; each influences the other, neither is the single dominant force. The interconnectivity is generally referred to as "structure and agency" and intends to address some of the limitations inherent in other approaches. *Approaching Human Geography* (Cloke, Philo, and Sadler 1991, 94) explained these limitations as follows:

> Through the [critical] lens, the camera can be constructed as only seeing social, political and economic constraints, and ignoring the purposefulness and spirit of individuals; through the humanistic lens the camera can … catch the ideals and cultures of individuals and groups, but not the political and economic boundaries within which individual and group behavior is put into practice.

Giddens argued that structure and individual power must be seen as mutually complementary. He saw people as knowledgeable and capable - qualities which they are denied in the purely structuralist approaches. Structuration theory allows me to bring together, into one theoretical framework, concerns for a specific place, personal interpretations, and influential social factors of place-change.

My main objective does not lie purely in the description of architectural features, or even in the interpretation of their meanings, but rather, in the process of change to the place – the decisions, the influences, and the responses. My research shows a strong focus on material culture, but unlike chorology it incorporates and emphasizes the human elements of place and socio-economic processes. I recognize the underlying influences of structuration theory which allow for an acknowledgement of structures that inform

decisions in place-making and landscape change. But my research is primarily a material culture analysis of the vernacular landscape with humanistic influences in relation to sense of place and personal decisions about the vernacular house.

Methods

During my fieldwork in India, I analyzed cultural landscape change through observation, written accounts, and personal interviews. I closely followed the outline of Eleftherios Pavlides and Jana Hesser (1989a) in their analysis and documentation of Greek village houses. Their research was organized into three phases of landscape analysis: the first involved visual analysis to become familiar with the architectural variation of the villages; the second incorporated detailed documentation including measured drawings along with observation, and informal interviews with community members and home builders. These interviews focused on providing an understanding of the use and significance of the architectural form. Third, additional interviews determined how the architectural form was interpreted by residents and how it related to socio-economic factors. In this third phase, particular images were shown to participants to get a focused perspective on the significance and interpretation of the elements in question. This was an effective methods-set because it addresses all the required perspectives from large-scale landscape analysis, detailed documentation, informal interviews, to *driven questioning* on specific objects.

Archives

My fieldwork began with archival research to gain an understanding of what was already known and what was available in India to further inform my research. Although no pertinent historical photographs or village maps were found during archival research (or interviews), many difficult to find books were available to me as well as examples of architectural artifacts. Archives were accessed in several places including the heritage library of the Handicrafts Museum, New Delhi; The Indira Gandhi National Center for the Arts, New Delhi; The National Museum and Archive, New Delhi; The University of Himachal Pradesh, Shimla; The Himachal Pradesh Census Bureau, Shimla; The State Library of Himachal Pradesh, Shimla; The State Museum of Himachal Pradesh (and its library), Shimla; The Kinnaur District Library, Reckong Peo; The District Offices of

Kinnaur, Reckong Peo; CEPT School of Architecture Library, Ahmedabad; Tribal Research Institute Museum and Library, Ahmedabad; and 7 additional cultural museums in Gujarat and Rajasthan.

Scholars

Fieldwork in India provided the opportunity to meet with Indian scholars as key informants. Many scholars were helpful and giving of their time for interviews. I shared several emails and phone calls with O.C. Handa, the premiere scholar of Himachali culture and architecture and met with him at his home office in Shimla. He has published many books on the culture, religion, and architecture of Himachal Pradesh and Kinnaur specifically. Professor Laxman Thakur from Himachal Pradesh University, located in Shimla, is a specialist in Himachali temple architecture and has published several books on the topic. We have shared several emails and I met with him in August 2010 and October of 2011 at his university office. Hari Chauhan, Curator of the State Museum of Himachal Pradesh has written on architectural carvings in neighboring valleys in Kinnaur and was a valuable resource in the selection of villages visited for study in periphery regions of Kinnaur. We shared several emails, spoke by phone, and met in October 2011. Professor Pratyush Shankar of the Center for Environment Training and Technology (School of Architecture) in Ahmedabad, Gujarat, is a specialist in Himalayan architecture. We shared several emails throughout the year prior and met in November 2011.

Additionally, I met with the head of architectural history research, Virendra Bangroo, at the Indira Gandhi Institute in New Delhi who shared with me his work in preservation of vernacular structures in a fire-stricken village of Kullu, HP. Ms. Neidi, the Deputy Director of the Handcrafts Museum in New Delhi who spoke with me about their collection and the use of decoration on houses. At the Department of Agriculture in Reckong Peo, I spoke with S.R. Negi, Umong Bhardway, and Rakesh Rana who shared with me statistics of regional growth in the horticulture economy and its history. I spoke with Hardip Singh, Range Officer of Kalpa tehsil (administrative region), and Amit Sharma Assistant Conservator Second in Command at the Forest Service at the District Forestry office who provided me with department documents and helped me understand the local regulations in forest management and how this directly impacts the access to

timber for local residents. Shiv Dahl Negi, head of the temple committee in Kalpa. The President of Kalpa village was helpful in explaining the *khul* irrigation system to me. Finally Rakesh Kumar, a local shop owner in Kalpa, well respected and very knowledgeable about the village and religion was an invaluable asset. All of these key informants helped form the foundation for cultural understanding and socio-economic agents of change.

Landscape Analysis

It has been argued that the holistic quality of landscapes renders quantitative methods particularly lacking in their study (Relph 1984). Spencer (1945) claimed that the quantitative attempts of earlier housing diffusion studies, (e.g. Finley and Scott 1940), revealed interesting facts but provoked more questions than they answered. However, several authors have incorporated quantitative aspects to their research when discussing landscape features (Kniffen 1936; Price 1964; Zelinsky 1977; Francaviglia 1978; Blake and Arreola 1996).

Zelinsky (1977), however, although having implemented numerical data, relied heavily on qualitative data and subjective feelings, what he called a sense of the gestalt for what constituted the visual display of a landscape, in his case the Pennsylvania town. Geographer Dydia DeLyser (1999) made it very clear that she offered a qualitative study – stating it as the first descriptor of her research which examined how people experience authenticity of a ghost town. Through an understanding of the perspectives of visitors to Bodie, California's historic park, rather than survey numbers and percentages, DeLyser concluded the dynamics of their experiences with authenticity. Likewise, my research is primarily structured as a qualitative landscape analysis incorporating open interviews with local residents, but additionally I offer occasional interpretations of findings in basic descriptive statistics.

As explained briefly above, landscape analysis includes detailed documentation including measured drawings, photographs, mapping, and observation with interpretation. During my time in the Kalpa village region, I conducted full days of landscape interpretation and architectural study. I documented the landscape photographically and tried to become a comfortable presence in the village. Towards the end of my time in Kalpa I conducted architectural documentation – creating measured interior and exterior

drawings – of three houses. These houses were chosen because they represent three distinct types of vernacular houses in the village of Kalpa and its neighboring villages – ancient, typical and modern Kinnauri vernacular.

A map of the village of Kalpa was not found in my searches or meetings at the district government offices in Reckong Peo. With a GPS I was able to map the village through tracking roads and footpaths, and waypointing each house with the help of my assistant. Houses were categorized as ancient, old, mixed, or modern. And buildings were noted as temple, hotel, or commercial. In response to producing a taxonomy and categorizing the various forms of the Kinnauri vernacular, I determined that one village was enough as mapping was not a major goal of the research.

In Kalpa and surrounding villages, the patina of time manifests in a great mix of building materials and styles on a single house. The steep, tight, intermixed and historically long-in-the-tooth landscape of Kalpa and its village region makes a detailed taxonomy an enormous undertaking. It seemed unnecessary for the objectives of this dissertation. This is supported by the overall framework which presupposes that vernacular styles are always in transition. Therefore, a very general categorization of abandoned, old, mixed, and modern is used for the purpose of mapping a vernacular style. In addition, the terms ancient and classic vernacular are incorporated and defined in the discussion of Chapter 4 when the house is examined in detail.

In addition to landscape analysis in Kinnaur, I traveled the periphery of Kinnaur in portions of Shimla, Mandi, and Kullu districts in Himachal Pradesh and in Uttarakhand state (Figure 1.4). Neighboring Lahaul Spiti district was not included because, based on literature and previous visits, it is part of a culture region more dominated by Buddhism. Therefore, the landscape, architecture, beliefs, and ornamentation differ drastically from that of Lower Kinnaur and its surrounding southern districts.

All research took place in the company of a translator. Private transportation was needed to visit many of the locations. Each location on this journey was recommended by Indian scholars focusing in this region and topic, and supplemented by local people knowledgeable of the temples, vernacular dwellings, carvings, and nearby villages. Each town is known for its superb examples of carving and vernacular architecture. Therefore, research in this region helped determine the extent of the characteristic features
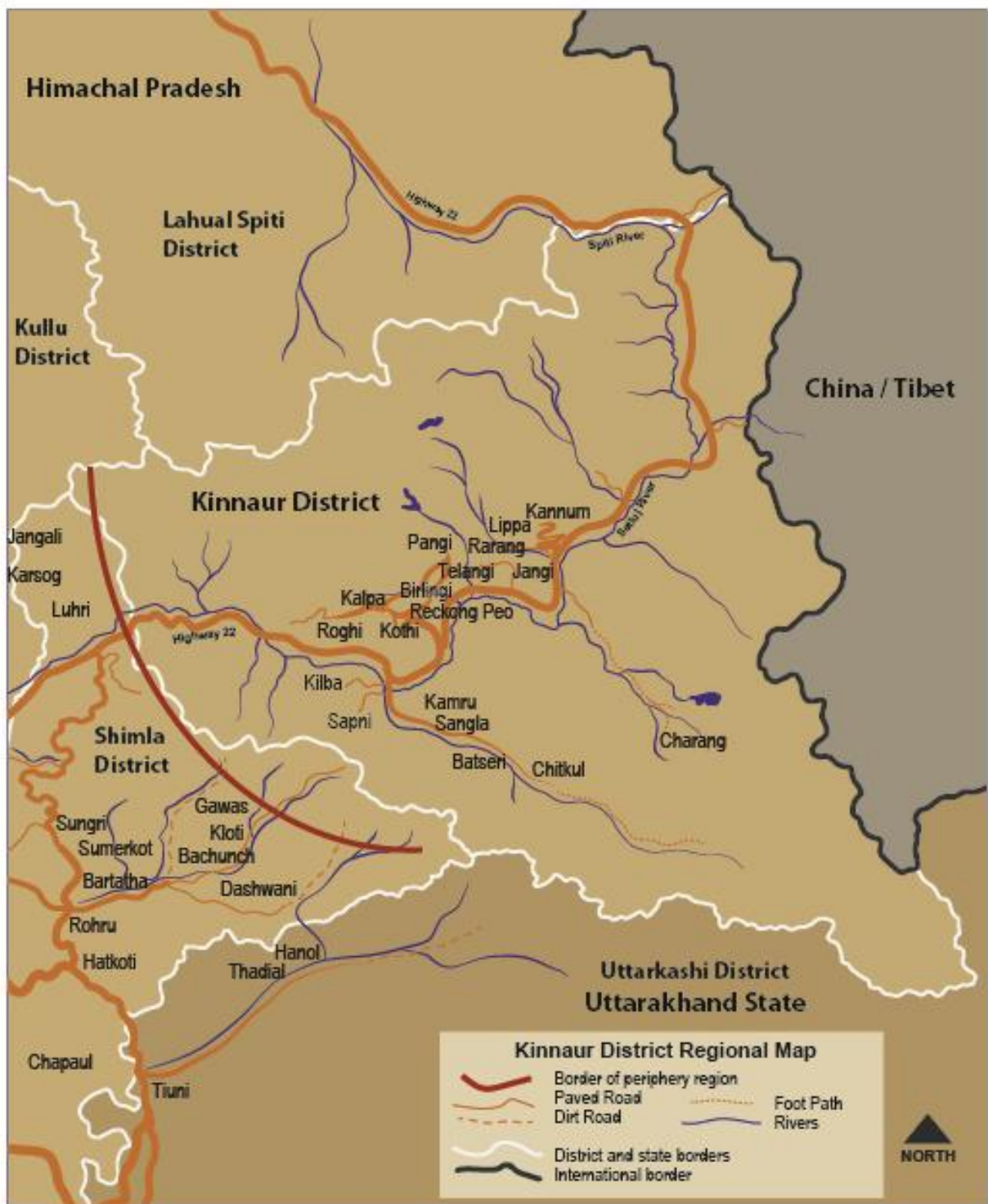
Figure 1.4 Kinnaur Periphery Region
The red arch shows the periphery region of research. All villages listed, including the northern region of Uttarakhand State are included and were visited. Lahaul Spiti district is culturally distinct and not included. Map by author.

that are considered Kinnauri architecture, as determined through landscape analysis and interviews. I was able to examine changes in house form and materials application; whether the content and frequency of the carvings changes over locations; and if designs change in the context in which they are used. However, content of carving has not, in the end, held a central role in this dissertation. Therefore, only some of these findings on religions, carvings, and temples appear in the findings chapters.

Travel to the states of Rajasthan and Gujarat was undertaken to meet with a key informant in Ahmedabad and to compare the high occurrence of ornamentation on the West Indian house. The ornamental paintings typical to the region allowed a comparison of content and context much the same way the Kinnaur periphery regions provided. Furthermore, the drastic difference in physical environment and increased influence of Islam allowed for an additional facet of study as to the influences of ornamentation. In all areas (Rajasthan, Gujarat, and northern periphery regions of Kinnaur) I was able to ask questions to locals, and visit houses and temples.

Interviews

In landscape study, the primary perspective of an "outsider" can help the researcher see the landscape with fresh eyes. The "insider" often overlooks the most common features of the landscape (Relph 1976; Lewis 1979a, 1983; Arreola 1981). And since the landscape is primarily visual (Price 1964; Cresswell 2004), the *etic*, or outsider perspective can be invaluable in revealing landscape character (Relph 1976). The etic account is useful for preliminary understanding and information gathering, particularly in the study of vernacular architecture (Pavlides and Hesser 1989b). However, an outsider, lacking in knowledge, may overlook something that is actually meaningful to the community (Pavlides and Hesser 1989b). Etic analysis can only be assigned meaning through the collection of *emic* data, or insider perspectives – the emic account validates information such as meaning, use, and interpretation (Pavlides and Hesser 1989b).

Scholars gain much greater insight into a particular setting if they "see the landscape, as much as possible, through the eyes of the people who use it and shape it" (Heath 2001, 180). Interviews therefore, are a central piece of my qualitative methods. A wide variety of local residents including homeowners (both male and female), craftsmen, farmers, and businessmen were asked to participate in semi-structured

interviews. Interviews took place at home or office with the assistance of a local translator. Although English is widely spoken in India, it is concentrated mainly in cities and among people with a higher level of education. A translator was necessary in the villages where people speak the local dialect of Kinnauri and generally do not speak English. Local translators also helped facilitate cross-cultural interaction, set up pertinent visits and interviews particularly with elderly craftsmen and in process carving.

In total, four translators participated in my fieldwork interviews in Kalpa and surrounding villages (including Sangla, Kinnaur at a distance of 35 km, or 2 hours by bus). Two of these translators worked only for a limited number of interviews helping interview people with whom they were personally acquainted, while the other two worked on a much more continual basis for the six weeks spent in Kalpa in 2011.

Translators became increasingly effective in communicating my ideas to the interviewee and the interviewee's information back to me. However, I acknowledge that potential areas of concern exist in the interviewing process due to the dependency on translation. The biggest concern is that although I used the word "typical or normal" in prompting answers on Kinnauri style, it is unknown if a limitation in the way the question was phrased from the translator to the interviewee biased opinions to historic or ancient houses only. For example, in one interview I asked if the house which we were in, was a "typical Kinnauri house". The fifty year old women answered "yes, yes, it's totally Kinnauri. It is the oldest in the line of houses here." As if the act of being old alone, made it Kinnauri. When pressed for details as to which parts make it Kinnauri, all I received was a long silence. More than once, people had trouble answering the question. To address this, I repeatedly express my goals to the translators and worked to ensure that they shared all answers with me rather than summarizing.

A true representation of the town, including a variety of economic levels and diversity in vernacular to modern houses was sought. Interviewing during the day, we were at the mercy of timing. Many residents are out working in their fields during the day, leaving houses empty or occupied by the elderly and young. However, night was a poor option for interviews due to the difficulty in negotiating footpaths in the dark, my need to take photographs in the light, and potential interference in the preparation of the nightly meal. Interviews were generally carried out in the afternoon, or older residents

were interviewed during the day. The result was random in the aspect that the majority of homes were approached and we took all opportunities for local interviews; therefore, the outcome could not be driven in any certain direction. In all, 45 interviews took place with local residents. Many took place with multiple family members present. All people were considered homeowners, but eight carvers and five builders were identified within the group. In addition, 10 local businessmen or officials were interviewed with a specific focus depending on their profession, in for example, the Department of Agriculture, Department of Forestry, the temple committee, government offices, or hotel owners. Precise numbers of people from each category becomes more difficult because of the cross over between the categories of homeowner and carver etc. A table of all people interviewed in the Kalpa village region is included in Appendix A. Additional carvers were interviewed outside of Kinnaur district but due to the informality of the interviews, they were not included in the numbers.

Interviews with local residents helped determine the characteristic features of the Kinnauri vernacular house from the perspective of the people who live and interact daily with the vernacular landscape. Interviews are vital for understanding homeowner perspectives of the features that are considered particularly Kinnauri and factors that influence vernacular change in both house form and ornamentation. Both homeowners and artisans were asked to convey the reasons behind modification and if adaptation reflects societal change. Builders and artisans have a unique perspective on change in technique and local demand for traditional decorative elements of the house. Redundancy of answers determined if any specific elements are more meaningful, which are considered part of the typical Kinnauri house, which have changed most, and which have fallen out of use. Additionally, I conducted interviews with city officials, businessmen, temple committee chair of Kalpa, Department of Forestry supervisors, and Department of Horticulture staff in Reckong Peo to obtain information on area growth, regulations, transportation improvements, access to modern building materials, and tourism influences.

The interviews were 'open in structure' using a loose question approach which allows the interviewer to ask broad questions that elicit unrestricted responses from the interviewee (Thomas 2003). The same outline for questioning was used amongst all

people; however, not every question was appropriate for all participants. For example, many women homeowners seemed unaware of why certain construction styles and materials were chosen or why the specific builders were chosen. Some people could not answer certain questions to a level which provided a clear answer; therefore, these were not counted in percentages. Furthermore, additional questions were added for people who offered information on tangential topics. Additionally, subsequent interviews included new and updated questions.

In most cases 'response-driven questioning' was included which begins with a prepared question list but allows for the spontaneous creation of logical follow-up questions which take advantage of a particular line of information (Thomas 2003). On more than one occasion, an entirely new line of questions were added to my subsequent interviews due to information that was garnered in this way. For example, the progression of the ancient roof structure in relation to economics was unexpected information drawn from response driven questioning. This spontaneous creation provided the most drastic qualification to interviewing because new questions arose throughout the interviewing process and previous interviews could not be recreated.

The open questions then progressed to 'tight questioning' which provides a structure for people to answer within. These can be "yes or no" answers or a question that can be answered with a couple of options. The combination of these methods of interviewing is called a 'converging questions strategy' and combines advantages of multiple systems so that broad questioning narrows down to information on specific items under investigation (Thomas 2003). This approach was particularly helpful because it allowed me to first get an unrestricted idea on how people view the Kinnauri house in their own perspective. Then I could also measure that against features that were showing themselves in the landscape. By allowing people to answer in an unrestricted way first and then asking them targeted questions about certain features, their own opinions remained uninfluenced by my direct questioning. Direct questioning, though, allowed me to get opinions on a select list of criteria. In this way, as argued by Pavlides and Hesser (1989b), the insider (local) perspective could validate or contradict my outsider landscape analysis. My approximate question set for homeowners and builders is included in Appendix A.

Sampling for the interview portion of this research was not completed on a strictly random basis due to the necessity for interviewing available people. On a purely random basis some people would not be available while skipping over houses where people were home. Due to the small size of the villages, the haphazard arrangement of the settlement, and the remote or inaccessible location of many houses, interviews were taken when the opportunity presented itself and most people seen at home were asked for interviews. That said, additional houses were chosen for specific reason, because they were very traditional and ornate or because they were very modern. These homeowners could explain materials choices, vernacular traits, and their significance from different perspectives. Therefore, the targeted interviews seemed advantageous and justifiable in relation to the research questions. To overcome and potential problems in the lack of strictly random sampling, I used a large sample of nearly 50 homeowners.

Demographics

As part of the privacy assurance on the Institutional Review Board (IRB) research proposal form it was stated that for this research, names and ages would not be asked as part of personal information (although some were offered). I indicated that names of participants would be kept confidential if offered and that giving a name was not required for interviewing. This approach allowed the local residents to feel more secure that others would not be able to know what they said about the village. For this reason, names are not associated with homeowner interviews. Because names were taken only from a small percentage of people interviewed, they are used when possible. All officials offered names and those are used with appropriate comments and quotations.

People who participated in the interview process did so on a voluntary basis. No specific demographic of age, income or any other criteria was singled out. As explained above the process for choosing interviewees was roughly random, while pursuing a diversity of house types. Therefore the age, gender, occupation, or geographic location within the selected region played no part in deciding who to interview. This added to the diverse sample. Income levels varied among people interviewed and this did not seem to influence the opinions or information.

Homeowner participants fell into a diverse demographic. The youngest participant was 16. The young adults were home during the interview and were asked questions in front of their parents as they listened to and showed interest in the interview. Questions for this group addressed the contemporary views of building materials, the opinion of the traditional house, and its place in the social structure today. I asked specifically to this demographic whether they would prefer to build in wood or concrete, and then asked if both were available for the same price which they would use. Questions on the increasing influence of modernization were particularly appropriate for this age bracket and those up to about 30 years of age.

The middle age bracket of mid 20s through 30s were generally able to speak more to the current situation of materials acquisition if they were living in a newer home, while the older age groups, if they were living in an established home, had less accurate information on current wood availability, not having acquired it in many years. Each group seemed to offer useful information to the interviewing process and since their perspective and opinion were sought, as opposed to a correct answer, they were all able to contribute. The majority of people interviewed fell into an age group between 30 through 50 years of age. Several people were in their 80s and could attest to the changes that have taken place, remembering the region before roads, concrete, and effortless communication.

Structure of Dissertation

In addition to presenting the research questions and methods, Chapter 1 has explained the theoretical framework of addressing place as an important component of the human experience, and landscape features as significant components of that experience. Chapter 2 builds on this introduction providing a literature review of the field of landscape studies, vernacular architecture, and place. The primary goal of Chapter 2 is to outline contributions made by geographers in their long history of engagement with the cultural landscape and the vernacular house, and to assert that change should be a primary focus in any contemporarily relevant landscape study Lewis 1979a). Additionally, ornamentation and distinctive features as a focus of this research are explained.

Chapter 3 introduces the reader to the cultural setting of the research. The dramatic isolation of the Himalayas provides the backdrop to the Kinnauri culture, its unique religious blend, and its bucolic cultural landscape. The primary focus is to set the stage for understanding how a distinctive culture such as the Kinnauras is able to thrive in its physical situation and form a material heritage that has lasted to this day, despite hardships.

In Chapter 4, I answer my first research questions and define the characteristic features of the Kinnauri vernacular house. I distill the details in a very straight forward manner, while incorporating interview findings, to give the reader an understanding of the dominant landscape feature of the region. Chapter 5 again presents my findings giving attention to the contributing agents of change in the cultural landscape. Three primary influences of change are highlighted. The major impacts in house form are examined in Chapter 6 in relation to the socio-economic instigators, illustrating how directly the house reflects society and its current values.

I conclude the dissertation in Chapter 7 with a summary and a discussion of conclusions and results. I identify the select essential features that create the ensemble most valuable to a culturally congruent Kinnauri landscape. Furthermore, I provide insight into why certain features endure in a changing society, and which vernacular landscapes have a greater chance of maintaining an enduring spirit of place in the future. To finish, I provide limitations and qualifications to my study and offer suggestions for future study on this topic.

Chapter 2 - The Cultural Landscape

History of Landscape Studies

Twentieth century cultural geography settled into the concept of region under the works of French Geographer Vidal de la Blanche, followed by the work of Richard Hartshorne in America. Before the 1960s, much of human geography was devoted to describing the differences between places, areas, and regions (Cresswell 2004; see also Riley 1989). Known as the chorographic approach, the goal is a complete understanding of the earth's surface as it represents itself regionally and through particular visible phenomena.

Carl Sauer of the University of California at Berkeley is perhaps the most well-known of this geographic tradition in America and used it as a platform to denounce the dominant framework of the time, environmental determinism. Although Sauer's early work was highly influenced by German geographer Friedrich Ratzel's theory of environmental determinism, Sauer later criticized its tenets in preference for Vidal de la Blanche's theory of environmental possibilism. In his groundbreaking work *The Morphology of Landscape*, Sauer (1925) argued that man's record upon the land is the main concern for geographers. Building on Otto Schluter's concept, he claimed landscape as the unit concept of geography and defined it as "an area made up of a distinct association of forms", both physical and cultural (Sauer 1925, 25). Sauer called for a focus on the expression of human culture, and highlighted the impact of man on his natural environment. This went against the mindset of the time in which the physical environment was thought to limit and determine the potential of human expression. Sauer, in his one address, closed the door on environmental determinism and opened the way for a new study by illustrating that the landscape is transformed by human agency – from natural to cultural. Sauer claimed culture as the agent of change, the natural area as the medium, and the *cultural landscape* as the result. This differed drastically in the amount of agency previously attributed to man over his landscape and set the stage for the "Berkeley School" approach to cultural geography. Although some of the Sauerian doctrine has been rethought (for example, avoiding any examination of the customs and beliefs while emphasizing dispersion) the staying power of his thesis, the ability to affect

many branches of geographic practice, and the contemporary application of his historic arguments make it one of the most significant works in landscape studies.

Fred Kniffen, a Berkeley graduate, exemplified the early style of Sauer's cultural geography. His 1936 work on Louisiana house types focused primarily on taxonomy, description, and geographic diffusion of the vernacular house. Kniffen's methods and emphasis on spatial distribution of houses were new to the field (Ford 1984). He endeavored to find the important characteristics of the varied Louisiana house types rather than the numerous geographic qualities of a region. Kniffen demonstrated that the house is an element of culture and worthy of study in and of itself (Ford 1984). He had great influence on the field of material culture by attesting that the most common material objects possess the strongest cultural meaning (Lewis 1983). However, his work suffered from a lack of interpretation (Ford 1984). For his time, Kinffen followed the guidelines laid out by Sauer, but this type of taxonomy-focused work left people with more questions than answers, having portrayed the artifacts of man as isolated from the people who use them (Spencer 1945; Rapoport 1969; Oliver 1975; Jordan and Kaups 1987; Groth 1997). His work, like much work of that time, delimited a region but with no added understanding of its reason for being or the culture that used it.

The "Landscape School", stemming from Berkeley, continued on its path of describing the landscape. However, the subject of study moved away from delimiting regions to focus more on the particulars of cultural landscape. Richard Francaviglia, Wilbur Zelinsky, Donald Meinig, Terry Jordan, Michel Kaups, Henry Glassie, Pete Shortridge, and Pierce Lewis are among the sizable group of geographers and others that focused on the particulars of a defined area, which predominantly included the rural landscape. Approached in a highly materialistic and subject-oriented manner, landscape study necessarily continued to focus on description and in many critiques remained divorced from the cultural or social realities of the place (Ford 1984; Jackson 1984; Vellinga 2004). This early research has been criticized as overly descriptive, romantic, lacking connection to the future, and disregarding the concept of change (Ford 1984; Jackson 1984; Upton and Vlach 1986; Rapoport 1982a, 1989; Asquith and Vellinga 2006; Vellinga 2006).

However, the descriptive and documentary research has not been without merit. Although approaches have evolved and the diffusionist approach has now fallen out of favor (Oliver 1997), this early work still plays a role in cultural geography. It has documented examples of buildings that no longer exist. Scholars including Amos Rapoport (1982a), Paul Oliver (1997), and Kingston Heath (2009), respect and encourage the documentation and preservation of vernacular landscapes and buildings. There is still a need for description when it comes to the vernacular house, however, *not* at the expense of analysis and problem-solving research such as meeting appropriate housing needs after disaster or promoting socially acceptable methods of modernizing. It is an important part to a broad understanding and the foundation of more theoretical research.

In traditional geography, the term cultural landscape is often interchangeable with *vernacular landscape* which depicts the regional, everyday nature of a landscape. The greatest proponent of studying vernacular landscapes was J.B. Jackson. Although not officially seated in the academic discipline of geography, Jackson's immense contribution to the field and his prolific writing on the vernacular landscape led to his being sufficiently adopted by the discipline. Jackson edited the journal *Landscape* from 1951-1968. Through the publication of *Landscape,* the interdisciplinary field of landscape studies found a home and gave voice to cultural geography. This outlet strengthened the field of study primarily through its ability to fostered collaborations that spanned the limited branch of landscape studies through humanities and social sciences. This increased the exposure of landscape studies and cultural geography as a discipline. It provided examples of what landscape study is and showed the variety and breadth of the field. Jackson (1984) continued to urge people to look at the ordinary and its everyday appeal. He transitioned cultural geographers away from the pristine rural homestead by embracing the vernacular landscape that was just outside their door – the suburb, the commercial strip, and the mobile home. In doing so he pushed the boundaries of the term vernacular. Jackson continued throughout his career to give life and personality to the vernacular landscape and began to remedy the critiques of early geographic work.

Jackson continued to challenge the way we viewed the landscape so that we study it not as a work of art, but for what it can tell us about the creator (Jackson 1963; Meinig

1979b). This idea is a critical departure from the early understanding of the word landscape as a scene or painting (Jackson 1984; Cresswell 2004), and slowly caught on in the field of cultural geography. Jackson argued that the landscape is not separate from our interaction. It is a "three-dimensional shared reality" (Jackson 1984, 5). Others supported that it is lived and experienced (Seamon 1991, 2000; Groth 1997) and at times, a rather taken for granted, unconscious state of daily activity (Seamon 2000). Jackson urged, that we "must always seek to understand the landscape in living terms" (Meinig 1979b, 228). He argued that discussions of what is wrong with the landscape come down to people judging it as a spectacle versus a "place for living and working" (Jackson 1964, 19, also Jackson 1963).

Scholars agree that all landscapes have a human influence (Sauer 1925; Jackson 1984; Meinig 1979b; Appleton 1990; Bender 1993; Groth 1997; Lewis 1997a; Singh 2004). This human interactive element contributes to the landscape being called "elusive" (Tuan 1979, 89). The flexibility and enigmatic quality may have been the precise point of contention for the discipline as a whole. Rumblings from quantitative scholars created upheaval in the 1960s leading to what is known as the quantitative revolution in geography. At this time the qualitative regional emphasis was eschewed, doing away with place as a focal point and replacing it with the more measurable subject of space (Cresswell 2004). Beginning with the Chicago School, this led to new spatial and behavioral approaches which could be tracked quantitatively, approached in a logical positivist manner, hypothesized, repeated, and proven.

Almost in reaction to the newly emphasized focus on spatial science was the development of humanistic geography which, for the first time, put place explicitly at the center of geographic inquiry (Cresswell 2004). Branching into the experiential study of phenomenology, place transformed from a topic of particulars in chorology, moved beyond spatial science's location, and became the study of the individual embodiment and experience of place. Scholars such as Edward Relph (1976), Yi-Fu Tuan (1979), and David Seamon (1979) embraced subjectivity and personal experience as the center point of inquiry. Looking to philosophy for its inspiration, humanistic geography ushered in an entirely new way of conceptualizing place. It was the next paradigm shift for landscape studies with increased integration of personal perception.

This opened the door for critical geographers and their widespread incorporation of social issues, and class and gender struggles (Lowenthal 1968; Duncan 1973; Mitchell 1996). Critical geographers argued that the experience of landscape cannot be "confined to a particular time, place and class" (Bender 1993, 1), and they expanded the study with a particularly urban focus. Through critical geography the landscape was examined as a way of seeing, but with an acknowledgement that much of the toil of the workers remains hidden behind a smokescreen or a veil (Wylie 2007). Geographers David Lowenthal (1968) and Donald Mitchell (1996) reminded us that the pioneer or agricultural worker sees the landscape very differently than others because of their personal interaction and struggle. James Duncan (1973) was influential in using the domestic landscape (that of the house) to illustrate the class struggles that are visible – and hidden – in the suburban landscape. Each of these perspectives has contributed to the evolution of geographic research which now shows a clear indication that community association, cultural context, and socio-economic factors are significant aspects to any study of the vernacular landscape. These perspectives are central to the research of my dissertation.

Seeing Culture in the Cultural Landscape

It is widely asserted that landscapes have cultural meaning (Sauer 1925; Jackson 1952a, 1979; Groth 1997; Lewis 1979a; Sinha 2006) and are created with human intention (Upton and Vlach 1986; Norton 1989; Sinha 2006). Early on, Sauer (1925) urged students to evaluate material items as interrelating and existing within a system. This concept was popular amongst scholars who spoke of the importance of analyzing landscape elements in context with the "cultural complex", "matrix", and "settlement system" (Jordan and Kaups 1987; Rapoport 1990, 1982a; see also Oliver 1969, 1975). In light of these arguments it is important to take into account not just one element in isolation, as early chorographic approaches might have done, but to incorporate expanded approaches that have been cultivated by geographers throughout the years. An appreciation of the vernacular landscape without an understanding of the people and their values would lead to an incomplete or "superficial" study (Oliver 1969, 28). The cultural values behind the aesthetics must be understood to bring us to a better understanding of the community (Oliver 1975). The study of landscapes therefore cannot pertain only to

material artifacts. People are fundamental to the transmission of traditions and imbue a space with meaning (Rapoport 1982b). The study of vernacular traditions should be considered as "fundamentally a humanistic study" because to really appreciate a landscape it is vital to understand the people who made it (Upton and Vlach 1986, xxi).

Lewis (1979a, 12) explained that the landscape is in fact the truer "unwitting autobiography" of our culture in "tangible, visible form." Therefore, the landscape has been referred to as a text, but a text "edited and re-edited by people with illegible handwriting" (Lewis 1979a, 12). Indian geographer Rana Singh (2004) reminded us that the writers of this text each have a very different purpose and interpretation. The landscape is considered to be a representation of its creators; therefore change to the landscape reflects changes in the culture (Lewis 1975, 1979a; Glassie 1990). In that way vernacular landscapes provide clear evidence of cultural process – people engaging their everyday surroundings in a critical way (Rapoport 1982a; Glassie 2000; Heath 2009; Upton and Vlach 1986).

The perspectives of scholars noted above play a leading role in my research. The vernacular house of Kinnaur is analyzed within the context of the cultural community and with an understanding that the processes that form landscapes are ever changing. Within landscape studies there are several areas of research that are particularly relevant to my dissertation. These areas include the vernacular house, the significance of landscape features as defining aspects of cultural landscapes, and the acceptance of meaningful change in vernacular design. Before focusing on these subjects, I first begin with a discussion of the word vernacular as it is defined in the field of study.

Defining Vernacular

The word vernacular is used throughout my dissertation to describe the landscape, but it is also used to classify a specific type of building. Additionally, it is used to denote specific features on those buildings or homes. It is important to have a clear understanding of the word as well as the underlying concept. Although vernacular architecture makes up 90 percent of the housing stock of the world (Oliver 1997, 2003; Asquith and Vellinga 2006), those dedicated to the field of vernacular studies struggle or hesitate to form a definition of vernacular architecture (Jackson 1984; Oliver 1997, 2003,

2006a; Heath 2009). Many attempts at a definition have been somewhat incomplete because the study encompasses the building, but also so much more including the context, culture, use, symbolism, and varied forms (Oliver 1997). Vernacular architecture has been described as timeless, countrified, or traditional, with reference to rural dwellings of the farmer (Jackson 1984).

To call a building vernacular implies that there is a shared understanding among the community that the building belongs to a place (Bronner 2006). Vernacular dwellings have a strong sense of cultural congruity because they have evolved over centuries to meet the needs of inhabitants (Walkey 1993; Glassie 2000). Vernacular architecture is decidedly different from high style designs emulated from outside of a region, or the whimsy of one person that is not repeated within a group (Heath 2009). It represents the values and beliefs of the group rather than individual tastes (Jackson 1984; Oliver 1997; see also Rapoport 1982b). Vernacular architecture is culturally specific, built to reflect an ideal, and support daily life and social norms. Oliver (1997) provided the following working definition in the *Encyclopedia of Vernacular Architecture of the World*. It is generally agreed upon in the field and is inclusive of all forms and functions.

> Vernacular architecture comprises the dwellings and all other buildings of the people. Related to their environmental contexts and available resources they are customarily owner or community-built, utilizing traditional technologies. All forms of vernacular architecture are built to meet specific needs, accommodating the values, economies and ways of life of the cultures that produce them. (Oliver 1997, xxiii)

Of Latin origin, vernacular refers to native language or dialect (Oliver 1969, 1997; Jackson 1984; Bronner 2006; Heath 2009). Vernacular denotes the commonly used speech patterns characteristic of a specific place. This idea can also be applied to buildings because vernacular buildings express what is common and shared in the community, such as a regional dialect (Bronner 2006). Oliver (2006a, 17) related the linguistic term to architecture as "a language of the people with its ethnic, regional, and

local dialects." In this way the buildings seem to come to life as an "architectural language" which people have built up over generations and that now constitutes a "collected architectural wisdom of a culture" (Mouzon 2004, 5-6). Architect Stephen Mouzon (2004) argued that a commonly understood architectural language is critically important to telling the story of the nation. In traditional cultures it prompts people to recognize the function of a building (e.g. domestic, sacred, or public). At no time in history has a culture ever discarded its entire language; it simply has too much to offer. This is akin to reinventing their architectural system, producing a disjointed communication with place. This understanding provides an unquestionable rationale for incorporating a linguistic term into the realm of the built environment.

The term vernacular is advantageous because it can include the wide range of typologies (from a granary to a barn to a temple). It is not believed to carry a stigma like other choices such as primitive, peasant, spontaneous, or anonymous (Hubka 1986). Because cultures that thrive in vernacular landscapes have been viewed as stagnant, these words act as stumbling blocks to acceptance and respect (Hubka 1986; Asquith and Vellinga 2006). The word unselfconscious for example, has come to imply naïve spontaneity in the designs of vernacular structures. It discounts a wide array of highly conscious symbolism and responses to environment and culture (Hubka 1986). Vernacular design is unselfconscious only in relation to Western notions of required drawings and written words. In reality, it is a "systematic method of design, facilitated by a highly structured … architectural grammar" (Hubka 1986, 428).

Additional terms are used in this dissertation, intermixed with vernacular. These terms, however, have limitations. The term regional is virtually interchangeable with vernacular (Heath 2009). However, regional can also be applied to high-style variants (Adirondack cabins or Georgian plantations) or the abundance of trailer homes in certain regions of America (Oliver 1997). Traditional is considered to be the most widely used of the alternative terms because the process of tradition is so important (Oliver 1989, 6). However, this term has limitations as well since it also applies to monumental architecture and architect-designed buildings that embody traditional elements (Classical or Gothic Revival) (Oliver 1997, 1989). Ultimately, a persuasive argument exists for the adoption of the term vernacular as the architectural language specific to a place.

Learning from the House: Past Research

Although climate, topography and available building materials all influence house form, the environment only establishes "one of the conditions of choice"; it does not determine form (Glassie 2000, 92; see also Rapoport 1969). The only way to account for the great variety of building forms among groups who use the same building material in similar climates and physical landscapes, is to acknowledge the influence of ritual, spiritual beliefs, social interaction, and livelihood. These social systems, it is argued are far more important than any physical restraint and have the greatest differentiating effect on the form of vernacular housing (Rapoport 1969; Sinha 1989; Glassie 2000). Jackson called the house a microcosm which satisfies not only our biological, but also our "social and spiritual needs" (1952a, 5).

Houses provide shelter, a roof and walls to protect us from the elements, but more than that, houses play a significant role in the makeup of society. A house is functional space, but it is also an artifact, a marker of identity, and a sanctuary. Houses are "not only an important part of our everyday environment", they reveal "much about our values and how we adjust to the surrounding world" (Jackson 1976, 11; Meinig 1979b). The house is the space where customs, ritual, and tradition are brought to life. Beyond the built form and the shell of the structure, vernacular landscape study recognizes buildings as representations of the society, reflecting values and beliefs, and functioning as cultural systems (Bronner 2006). The house is ultimately a process reflecting the ongoing choices of the inhabitants.

Houses are intrinsically tied into the cultural landscape. They are a defining aspect and make up one of its major components (Ford 1984; see also Solomon 1966). Jackson considered the dwelling to be the "elementary unit" of the landscape (Meinig 1979, 228) and "by far the most significant" man-made feature on it (Jackson 1952b, 10; see also Jackson 1959). He said it is "the key to understanding all other elements in the landscape" including culture and social order (Jackson 1980, 117; see also Solomon 1966). The house has been called the "central reference point of human existence", a social product, and a cultural institution (Relph 1976, 20; Goss 1988).

Studies investigating domestic landscapes are at the convergence of several disciplines (Riley 1989; Oliver 1997; see also Bourdier and AlSayyad 1989). Vernacular

architecture is a highly interdisciplinary study without a single field that it calls home (Oliver 2006a, 1997; Upton 1990; Bourdier and AlSayyad 1989, Jackson 1984; Upton 1990). Geographers have a long history of studying the numerous aspects of landscape including dress, religion, language, furnishings, festivals, music, and food. However, the house has been a mainstay of study. Jackson (1952a) declared study of dwellings as the most important task of the human geographer. Geographers have been among the earliest and most active investigators of vernacular architecture with the work of Kniffen in the 1930s providing a relatively secure foothold (Upton 1981, 1990). Additionally, Hartshorne and Sauer have been recognized as two early proponents for the study of houses (Ford 1984). True to early styles of cultural geography, Sauer (1925), Kniffen (1936, 179), and Hartshorne (Ford 1984) saw the greatest potential contribution of the house as its "great diagnostic value" in areal differentiation (Spencer 1945; Price 1964; Solomon 1966; Zelinsky 1977; Francaviglia 1978; Meinig 1979a**;** Arreola 1988; Smith 2002 for the use of the term diagnostic.). Although Robert Fuson (1964) likewise claimed that houses could be the key to defining a region, he also asserted that dwellings (used interchangeably with houses) are tangible cultural forms and their strength as subjects of study goes much beyond their location.

Although there has been a long history of diffusionist studies in relation to the house, numerous creative examples have conscripted the house as a lens for looking at the cultural landscape. Several influential works will be presented throughout this dissertation. Those highlighted here in detail illustrate the variety of topics that have been addressed through a focus on the house, and which have influenced the research contained within my dissertation.

Richard Francaviglia (1978) determined through photo analysis that the house is the dominant and most significant feature in the American Mormon landscape. It was primarily through this feature that residents felt a sense of place and a connection to the town as theirs, and as Mormon. The house has also illustrated the process of syncretism and pre-adaptation. Geographers Terry Jordan and Michel Kaups (1987) drew attention to the process of simplifying "trait complexes" (ensembles) of the house in order to cope with stress brought on by migration or habitat change. They made a case for adaptation illustrating that those early pioneers who were able to adapt their houses, thrived.

Geographer Jay Edwards (2008, 2010) used the Caribbean vernacular house of the African diaspora as an instrument to examine creolization – the blending of two cultures. Research was based on the merging, transformation, retention, and disappearance of architectural forms and features. Syncretism is a primary function by which a house is creolized (becoming something entirely unique), or adapted (maintaining some original meanings). He argued that "cultural features" of the house communicate meaning.

Architect Kingston Heath (2001) used the backdrop of the ubiquitous three-decker house of Massachusetts to blend a story of history and culture. Leading the reader through large and small-scale changes to design he illustrated exactly how interwoven the house is with the contexts of its inhabitants. Heath explained that the three-decker became the embodiment of New Bedford's industrial achievement and failure. When a later generation of immigrants moved in they brought with them architectural ideals that were best expressed through adaptation and the incorporation of new features onto a preexisting vernacular landscape. He demonstrated how adaptation of house features makes visible resettlement or changes within a culture.

Landscape Architect Amita Sinha (1989) looking particularly at the courtyard, maintained that space is vested with meaning. Sinha studied the rural courtyard house in Uttar Pradesh, India. She made a case that spatial organization reflects social organization, and that house form is determined by strong traditions and cultural values (see also Glassie 1990). Cultural beliefs emerge as the primary factor in house design but she acknowledges that upgrades will be made if people have the opportunity, and changes will take place.

The study of vernacular architecture has been inhibited over the last couple decades due to the static and essentially descriptive work that preceded it (Upton 1993). However, Larry Ford (1984) encouraged geographers not to abandon their long-standing tradition of studying the house, but instead to do so with stronger analytical backing. The house is an important dimension of the landscape and one that deserves increased emphasis and comprehension *due to* the early work that was considered deterministic and lacking in explanation (Jakle 1987; Ford 1984). Paul Groth (1997) lamented that cultural landscapes are studied as if no conflict has surrounded the choices and alternatives of the house. In fact, choices are made continually with regard to the vernacular house and the

act of repair; therefore they are particularly useful for studying socio-economics (Spencer 1945).   Not only do these examples show the breadth of study possible in vernacular architecture, they illustrate that the house contributes greatly to cultural significance and distinctiveness in the vernacular landscape. The house is used as a marker of identity and often times the process of adapting the house ensures that it will continue to reflect the identity of inhabitants. Because the house represents group ideals, it can be used as a lens for investigating changes to group identity and ideals (Lewis 1975, 1979a; Glassie 2000)

The House and Housescape as Institutionalized Behavior

In traditional remote settings, great value is placed on homogeneity. Group identity is more important than individual distinction (Rapoport 1982b; see also Hostetler 1964; Jackson 1985). This is why vernacular landscapes show great repetition in design. The traditional uniformity in house type creates a sense of belonging to a community (Jackson 1985). Rapoport (1982b) described the house as a 'fixed feature element'. Fixed landscape features change slowly or rarely due to their size. Because they are commonly owner-built and owner-controlled in traditional societies, they are more culturally specific, and less arbitrary. Therefore, in such societies the fixed feature elements such as the house communicate meaning particularly well (Rapoport 1982b, 1997).

In more modern societies however, fixed features communicate less because people tend to move into ready-made houses that are under the controls of codes and regulations (Rapoport 1982b; see also Jopling 1988; Blake and Arreola 1996). Therefore, fixed feature elements are highly supplemented with semi-fixed features, such as lawn furniture and landscaping (Rapoport 1982b; see also Duncan 1973; Arreola 1988; Jopling 1988; Blake and Arreola 1996; Heath 2001; Cresswell 2004). Semi-fixed features have a dynamic function and tend to change fairly quickly and easily (Hall 1966; Rapoport 1982b). They can be easily rearranged to reflect new circumstances, and formal and informal space which is different for each cultural background.

Kevin Blake and Daniel Arreola (1996) reinforced this claim in their study of Phoenix suburbs. Examining contemporary American society, they observed that houses tend to be similar – ready-made or developed en masse (Rapoport 1982b). However,

they call attention to distinct patterns present throughout each community such as lawn ornaments, landscaping, fences, and lighting – semi-fixed features that are ultimately used to indicate and promote group identity, even in the seemingly placeless suburbs of America (see also Jopling 1988). Other studies based in America exist that exemplify the use of semi-fixed features which ultimately supplement the ready-made fixed feature house in a way that shows group identity (Duncan 1973; Arreola 1988; Heath 2001). House color, mailbox style, and driveways, although seemingly individualistic, all promote a sense of belonging to a group.

This understanding illustrates two important points. First, it exemplifies "institutionalized behavior" – a behavior that is completely engrained into the culture and adopted on a wide scale within a certain group (Hostetler 1964). Landscape features are the product of institutionalized behavior patterns that result from long-cohesive cultural associations (Hostetler 1964). The features are chosen on the personal level in a subconscious process of group identification. They matter because they remind us that we are not rootless, without identity or place, and therefore satisfy a fundamental human urge to belong (Jackson 1970b). Second, acknowledging that mundane features such as the fence, hedge shape, or house color in fact influence our understanding of the landscape, encourages a deeper level of landscape study.

Knowing our Place

Institutionalized behaviors tend to go unnoticed precisely because they are so engrained. The concern is that we show little understanding of the constitution of places, even those with which we are highly familiar (Relph 1976). Jackson (1961, 115) called for studies into what quality landscapes possess "which enables them to multiply and endure". He encouraged geographers to study traditionally minded communities in order to find out how they have evolved physically as well as socially. Questions from scholars such as why some cultural landscapes change very quickly while others continue to be highly valued (Ford 1984), and why certain aspects of tradition are handed down in place of others, have remained unanswered (Tuan 1989).

It is through a close examination of the characteristics, patterns, and types of objects within a place that we can begin to understand it (Relph 1984). Relph (1993)

explained that we must develop a sensitivity to the attributes and spirit of place, and learn to understand the qualities that are essential in making it distinctive. Spirit of place generally refers to a quality, or unique environmental ambiance that yields a distinctive identity. It is clearly connected, but distinct from, sense of place, which is an individual experience connected to personal memory (Relph 2009; also Lewis 1979b). Spirit of place, focused on character, can be designed, diminished, enhanced, and fostered. As a place is "built up and lived in, spirit of place grows" (landscape signatures are reinforced) and a place gradually acquires its own identity (Relph 2009, 25). This way, even an initially placeless neighborhood can gradually acquire its own identity for those who live in it (Rapoport 1982b; Jackson 1994; Blake and Arreola 1996; Jopling 1988; Heath 2001; Relph 2009).

Like Relph, Lewis (1979b, 40) argued that we must learn to recognize spirit of place – "to nurture it when we find it" and instill a sense of place "where it does not now exist." This implies that through the enhancement of spirit of place (character), comes the increased opportunity for sense of place, or attachment. The best way to accomplish this is not only through preservation, and not by manipulating the future through excessive planning, but by looking "to the present, … to discover places where a genuine *genius loci* is alive and well," to see where the spirit of place is vigorous, to discover the environment in which it thrives, and "try to find out why" (Lewis 1979b, 35, 40). "What do these places have in common? What magic qualities have combined to bestow that priceless quality: a sense of place" (Lewis 1979b, 40)?

This approach of knowing and fostering distinct features, of thinking carefully about the nature of a landscape, has led to a growing awareness of the importance of place, that places are integral parts of human experiences (Relph 1993). Relph (1976) warned that only when it is gone will we realize the importance of what has been lost. It will then be imperative to know the "distinctive and essential features" so it is possible to create, reclaim, and preserve the "significant contexts of our lives" (Relph 1976, 6).

To define spirit of place requires identifying and preserving the various features that make a place unique (Lewis 1979b; Relph 1976, 1993). Landscapes are studied more effectively by separating them into components (Appleton 1990). Since the landscape is primarily a visual experience and "an intensely visual idea" (Cresswell 2004,

10; see also Price 1964; Jakle 1987), the visible features are the primary components for deciphering place for the outsider, and knowing place for the insider.

The Significance of Distinguishing Features and Ensembles

Donald Meinig once wrote that the cultural landscape is an "ensemble" comprised of "ordinary features which constitute an extraordinarily rich exhibit" of society (1979a, 2). Geographers have provided useful examples of itemizing the landscape into visual components, or features, for better understanding. They have illustrated that the component parts are significant aspects of the landscape because interpreting landscape features furthers our understanding of cultural landscape patterns. Duncan (1973), Zelinsky (1977), Francaviglia (1978), Lewis (1979a), Arreola (1981, 1988), and Ford (2000) all demonstrated that identifying select features in combination was the key to categorizing the landscape. It was through the key physical attributes and "cultural signals" that specific cultural landscapes differed substantially from other regional settlement types (Zelinsky 1977). They used the strength of *ensembles* by pursuing the existence of a reoccurring set of criteria, which ultimately identified the landscape. An ensemble is a selection of objects and their particular arrangement (Rapoport 1981). It is significant because its distinct elements are recognizable as a whole and form part of a larger landscape. "The whole tells us a story which the separate elements do not" (Antrop 1997, 112), therefore the concept of ensembles adds even more benefit to studying distinctive features.

Francaviglia (1978) provides a perfect example for the application of distinguishing features and ensembles for his study of the Mormon landscape. He analyzed the repeated patterns of landscape features to pinpoint the unique or highly represented features. He concluded that if a town has five of the ten defined characteristics, it should be considered an American Mormon town. The traits that he examined are generally not exclusive to Mormon towns. He listed open ditches, wide streets, and particular housing setbacks among his distinctive landscape features. Like the specific house type detailed in his book, they can be found in some manifestation throughout most of America. These features neither originated from nor are exclusive to a Mormon landscape. But put these characteristics together in combination, and chances

significantly increase that the settlement is a Mormon landscape. The power lies in the high representation and combination of the select traits that together create the visual impact of the landscape.

Several other geographers and architects highlight the impact of studying ensembles to better understand a cultural group and cultural landscape. American subdivisions have been called vacuous places, where it is difficult to develop a sense of place, and a lack of meaning exists because "there is nothing to promote affection or a sense of belonging" (Relph 1993, 32). Many scholars have proved differently in their studies of American suburbs. Duncan (1973) illustrated that the use of distinguishing features such as landscaping and mailbox design, heightened community member's ability to show belonging and convey identity within a certain group. Arreola (1988) continued to advance the focus on architectural features by pinpointing the qualities of the Mexican American "housescape" (a house and its immediate landscape). He cited three signature features that are commonly overlooked, but nevertheless culturally significant. He demonstrated that landscape features such as perimeter fences, brightly colored houses, and yard shrines, had the capacity to reveal a cultural group. Arreola illustrated the strength of an ensemble in explaining that any one of the landscape features that made up the Mexican American housescape could be seen individually in the home of an Anglo-American. But the complex – the occurrence of the ensemble – made it more likely to be the home of a Mexican-American. The "presence of signatures together in a recurring pattern suggests a specific form of cultural communication" (Arreola 1988, 299). He called the pattern an "ensemble of cues" that instills an identity to the landscape (Arreola 1988, 305).

In their study of suburbs in metropolitan Phoenix, Blake and Arreola (1996) found that residential subdivisions do in fact show significant signs of place-making. The incorporation of personal landscape features or "signatures" to a preexisting landscape differentiates one neighborhood from another. It is not until the individual components are actively investigated that the acts of place-making and landscape distinction emerge. Architect Ronald Walkey (1993) implemented the framework of characteristic features and ensembles in determining the "central qualities" of the vernacular house in Northern

Greece. The features were mainly decorative elements and evoke an image of the iconic Greek house even amid flexibility.

Distinctive features such as fence type, house spacing and color, mailbox style, lamp posts, driveway types, signage, silos, and flashing electric signs, have all been examples of important landscape features (Duncan 1973; Lewis 1979a; Arreola 1981, 1988; Blake and Arreola 1996; Ford 2000). Including such features in research speaks of the importance of distinctive and small-scale landscape features and stresses the perspective that all aspects are worth of study (Lewis 1979a). Lewis (1979a, 18) claimed that most items in the cultural landscape are "no more and no less important than other items – in terms of their role as clues to culture." Determining repetitive and distinct features that often times work together as ensembles allows for deeper analysis in understanding cultural landscapes. These example studies illustrate that through an examination of specific features and ensembles a deeper understanding of the landscape and place emerges.

One must study the complex of traits and the relationships for a more holistic approach (Rapoport 1990). Rapoport (1982a, 1990) makes a case for ensembles through his explanation of the "*Polythetic*" or "Multi-attribute approach" which states that no single feature is enough to classify or disqualify a building typology from being vernacular. A larger number of attributes is needed "which need not be present in every member of the class" (Rapoport 1989, 80). It is the relationships among elements rather than the elements themselves that might be the most important aspect of the vernacular landscape because it is the relationships of the elements which create the overall character of a place (Rapoport 1990, 1973).

Rhyme is the reoccurring pattern that produces a special relationship between singular features and binds the whole. It is an important concept in architecture (Smith 1979; Jakle 1987). Two specifics of rhyme involve repetition from feature to feature, and a variable pattern that hints at overall coherence (Smith 1979). This variability was reflected in the cohesion of city blocks in Warsaw, demolished because of their contribution to the whole, and in personal interpretations of institutional suburban landscape features. The combination of these two forms of rhyme explains how various house colors or distinctions in fence types come together within undefined parameters to

represent the typical Mexican American housescape or seamless variations in a Grecian home (Arreloa 1988; Walkey 1993; see also Duncan 1973; Blake and Arreola 1996). The power of the features to create a coherent visual impact is stronger as an ensemble than as singular unassociated components.

Meaning in the landscape is conveyed through repetition of cues, which provides strength in the system of messages (Rapoport 1981, 1982b). Redundancy and consistency are the two main criteria to clearly communicate meaning in the landscape (Rapoport 1981). Without redundancy to make features or symbols noticeable, and consistency to allow understanding, the code cannot be deciphered by the society. The occurrence of ensembles is tied to group meaning, norms, and ideals, resulting in a higher degree of shared symbols, or repetition, in cohesive groups (Rapoport 1981; see also Hostetler 1964).

Landscape Scale and Ornamentation

Discovering landscape features at times requires a highly detailed investigation of patterns. Research shows that landscapes "may be understood at many scales" (Jakle 1987, 79; see also Cresswell 2004). Vale and Vale (1983) compared a leisurely stroll to a high-speed airplane flight, assuring that each offers its own rewards. Examining the landscape at different scales – for example, entire city, single street, individual building, or specific architectural elements (Jakle 1987; see also Ford 2000), is valuable for the various perspectives offered at each. Our contemporary landscapes might contain diversity on a level greater than ever before. However, people can overlook diversity because it occurs on a small scale (Riley 1980). "[W]hen viewed at a finer scale, any homogenization as seen from afar becomes much less evident. Scale matters – and matters mightily!" (Zelinsky 2011, 264).

As we analyze a landscape more closely we become more detailed in our survey and focus more on the component parts for analysis and classification (Solomon 1966). Examination on the small-scale individualizes "the essential quality of place" (Relph 1981, 176). This perspective emphasizes the distinctiveness between places and enhances the landscape experience (Relph 1981; Jakle 1987). Meinig (1979b, 204) stated that landscape analysis "must be rooted in detail." The village landscape has much to tell,

but so do the house and even its bricks. Small elements have a life of their own and the landscape becomes more interesting when the eye is trained to see in detail (Cullen 1961). For E.T. Price (1964), small-scale features of Italian stone buildings determined transitions between periods of former glory and prosperity to those of fascism. Details helped establish the status of the owner. He examined the particulars of door placement, rafter details, trim, cornice design, and decorative stonework, what he called perhaps the most diagnostic feature of an Italian landscape.

Of small-scale landscape features, ornamentation has been incorporated as the easiest and most accessible means of displaying identity. It functions particularly well in differentiating culture among immigrant residents and bestowing identity onto "neutral" urban houses manufactured by and for other cultures (Jopling 1988; Heath 2001; also Price 1964; Duncan 1973; Arreola 1988; Blake and Arreloa 1996). The application of ornamentation helps differentiate one house from the neighbors' and can indicate that someone cares for a place (Jopling 1988; Relph 1993; see also Blake and Arreola 1996). Exterior ornament asserts home ownership and showcases status (Jopling 1988).

A certain amount of economic stability is needed before precious time and resources can be spent on symbolic and ornamental decoration (Oliver 1997). Therefore, in certain time periods superficial ornament was a contributing factor in making the house seem appropriately stylish for upper-class families (Vlach 1976). It was not through size or materials, but through decoration that it gained status. However, in modern, architect designed buildings, ornamentation has become almost a forbidden word. In the early 1900s, Austrian architect Adolf Loos spearheaded a movement condemning ornament, equating the evolution of culture with the elimination of ornament from useful objects (Oliver 1997). Loos argued that progressive cultures should do away with ornament and the wasted time that they demand. Others maintain that all designed objects incorporate aesthetics that are beyond function (Upton 1981). The modern movement away from decoration is seen today in vernacular landscapes such as Kinnaur's where modernizing buildings simplify designs and incorporate less ornamentation. This is seen particularly well at the small scale.

Generally, ornamental features of the vernacular home possess cultural significance (Rapoport 1969; Lewis 1979a). Visual aspects help maintain group cohesion

and convey group values (Hostetler 1964; Oliver 1997; Blake and Smith 2000). There is benefit in studying ornamentation created at a vernacular level – a level separated from the high style influence from outside – not only because ornament contributes to memorable places (Bloomer 2000), but because it contributes to the cultural story. Because it is ultimately shaped by cultural values, ornamentation can be equally important as more dominant (or large-scale) landscape features (Rapoport 1969; see also Lewis 1979a). It is believed that modification to these features impacts the cultural landscape and is an observable response to cultural change (Lewis 1979a, 1975; Glassie 1990, 2000; Arreola and Curtis 1993; Heath 2009).

Most landscapes show tension between a folk-culture/mass-culture divide (Relph 2009). In all landscapes (urban, suburban or rural), cultural groups express changing identities most easily through incorporation and modification of small-scale features and ornamentation. We know that the world over, many vernacular details have been lost in the long evolving process of settlement. Consequently, along with the elimination of ornamentation goes the cultural story. Due to the small-scale nature of such features, and the required work for upkeep, they may be the first parts of the house to show signs of change in a changing landscape (Rapoport 1982b; Jopling 1988; Heath 2001).

The New Paradigm for Studying Vernacular Landscapes

Bernard Rudofsky (1964, 1), one of the earliest pioneers in the appreciation of vernacular architecture, argued that the vernacular house is "nearly immutable, indeed unimprovable, since it serves its purpose to perfection." In this way, Rudofsky claimed that vernacular landscapes never change or adapt, and that they function perfectly without modern technological adaptations. This viewpoint overlooks numerous examples of subtle modifications that were no doubt observable in his day of writing. This idea of timelessness, it is argued, is the paradigm that holds vernacular landscapes in a marginalized, stigmatized perspective where house forms and landscapes are relegated to the past, displaced in a changing world, and inconsequential for the future (Asquith and Vellinga 2006; Hubka 2006). Scholars argue that vernacular traditions have always adapted and are renegotiated by every subsequent generation (Jackson 1976; Jordan and Kaups 1987; Blake and Smith 2000; Health 2001, 2009; Bronner 2006). Vernacular

building "implies unwritten or even unconscious codes of doing things that foster variations" (Bronner 2006, 25).

What is called for now is a conscious focus on the modifications to vernacular designs and adaptations to new circumstances (Oliver 1975, 2006b; Lewis 1979a; Ford 1984; Jackson 1984; Upton and Vlach 1986, Rapoport 1988, 1989; Bourdier and AlSayyad 1989; Upton 1990, 1993; Glassie 2000; Vellinga 2004, 2006; Asquith and Vellinga 2006; Heath 2001, 2009). Several scholars support a more conscious inclusion of modernized buildings in the study of vernacular landscapes and a deep understanding of social circumstances (Jackson 1976; Vellinga 2004, 2006; Shankar 2005; Heath 2009). The field has moved away from a romantic, rural view of stasis. *Blending*, *weathering*, *creolization*, *hybridity*, *fusion* and *vernacularization* are all terms that appear repeatedly in contemporary writings and refer to a new, locally chosen form created through modification (Vellinga 2006; Edwards 2008; Heath 2009). Change is a relevant topic of study because change informs us of who we are (Heath 2009). Furthermore, cultural heritage is not a fixed concept. "[A]rchitecture, like the landscape of which it is part, is dynamic and ever changing" (Heath 2001, 184). Additionally, cultures are ever-evolving. Therefore, vernacular traditions, which by their very definition are contextual, must be seen as evolutionary as well (Blake and Smith 2000).

It is a shared assertion that to study the landscape one must focus on its human-induced evolutionary nature (Norton 1989). Early on, geographers considered modification of man's environment to be the dominant focus of geography (Sauer 1925; Wagner and Miskell 1962) acknowledging that the landscape is in a continuous process of creation, alteration, and replacement (Jackson 1958, 1963; Meinig 1979a). Jackson (1963) argued that it is not acceptable for us to seek preservation above all else. We are not spectators, we are inhabitants and for that reason we must modify our landscape which is neither static nor permanent (Jackson 19561, 963). R.J. Solomon (1966) argued that modified landscapes are equally important as "pure" landscapes. He argued that an integration of modified elements into the original structure can lead to a harmony in the total effect of the landscape.

Through adaptation and by embracing new representations that appeal to younger generations – that is, through change – the connection to vernacular traditions will be

maintained by the people who value them. The spirit of collective adaptation adds to the permanence. This was illustrated by geographers Kevin Blake and Jeffrey Smith (2000), in investigating Pueblo Mission churches of New Mexico. They determined that cultural identity is maintained through vernacular buildings and particularly through the longevity of the traditions with which they are invested. The investment in meaningful decoration and conservation helps convey ownership for the locals.

Landscapes and structures don't change steadily over time but change in great leaps, instigated by agents of change including technological breakthroughs, changes in social structure, and changes in aesthetic values (Lewis' 1979a). Patterns of local change are significant expressions of place and critical to understanding the mosaic of identity (Heath 2001; see also Ford 1984). Heath (2001) argued that to study patina or weathering is to study the very element that links a building to its past and to its place. The patterns of changes themselves identify the record of transformation prompted by regional forces, or agents of change (Heath 2001; also Relph 1981) that are responded to on an individual level (Duncan 1980). Layers are formed because "some parts of tradition (e.g. artifacts) may be accepted and others (e.g. lifestyles or social arrangements) may be rejected" (Rapoport 1989, 84). Therefore, different aspects of tradition can change while certain essential elements combine with new ones.

Lewis (1979a, 15) argued that "major change in the look of the cultural landscape", very likely reflects "a major change occurring in [the] national culture at the same time" (see also Lewis 1975). These changes are often influenced by imitation, which furthers a main undercurrent in studying landscape change. Daniel Arreola and James Curtis (1993) determined that the disappearance of the ubiquitous yard enclosure in Mexican border cities was an indicator of changing landscape taste and therefore a changing culture – one that more closely reflected the tastes of Anglo Americans. Henry Glassie (2000) likewise determined that house form change in Ireland was directly related to changing social norms that were adapting to Westernized habits of entertaining guests in compartmentalized homes. The imitation of Western societies, which is experienced locally in India more generally as modernization, could be a major influence in the changing landscape of Kinnaur and a progression toward the international style of architecture.

Developing countries offer additional and unique perspectives of study. Rapoport (1986) argued that change is seen most clearly in developing countries because of the surviving traditional material culture (see also Rapoport 1981, 1982b, 1989; Shankar 2005). Therefore, the vernacular fabric is highly identifiable and often changes greatly between regions. Furthermore, the repetition of shared meaning in traditional cultures allows for a more focused study of the cultural landscape than in more idiosyncratic, Western cultures (Rapoport 1981, 1982b; Shankar 2005; See also Seamon 1991).

Vellinga (2006) argued that change to local vernacular architecture does not always represent destruction of traditional values (see also Dayarante 2008). Roxana Waterson (1989) illustrated this in the tribal houses of Indonesia where labor migration encouraged new construction. However, it also encouraged a stronger connection to traditional styles, producing a seeming paradox. This manifests in a resistance to removing traditional structures even when new construction is woven in around it – a clear example of hybridity and weathering. This illustrates how often times, the resulting vernacular expression is more pertinent to the existing local population who has responded dynamically to local events (Heath 2009). In this way, adaptation can help keep vernacular traditions viable for future generations (Arreola 1988; Blake and Smith 2000; Vellinga 2004; Shankar 2005).

Elements of design eventually become disassociated from the source. They then are reformed through a collective process so that they meet the needs of a new culture (Heath 2001). This syncretic blend can result in a "new vernacular" (Heath 2001, 177). This is similar to Labelle Prussin's (1973) example of syncretism in Malian architecture and Blake and Smith's (2000) study of Pueblo Mission Churches. Both studies found that modifications reflected the contemporary inclinations of the population. Designs pertained to and were relevant to belief systems of the current generation, but with acknowledgement of the past. Because the contemporary designs reflected the vernacular style but also incorporated new ideas, they respected the heritage and desires of modernizing groups. These types of "repairs, replacements, and additions to the fabric of the landscape" help maintain continuity and consistency of expression (Relph 1981, 172).

Preservation of traditions can be seen as a commitment to common symbols. These are modified as social values change in order to maintain congruency (Rowntree and Conkey 1980).

Most vernacular architecture comprises a hybrid, a mixture of indigenous traditions and new outside influences that have adapted to the local context (Abel 1997). Heath (2009) and Vellinga (2004) acknowledged that some traditional styles have been lost; therefore, not all change is positive. However, studies focusing on modernized, indigenous buildings are rather rare and if written, are often in negative terms (Vellinga 2006). Researchers tend to ignore change in preference to landscapes of continuity and authenticity (Upton 1993). This lack of acknowledgement of change is seen as the shortcoming of vernacular discourse (Vellinga 2006). Most discussions of vernacular architecture are grounded in two opposing arguments. One argument states that if vernacular architecture is not allowed to evolve, but instead is held in a *museumified* setting, it is no longer vital to its users; they can become disconnected from its significance, and the outdated language is stripped of its ability to communicate (Vellinga 2004; Heath 2009). At the other extreme, it is argued that if the vernacular language is completely replaced with new designs, the culture is then without the presence of its history (Mouzon 2004), "without roots and very possibly without meaning" (Oliver 2006a, 25). The combined effect of this argument supports mindful change and research that focuses on social aspects with a respect for hybrid vernacular landscapes.

My research responds to the appeal to shift focus away from the purely authentic, characteristic, and enduring to incorporate the active and impure hybrid (Upton 1993; Asquith and Vellinga 2006; Oliver 2006b). A transitional vernacular style must still possess parts of the original in combination with modernized materials and methods. However, spirit of place is capable of persisting in spite of profound changes (Relph 1976). Therefore, determining the quintessential elements that allow the vernacular house to transition while still carrying forth original aspects of heritage could help provide a spirit of place for a lasting lived environment.

Scholars make it clear that vernacular architecture is a cultural "process", a product changing over time, (Rapoport 1982a; Bourdier and AlSayyad 1989; Oliver 1997; Lewcock 2006; Heath 2009). Because settlements have always evolved and will

continue to do so, we can expect that many vernacular features will be modified as contexts, ideals, and values change. This presents an opportunity to critically analyze the process of change in the vernacular home and therefore, the vernacular landscape. My research provides insight into the aging process of a landscape. Although focused on one facet, it keeps the house in context by focusing equally on the agents of change and the socio-economic contexts that have given shape to the house. Developing countries have been highlighted as advantageous to the study of vernacular landscapes.

Geographers have a long history of studying the house as a central element in the landscape. The vernacular house has proven a vital aspect to researching cultural norms, boundaries, and identity. Identifying signature features of the house and housescape, including ensembles, has proved to be an advantageous method for interpreting a cultural landscape. These components can highlight institutional behaviors repeated within a group and visible on the small scale. Distinguishing landscape features also serve a critical role in place-making. Kinnaur district's heritage of woodcarving makes it particularly suited for study of vernacular features. Furthermore, India's monumental economic growth makes it a particularly relevant place to study change.

Chapter 3 - The Cultural Setting: Kinnaur, Himachal Pradesh

India

India is a country defined by diversity. Within its borders lies one of the world's driest deserts, the wettest region, highest mountain range, and densest cities. Culturally, India is home to well over 600 tribes, some isolated and others intermixed in growing urban areas. The Indian-subcontinent has been described as "racially, religiously, and linguistically one of the most complex areas in the world" (Wallbank 1958, 9). The country is the birthplace of four of the world's religions: Hinduism, Buddhism, Jainism, and Sikhism, and maintains followers of Islam, Christianity, and Bon animism. The cultural landscape is the physical embodiment of Hinduism, the dominant belief system, which is played out publicly in daily individual rituals.

The British ruled the subcontinent for nearly two centuries. During that time the ruling class exploited the hierarchical Hindu caste system, oppressing Indians while providing a luxurious life for the upper-class 'Britishers' (Wallbank 1958). After India's independence in 1947, the fledgling country struggled to acquire political and economic footing. The sub-continent had been spurred into the first stages of industrialization by the British crown, however India continued to carry the stigma of underdevelopment, poverty, and "backwardness" for many decades. It has remained in many ways a mysterious land to people in the Western world. The lingering myths about South Asia and India in particular, brought about by ignorance, must be replaced, historian T. Walter Wallbank (1958, 9) argued by "adequate unbiased knowledge and sympathetic interest."

A growing concern for the economic stability and self-sufficiency of the Indian subcontinent is particularly stressed today. Escalated tensions in the Middle East along with India's and Pakistan's role as democratic buffers in the world's largest population mass (which includes China) has highlighted the region in international politics. Although still suffering occasional turmoil brought on by religious fanaticism, India is usually discussed today in reference to its booming technology industry and large, growing population. Having reached 1.2 billion in 2012, India has the second largest population in the world (CIA Factbook 2012). However, much of India remains isolated and sparsely populated. This is especially true for its mountainous regions. People in

these remote areas seem to live a life from a bygone era. While in India's large cities, a young growing middle class is tapped into the same technology available in New York or London.

India supports what is claimed to be the world's second largest movie industry after Hollywood. Several major film companies, known by the umbrella term *Bollywood* have produced a class of cinematic A-Listers for the Indian masses (Athique 2012). Popular films often showcase Indian traditional culture juxtaposed with modern luxuries, and risqué dance and costumes. This exemplifies India's world of paradox. It is seemingly held together by its diversity – holding deep respect for its age old traditions but running full speed ahead in embracing modernization.

Given the diversity of India it should be expected that there is equal variety in its cultural landscapes. Climate, terrain, and belief systems have combined to create a varied patchwork of settlement systems, building styles, clothing, food choices, and art. Landscape Architect Amita Sinha (2006) argued that India offers an ideal location for the study of cultural landscapes. However, she acknowledged the dearth of cultural landscape study on South Asia (notable examples are Singh and Khan 2002; Singh 2004). Sinha cited India's conservative tendencies that respect tradition as one reason that the country has a rich vernacular landscape (see also Norton 1989). Generally in India people adapt slowly to new influences with a propensity for staying true to traditions (Sinha 2006). This allows for the study of age-old practices alongside current day modifications. Due to the predominance of the polytheistic Hindu religion, India's landscape is linked to myths, gods, and goddesses, making it rich with meaning (Singh and Khan 2002). The profound connection to religion promotes deep-seated tradition and symbolism that is played out in everyday life, visible on the home as well as the temple (Sinha 2006; see also Rapoport 1982b; Pavlides and Hesser 1989a, 1989b). Numerous opportunities exist for studying the cultural meaning behind vernacular architecture.

India's diversity is clearly seen in the variety of housing styles throughout the country and numerous studies document specific regional house types (see Mitra 1982; Cooper and Dawson 1998; Jain and Jain 2000; Marh 2004; Handa 2007). The mountainous region of the Western Himalaya, made up of the states of Uttarakhand, Himachal Pradesh, and Jammu and Kashmir, has a distinct cultural landscape and a

distinctive architectural style compared to the rest of India, including the eastern Indian Himalaya. Wooden temples are particularly noteworthy in the western Himalayan region due to their towering designs, copious amounts of wood, and detailed carving. The domestic landscape echoes the temple design in various ways producing one of the most striking landscapes in the country.

Himachal Pradesh: Regional Background

Figure 3.1 Map of Himachal Pradesh and Neighboring States
Note: Uttarakhand is labled with its previous name of Uttaranchal. Map used with permission from Dominik Lang and The World Housing Encyclopedia.

The region of study for my dissertation is in Kinnaur district in the Northern Indian state of Himachal Pradesh, which lies in the mountainous region of the Western Himalaya. The state of Himachal Pradesh is bordered to the south and southwest by the highly populated plains states of Punjab and Haryana. One of the newest Indian states, Uttarakhand (previously called Uttaranchal) is situated to its southeast (Figure 3.1). To its north lies the often turbulent state of Jammu and Kashmir and to the east, the international border with the Tibetan Autonomous Region of China. Himachal's proximity to the populated plains leads to a paradox of Indian tourism throughout the southwest, alongside military checkpoints and restricted areas in its remote eastern limits.

Himachal Pradesh encompasses a diverse ecosystem. It is centered on 31° 3' north latitude and 77° east longitude. The state includes all three high mountain ranges of the region – the Zanskar, Great Himalaya, and Dhaula Dhar ranges. Himachal's elevation ranges from 980 feet (300 meters) to nearly 23,000 feet (7,000 meters), therefore changes in climate are considerable and coincide with elevation change. Altitudinal zonation plays a significant role in agriculture.

This mountainous area was a vital location for the British Crown. Officials and their families spent summers enjoying the cool temperatures in what is now Himachal's state capitol of Shimla. It functioned as the British summer capitol beginning in 1864. However, Britishers did not penetrate deeply into the mountains nor did they interact much with the mountain cultures of the region. Therefore, the indigenous culture is still strong to this day.

The state of Himachal Pradesh was initially formed on April 15, 1948 when the princes of 30 independent kingdoms merged territories to form a state after independence (Cranney 2001). New districts within the state were added periodically and full statehood was granted in January 1971 with a total of 12 districts (Figure 3.2). The newly formed Himalayan state was carved out of the highly populated bread-basket region of Punjab for fears that Punjabi lawmakers could not relate to the distinctive cultures and ecology of the hills (Vedwan 2008) (Figure 3.3). The hill country felt the dominating political and economic pressure from the lowlands and wanted to safeguard its interests.

Figure 3.2 Himachal Pradesh
The state of Himachal Pradesh and its 12 districts, showing the surrounding state and country borders. Map by author.

Figure 3.3 Map of Punjab

The state of Punjab encompassed what would become Himachal Pradesh. The central research location of "Chini" is highlighted in green beside "Punjab". Chini is the historic name for the village now called Kalpa. Map (by Longman and Co., 1882) used with permission from the University of Texas Libraries, University of Texas at Austin.

Based on heavy state investment, the new state of Himachal eventually made great progress in increasing literacy for the rural population and encouraging agriculture through government subsidies (Vedwan 2008). Today, due in part to an established and expanding apple industry and the ability to generate hydroelectric power from several rivers, the rate of economic growth in Himachal Pradesh is accelerating compared to other Himalayan hill states (Jreat 2006). Surprisingly given its remote and treacherous terrain, Himachal Pradesh has one of the highest per capita incomes in India (PB Planning 2008). People with access to land who are pursuing horticultural activities are benefitting most from capitalist development (Cranney 2001).

However, Himachal remains the least urbanized of the Indian states with 91 percent of the population living in rural areas (Vedwan 2008). This has contributed to the outmigration of students who pursue advanced educations and ultimately remain outside

of the village living in larger cities with increased employment opportunities (Cranney 2001). Today, the mountain environment of Himachal Pradesh is under great stress from economic development. The highly forested hills are experiencing deforestation and soil erosion brought on by increased development pressures such as hydroelectric dams and its associated workforce housing (Cranney 2001).

The mountainous landscape of Himachal, although harsh, has also been a source of prosperity for its inhabitants. Forests were the greatest source of revenue for the ancient kingdom of Bashahar, later to be known as Kinnaur district (Bajpai 1984). In pre-colonial times, the villages of Himachal had almost total control of the forest beyond taxes that were paid to the Indian kings (Cranney 2001). Forests were used communally on a small-scale for local construction, fuel sources, and harvesting of wild fruits and nuts. Today as throughout history, people have a close interaction with the surrounding forests for their daily needs.

Around 14 different species of trees grow in Himachal Pradesh (Handa 2006; Cranney 2001). Among local inhabitants, oak is the preferred tree for daily use because of its superior capacity to provide abundant low and fallen branches for kindling, good burning fuel wood, and excellent leaves for feeding cattle (fodder). Furthermore, the leaves of the oak are good for soil compost and encourage fodder grasses to grow beneath (Cranney 2001). Alternatively, *deodar* pine is a second choice for home fuel use because its smoke and sap are problematic making hands and homes black (Cranney 2001). However, deodar is superior for construction. It is straight, accepts carving well, and is thought to house deities and forest spirits (Handa 2006; see also Thakur 1997; Verma 2002). Consequently, this wood is considered sacred and is culturally significant, making it the choice wood in temple construction (Handa 2006). The abundance of wood is very important to the vernacular architecture of the region. Although the domestic architecture is typically a combination of stone and wood, it is through carvings in the wooden upper story that the vernacular architecture becomes most distinctive, particularly in the district of Kinnaur.

The Kinnauras: The People of Kinnaur District

The district of Kinnaur, located in the south eastern region of the Himachal Pradesh, is the focus of my dissertation. A kingdom since the 6th century historically known as Bashahar, the district came into legal existence as Kinnaur district on May 1, 1960. It redefined its cultural core and gave some of its territory to Shimla district to the south. Its language, history, unusual and rich cultural heritage, and location along the sensitive border with the Tibetan Autonomous Region of China are among the qualities that contributed to it becoming a distinct district (Chib 1984).

Part of the Great Himalaya Range, the average elevation for Kinnaur district is significantly higher than other areas of the state (between 4,000 feet – 22,200 feet or 1220 and 6770 meters). The high elevation and rugged terrain of the district spurred distinctive characteristics in the local population. The various mountain tribes indigenous to Himachal Pradesh and the Indian Himalaya, such as the Gaddi of Chamba and the nomadic Gujjar, are collectively known as *Pahari* and are an inspiring example of folk culture (Handa 2006, 2009). A 'tribal' or ethnic population comprises just over four percent of Himachal's population (Jreat 2006). However, Kinnaur district alone is 55 percent tribal, comprised mainly of the Kinnaura group (Jreat 2006). Ninety-six percent of the tribal population lives in rural areas (Chauhan and Moorti 1990). Kinnaur district is considered to have a low population density (Jreat 2006), and many towns are isolated and far removed from commercial centers.

The Kinnauras, referred to in an assortment of spellings including Kinner and Kinneras, are an ancient tribe and the original inhabitants living in an extensive area of the Himalaya (Bajpai 1981). They have deep roots in Indian mythology, legend, and literature. They are mentioned in almost every ancient text of the Vedic, Hindu, Jain, and Buddhist traditions, as well as the epic history of the *Mahabharata* which is said to have taken place in parts of Kinnaur (Bajpai 1981; Chib 1984). Kinnauras are generally considered a distinct race (Bajpai 1981). They were present prior to the Aryans who immigrated in ancient times from Central Asia. The Kinnauras were eventually pushed deeper into the mountains by the Kashmiri Khash cultural group (also known as Khas and Khasia) who they ultimately blended with by the seventh century AD (Chib 1984). The Khash cultural group, including the assimilated Kinnauras who still hold their distinct

identity of name, dominate in the state including the southern portion of Kinnaur (Lower Kinnaur), Mandi, Kullu, Upper Shimla, and Sirmaur districts, and bordering districts of Uttarakhand state (Handa 2006). This is referred to as the Khash cultural region and becomes a significant region for my discussion of vernacular architecture (Figure 3.4). Confined to dispersed isolated locations, the Kinnauras have developed distinct characteristics including their different customs, manners, dialect, and dress, as well as pantheistic systems and beliefs (Handa 2006).

Figure 3.4 Khash Culture Region
The Khash culture region includes Kinnaur and periphery regions. Map with color coding used with permission from Dominik Lang and The World Housing Encyclopedia.

Mythic and Isolated People

Anthropologist Gerrald Berreman (1979, 9) stated that the Himalayas are "shrouded in mists of myth, romance and misinformation." This describes Kinnaur well. It is regarded as a distinct and mystic region located amidst the breathtaking high-Himalaya (Chib 1984). The mountain locked isolation of Kinnaur has always separated it, physically and mythically, from the rest of the surrounding country. Even the distant capitol of ancient Bashahar (the city of Rampur, which now lies in Shimla district) never had a strong impact on the Kinnauras. They instead focused most of their culture, socialization, and trade to the north with Tibet rather than south (Chib 1984). For this reason a boundary exists in the Kinnauri cultural landscape informally separating Upper Kinnaur (more culturally congruent with Tibet) and Lower Kinnaur (which shows a deeper blend of Indian culture).

The isolation of their extreme mountain landscape helps explain why the ancient narrative of Kinnaur is predominantly mythological and steeped in nature based superstitions (Chib 1984). The mythical stories that surround Kinnaur made it difficult for India's polytheistic culture to sort fact from fiction (Chib 1984). Kinnaur's inhabitants have been described as strange living creatures, demi-gods – somewhere between human being and gods. In ancient times, rumors circled that they could change their physical form at will to that of horse or bird, and dwell with gods as well as humans (Negi 1976; Bajpai 1981; Chib 1984; Thakur 1997). They are regarded as great singers, who have an inordinate love of music, song and dance, and formed the orchestra at the banquets of the gods (Negi 1976; Bajpai 1981; Thakur 1997). In addition, the ladies of Kinnaur are, even today, believed so beautiful that their parallel is difficult to find anywhere in India (Bajpai 1981).

For the population of Kinnaur, since very early times, any money earned translated into gold and silver jewelry (Bajpai 1984). There are "ornaments for the head, for the forehead, the ears, the nose, the neck, the wrists, the fingers, the ankles and the toes. And there are amulets and brooches" (Negi 1976, 37). This display, coupled with their ornately woven shawls, added to the distinctiveness of the Kinnauri women and has become part of the myth surrounding their beauty (Chib 1984; Tobdan 2008).

The misconception of the Kinnauras as a mythical group in a mysterious region is due to long, mountain locked isolation and relative immobility. Their anonymity was compounded early on by their tenuous relationship with the plains of India. But, it is intensified by the nature of Pahari tribes as slow in adopting new customs and beliefs (Berreman 1970). Therefore, in the Khash cultural region, traditional values have persisted for centuries and are still compelling for villagers (Prakashan 1985).

While respecting the desire of mountain communities to maintain tradition, it cannot be ignored that people of these remote areas have suffered long neglect (Chib 1984). Cut off from mainland India, inhabitants of Kinnaur were not only subjected to mythical rumors, but were also removed from the natural progression and economic development brought about by years of British rule. Isolation and separation due to extreme terrain and climate, led people to believe in deities, supernatural powers, and medicinal plants more than modern medical care (Bajpai 1981). For example, in Kinnaur, 98 percent of women still give birth without the aid of a trained assistant (Cranney 2001). Additionally, due in part to difficult terrain and lack of transportation, literacy rates remained low, communications infrastructure inadequate, and farming methods 'primitive' compared to other regions of India (Bajpai 1981; Chib 1984; Cranney 2001). Cultivation methods are holding true to traditional practices such as ox and plow partly because of the inaccessibility and small size of land holdings, but also due to a preference for 'primitive' ways, perpetuating the region's image as 'backwards' and prompting critics to accuse the Pahari of being bound to old ways (Chib 1984).

Religious Belief Systems

For most Indians, religion is central to daily life and a place is carved out for it visible on the landscape. In the Himalaya region, particularly in Himachal Pradesh, an ancient form of animism called Bon is a significant influence (Handa 2006, 2009). Bon is popular in the Zanskar Range and throughout Tibet and is perhaps the earliest form of religion in Kinnaur district. Today this religion is particular to the region. The awe-inspiring physical environment of the Himalaya fostered a local polytheism focused on spirits, both vile and favorable. They are believed to inhabit the natural world of forest,

rivers, and mountain tops. Consequently, the Kinnauras are deeply religious and superstitious (Chib 1984; Handa 2006).

Although local deities and rituals varied among the isolated populations, the deodar trees have traditionally been regarded as the dwellings of the tree spirits. And the Pahari of the entirety of the Himalayan region have deep-rooted reverence for the forests and this sacred tree. Generally the Pahari belief system did not prompt construction of temples or structures for worshiping local deities. However, as Buddhism emerged, and as Hinduism later took hold, people eventually began to build temples using the sacred deodar wood (Handa 2006).

Figure 3.5 Map of "Upper and Lower" Kinnaur District
Kinnaur's landscape is bisected by an informal religious boundary (represented by the red dashed line) roughly differentiating Hindu and Buddhist majorities.

Kinnaur district experienced religious influence from both Buddhists in the north and Hindus in the south (Handa 2009). This is reflected in the intangible threshold between Lower and Upper Kinnaur which makes visible the merging of religions near the village region of Kalpa (Handa 2011). This religious boundary is reflected in the differing cultural landscapes of Lower and Upper Kinnaur district. Culturally, the international border region comprising Upper Kinnaur and Lahaul Spiti district (Figure 3.5) appears much more Buddhist in its architecture, material culture, and dress (Figure 3.6, Figure 3.7). Lower Kinnaur and the other districts more clearly reflect the practices of Hinduism.

Tibetan Buddhism came to the area in the first century and the indigenous Pahari gods were assimilated into the Buddhist faith as subsidiary gods (Berreman 1963; Karmay 1996; Handa 2006; see also Verma 2002). This type of syncretism is not new for Buddhism which has throughout time blended with ancient beliefs and given them new meaning (Buffetrille 1996). It is less clear when Hinduism reached the mountain region. True Hindu beliefs never took hold in the deeper parts of the state. Eventually, similar to Buddhism, the local indigenous gods became anthropomorphized under Brahmanism or Hindu influence (Handa 2006). Native deities were adopted into Hinduism and given a new local identity (Handa 2009). Ultimately, what is practiced in

Figure 3.6 Border Culture
Lahaul Spiti district and Upper Kinnaur district have a decidedly Tibetan or Buddhist style of dress and architecture. Nako village, Kinnaur district

Figure 3.7 Border Architecture
Lahaul Spiti district and Upper Kinnaur district have a decidedly Tibetan or Buddhist style of dress and architecture. Losar village, Lahual Spiti district

Kinnaur is neither the Brahmanical Hinduism of the plains nor the Buddhism of Tibet. The overall religious belief which predominates is considered an "ambivalent form of Brahmanized indigenous cults" (Handa 2009, 134) or "Hinduism with a strong coat of tribal faith" (Verma 2002, viii). Either way, it is often regarded as a unique form of religion (Thakur 1997).

Along with Hinduism, the Hindu caste system was introduced to Himachal Pradesh (Handa 2009). The caste system, although outlawed in 1947, is a social structure within which the Hindu culture has operated for centuries. It dictates from birth, profession, income, marriage, social interaction, and discrimination. Until its introduction, the Pahari society had been un-stratified, if only showing some slight distinctions between professional categories such as musician, woodworker, and metal worker (Berreman 1970; Negi 1976; Bajpai 1984; Handa 2006, 2009; Vedwan 2008; Sonil 2011). Reflecting the blended religions, the Kinnauri caste system is more lax than other districts. And because it is not practiced under Buddhism, it is non-existent closer

to the Tibetan border where the population is predominantly Buddhist (Handa 2009; see also Vedwan 2008).

Seventy-four percent of the people of Kinnaur identify themselves Hindu and 24 percent identify as Buddhist (Economics and Statistical Department Himachal Pradesh 2009). These populations are clustered with Buddhists predominating in the upper region close to Tibet and Hindus to the south. However, census numbers are admittedly skewed due to people's allegiance to the ancient king (Bajpai 1981). After the religions merged in the ancient kingdom of Bashahar, the Raja (or local king), who lived in the lower part of the region, adopted Hinduism. This played a significant role in the acceptance of Hinduism versus Buddhism and could have influenced identification as Hindu even for some families who continued their Buddhist faith. People generally followed their Raja except in areas very close to the Tibetan border where they spoke the Bhot Tibetan dialect and more closely related with the Tibetan culture (Bajpai 1981). Additionally, since the occupation of Tibet by China, people are more likely to self-identify as Hindu on census surveys as a way to distance themselves from the aggressions that India experienced at the hands of China in the 1960s (Bajpai 1981). Meanwhile, they continue to practice the Buddhist and animist faith.

In practice, all Pahari follow traditional animist beliefs commonly referred to in the Kalpa region as the "Kinnauri religion" (Kumar 2011; S. Negi 2011) (Figure 3.8). But they easily apply both Buddhism and Hinduism to their rituals (Handa 2009). Most villages have Hindu and Buddhist temples, along with small shrines created for local deities. The religions overlap considerably in this way and both Hindu and Buddhist villagers regularly interact with the leaders and followers of the other belief system (Kumar 2011; S. Negi 2011).

A distinct absence of Christians is conspicuous compared to eastern and southern regions of India. However, Moravian Missionaries, who arrived in the late 1800s, played an important role in the social and economic development of Kinnaur's education, health, agriculture, horticulture, and household industry, influencing the economy (and the apple industry) more than the religion (Tobdan 2008). It is difficult for outsiders to influence the beliefs of the Pahari people (Bajpai 1981).

Figure 3.8 Kinnauri Religion
The Kinnaura people believe their local deity can be carried in the Rath, or chariot, and visit surrounding villages. Kalpa village

Cultural Landscape: The Agricultural System and Cash Crop Industry

In the state of Himachal Pradesh agriculture and animal husbandry have produced a cultural landscape that seems to defy our limits of human exertion. Terraces of apple orchards cling to cliffs and fodder is gathered on impossible slopes (Figure 3.9). Within this landscape, the vernacular house tells the story of the daily chores, the seasonal shifting of crops, and a people who live closely with their animals (Figure 3.10, Figure 3.11). The hilly tribal areas, with rough and rocky terrain, are characterized by small sized farms often on steep slopes (Figure 3.12).

Kinnaur's cultural landscape has been described as a "haphazard and confused, clustered arrangement of houses in different stratified hamlets" (Handa 2009, 237) (Figure 3.13). The steep mountainous landscape encourages double story houses and the use of retaining walls to carve out a flat space for daily work. A small footprint of the house facilitates construction in the limited area (Figure 3.14, see also Figure 3.11).

Furthermore, the double story houses are a benefit in the climate and a function of the livelihood. Lower levels are used for animal penning, producing heat in the upper levels to fend off the cold of the Himalayan winter.

Figure 3.9 Gathering fodder
Women gather fodder (grass used for animal feed) on a steep hill side. Bachunch village

Figure 3.10 The Agricultural Housescape
A family in Sangla thrashes grain in their yard.

Figure 3.11 Housescape
The housescape reflects the animal husbandry livelihood. Roghi village

Figure 3.12 Small terraced plots
The small plots of the Himalaya are generally plowed by animal and human power.
Rohru, Shimla District

Figure 3.13 The "Haphazard Hamlet"
The village of Kamru represents Kinnauri villages, which are often clustered on steep hillsides connected by foot paths. Kamru village

Figure 3.14 Small footprint for limited area
Sangla village

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Animal husbandry, particularly sheep rearing, is the main source of livelihood of tribal people in the Western Himalayan regions where shepherds pass months at pasture with their livestock. Sheep and goat are the choice animals and supply wool and hair respectively for domestic use, which an owner can use in weaving or sell to buy other necessities. Additionally, they provide milk, and goat meat is especially valuable for religious ceremonies (Chauhan and Moorti 1990). However, in Himachal Pradesh, compared to other states in the Himalaya, only about 40 percent of the rural population depends directly on animal husbandry (Chauhan and Moorti 1990).

Alternatively, about 75 percent of Himachal's population is engaged in agriculture (Chauhan and Moorti 1990). Due to the dry climate, subsistence farming and cash crop agriculture are suitable only in select regions of the Himalaya and Himachal Pradesh. In Kinnaur, animal husbandry has historically been supplemented with subsistence farming of mixed crops. However, over the last 40 years, Kinnaur district has emerged as a leader in the fruit orchard industry. Although grapes and apples were seen as early as 1842, before the Moravian missionaries' arrival as described in various early travel journals, the Moravians introduced grape and apple cultivation on a larger scale (Tobdan 2008). In 1904 an American brought the Delicious group of apples to India and by the middle of the 19th century Christian missionaries and the British officers began plantation of the strain (Nada 1987). Cereals and pulses, which are now easily obtained from Punjab, no longer play an important role in household gardens or the agricultural economy of the state, which is today dominated by fruit crops including apples, almonds, and apricots, and forestry products (Chauhan and Moorti 1990; see also Allan 1989; Kamal and Nasir 1998).

Kinnauri villages show an abundance of the *khul* irrigation system which is particular to the region (Bajpai 1981) (Figures 3.15a and b). The steep topography compelled people to devise this system of ditches, which is essential as there is almost always scarcity of rain. Water from natural springs, in which the Kalpa region is rich, is carried through channels to each irrigated field. In ancient times khul irrigation was available only to certain upper-class sections of the population. Now it is operated as local government utility, alternating days of water access (Bajpai 1984; Mayor 2011). Today, almost all cultivated landscapes are irrigated through this channel system. The

predictable availability of water spurred the apple industry in Kinnaur and gave Kinnauri villages a distinct upper hand in orchard cultivation.

The growth of the orchard industry, has led to changes in livelihoods as well as in the cultural landscape. The historic clustering of houses in dense hamlets has given way in part to houses isolated within an orchard (Handa 2009). Most villages are pedestrian focused since few people own cars; therefore, most houses are reached by foot path up steep slopes and steps (Figure 3.16).

Figures 3.15a Khul Irrigation system
The irrigation system in Kinnaur helped it succeed in the horticulture industry. Kothi village

Figures 3.15b Khul Irrigation system
The irrigation system in Kinnaur helped it succeed in the horticulture industry. Kalpa village

Because of the lack of road connection and communication with outside populations, the Kinnauras "have been able to preserve their distinct culture to this day" (Bajpai 1981, 111). Architectural styles have come to the present with almost identical vernacular styles, it is said, because the Khash deities are averse to deviation from tradition (Handa 2006). People are reticent to change historic homes because of the belief that local deities will be angered. However, this belief is now up for debate as O.C. Handa (2006, 60) noted, the "gods seem amenable to change", indicating an easing up of religious and cultural adherence. This growing flexibility in cultural norms shows that the remote mountainous regions of the Himalaya could be poised for increasing changes in the vernacular landscape.

Figure 3.16 Himalayan footpaths
Few people own cars in the Himalaya and villages evolve with a pedestrian focus. Most areas of the villages are accessible only by footpath and steps. Kloti village

Chapter 4 - Iconic Features of the Kinnauri Vernacular House

Several landscape signatures most clearly characterize the vernacular landscape of Kinnaur. In the clustered hillside village landscapes, the steep and narrow footpaths are a significant component. These are the primary village thoroughfares. Some are neat concrete paths while others are grass or dirt, barely wide enough for one person to walk. Along the footpaths, continuous hand laid stone walls line the trail. As residents improve their farmland and delineate their property one of the most outstanding signatures of the Kinnauri cultural landscape is produced. Each wall is distinct, but complementary, and

Figure 4.1 Pathways and stone walls of Kinnaur
Kalpa village

differentiates the path between orchard and public space (Figure 4.1). However, the most striking feature on the landscape is the tight clustering of houses set into the steep topography. Steeply pitched roofs shed winter snow. The ornate roof lines and stone slabs echo the surrounding mountains (Figure 4.2). Weathered wood and chipping paint outline verandahs that appear much older than their actual years.

Figure 4.2 Steep rooflines echo the mountain landscape
Chitkul village

Walking on the footpaths through Kalpa and surrounding villages, one sees great variety of style in the vernacular house. No two are the same in scale or detail. Houses are very close together, almost on top of one another in instances. They orient in different directions in relation to the street, slope, and path. Many take advantage of the sun and the view of the sacred peaks by facing to the south with the primary wall of glass (Figure 4.3). However, due to the tight clustering and steep topography, exceptions are always

Figure 4.3 Verandah facing south towards sacred Mt. Kinner Kailash
Kalpa village

part of the rule. Some houses are exposed to the walkway while others are obscured

behind large walls of stone. Elaborate entry gates are common (Figures 4.4a and b).

Construction materials vary as well as the basic house form. Stone and wood are the

common traditional materials, but new homes often use concrete. The roof form can take

on several variations from complex peaks to flat earth, employing natural stone or

manufactured materials such as metal (Figure 4.5). With all of this diversity however,

one can still glean an essential Kinnauri vernacular style.

The vernacular house has a linear orientation faced by a verandah. The inside

space has changed little given the modifications that are evident today on the exterior.

The verandah hallway, protected behind glass, shields interior rooms from the cold.

Today, those interior rooms line the back of the house as they always have. The

Figures 4.4a and b Entry gates on houses
Kalpa village

Figure 4.5 Kalpa's diverse building forms and materials choices

house is one room deep with the added space of the verandah. The kitchen is often a popular multi-purpose room and draws the inhabitants in with its warm wood stove. The small flat stove is used for both cooking and heating. Although the houses might seem unexciting by this description, the vernacular house of Kinnaur is known in India to be special.

Kinnaur district, part of the Khash cultural region has a long tradition of architectural wood carving. The Khasha and Kinnauras are the traditional custodians of the intricately carved wood-based art and architecture which populates the landscape (Handa 2006). This includes multi-story temples, as well as stunning examples of domestic architecture teeming with ornamental carving. As the Kinnauri vernacular house transitions through time, the heritage of wood carving has progressed with it. Changes are apparent in the vernacular house, but consistencies remain and help the

vernacular landscape retain a spirit of place that reflects a distant past in the midst of a modernizing society.

Kinnaur's vernacular landscape provides an ideal case study into the transformation of a vernacular style. Since house types continually change and adapt throughout time, the vernacular style analyzed during my fieldwork provides a snapshot into the history and present of Kinnaur district's vernacular landscape. My research also allows for an interpretation of potential future outcomes in the vernacular house. The Kinnauri vernacular house visible on the landscape today is a layering of generations' worth of characteristic traits that are now woven together into the vernacular fabric.

Before I explain the agents of change in the vernacular landscape, this chapter seeks to answer my first research question (What are the characteristic or distinctive features of the traditional Kinnauri vernacular house, and what are their origins, functions, and meanings?). It will provide familiarity with the characteristic traits of the Kinnauri vernacular house through an introduction to the dominant features of the house, the origins if known, and the changes that have taken place roughly up to the last decade. Chapters 5 and 6 provide more detail on many of the traits discussed below and more specifically address reasons for changes in the house in contemporary times.

Guided by interviews and landscape analysis, I have distilled the central qualities of the Kinnauri vernacular house to eight iconic features (Figures 4.6a and b). They are:

1. layered wall construction known locally as *Kath Kuni*
2. small ground floor windows and doors
3. pitched slate roof
4. ridgeline adornments
5. verandah overhang
6. verandah window bank
7. carved upper story wall panel
8. carved fascia trim.

Figures 4.6a Two of the eight distinguishing features of the Kinnauri vernacular house
(see following page)

Figures 4.6b Distinguishing features of the Kinnauri vernacular house, numbers 3-8

These distinctive features described in detail below are a mixture of building material, house form, and ornamentation. Of the eight Kinnauri vernacular features, several have fallen from use while others have gained popularity as the house has evolved over the last century. Bernard Rudofsky (1964, 1) stated that "[a]s a rule, the origin of indigenous building forms … is lost in the past." His point resonates in my search for the origins and information about Kinnauri vernacular features. I found that local residents had difficulty determining an exact account or date of origin for the use of such common traits. Moreover, published work on Kinnaur and Himachal addressed very few issues of the house; most bypassing design details completely. In any case, it is not the goal of this research to explain the origin and diffusion of the vernacular features or the house form. To do so would only add to the canon of studies in diffusion focused cultural geography. However, a short introduction to the vernacular house contextualizes upcoming discussions of the contemporary vernacular landscape, the manifestations of a dynamic community, and the interpretation of architectural elements which impart the spirit of place.

The Iconic Features

1. *Kath Kuni*
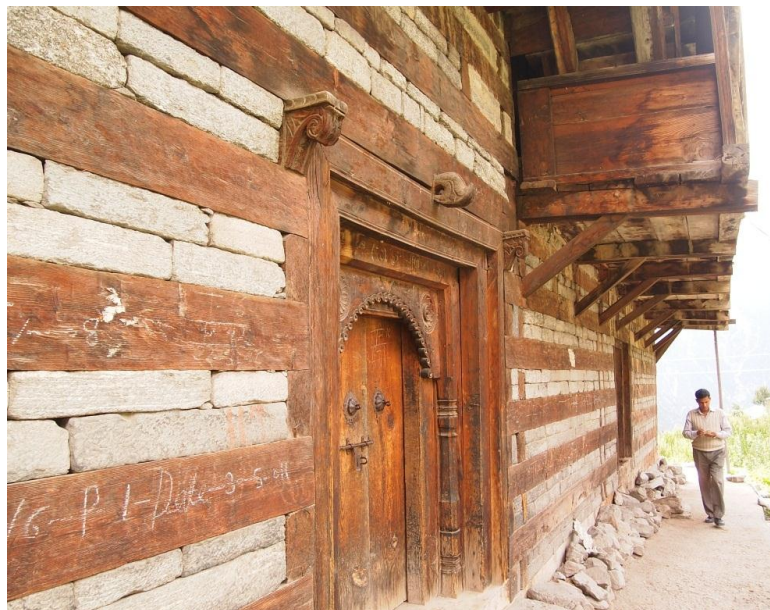
Figure 4.7 Kath Kuni wall construction of stone and log
Telangi village

Due to the abundance of wood in many parts of the Himalayan region, the earliest known housing system of the western Himalaya was made exclusively of wood (Handa 2006). People used the sacred *deodar* tree, or god tree, as the primary timber chosen for temples and homes throughout history due to its sanctity and its ability to accept meticulous carving. Few if any of these structures exist today. Subsequent home and temple construction of the eleventh century featured wood and increased amounts of stone layered, predominantly on the bottom level, in the seismically resistant construction method known as *Kath Kuni* (Figure 4.7) (Shankar 2006; Rautela et al 2008). The tensile strength of the wood, the ability of the logs to flex during earthquakes, and the technique of linking the wooden corners together all help the vernacular Kath Kuni house perform well in earthquakes (Figures 4.8a and b) (Rautela et al 2008).

Figures 4.8a Kath Kuni construction
The linked corners of Kath Kuni protect against earthquakes. Kalpa village. See following page

Figures 4.8b Kath Kuni construction with linked corners to protect against earthquakes
Kothi village

My interviews revealed that the ancient system of Kath Kuni wall construction was recognized most often as a typical vernacular trait of the Kinnauri house. Of the 17 people who offered clear opinions of the characteristic Kinnauri vernacular style, 47 percent named Kast Kuni construction. As the primary construction method for several hundred years, it is frequently seen in older homes of the region. It is commonplace in the center of villages because these are the oldest settlements, typically surrounding the temple. However, it is not entirely clear where this feature originated. Kath Kuni construction is seen over a wide swath of the Western Himalaya from Afghanistan to Nepal and is not unique to Himachal Pradesh or Kinnaur (Shankar 2006; Rautela et al 2008). Several people interviewed in the Kalpa region understood that this building system is in use in Shimla, Kullu, and Kinnaur districts.

Kath Kuni is a conspicuous and significant component of the Kinnauri vernacular landscape. This is in part due to the durability of the building system. However, it is no longer incorporated into new house construction, as discussed in Chapter 6. However, participants still felt that it represents a regional style calling it a major component of the Kinnauri vernacular dwelling.

2. *Small Windows and Small Doors*

The agricultural and animal husbandry focused livelihood of Kinnaur resulted in livestock penning and feed storage in the under story of the house. Because the ground floor was dominated by animals rather than human use, only a limited number of small openings were incorporated into the walls to let in a minimum amount of fresh air and light (Figure 4.9, Figure 4.10). I offer several additional reasons for the construction of such small windows. Wall openings only contribute to heat loss and infiltration of wind. Cold temperatures and high snow levels encouraged homeowners to keep openings small. The small frames were also prompted in part by the difficulty of supporting large openings in the stone construction of Kath Kuni, and the real or perceived need for security.

The small doors and windows are closely associated with carved trim work. Oversized ornately carved window and door trim is the hallmark of ancient vernacular architecture in the Himalayan region, both domestic and sacred (Figure 4.11). Because of the historic presence of trim carvings, small doors and windows came to be associated

with wealthy people who could afford to put in openings and add carved trim. Alternatively, poorer people would have no windows at all in the lower level.

Small windows and small doors were recognized as a distinguishing feature of the Kinnauri house by 29 percent of the 17 residents who were able to determine a main characteristic. However, this feature is not incorporated into Kinnauri houses today. Over the last generation doors gained height and windows expanded, incorporating glass (Figure 4.12). Today, the small openings are visible on the landscape only as components to the ancient vernacular house.

Figure 4.9 Small ground-floor windows of the Kinnauri vernacular house
Kalpa village

Figure 4.10 Small doors of the Kinnauri vernacular house
Kamru village

Figure 4.11 Ornately carved door trim
Sangla village

Figure 4.12 Later house designs incorporate larger windows and doors
Kothi village

3. *Slate Roof*

Based on my interviews, the ancient roofing system of Kinnaur is a layering of timber, clay, stones, and tree bark laid flat (Figure 4.13). This progressed over the years to a more weather efficient, pitched wooden plank roof which helped shed the heavy snow and occasional rain (Figure 4.14). Roof collapse due to decay inspired homeowners to improve the roofs with stone slabs constructed on a steep pitch (Figure 4.15). Stones were seen as the best solution for an enduring roof that would shed snow and rain. The type of stone varies from region to region from slate to schist depending on the local geology. Schist is more common to Kalpa and its immediately surrounding villages, however, I consistently used the term slate in my dissertation to simplify reference to construction of slate roofs.

The ancient stone roofs are still visible on the landscape today. The stone was brought in from a considerable distance by pack animals (near Sangla about 21 miles away). Homeowners could gather pieces of slate themselves if they had the means of transport, or they could hire others to do it. Because the stones are difficult to acquire and expensive to procure, the majority of people interviewed on this topic agreed that a slate roof is associated with status. Others who disagreed believed that slate roofs are associated with climatic convenience and function, rather than appearance. Nonetheless, new slate roofs are still highly respected.

The traditional roof form incorporates a very steep pitch and 'joint' in its form and is constructed with a gap at the ridge line (Figure 4.16). Although labor intensive, the gap is said to be for beauty and interest rather than function or symbolism. The jointed form of the roof clearly provides a function for daily life by providing an area for drying crops that is out of reach of animals (Figure 4.17).

Figure 4.13 Flat roofing system of the early Kinnauri vernacular
Kalpa village

Figure 4.14 Wooden plank roofs
Chitkul village

Figure 4.15 Steep slate roofs
Kamru village

Figure 4.16 Jointed roof form with "gap" in center
Roghi village

Figure 4.17 Jointed roof allows for drying and storage of crops
Kamru village

4. Ridgeline Adornments

The decorated ridgeline of Kinnauri vernacular houses is one of the most original and eye-catching traits in the traditional villages. The almost-vertical slate roof overlaps at its peak performing a functional role in place of a cap which stops water from entering (Figure 4.18). The overhanging portion of stone rises above the apex and often times has decorative carvings projecting beyond (Figure 4.19). This creates an ornamental silhouette reminiscent of the effort taken to decorate the ridgelines of the Hindu and Buddhist temples. The temples are often adorned with symbolic creatures said to offer protection against evil spirits (Figures 4.20a and b).

Figure 4.18 Overlap of slate on the ridge top
Kalpa village

Figure 4.19 Ridgeline adornments
Kalpa village

Figures 4.20a and b Temple ridgeline ornaments
Chitkul and Kalpa village

Surprisingly, most people interviewed were almost unaware of the domestic ornaments. When pressed, they answered that they are added for beauty. To explain what the forms or symbols represent, one person guessed that it might represent long life. Through visual interpretation, the ridgeline carvings resemble flowers or the Trident (Trishool), a religious symbol of Hindu Lord Shiva (Figures 4.21a and b). Several people interviewed agreed that it could be a flower or a trishool when asked directly. However, it proved difficult to determine any exact meaning or symbolism for these motifs.

The ridgeline adornments were determined to be a Kinnauri feature because of the limited geographic range of the phenomena and the decidedly decorative purpose. They are rarely seen, or present on such a range of structures (from large houses to simple sheds) in periphery regions. But in the Kalpa village region they are conspicuous, making them a signifier of the landscape. However, again, this feature is less common on newer construction.

Figures 4.21and b The Trishool or Trident of Hindu Lord Shiva
Decorative designs on the ridgeline echo the trishool of Lord Shiva.
Kalpa village

5 & 6. *Verandah Overhang and Verandah Window Bank*

Homes of the Western Himalaya commonly incorporate a larger, overhanging second story (Figure 4.22). This is known as the verandah. The design of a smaller base (house footprint or foundation) facilitates construction in steep terrain because it allows excavation of a smaller-sized, level building site. The small ground-level rooms provide enough space for storage and caring for livestock and the upper-level overhang provides crucial semi-protected outdoor workspace below (Figure 4.23, Figures 4.24a, b and c). The overhang has become deeper over the last several decades allowing for more protected area for domestic activities.

Figure 4.22 Kinnauri vernacular house with overhanging second story verandah
Roghi village

On the upper level living-space, ancient homes show profuse use of wood through panel or plank-based wall construction (Figures 4.25a and b). Windows are concentrated on the verandah wall, which provides the bulk of light and ventilation for the house. The other three walls are often completely void of openings (Figures 4.26a and b).

Figure 4.23 Ground floor rooms house livestock
Kalpa village

Figures 4.24a The verandah overhang provides semi-protected storage and work space.
Sangla village. Also see following page.

Figures 4.24b and c The verandah overhang provides semi-protected work space.
A couple in Kalpa village weave beneath their verandah. And apricots dry at a house in Telangi.

Figures 4.25a and b Ancient homes use profuse amounts of wood on the upper story verandah
Kalpa village

Figures 4.26a and b Verandah window wall
The images above show the front (verandah window wall, at top) and back of the same home.
Windows are generally concentrated on one wall. Kalpa village

However, influenced by climate, even verandah openings were kept small and light kept at a minimum. Eventually the incorporation of larger window openings with shutters allowed for more flexibility in ventilation and light while still keeping out the cold air (Figure 4.27). As a newer modification by the mid-20th century, glass began to appear with more regularity allowing for large walls (banks) of glass for verandahs (Figure 4.28). This is the most prominent style today in Kinnaur district. Often, decorative details are present on the wooden sashes used between windows.

Various verandah forms are widespread throughout the Western Himalaya. This particular variation in Kinnaur district was referred to as the "new Kinnauri style" by several homeowners. One homeowner called his house Kinnauri *because* it had many windows. It is evident that locals see this new interpretation of the verandah as an important part of the contemporary house. In interviews, several people noted that winters are less severe now; they are not as cold and come with less snow. Therefore, bigger windows are not the problem they once were. It was also offered that the increase in window openings was a reflection of reduced availability of wood, making shutters less feasible. All people who I asked directly in interviews confirmed that the verandah is a very important feature of the house. Chapter 6 discusses the verandah and its role in more detail.

Figure 4.27 Shutters in verandah openings
Telangi village

Figure 4.28 Verandah window bank
Kalpa village

7. *Carved Upper Story Wall Panel*

Kinnauras are known as skilled wood carvers and the product of their talent is visible throughout the region. Certain ancient houses have profuse carving on the wall panels that make up the second story (Figure 4.29)   Flowers, labyrinths, peacocks, and mythical creatures are the typical motifs (Figures 4.30a-d). The elaborate panel carvings are almost identical in design and content to the style of the Hindu temples in the Khash cultural region (Figures 4.31a-f). However, none of the people I interviewed drew a connection between the domestic panel carvings and the temples. It is seen as inauspicious to copy the temple and although some of the content seems similar in design to that on the temple, any questions of the content being religious in nature were contested in interviews. The carved panels of the temple courtyards represent a gift in gratitude to the gods from a family who had a prayer fulfilled (Prakashan 1985). Conversely, carvings on the house are historically used to show the skill and wealth of the homeowner. The carvings add beauty and their use and design is at the discretion of the homeowner and carpenter. These findings conflict with arguments made by Amos Rapoport (1997) who asserted that designs are seldom without cultural meaning or done

simply for the sake of appearance. But, all homeowners I interviewed held the position that the designs were purely for beautification.

Figure 4.29 Carved upper story wall panel
Sangla and Kamru villages
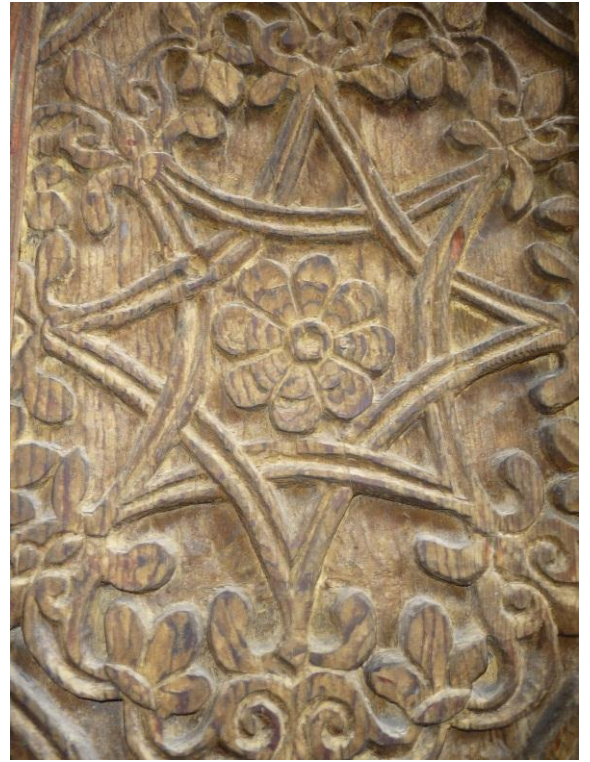
Figures 4.30a,b,c, and d Kinnauri wood carvings

Figures 4.31a-f Temple carvings (left) closely resemble motifs of the house (unpainted, right).

Figure 4.32 Ancient Kinnauri houses alongside modern counterparts
Kalpa village

Because of the endurance of historic buildings alongside new construction, carvings are still visible today as part of the landscape (Figure 4.32). They typically appear on older houses, with new applications becoming less common in the late 1990s. Several people I interviewed felt that carvings make the house 'more Kinnauri'. The carved panels are in higher concentration in Kinnaur because the Kinnauras are especially known for their wood carving skills. Carved wall panels are found only on occasion outside the periphery of Kinnaur. Very simple wooden walls with no carvings are more frequently seen. In the neighboring district of Shimla, it is common to see metal sheeting used below the windows where panel carvings would be located (Figure 4.33). This led me to question whether carvings were part of the architectural history. However, local residents did not recall seeing any carvings behind the sheeting on these homes. This enabled me to determine a geographic boundary for the carvings.

Figure 4.33 Metal verandah wall
Dashwani village, Shimla district

Today, the carved panel sits below the veranda window bank. A small wooden panel is also possible above the glass (Figure 4.34). A number of people still incorporate simplified versions of the original carving motifs but many more incorporate basic geometric carvings on the panels (Figures 4.35a,b, and c). The carved panels are a very special part of the Kinnauri vernacular landscape but are also very vulnerable to changes in tastes and priorities in regard to new modern materials and house forms. Carving comes at a high cost, requiring people to make deliberate decisions weighing heritage against basic necessities. For this reason 80 percent of the 18 people who spoke to this issue in interviewing believe that carving shows status and is for the well-off. It has always been associated with the temples and the houses of the king's men – the wealthy.

Figure 4.34 Window bank and carved panel
The carved panel is located below the window bank with space for additional carvings above windows.
Kalpa village

Figures 4.35a,b, and c Simplified versions of panel carvings

8. *Jallar: carved fascia trim*

Carved fascia or eaves trim, locally called *jallar,* wraps the roofline eave of the house with an interlocking floral design (Figure 4.36). It is used exclusively on pitched roof construction. However, today it is commonly seen separating floor levels. Like other ornamentation such as panel carvings, jallar was historically found only on temples and houses of the rich. It is a clear reflection of temple design transferring to domestic architecture (see Arreola 1988) with the design reflected almost identically (Figure 4.37). Again, common opinion insists that the carvings are distinct and copying the temple would be inauspicious.

Figure 4.36 Carved fascia trim locally known as *jallar*
House in Roghi village

Unlike the wall panels, jallar has grown in popularity over the last several decades. Now, this carved trim-work is the most commonly seen central quality of the Kinnauri vernacular house. Like the glass window bank, it is a later interpretation. Domestic use of jallar began approximately 60 years ago. Several people stated that long ago, average people were prohibited from adding jallar to their house. Because it was so

similar to the temples, you had to receive permission and have some degree of social standing in the community. However, interviews suggest that over time the religious rules relaxed. People are now less strict about religious adherence and jallar can be used by anyone.

Figure 4.37 *Jallar* on the temple is almost identical to the house
Jallar detail on tower temple of Kamru village

Some people who I interviewed felt that jallar originated in Kinnaur and is only found in Kinnaur. Others disagreed, arguing that although it is seen less frequently, it is still found in neighboring districts such as Kullu and Shimla. However, most felt that the Kinnauri design was slightly different from other places, making it distinct. The consensus is that jallar adds beauty, it is the finishing touch to a house, and yes, it makes it more Kinnauri. People are quick to say that jallar represents the culture, and they are trying to keep the house Kinnauri – so they use it. Many people have applied jallar well after the completion of the house, believing that no house is complete or good-looking

without it. One man called it the hat to the house, without which it is not finished or beautiful. Several people offered the word compulsory. "If you want a beautiful house you must have jallar, just like a beautiful temple."

Jallar is a very personal touch to a house. Some examples are intricately detailed while others are very simple and obviously made by a novice (Figures 4.38a-d). Even if they do not have much money to make it very fancy, they still feel compelled to add it in their own way, even in metal (Figures 4.39a-c). This shows the attachment that people have to the use of jallar. It shows personalization, but since it is repeated as a cultural norm, it also acts as a marker of identity – a cultural institution.
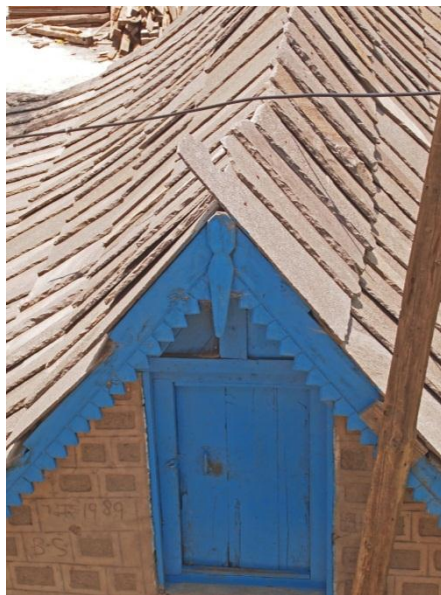
Figures 4.38a-d *Jallar* **trim work varies from ornate to very simple showing its handmade quality**

Figures 4.39a-c *Jallar* **fabricated in metal**

The Idealized Kinnauri House

The Kinnauri vernacular house incorporates these eight iconic features in varying combinations, but it is the presence of wood carving that distinguishes the district from others. Domestic carvings play an important role in the ensemble of the eight features noted above. Carvings are found on the doors, window and door trim, jallar, wall panels, ridgeline adornments, window sashes, and often on the stones and logs that are used as courses in Kath Kuni (Figures 4.40a-d). This prompted me to investigate why carving emerged as a distinguishing vernacular trait of this region.

Many of the carving motifs found in Kinnaur, such as the flower, vine, sun, peacock, and geometric "weaving" reminiscent of local shawl designs, are typical Indian themes that are found in surrounding as well as distant regions (Figures 4.41a-h). Today the designs are simplified into geometric patterns or freestanding floral motifs rather than

elaborate floral labyrinths, but the trait continues for those who have the resources to hire a craftsman (Figures 4.42a and b). In the distant regions, not associated with the Kinnauri carving heritage, the motifs are painted, differentiating the characteristic of decoration between places.

Figures 4.40a-d Stone carvings on Kath Kuni wall courses

In investigating the Kinnauri carving heritage, one ancient house style surfaced as an anomaly and stands out among the general vernacular. It is full of carving and dripping with detail from top to bottom (Figures 4.43a-c). All of the characteristic Kinnauri features are incorporated in excess onto this one house style, making it an example of an "idealized model", which can be used to evaluate and define ensembles (Antrop 1997; see also Rapoport 1990). This house type is seen in only the occasional village. Examples were found in Roghi, Kilba, and Sanlga, all of which are in Kinnaur district, and in Dashwani which lies just over the border in Shimla district (also part of ancient

Figures 4.41a-h Kinnauri carving and Rajasthani and Gujarati paintings
The similarities between content of Kinnauri carvings and western desert paintings in
Rajasthan show that the images used are not unique to Kinnaur.

Figures 4.42a and b Elaborately carved panels compared to later versions with smaller and simpler geometric designs.

Figures 4.43a-c The Idealized Kinnauri House
The elaborately carved houses of Kilba, Roghi, and Dashwani villages

Figure 4.44 Kalpa's version of the idealized Kinnauri house

Bashahar). All villages are in the Khash cultural region. I asked many people during my landscape analysis in periphery regions if they knew of houses like these examples, and no additional cases were offered. However, I do not believe this is an exhaustive list of locations with the idealized Kinnauri model. Kalpa village possesses a similar model but larger in scale and with less carving, lacking jallar (Figure 4.44). The house type is said to be several centuries old and of nobility, or a person who lived locally but worked for the king of Bashahar. This person of means had the ultimate iconic house.

Interviews suggest that because the nobleman was of such high status, his house emulated the temple form with its signature carvings. The tradition of Kinnaura people as skilled woodcraftsmen prompted prolific architectural carving, first in temple construction. The trait then spread to the house of the nobleman. Eventually, in the late 1800s, a growing economy allowed local residents to hire specialty craftsmen to incorporate carvings on their houses as well, emulating the idealized house. This resulted in the differentiation of status through carvings. Because of the presence of this house

type, and the association with royalty, all people interviewed said that the carvings on the idealized Kinnauri house represent status (also see Sharma 2006).

It is for this reason that people contend that architectural carving has always been for the wealthy families. Although many families felt that carving did in fact add to the identity of the Kinnauri vernacular house, many felt that it has always been for a certain demographic only (the wealthy), and therefore, was not required for the house to be Kinnauri.

I contend that the presence of this house played a significant role in the adoption of domestic carving in Kinnaur district. Because this nobleman's house is a localized phenomenon, the practice of carving decorative wall panels and the use of jallar on the home is centered in Kinnaur. Fewer occurrences are evident in the periphery regions of Kinnaur. The idealized Kinnauri vernacular house illustrates an example of people emulating the wealthy in a regionalized vernacular style.

The Common Vernacular Ensemble

The common Kinnauri vernacular house incorporates a much smaller amount of carving compared to the idealized model, if any at all. However, interviews with homeowners and builders revealed that the historic features of the Kinnauri house are still important today and the house is an important part of the culture. These historic features include the Kath Kuni wall construction and small windows and doors. These features are what people named most often through open-ended questioning as the features that make a house Kinnauri. Ironically, none of these traits are part of today's contemporary vernacular house in Kinnaur – meaning that although visible on the landscape, people no longer incorporate these features into new construction.

The labor and material intensive construction method of Kath Kuni is increasingly rare if not absent from new construction. Furthermore, small windows and doors are no longer chosen due to the availability of glass and evolving expectations of the living environment. These new expectations include larger windows, fresh air, and sunlight. Some examples of this type of vernacular house date back 500 years and of course people's tastes and preferences have evolved. The features of Kath Kuni and small

openings, along with the slate roof and wooden upper story, are the iconic features of what I refer to as the *ancient* Kinnauri vernacular house (Figure 4.45).

Figure 4.45 The Ancient Kinnauri vernacular house
Kath Kuni wall construction with small windows and doors on the ground floor, profuse use of wood on the upper level verandah, and the split-form slate roof represent the *ancient* Kinnauri vernacular house style. Kalpa village

My landscape analysis determined a separate set of architectural features (part of the eight iconic features) that make the Kinnauri vernacular landscape distinct from other regions today. Visual landscape analysis provided the initial information and determined several features that were common to the Kinnauri vernacular housescape. Interviews then helped determine whether these features are meaningful within the Kinnauri culture. Through this method three features presented themselves as the most common and distinctive Kinnauri vernacular traits today. They are:

1. the window bank – with and without decorative sash
2. the wall panel – especially when carved
3. and the jallar (carved fascia trim)

These three features contribute significantly to the house which I refer to as the *classic* Kinnauri vernacular house (Figure 4.46). Visually, it has a strong regional identity that marks the present day and reflects the vernacular heritage. A classic house may very well have Kath Kuni, but the incorporation of a deeper verandah and the window bank help the house transition into a more recent time period. This housescape began to appear 50 years ago and is not considered a modern or international style. To keep these differences clear I have separated the houses into the two categories, ancient and classic.

Figure 4.46 The classic Kinnauri vernacular house
The deep verandah overhang supported by posts, the window bank, jallar, and the wall panels comprise the characteristics of the classic Kinnauri vernacular house. Sangla village

This ensemble of features was chosen because it is found in high concentration and repetition in Kinnaur compared to other regions. Additionally, in Kinnaur, decorative aspects of the ensemble are presented in a more refined manner keeping with the carving heritage for which the Kinnauras are known. Daniel Arreola and James Curtis (1993) applied a similar concept referring to landscape signatures in Mexican border cities when they cited enclosure and exterior color as the most basic cultural

features. They tagged these signatures as fundamental expressions of the "Mexicanness" of the border-city townscape, implying that those two signatures were more important than others in conveying identity.

The three select essential qualities show the most resilience and when set together, make the house distinct from neighboring regions. I contend that the common pattern of significant features, used in specific and meaningful combinations, creates an ensemble distinct to the region. Again, these components are seen to varying degrees throughout the Himalaya, but a high occurrence of the ensemble is uncommon elsewhere. Interviews validate that these features are meaningful, but only through direct questioning. People did not offer these features in response to open ended questions querying the Kinnauri style. This exposes the paradox between what local people view as Kinnauri (focused on the ancient vernacular house), and what they actually perpetuate as Kinnauri in their contemporary landscape (the classic ensemble) (Figure 4.47, Figure 4.48, Figure 4.49, Figures 4.50a and b). The classic Kinnauri house sits idly by, somewhat unnoticed.

The Taken for Granted Landscape

When asked if the three specific traits were important parts of the Kinnauri house, everyone answered affirmatively. They did not feel that each house had to have every trait – such as carving. But, they felt that these features were typical of the Kinnauri culture. They expressed that the carvings make it more Kinnauri. They thought the verandah window bank is very important for the house and lifestyle. And they believed that jallar makes the house complete. Interestingly, during open-ended questions, none of the people I interviewed listed these traits instinctively in answering which parts of the house are typically Kinnauri.

Beyond the Kath Kuni wall and small doors and windows, the features of the Kinnauri house seem to be an unconscious part of the contemporary vernacular landscape – so common that they are overlooked (Arreola 1981; also see Lewis 1979a). Numerous scholars remind us that much of the cultural landscape is unconscious and taken for granted, and this by no means diminishes its meaning (Relph 1976, 1985; Lewis 1979a;
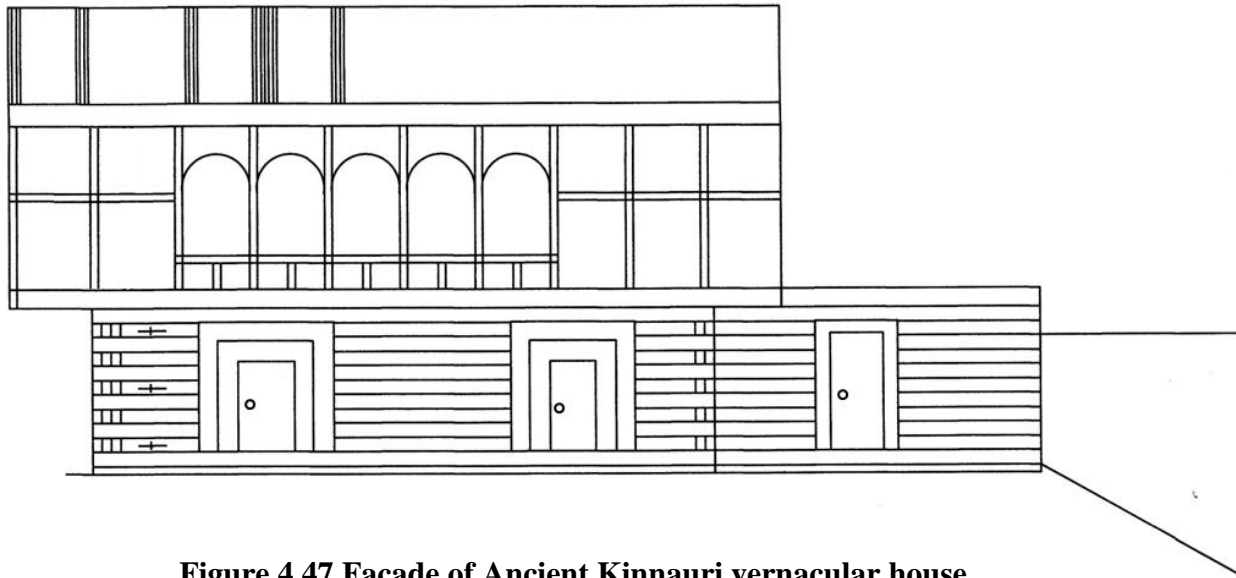
Figure 4.47 Façade of Ancient Kinnauri vernacular house
This measured house had a Kath Kuni lower level, small doors and windows, and a large wooden verandah with minimal window openings. It also had a metal roof constructed over the ancient flat roofing system. Kalpa village. By author.
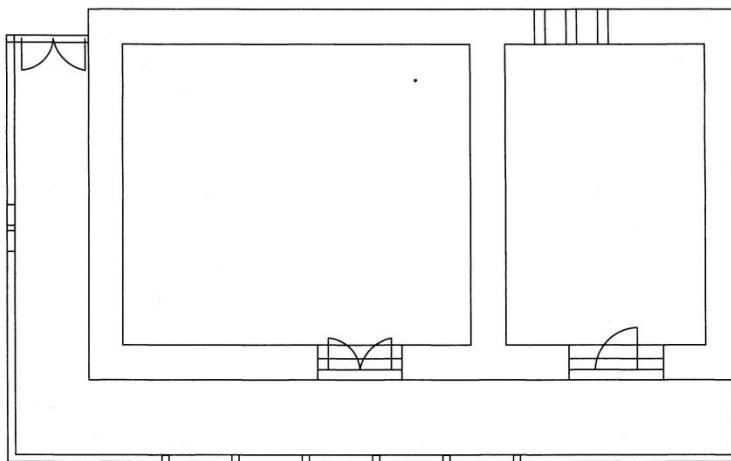
Figure 4.48 Upper level floor plan of Ancient Kinnauri vernacular house
The floor plan shows how the verandah protects the interior rooms. The kitchen is the room to the right. The upper level rooms are built directly above the lower level and reached by way of a steep exterior stair to the back of the verandah (at door). By author.
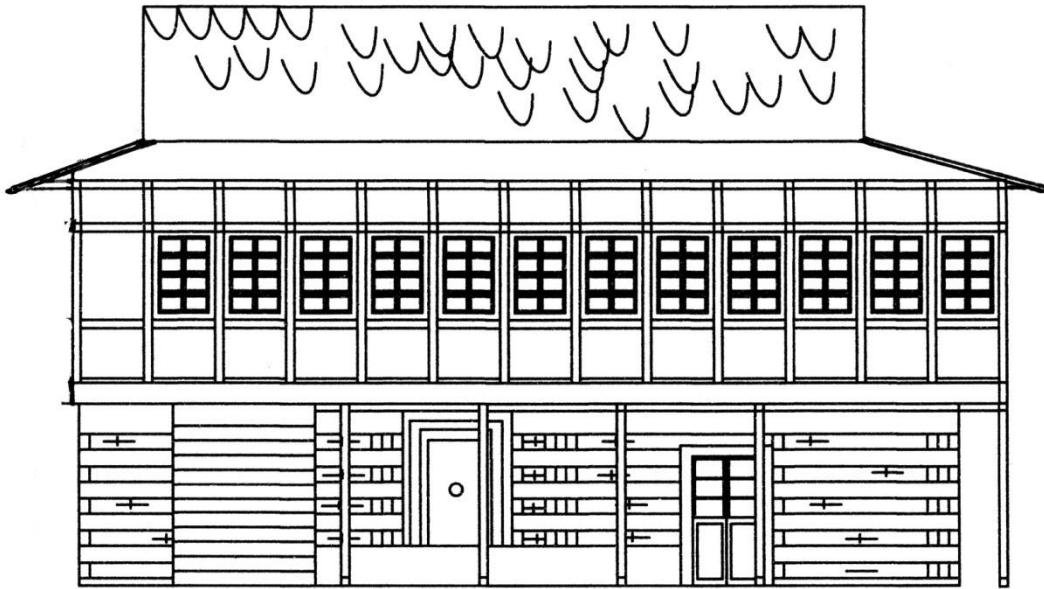
Figure 4.49 Façade of Classic Kinnauri vernacular house
The classic model has a deeper verandah supported by posts, increased use of glass windows on the verandah, and an obvious wall panel below the windows. This house had a slate roof and Kath Kuni wall construction. Kalpa village. By author.
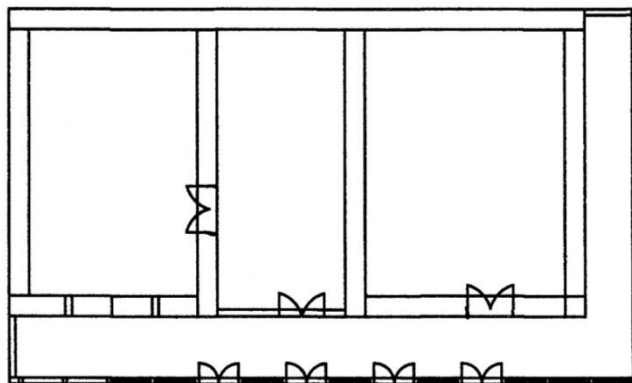
Figures 4.50a and b Floor plans of the Classic Kinnauri vernacular house
The upper floor plan (top) sits directly on lower walls. The kitchen is located on the right. The upper level is reached by way of a steep interior staircase. By author.
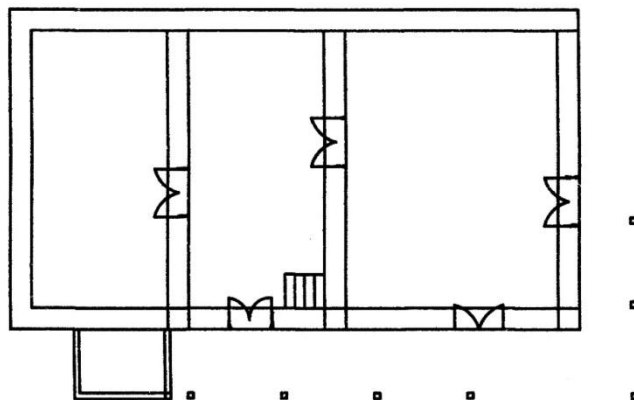
Meinig 1979a; Arreola 1988; Jackson 1985; Seamon 1980, 2000; Duncan and Duncan 2001; Bronner 2006). People "are only partly conscious of the reasons why they do what they do" (Duncan and Duncan 2001, 401). Edward Hall (1966) referred to "the dance of life" in which people interact in cultural contexts with behavior that requires little or no discussion (see Heath 2001). David Seamon (1980, 149) explained that we have an "unnoticed and unquestioned acceptance of the things and experiences of daily living". This is called the natural attitude and becomes the "taken for granted … context of everyday life" (149). People interact within this world daily without making it an object of conscious attention. This unconscious acceptance through the natural attitude makes it very difficult to articulate the meaning and significance of our environment.

Edward Relph (1976, 132) called the everyday landscape "so completely taken for granted" that its features become "ordinary and unselfconsciously accepted backgrounds." This is exactly how the Kinnauras react to their classic – newer yet by all means long-standing – vernacular traditions. They do not yet associate them with cultural norms. But, perhaps in the future they will. They are now merely part of the background of daily existence. Nevertheless, Relph reminded us that the relationship people have with a place is no less important because they seem unaware of the deep connection. In Kinnaur, the repeated pattern of use within defined parameters speaks to the value of select features and their role as cultural institutions.

Because remote societies tend to be highly tradition oriented, and landscape taste is transmitted from generation to generation, certain forms become taken for granted (Rapoport 1969, Appleton 1990). Yet at the same time they strongly resist change (Rapoport 1969). The longevity or "permanence" (Arreola 1988; Blake and Smith 2000) of a landscape feature imprints future generations and encourages increased endurance. This can take place even if the current generation doesn't entirely understand its reasons for construction. It is "faith in a tradition that requires no special explanation" (Arreola 1988, 315). The meanings attached to the individual elements "come from a distant past that is largely unrecognized by the current generation" (Arreola 1988, 315).

David Lowenthal and Hugh Prince (1965) described English landscape tastes as a love for the old and a value for antiqueness without really understanding why. They depicted a faithful adherence to tradition. This was similarly noted by James Duncan's

(1973) study in which neighborhood residents subconsciously perpetuated class distinction through landscape taste. In Arreola's (1988) research on Mexican housescapes, people had difficulty explaining why residents maintained the defining landscape signatures. He believed that it correlated with status but stated that it could just as much relate to the staying power of a historic tradition because this can be as important as any deliberate reason. He emphasized that the uncertainty of meaning and lack of a practical explanation points to an institutionalized landscape taste. Arreola argued that tradition may be as valid as any other reason for continuing a trait. In all examples, the common landscape tastes are rarely questioned by residents and are often explained as tradition or historic practice.

I assert that the people of Kinnaur have grown largely accustomed to the surrounding details of their vernacular landscape and have lost the understanding of origins and meanings. There is a disconnection between the meaning behind folk culture and the "lived-in-world" due to a lacuna in the indigenous knowledge (Thakur 2012, 157). However, the elements that contribute to spirit of place are no less meaningful. I argue that even with change, a cultural institution can continue to foster a sense of place. Even with modification, traditions are "preserved in the shared memories of the inhabitants and conveyed from generation to the next through example and action rather than education" (Relph 1981, 172). Often times the most basic cultural features are the most significant indicators of cultural change (Arreola and Curtis 1993) because they show changes to deeply seated traditions. It is precisely this layering over time, making visible vernacular traits which span generations, that contributes to the "patina of place" and sets one place apart from another (Heath 2001). Identifying the iconic features of the Kinnauri house, which have been perpetuated over generations, provides a foundation from which to analyze changes to the landscape, place, and society.

Chapter 5 - Agents of Change in the Kinnauri Vernacular Landscape

With an understanding of the features that characterize the Kinnauri vernacular house, a discussion can begin about changes to the house and the cultural landscape. This chapter addresses the question: what processes and influences have led to changes in the ornamental and distinctive features of the vernacular house?

"House form is not simply the result of physical forces or any single causal factor, but is the consequence of a whole range of socio cultural factors" (Rapoport 1969, 47). Therefore, the house must be studied in context with society. Pierce Lewis (1979a) argued that studying a building isolated from its context removes the evidence which explains why it looks the way it does and what this tells us about the culture. Changes within the culture must be a substantial component of research investigating change in the vernacular house. Major change on the landscape and to the house reflects changes in the culture and the social structure (Lewis 1979a; Glassie 1990). Joshua Meyrowtiz (1985, 307) elaborated that "change is always too complex to attribute to a single cause and too diverse to reduce to a single process." Therefore, without attributing Kinnauri vernacular landscape change to any one factor, I highlight certain processes that are highly influential on particular aspects of the built environment. I argue that road construction, a changing market economy, and restrictive forest management policies have had the greatest influence on changes to the traditional Kinnauri vernacular landscape.

Road Networks and the Accessibility of Building Materials

Geographic Isolation

Himachal Pradesh is a sparsely populated and remotely situated state. Kinnaur district is one of its more isolated districts. Scholars agree that mountain passes, distance from roads, and extreme climates greatly contribute to the longevity of vernacular landscapes and often foster a respect for tradition and a strong sense of group identity

(Hostetler 1964; Berreman 1970; Meyrowitz 1985; Bourdier and AlSayyad 1989; Oliver 1989; Norberg-Hodge 1991; Abel 1997; Kleinert 1998; Singh 1998; Smith 1999, 2002; Shankar 2005; Edwards 2008). Remote communities are often tightly knit and highly interdependent, creating strong bonds and support systems for residents (Oliver 1989). Isolation "insulates" residents and "reinforces their dependence on what they know and have inherited" (Oliver 1989, 56). John Hostetler (1964) explained that cultural symbols, in his example the Amish dress and cap, function at their best in these physically isolated communities. As is the case in Kinnaur, an aspect of material culture is often observable, such as textiles or headwear that identifies a member as part of the region or community. As the outside world encroaches, individualization and "disorganization of culture" follows, leading to potential abandonment of traditions.

Likewise the strongest examples of vernacular dwellings are found in the least accessible locations (Bourdier and AlSayyad 1989; Norberg-Hodge 1991; Lewcock 1997; Rapoport 1997; Smith 1999; Shankar 2005; Edwards 2008). It can be reasoned that continuity of tradition is fortified because "the great bland placeless world has not yet elbowed its way in" (Lewis 1979b, 46). Isolated places sustain the "truly indigenous examples" and unbroken traditions of architecture because "a narrow range of material choices determine[s] the architectural language" (Abel 1997, 163; Dasgupta 2008, 327). Contact with other cultures, whether by conquest, pilgrimage, or trade is the key to cultural change (Abel 1997; see also Smith 2002). Traditional housing practices are vulnerable to the increased access to manufactured building materials that come with road construction (Dasgupta 2008; Harrison 1998; Kleinert 1998; Rawat and Sharma 1997). Therefore, limited exposure to modernized or outside influences fosters a continuation of the known ways. However, very few places are without outside influence today.

Until recently, personal interaction was the primary means of experiencing different societies and behaviors (Meyrowitz 1985). The arrival of new roads, however, makes people less bound to place, and exposures them to different technologies and images. J.B. Jackson (1980, 122) called the road "the most powerful force for the destruction or creation of landscapes." He said that the road alters how people perceive the world. It is a common opinion that transportation development is the key to

modernization and economic development (de Grassi 2005; Gruber 1986; Naidu 1991; Rawat and Sharma 1997). Modern transportation reduces the isolation that safeguards traditional practices and allows traditional populations to thrive (Smith 1999, 2002).

In Tibet, reduction of isolation through transportation development transformed the landscape and people leading to the "cultural dilution" of one the world's most remote populations (Allen 2009, 23). Several studies in the Indian Himalaya, Nepal, and Tibet show that houses and settlements have changed little in the remote areas. Houses maintained vernacular styles as long as there is no road to transport building material. However along the main trade and trekking routes, and close to transportation, landscape change has been remarkable. A notable absence of modern styles is obvious the farther one travels from the road (Rawat and Sharma 1997; Kleinart 1998; Allan 1989).

This is certainly the case outside of Asia as well. Geographer Jeffrey Smith (1999) noted that in the "Hispano homeland" of northern New Mexico, areas with greater access to transportation showed a much greater sense of change. He specifically noted geographic isolation as one of the contributing factors leading to the development of a distinctive Hispano culture. The outcome of increased road networks in many places is the tendency towards newly available, lower cost, lower maintenance materials, such as concrete and metal roofing in place of the labor intensive traditional practices such as adobe construction or timber harvesting (Dasgupta 2008; Dayarante 2008). In one Guatemalan study for example, increased use of tile, fiberglass, concrete, brick, and wooden planks, replaced thatch and bamboo (Maluccio 2005). These changes were not prompted primarily by an increase in wealth, but because of increased availability of materials, making the prices competitive with locally harvested materials. These studies highlight the circumstances in Kinnaur where manufactured market products are more affordable than traditionally harvested materials, particularly if hired labor is calculated into the equation for gathering, finishing, and construction.

Today, the Pahari rural areas continue to be relatively detached from popular culture and global business connections that are more commonplace in the urban realms of India. Generally, Indians take pride in the traditions of the country and the high numbers of tribal groups. However this is at odds with the country's overarching desires to modernize. Throughout history, government development schemes in India focused

intensively on increasing access to rural communities to spur economic development. This was accomplished mainly through the construction of roads. Pressured by the strongly progressive national development policy, it is clear that a desire to maintain traditional practices is affronted by Indians who favor government policies of extensive rural development (Thakur 1997). The progressive road development campaign has ultimately impacted the economy and livelihood of the Kinnaura.

Promoting access to these remote regions is viewed as the first step in their economic and social development – as well as to their potential demise (Kleinert 1998; Smith 2002). Authors speak of Kinnaur district as 'backward', not only in comparison to all of India, but also for remote Himachal (Chib 1984). 'Backwardness' is attributed to the unwillingness of tribal groups to innovate and accept progress (Chib 1984), illustrating contention towards the tribal groups who continue to practice traditional lifestyles. When traditional practices give way to "modern methods of living", development minded people see this as an "achievement" in itself (Naidu 1991, 93), regardless of the potential detriment to certain aspects of traditional practices. This facet of development – modernization at all costs – threatens the balance of traditional practices and reflects critiques earlier outlined that vernacular landscapes suggests inferiority and are expendable in the name of progress (Jackson 1997; Asquith and Vellinga 2006).

Increasing Connectivity

The first road that passed through Kinnaur district was known as the Hindustan-Tibet road and was built between 1854 – 1858 (Bajpai 1984) (Figure 5.1). However, it was never finished due to the completion of the Sikkim route connecting India to Tibet in the Eastern Himalaya. The Hindustan-Tibet road continued only as a bridle path which went high up into the hills and connected many villages (Bajpai 1984).

The age old isolation of Kinnaur district started coming to an end with Indian independence. Relations between India and China became strained in 1959 during the Tibetan uprising against the Chinese, after which Himachal Pradesh sheltered the Dalai Lama in exile. In 1961 the Ministry of Transport and Ministry of Defense began the

National Highway 22 (Bajpai 1981). However, to avoid snow at higher elevations, this highway skirted close to the Setluj River, bypassing villages which were generally located up in the hills (Figure 5.2). The highway was constructed to facilitate military movement in border regions, therefore, linking villages and supporting improved communications between local populations was not an objective, but an eventual byproduct.
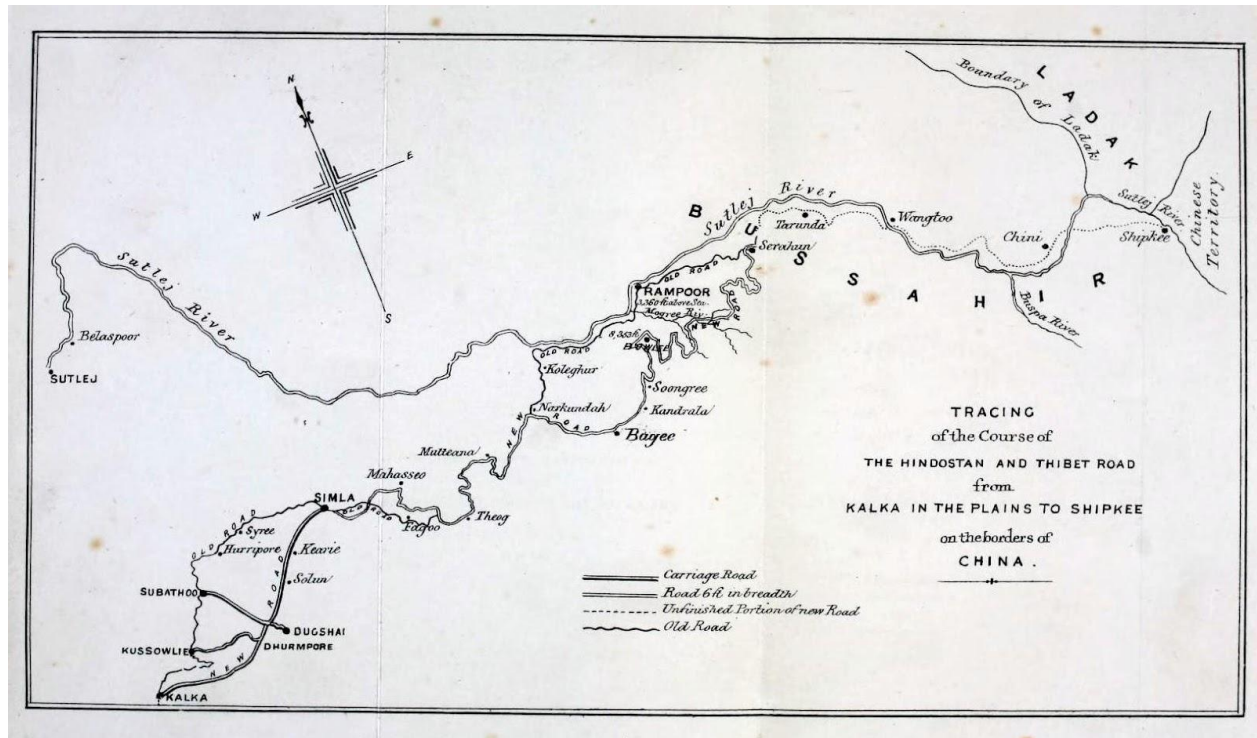
Figure 5.1 Hindustan Tibet Road
Open Source: SearchKashmir.org

After subsequent Chinese aggressions into the Himalayas, Himachal's trade with Tibet diminished. In 1962 the India-China eight-year trade agreement expired. This led to closure of trade with Tibet and a reassessment of careers for many long distance Kinnaura traders. Due to the increasing strategic importance of the border region, district level headquarters were establishment in Kalpa village (then called Chini). Kalpa and the newly formed town of Reckong Peo subsequently became the hub of development activities for Kinnaur district (Bajpai 1981). This provided an increasing opportunity for construction and government jobs that kept men close to home.

Figure 5.2 Map of Kinnaur showing Highway 22
Highway 22, shown in yellow, cuts across Kinnaur district in the Setluj River valley.
Map courtesy of Indian Map Service, Jodhpur, Rajasthan, India.

Prior to 1960, Kinnaur had been a prized buffer region, not easily penetrated from Tibet and China, and basically of little interest to Indian officials. After 1960, it became a strategic hot spot (Chib 1984). The British government before independence greatly improved the Hindustan-Tibet Road. Although still too narrow for large vehicles, they constructed a number of bridges increasing accessibility to villages (Tobdan 2008). This was then coupled with the new Highway 22 linkage. The people, with improved road

networks and no longer so isolated, gradually found more products in the markets brought up from the core of India. Access to new products continues to expand, and the traditional animal husbandry livelihood continues to evolve, as does the cultural landscape and the vernacular house.

From my interviews, I learned that many people identified the road as the most significant change to town. The old Hindustan-Tibet road came through the villages of Kothi and Kalpa. But until the 1960s it was only for donkeys. Road conditions eventually improved over the years. A woman, approximately 50 years old, described how as a young girl, she and her friends ran up to the first jeep they saw, ready to feed it grass, not understanding that it wasn't an animal. "Now it is a big road" and children have schools that are closer. A couple families noted that the road brought new materials and that this directly affected the house style, making them more "modern".

With the increase in road networks over the last several decades, residents in the remote regions of Himachal Pradesh are able to buy products previously unavailable in the market. A limited choice in modern materials such as metal sheet roofing, bagged cement, and concrete block have become more available. Based on my interviews, new types of construction materials were first available in tandem with road construction. However, the new materials were primarily destined for government procurement. Prices remained high until the middle to late 1980s, deterring most locals from incorporating concrete or metal into their houses. At that time however, an improved standard of living brought about by government jobs and an expanding cash crop market (made possible through improved road networks), began to influence changes in the style of the vernacular landscape.

Changing Livelihoods

A Growing Cash Crop Industry

Although scholars have seemingly avoided economic factors in the study of landscape, they might be the most significant determinates behind the choices people make in modifying their landscape (Riley 1989; see also Spencer 1945). "[A]gricultural economics [including] land use, crop systems, and animal husbandry" are among the most important traits for study when investigating the changing landscape (Fuson 1964,

190). Indian architect Pratyush Shankar (2005, 2006) considered economy and livelihood to be the main factor influencing house type. Indian livelihoods are traditionally dependent on agriculture, with significant aspects of the work carried out on the home property. This requires space for storing tools, animals, fodder, and processing grains (Figures 5.3a-d, Figures 5.4a-c). The symbiotic housescape of the Himalaya (which includes the space surrounding the house), as illustrated by Shankar, reflects "the basic matrix of form and space [that is molded] to the needs of the user and the dynamics of place" (Heath 2001, 181). This is evident in Kinnaur where the housescape seems designed with the sole purpose of supporting the agricultural lifestyle.

Kinnaur district's unique combination of climate, topography, and water resources made it particularly suitable to take advantage of India's growing demand for orchard crops. The improved road connection provided the access to larger markets. Government road building campaigns in a large part of Himachal Pradesh have been credited as a major factor in the increase of cash crop cultivation, horticulture, and other non-farm modes of employment (Dasgupta 2008). New transportation networks not only provide increased commercial options in the market, but the decreased time to market brought by new roads facilitates cash crop economies that could not have existed in the past (see also Kamal and Nasir 1998). Without the ability to transport products to a distant market quickly and undamaged, a viable cash crop market would be untenable. This is illustrated in Pakistan where the Karakorum Highway has spurred a cash crop industry that is markedly absent in villages farther removed from the transportation route (Kamal and Nasir 1998).

Other studies along Pakistan's Karakorum Highway determined that most sustainable mixed-crop agricultural practices had been abandoned and trends moved to monocropping and cash crops (Allan 1989). Changes in the economy and improved access to roads allowed residents to purchase items from the market which they once produced for themselves. Vegetables and fertilizer are now easily purchased at the market and sustainable practices of intercropping, multi-cropping, and composting are waning (see also Kamal and Nasir 1998; Singh 1998). Once-fertile farmland has been stripped of its nutrient levels because of intensified chemical monoculture aimed at a growing export market (Kamal and Nasir 1998; Singh 1998). Similar circumstances are

Figures 5.3a-d The Indian Housescape
Agriculture is an important part of the livelihood in India.
Storage of food and animal fodder in a prominent consideration.
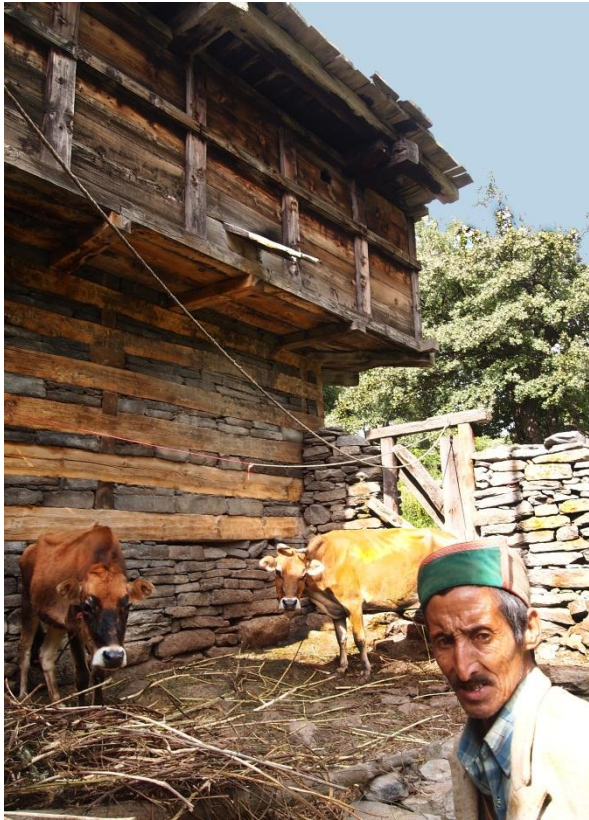
Figures 5.4a-c Animals are a conspicuous part of the housescape
Kalpa village

evident in Kinnaur where farmers employ chemical fertilizers and abandon long-standing subsistence plots in favor of monocropping and market dependency (Cranney 2001).

Land privatization has made herding and feeding animals more difficult. This is worsened by the strained relationship with China which provided additional pasture and markets for the livestock. Cash crop farming along with growth in government sector jobs has offered new opportunities for employment. Consequently, the animal husbandry tradition of Himachal has declined over the years and has been supplanted by the growing horticulture industry. Livestock are needed less than before as milk and wool become abundant in the market. This has been the most influential factor in the change of livelihoods which has ultimately prompted change in the landscape and house.

The typical small-scale nature of traditional agriculture in the Himalaya allows it to fit seamlessly into the domestic housescape. The growth of cash crop farming in Himachal, primarily of orchard crops such as apples, apricots and almonds, has transitioned the Kinnauri people away from a dependence on cattle (Figures 5.5a and b). Orchard horticulture is less reliant on plowing and soil fertilizer, both of which are provided by cattle. The number of livestock owned has decreased and the house has reflected this change in economy and lifestyle. Frequently a cow is still kept for milk, fertilizer, and a small amount of plowing in secondary subsistence plots. However, fewer cattle are needed as people move away from multi crop subsistence farming, and fewer livestock (goats and sheep) are herded as a means of income. Eventually the abandonment of livestock-focused livelihoods resulted in changes in house form and space use that historically reflected these needs.

Figures 5.5a and b Apricots and apples growing in Kalpa in small private fields

Forestry Policy and Material Restrictions

India was one of the first countries in the world to follow *scientific management* of its forests. This includes both conservation and commercial management (Oostheok 2007). Forest policies began when the British took over forest management in 1864 when the Rajas leased the forest to them for 50 yrs. Soon after establishment and forestry training in Europe, the Department of Forestry implemented a commercial management system of fast growing, monoculture plantations, and in 1877, the forest department began conservancy tactics (Bajpai 1984).

In mountainous Himachal Pradesh, timber harvesting has been considered throughout history as a tribal right for all landowners. However, the Forestry Act of 1878 put in motion prohibitions on local use of forests, restricting historic tribal rights to the forest and driving a wedge between locals and forest management (Cranney 2001; Oostheok 2007; Sharma 2011). Laws allowed the British government to make all decisions about forest use, taking control away from the traditional collective management of forests by locals.

After Indian independence from Britain, aided by improved transportation networks, forests and forest products became a valuable source of income for Himachal's government. Income from forestry goes to the government's Department of Forestry which controls 97 percent (and owns 68 percent) of the forests in Himachal (Cranney 2001). Now, forests are a major target for the growing development projects of the region which is leading to large scale use of timber reserves (Cranney 2001).

Personal wood harvesting for small rural communities is not the direct cause of large-scale deforestation (Allen 2009). In spite of this fact, wood harvesting restrictions were put in place in all regions of the Indian Himalaya with the inception of the Department of Forestry. Although British rule enacted forest conservation early on, limitations on timber access were not severely enforced until one hundred years later. Even during these early days, very little deterrence existed to actually impact or limit local access to timber. Populations and impacts simply did not call for it. Therefore government manpower had not been allocated for enforcement (Sharma 2011). People only needed to ask for permission, and up to ten trees a year could be harvested per family (Singh 2011). Beginning in 1980, enhanced government restrictions were placed

on tribal forest rights limiting access to timber for fuel and construction. This was called the Forest Conservation Act and was implemented nationwide. During the 1980s, laws permitted harvesting one tree per household, once every five years (Dasgupta 2008; Sharma 2011; Singh 2011). The 1988 National Forest Policy pointedly linked local timber rights to the discretion of the Department in regard to the carrying capacity of the forests (Forest Department H.P. 2005). The new regulations put added difficulty on acquiring timber and eroded social bonds of community forest management. This led to the illegal sale of wood and encroachment on forests for habitation and farming. The new policies ushered in conflict and deforestation as a village-centric view was replaced with individualistic economic goals (Cranney 2001).

In reality restrictions were still relatively poorly enforced during the early decades and one family discussed receiving 5 trees every year for several years in the 1980s at a cost of less than .05 US cents each (1-2 rupee per tree). Some families laughed at how they would repeatedly go to the forest department to request a permit using a different family member each year rather than waiting for five years to pass. Thus during the 1980s trees were still quite accessible for the Kinnauras for the construction of their homes. Yet, one elderly man who built his house in the 1980s said he saved up his allotments – "people were honest back then" he said.

Starting in the later 1990s enforcement of illegal timber harvesting tightened which pushed many families to consider alternative building materials. Restrictions continued to increase along with enforcement by government forestry agents, and tree prices went up to .22 US cents each (10 rupee). Residents even needed permission to harvest trees on their private land and still had to conform to the allotment allowance (Sharma 2011). Additionally, slate and stone, important components of the roof and first floor construction, are equally monitored by the forest service due to the possibilities of erosion brought on by stone harvesting (Dasgupta 2008; Sharma 2011). The timber allotment plan continued to allow each family to apply for one tree, once every five years. But the bolstered enforcement in following paperwork procedures prompted families to abide by the rules and save trees for many years to build a wooden home. Several families claimed to have saved permitted allotments of wood and stone for 10

years to build their home. One family saved for 15 years, returning three times on the 5-year cycle for their tree allotment.

In addition to conservation, the government forest department embraced monocropping of plantation trees. Cash crops, expanding markets for plantation trees, horticulture, and market animal operations have expanded land privatization. It cannot be over-emphasized the amount to which mountain people depend on the forest for their daily needs including fuel wood, fodder, building materials, medicinal herbs, wild edible plants, and water (Cranney 2001) (Figures 5.6a-d). The forest is the single most important factor in the daily work-life in Himachal because it affects every aspect of life, every single day. Clear cutting of bio-diverse forests for commercial timber plantations has displaced the land traditionally used for the day-to-day survival of families.

Figures 5.6a-d Forest products
People depend on the forest for their daily needs of wood, animal fodder, and food products.

The Department of Forestry began the plantation of deodar and *chilgoza* pines in select regions because of their market value as timber. It also established eucalyptus plantations which were ultimately banned due to the ill effects that they had on the soil and grasses, and their intense need for water (Cranney 2001). However, older eucalyptus stands still abound, degrading the soil and serving little use for local needs. The chilgoza pine is native to the Himalaya and has been prized for many generations for its high value nut, which was used for early trade (Cranney 2001). As a naturally occurring tree in a diverse ecosystem, it brought prosperity to the region through sustainable sale of nuts (R. Negi 2011). However, with increased development of cash crop chilgoza plantations, the informal economy of gathering seeds has significantly diminished.

The increase in chiloza and deodar plantation cropping created conflicts with the needs of local people. Government plantation land is no longer available for their daily needs. Both examples of government plantation trees, the deodar and chilgoza, grow very tall and branches soon reach heights inaccessible for local residents (Cranney 2001). People must seek out areas that provide lower branched trees for fuel wood. Today, families are required to walk farther to gather fodder grasses for their animals and fuel for cooking and heating because plantation land has displaced the natural forest. Along with branch gathering went the ability to gather grass fodder below the trees because the needles of both trees inhibit grass growth. In a naturally diverse forest the problem is mitigated by the diversity of trees. However, monoculture exacerbates the effect of the needles on groundcover. The challenges of procuring grass and leaves for fodder reduces the number of livestock families can care for. This leads to an increasing dependence on market products such as milk and wool, and changes in traditional livelihoods.

Plantation cropping replaces forest diversity and the preferred oak tree, which is of little commercial value. This creates new challenges for local livelihoods (Cranney 2001). Commercial management systems held profit as the main goal over ecology and social interest. Natural forest diversity soon deteriorated, replaced by single species commercial plantations. Obvious troubles and conflicts arose between the government and the locals, and exist to this day (Cranney 2001; Oostheok 2007; Sharma 2011; Singh 2011).

As a consequence of conservation and plantation policies, wood has become increasingly unavailable for local construction (Cranney 2001). Plantation grown timber is generally slated for government development schemes, not added to the local construction stock. In my interviews, people felt that the timber distribution plan of the 1990s did not provide enough wood for a family to build a house, merely to repair the houses or build window frames and doors. Illegal wood collection and concealed third-party sales continued. People signed up for their allotment but while in the forest, harvested more trees than permitted and sometimes sold them on the black market. Enforcement and accountability continued to be problematic. These issues prompted government action.

In 2006 the Department of Forestry imposed a full ban on all wood collection from forests throughout India (Sharma 2011; Singh 2011). The new regulations included limbing and harvesting of fallen dead trees. The government justification for banning wood collection was the establishment in 2009 of the Timber Depots (Sharma 2011). These are locations within the districts where local residents can go and purchase converted timber for construction use. In place of letting residents go out and harvest trees themselves, which was difficult to manage, the government now cuts the trees and converts the wood to timber (10' X 12" x 5" sleepers). In this way the government can better control activity in the forest since no one should be harvesting wood. Additionally, with fewer people in the forest, unnecessary human traffic will be avoided, increasing protection from erosion and fire. Forestry officials feel that through this program wood can be harvested faster and more efficiently, with less waste, and then distributed to the residents (Sharma 2011; Forest Department H.P. 2005). Over the last decade, with bolstered enforcement, clandestine tree procurement has become much more challenging. Now illegal felling of timber is rarely heard of.

Theoretically, the transition to the converted timber program should be welcomed by residents who now do not have to spend time in the laborious task of tree harvesting and hand milling. The forest service maintained that wood is now easier to get through the depot program. However, the local residents I interviewed asserted that wood is still unavailable. Although in theory, there is a mechanism in place which provides wood to residents, in practice, wood has not been available at the depots. There was a three-year

lag time from the inception of the ban to the time the depots opened. It has now been another two years and wood has only been sporadically available at the depots, and in limited quantity. Although forest service employees (at Assistant Conservator and District Range Officer levels) touted the Timber Depot system as better for residents, additional questioning of the officers and visits to the local depot revealed that construction timber has never really been available through this program. Forest officials claim that the forest is not healthy enough to provide the needed resources (Sharma 2011).

Today, the depot can only provide fuel wood– short pieces that can be purchased on a sliding scale for cooking, heating, and cremation, not construction timber (Figure 5.7). Special consideration is provided for cremation and the prices are kept very low if not free. Fortunately, government officials admit that they are not stopping locals from gathering fodder and fallen branches (Sharma 2011, Singh 2011). This is not enforced by forestry officials because gathering branches is too crucial for the everyday needs of the people. They need four kilos of wood per day just for cooking needs. This does not included wood for heating needs during winter (Sharma 2011).

Figure 5.7 The Timber Depot of Reckong Peo
Over the last few years, the Timber Depot has only offered fuel wood such as these
short pieces.

Due to tribal rights, residents do not have access to depots in any other location. Wood is harvested locally, therefore, it must be purchased by locals from that region. The Kalpa village region has a depot in Reckong Peo. Through the depot system, sleepers are (intended to be) available at the cost of US$ 55 - $66 per sleeper (2,500 - 3,000 Indian Rupee, Sharma 2011). This is a drastic increase from .22 US cents per tree (10 Rupee) under the tree allotment system. Families who are below the poverty line pay only 25 percent of the price, but still the price makes the house much more expensive to construct compared to earlier forest policy. Because government controls 97 percent of forests in Himachal, very little wood is available for sale on the open market. However, the open market is essentially out of reach financially for most Indians because one sleeper costs US$222 ("R10,000 Indian Rupee", Sharma 2011). One person estimated that a good house would need about 200 sleepers.

In the majority of traditional landscapes throughout the world, buildings are constructed with readily available materials, such as stone, timber, reed, and earth used in the form of bricks or plaster. This contributes to an affordable and homogenous regional character (Dasgupta 2008). The prior abundance of cheap wood for construction of houses and temples allowed the people of Kinnaur to excel in the art of wood carving and the admiration of this art form encouraged them to devote their wealth, time, and energy to it (Tobran 2008). In a region known for its woodcarving heritage, restrictions on timber access have major impacts on vernacular building systems and the cultural landscape

Single species commercial plantations exacerbate the inaccessibility of construction timber for locals by focusing on large scale development projects. Fortunately, future government policies limit plantations within close proximity to villages to allow for increased local use of diverse forest land (Forest Department H.P. 2005). This eases the daily tasks of mountain cultures that must seek out forest products. However, policy makers are less sensitive to the plight of the traditional vernacular landscape and continuity of wooden architecture (Sharma 2011). The 2006 ban on wood harvesting directly affects the ability of residents to continue their wood-dominant construction and no reconciliation is in sight. Limited access to traditionally harvested materials in turn raises the market price. The lack of availability of wood for

construction has had significant impacts on the long-standing carving heritage and vernacular house.

Secondary Influences on the Vernacular Landscape

To broaden the understanding of agents of change in Kinnaur, I investigated additional topics which tangentially influenced the landscape. These influences paint a more detailed picture of landscape change in Kinnaur. Here I consider cultural conformity and its influence on house type, characteristics of families who live in certain house types, the perceived status of architectural carving, availability of artisans, and the impact of tourism on the cultural landscape of the Kalpa village region.

Cultural conformity, peer pressure and/or pride in local vernacular houses seemed to contribute to the presence of the classic vernacular house. People continue to hold respect for wood carving and the verandah design of the Kinnauri vernacular. Although there was no strong pressure to build a house of this classic style, the institutional behavior was evident showing that cultural conformity is still important in this traditional society.

Family characteristics (e.g. income, education level, work experience outside the state, etc.) were difficult to measure. However, based on observation and interpretation they did not correlate closely and consistently to certain house types. It appeared that qualities of the vernacular style such as carvings, verandah windows with detailed sash, and jallar were associated with higher incomes. But those houses equally incorporated concrete in modern fashion. Older houses that were made of wood seemed to be associated with lower income residents mainly due to lack of upkeep (peeling paint or broken boards) (Figure 5.8). When new houses were constructed they were often small, without detail (vernacular qualities), and made of concrete (Figure 5.9). These houses were interpreted as homes of lower income compared to the larger scale newly constructed houses that I associated with well-off residents (Figure 5.10). The size and lack of detail were the main characteristics that indicated income level.

Figure 5.8 Older houses tend to have chipping paint or broken boards
Kalpa Village

**Figure 5.9 Small house lacking in detail, associated with
lower income levels**
Kalpa village

**Figure 5.10 Larger scale newly constructed home associated with
higher incomes**
Jangi Village

In Kinnaur, the carvings on the house and the slate roof were a primary means of showing status (Sharma 2006). This is because they reflect the wealth of the owner since both features take considerable money to construct. Research shows that status can be the most important meaning conveyed in the house, especially in more recent times because showing status and differentiation between classes has become more common (Pavlides and Hesser 1989a).

With the increase in off-farm or outside work, considerations in construction time play a larger role in decision making (Dasgupta 2008). No longer can homeowners afford to take the time to build or decorate when they are tied to an imposed work schedule. They must hire other people to build and try to complete the process as quickly as possible. Although the vernacular features are still respected and still communicate status, they must compete with new opportunities for showing wealth and today's added pressure of displaying modernization. Elements communicating status change over time – such as type and size of dwelling, presence of decoration, wall type, elaborateness of

ornamentation. Preferences for showing status go beyond the house and include clothing, textiles, jewelry, instruments, etc. (Figures 5.11a and b). Crucial to understanding
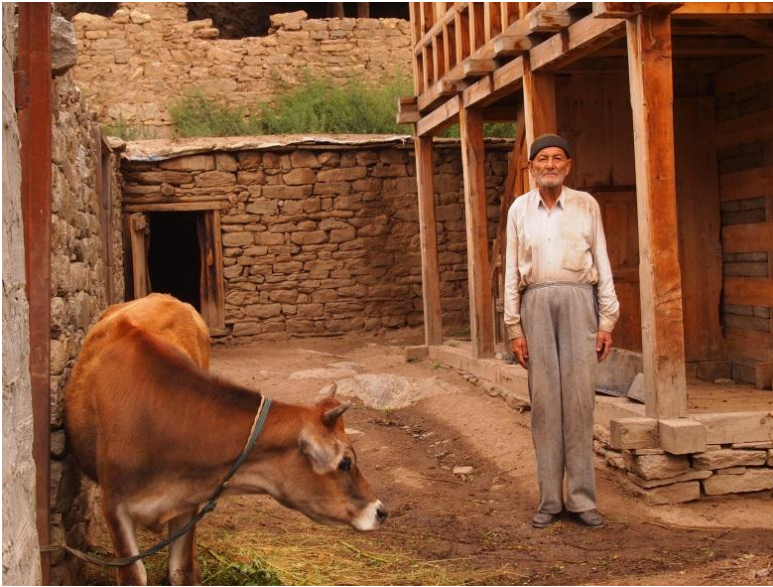
Figures 5.11a and b Signs of status
This man in Birlingi, left, wanted his picture taken with his cow, while a younger man in Delhi wanted his picture taken on his motorcycle, illustrating the differing symbols of status for each generation.

contemporary landscape change is acknowledging that increased opportunities now exist for showing status. The incorporation of carving and slate roofs competes with money now allocated towards changing building form, installing plumbing, buying western furniture, and building a bigger house. This is coupled with additional ways of showing status through the purchase of fancy mobile phones, cars, televisions, and western clothing. For this reason traditional heritage such as tribal clothing styles, foods, and decoration are subject to change. In many cases around the world, people are transitioning away from traditional means of showing status for newer options that represent modern displays of wealth.

Because the house is considered distinct from the temple, and carvings are disassociated from local religion, changes in religious practices / beliefs do not appear to affect the vernacular style. In parts of the Himalaya, hiring local artisans has become more difficult and more expensive due to outmigration to the urban centers where they can demand a higher wage (Singh 2008). Worldwide "the mechanized mass production

[over the last 100 years] of windows, doors, wall panels, and moldings, [all of the major essential qualities discussed in relation to the Kinnauri vernacular house,] effectively reduced the importance and availability of traditional craftspeople, such as cabinatemakers, stonecarvers, and metalsmiths, whose manual skills contributed so much to the historic shaping of ornament" (Bloomer 2000, 137).

In Kinnaur, many of the older woodcarvers are still present and working on temple carving. The apprentice system is still in place but has been fractured to some extent by younger generations moving away, or fathers wishing for their sons to pursue other professions. The best known carver in Kalpa has encouraged his son to go to school and pursue other work. I interviewed one award winning carver in Reckong Peo whose son continued the profession but transferred the practice of carving to furniture where he felt he would have more opportunity for income. The influx of Bihari migrants has produced a slightly altered form of carving for the local area. Much of the content in carving is copied as routine from the master carver (Figure 5.12), but stylistic differences and complexity are apparent. Bihari workers would not normally be employed on an important Kinnauri temple, but more likely on a home as they are the common construction workers.

I conclude the secondary considerations for landscape change with a discussion of tourism. Tourism has had an obvious impact on Kalpa village which is the central tourist destination in my research area. Hotel options have increased greatly over the last decade to total 20 hotels in 2011. The village landscape and mountain views are the main draw for tourists, comprised mostly of Indian nationals. Reckong Peo serves as the transfer station for busses coming into Kalpa and houses the permit office for travelers continuing northeast to the border regions, and therefore, has experienced a considerable amount of landscape change due to tourism as well. Reckong Peo has several nondescript hotels that blend into the concrete landscape of the town, but people tend to spend the night only by necessity as dictated by the bus schedule.

Only a small portion of residents interviewed in Kalpa felt that tourism was a big influence on the changing landscape of Kinnaur. Some felt that tourism encouraged new construction. This is evident in the number of hotels visible on the hillside (Figure 5.13). One older woman felt that "tourism is definitely changing the village and not in a good

way. It is developing and building it up" and the pollution is not acceptable. A few residents showed concern that houses were knocked down and orchards destroyed to build hotels. Other people saw that tourism is only part of the economy for four months in the summer, and it really only benefits those who own hotels. Most people expressed that tourism "does nothing for the regular people" and is not a big influence on the village.

Some people believed that tourism is less of an influence on the landscape than hydroelectric dams or the apple industry, which has brought in a large and sustained influx of income to the region. It could therefore be considered a more significant influence on cultural change. Also Kalpa's proximity to Reckong Peo with its government jobs, is an important influence on modernization and change. It is clear that the residents look primarily at the monetary impacts (and benefits) of tourism, rather than the cultural change that it so often brings. However, one of the unmeasured impacts of tourism was noted by an older man in Telangi. He said that "Western culture is spreading its wings. When [young Kinnauras] see modern Westerners, they want to be modern like them." Therefore, it can have a greater impact than just monetarily.

Overall, several significant agents of change are responsible for transformations of the Kinnaur vernacular landscape. The three main agents of change, improved road connections, the growing horticulture industry, and the lack of access to natural materials, particularly wood, have had the most significant effects on the Kinnauri vernacular house. In Chapter 6, I discuss the changes to the house in relation to those three major agents of change.

Figure 5.12 A Kinnauri woodcarver with his templates which are passed down from generation to generation
Reckong Peo

Figure 5.13 Hotels on the hillside of Kalpa

Chapter 6 - Impacts on the Vernacular house

The transitional stages of the Kinnauri vernacular house are influenced by the principal socio-economic and environmental factors of Kinnaur as discussed in Chapter 5. These influences have direct consequences on the vernacular house, and although overlap exists, a strong correlation can be drawn between particular examples of social change and resulting impacts on the house. This chapter is organized into three sections focused on: improved road connections and the impact on building materials choices; the growing horticulture industry and the change in house form; and restrictions to natural building materials and the impact on the long standing heritage of wooden construction.

Access to New Materials

The strategic location of Himachal Pradesh, on the international border with Tibet, led to growing connectivity for the state as military activity intensified. Road construction was a crucial part of the new state infrastructure and led to a reduction in the geographic isolation previously experienced by the Himachali population. Improved road connections expanded consumer options available in the markets and brought new building materials to the Kinnauri landscape. Over time and with increasing access, prices eventually fell to a level that local populations could afford, and these new building materials slowly worked their way into the fabric of the vernacular house. Today incorporation of new materials is seen in several key modifications to construction materials and house form.

Concrete

Stone from the surrounding countryside is an important building material in the Kinnauri vernacular house. When stone can be acquired from personally owned land, it is free. One family in Kalpa explained that harvesting stones can leave the land in an improved condition for farming. Therefore, it is worth the extreme effort to gather and finish stones for use in construction. Homeowners must expend great amounts of energy and a great deal of time in harvesting, splitting, and finishing stones for construction purposes (Figures 6.1a and b). To pay a laborer would cost the family a considerable amount of income and could amount to more than buying commercially available

concrete bricks or blocks. This family said that if they did not have access to stone on their own land, they would have purchased commercial products rather than paying the government for permission for a limited number of stones from the forest, which they would still have to spend time to finish. Accordingly, as prices for imported building materials fall, taking time to harvest natural materials becomes less economically viable.

Figures 6.1a and b Laborers finishing stones for temple construction (above) and the finished stones stacked and ready for use (below).
Kalpa village

Figures 6.2a and b Concrete use in housing construction

Synonymous with modernity and ubiquitous to cultural landscapes worldwide, concrete has become the choice building material in countless transitioning vernacular landscapes. Cement, the key component of concrete, has increased in availability since the expansion of road networks into the deep Himalaya. In Kinnaur, since the late 1980s, concrete has been incorporated into the house as wall material, roof material, verandah banisters, and support posts (Figures 6.2a and b). Today, the use of concrete has enormous impact on the visual quality of the vernacular landscape.

New materials can be used in a way that complements rather than overwhelms vernacular styles. They can be adapted for personal preference within the existing house form, leading to a more culturally congruent process of change, preserving spirit of place. Concrete's initial high price led to a relatively slow uptake with incorporation only on a small-scale. This slow uptake allowed it to blend gradually into the vernacular landscape. Initially in Kinnaur, concrete was used in a way that preserved much of the vernacular quality. For example, concrete blocks have the potential to blend into the traditional Kath Kuni construction when used in place of harvested stone. This combination only slightly alters the traditional visual quality (Figures 6.3a and b). Generally concrete blocks are incorporated into the existing house form, allowing for changes that reflect a modernizing society, but a society that equally respects its heritage. This shows that house form does not have to change drastically with the incorporation of concrete and new materials. It illustrates India's disposition as a country that respects tradition and takes on change slowly (Sinha 2006).

Figures 6.3a and b Small-scale incorporation of concrete
Houses in Batseri village show concrete used in a way that blends into the
vernacular style

New materials also have the potential to instigate increasingly drastic modifications to the house. The aesthetic of concrete on the vernacular house is most noticeable when used as solid monolithic walls (Figure 6.4). This construction method drastically alters the typical visual quality of Kath Kuni and stone construction by replacing it with a solid stuccoed wall. Additionally, with the incorporation of concrete walls in the lower floor, loose-stacked Kath Kuni construction no longer limits the size of openings. With concrete construction, larger window opening are possible. The small window openings have expanded in size and incorporated glass (Figure 6.4). Its impact is seen most notably in the replacement of wooden verandah panels with concrete stucco walls below window banks (Figure 6.4, and Figure 6.5). This modification interferes with one of the essential qualities that make up the regionally distinct ensemble, therefore having a greater impact on the vernacular landscape.

Concrete construction has made great inroads in Himachal Pradesh and Kinnaur district. People choose concrete because of its perceived longevity and water resistance. Not only does their choice of new material have impacts on the vernacular landscape, but due to lack of training, many concrete structures are simple in form, do not last as long as they should, and may contribute to vulnerability from earthquakes due to poor construction quality (Wisner et al 2004).

Figure 6.4 Concrete stucco creates the appearance of monolithic walls
This type of construction is the most contradictory to the Kinnauri vernacular style.
Window sizes are larger in new construction and panel is replaced with concrete.
Kalpa village

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Figure 6.5 Panel wall under window bank is replaced with concrete stucco.
Kalpa village

Metal Sheeting and Roof Form

Important changes to the Kinnauri vernacular house are seen today in the replacement of the traditional slate roofing in favor of readily available metal roofing. The slate roof is one of the iconic features of the Kinnauri vernacular house. The practice of using slate as roofing material in Kinnaur began in the 1920s and grew more common throughout the 1930s. The new investment in materials was made possible through improved local economies brought on by an emergent agricultural sector. This was first realized through a market for wild pine nuts (chilgoza) which are available in the surrounding forests. A local man described this time period as one where people could stop thinking only about food and begin to think about construction. The growth of government sector jobs in the region during the 1960s, in response to tightening border controls with China, further encouraged housing investment. These circumstances led to a widespread use of slate. But today, in light of new market products, new construction generally opts for metal sheeting in place of harvesting traditional slates.

Heavy slate tiles have associated disadvantages. They are difficult to acquire from their remote locations, expensive when purchased, and need robust wooden framework to support the weight. Furthermore, imported slate can be of lower quality than local slate and often cannot hold up to the harsh environment, sacrificing longevity (Dasgupta 2008). Metal sheets resolve the noted issues of slate and are perceived to last

longer. They are readily accessible in the market, and their light weight has the added advantage of reducing the wooden support system and saving money. The comparative cost makes metal sheeting less expensive and increasingly popular. This contributes to landscape change seen at all levels. From a distance, houses no longer blend into the hillside with the use of natural materials. Metal roofs reflect the intense Himalayan sun and dot the mountain landscape like mirrors (Dasgupta 2008).

Like concrete, the incorporation of metal roofing into the vernacular house does not have to entirely change the roof form and style. Many homes incorporate metal roofing while keeping the same traditional hipped form with peaks and valleys (Figure 6.6). However, changes to the form of the roof often accompany new materials because previous massing (building scale) was somewhat dictated by the limitations of accessible material sizes, such as available timber (Dasgupta 2008). Large, light weight metal roofing sheets can span greater distances on the roof structure. Since any deviation from a straight line adds construction time and cost, simplified forms have become more common. Often with the incorporation of metal, the jointed roof form common to the region is eventually forgone for a more simplified gable roof structure (Figures 6.7a & b).

Figure 6.6 Roof material and traditional form
New materials in roofing do not have to create drastic changes to roof form. Rohru

Figures 6.7a and b Gable roof forms instigated by metal
Kothi village

Changes to the vernacular slate hipped roof design have impacts on several traditional practices including ridgeline decoration, agricultural drying, storage, and growing of food products (Figures 6.8a and b, see also Figure 4.17). In steep landscapes, and those with animals grazing freely, roof space is an important asset to the vernacular housescape. The vernacular roof form of Kinnaur supported daily needs through its distinctive slopes. But the simple gable roof form common to metal sheeting makes many practices impossible. This is because of the steep slope, smooth material, and material's tendency to become hot in the sun. Additionally, along with the loss of slate roofing goes the tradition of carving decorative forms onto the ridgeline, a practice

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Figures 6.8a and b The texture and form of the traditional slate roof support daily activities.
Kalpa village

which has not been adapted to the new material.

Further evolution in roof form is visible in the common return to a flat roof. Flat roofs were the ancient roof form used before the incorporation of pitched wooden slats (Figure 6.9). At that time they were constructed with a combination of timber, clay, stones, and tree bark. Now, modern materials, such as concrete, are better able to cope with rain and snow and the flat surface provides space for household work and food processing (Figure 6.10). The combination of a concrete structure with a flat roof shows a clear progression to the "international style" of architecture – distinct to no by the incorporation of new materials such as concrete, glass, and steel.

The process of modernization is taking place in Kinnaur in domestic as well as commercial architecture (Figure 6.11). Edward Relph (2009, 29) attributed adoption of these types of materials to transport and a transition to "styles that [are] self-consciously international." As Relph argued, industrialization and modernization undermine "local practices, partly through the use of placeless materials like iron, concrete, metal, and glass." The outcome is an "International Style" that produces office buildings, storefronts, and multi-family housing that could fit almost anywhere (Relph 2009). This is now seen in Kinnaur's vernacular landscape, both domestic and commercial, brought on by the easy availability of new modern materials which facilitate changes to building form.

Figure 6.9 Flat timber roofs gave way to sloped forms
Telangi village

Figure 6.10 Flat roof workspace
A woman in Kloti processes corn on the flat surface of her concrete roof.

Figure 6.11 Modern commercial strip
Reckong Peo

Changing Expectations in House Size

The increase in off-farm labor, such as government jobs, requires people to work within imposed schedules. This has led to pressures in shortening time taken for house construction. It also limits the abilities of homeowners to gather materials and build houses on their own because of the profuse time involved in harvesting and finishing. New building materials such as cement and metal sheeting are revered as ways to decrease construction time when compared to the laborious process of Kath Kuni construction and wood carving. Furthermore, the use of harvested stones for wall material has eventually been replaced by more expensive, but much easier to acquire concrete blocks.

Although the changes brought on by new materials can be minor, they often times are extreme, prompting new house form, massing, and style. An increase of industrial building supplies in the market often supplants naturally harvested materials, such as stone, earth, and wood. This is sometimes because the new materials are actually lower in cost. Thus house size often increases for the same price and in less construction time than vernacular practices. This was noted in Pakistan (Harrison 1998), Guatemala (Maluccio 2005), Bahrain (Dayarante 2008), India (Singh 2008), and is taking place in Kinnaur. Because people in Kinnaur felt that they could build faster with concrete and

complete more square footage for the same price as wood and stone construction, the scale and number of rooms per household grew, impacting the overall landscape. Consequently, choices of material and construction method are influenced by changes in livelihood and the need to better work within new schedules. If laborers must be paid, preference will go to buying manufactured materials.

It is clear that the incorporation of manufactured materials can lead to the abandonment of vernacular practices. This was addressed in the studies by Harrison (1998), Maluccio (2005), Dayarante (2008), and Singh (2008) and is often attributed to the pursuit of increased status. These studies show that increased economic opportunity and access to new building materials through road construction can influence class differentiation, where before there was little opportunity or need for distinction. A general lack of wealth kept community members on a level playing field. The use of modern products provides new opportunity for class distinction including larger house size and materials that project a sense of status and wealth. People can differentiate themselves in new ways leading to previously unknown socio-economic divisions within communities, which eventually results in great changes to a place (Singh 1998; Zelinsky 2011).

Only a small portion of the population interviewed in the Kalpa village region admitted a strong urge to pursue manufactured materials as a sign of status through modernization. Most felt compelled to use them for financial and environmental reasons. Nevertheless, though historically non-hierarchical, class formation in some districts of Himachal has been the consequence of a modernizing lifestyle that emphasizes a 'have and have-not' society (Cranney 2001; see also Janjua 1998; Maluccio 2005; Dayarante 2008; Singh 2008). The growing horticulture industry is a dominant driver in this scenario, bringing about an improved standard of living and new class distinctions. Social change can influence the cultural landscape. However, new embodiments of the cultural landscape can then influence increased social change. These international research studies illustrate the transition to a more self-conscious and individualistic manner of building that depicts some of the same struggles taking place in Kinnaur today.

Economic Change and the House Form

The decreasing geographic isolation of the Himalaya and Kinnaur in particular, has led to increasing opportunities in livelihoods choices. The increase in government sector jobs for people living around Kalpa and Reckong Peo helped to transition that population away from dependence on the traditional livestock focused livelihood. Another leading influence in the change from livestock based livelihoods is the presence of an expanding horticulture based economy. These changes in livelihoods, reflecting a growth in economic markets within the Himalaya is having great impacts on the vernacular landscape of Kinnaur. The traditional housescape of Kinnaur was driven by livestock ownership and their fodder needs, as well as the subsistence mixed crop farming that rounded out the overwhelmingly self-sustaining livelihoods. The change from livestock based livelihoods is visible on the housescape and seen most clearly in the transformation of the verandah house form.

The interior verandah space has been an essential feature of the mountain home, facilitating several tasks of daily life and playing a critical climatic role in the comfort of the home. The exterior barrier wall of the verandah (Figure 6.12) provides protection for the interior rooms from cold, wind, and snow (Figures 6.13a and b). For subsistence farmers, the interior hallway-like sun space is important for processing crops indoors when outdoor temperatures are too cool (Figure 6.14). The exterior covered space created at ground level from the verandah overhang functions as a semi-protected workspace sheltered from rain and snow, providing a crucial area for wood storage, food storage, animal penning, and domestic work.

The interior verandah sunspace continues to play an important role in daily life by providing space for work and drying of fruit. However, the ubiquitous exterior verandah overhang of the mountain vernacular landscape has become less important. Fewer livestock to pen indoors and out, and less fodder to store, have allowed some families to reallocate ground-floor spaces traditionally used for animals. Over the last 20 years, these spaces transitioned away from animal storage to fruit storage, household storage, and sitting space.

One of the first transitions of the house from ancient vernacular to classic Kinnauri vernacular was the incorporation of a larger verandah overhang that was
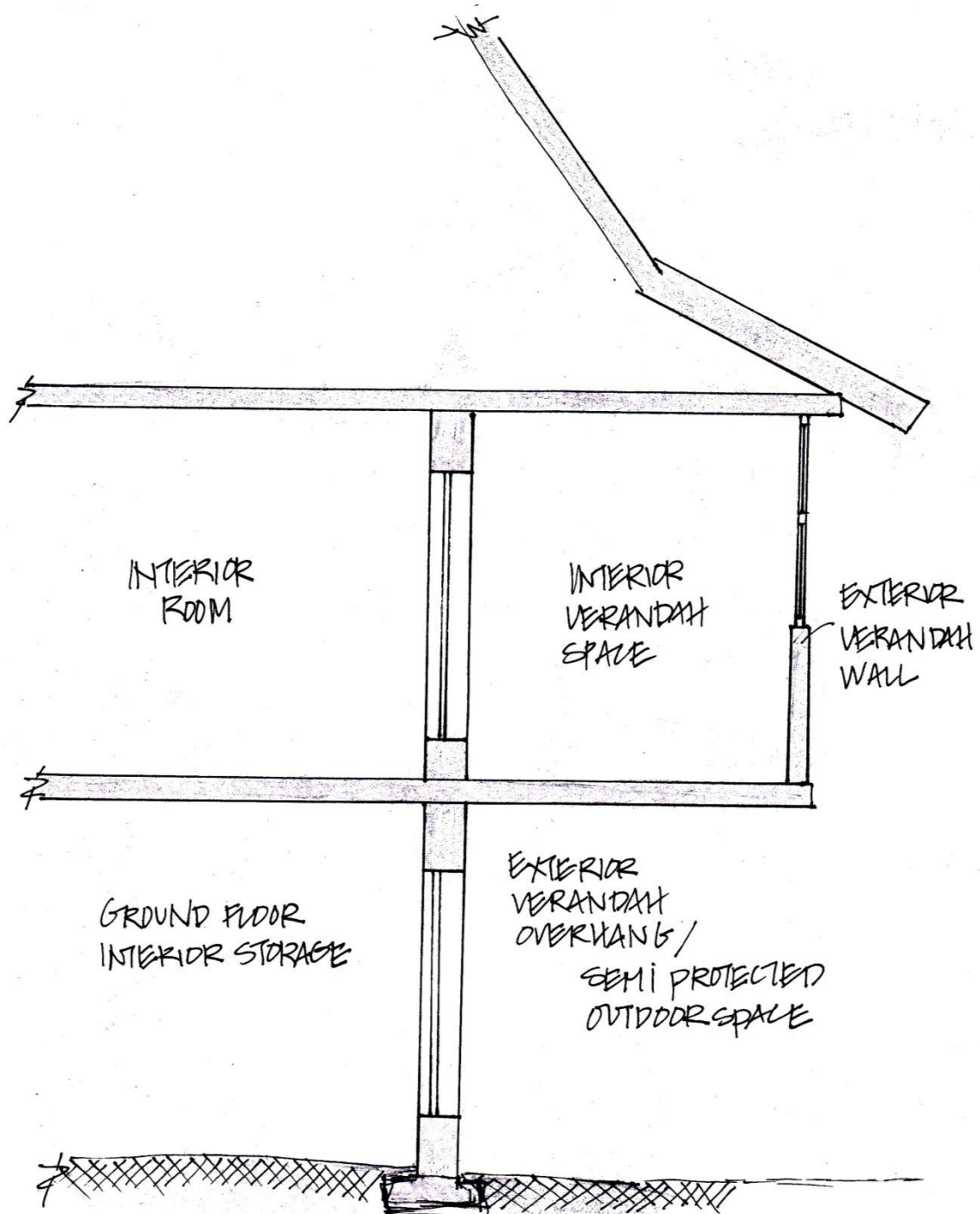
Figure 6.12 Section of verandah house
The section sketch above shows the exterior wall that protects the interior spaces from cold and wind. The incorporation of windows creates a sunspace in front of the interior rooms. These provide the majority of fresh air and light while allowing the interior rooms to hold in heat provided from small wood stoves.
Section drawing by author

Figures 6.13a and b Interior verandah space
The exterior window wall protects interior rooms from cold. Kalpa village

Figure 6.14 The interior sun space is used for drying fruit and spices
Kalpa village

supported by posts (Figures 6.15a and b). It is unclear when this subtle change began to take place. However, it may have reflected the increased need for protected storage of export apples and the increased importance of the interior verandah space for dry fruit processing. This correlates to the 1960s when apples emerged as an expanding economy. As apple production grew throughout the 1960s, the verandah became a more dominant part of the house than that seen earlier in the shallow overhang of the ancient vernacular house. Apples are sold whole in boxes as well as sliced and dried. This latter process is facilitated by interior space and is often seen dominating the interior verandah space. In addition to apples, apricots are an important Kinnauri crop. They are likewise sold fresh and dried, and pits are stored to make oil, requiring additional protected space.

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Figures 6.15a and b Verandah support posts
A wider verandah overhang and interior space are supported by posts as the house transitioned to the classic Kinnauri style.
Kalpa village

Figures 6.16a-c Enclosure of verandah overhang
Kalpa village

The large stock of boxed fruit, ready for collection by fruit export companies often waits relatively exposed under the verandah overhang. Increasingly common today, the exterior overhang area is filled in to allow for increased interior fruit storage and living space (Figures 6.16a-c). This reflects changes in livelihoods, but also an increase in the standard of living. People can now afford brick or concrete block walls to secure their products. In other instances, the lower level becomes part of the finished house. Several houses that I visited used western style furniture in conjunction with increasing house size (Figure 6.17a and b). These rooms reflect the desire of local residents to show tendencies towards modernizing and westernization. The added rooms are most often used when guests come to visit.

The enclosure creates a block-like house form in place of the verandah house form. Any remaining animal or crop storage needs are relocated from the ground floor to a storage shed, separating traditional space use in the housescape (Figure 6.18). Because

Figure 6.17a and b Western style furniture is increasing in popularity
Kalpa village

Figure 6.18 Typical storage shed
Kalpa village

of the construction benefits of modern materials, the lower level windows are much larger than those used historically – transforming one of the most noted Kinnauri vernacular features of small windows and doors. With the incorporation (and expense) of large-scale doors and glass panes, less work goes into oversized decorative trim. Therefore the ancient trait of carving ornate framing trim has all but disappeared.

The upper verandah likewise incorporated larger windows with glass panes in the 1950s and 1960s, based on market availability. This is what I refer to as the verandah window bank. Today, in keeping with the ancient practice, residents commonly craft simplified versions of detailed edgework along the window sashes as an easy detail that echoes its predecessor (Figures 6.19a and b). This reflects arguments that cultural traits face simplifications as they are modified (Jordan and Kaups 1987). The larger window openings serve the function of added light and increased ventilation to clear smoke from cooking and heating, maintaining a healthier environment overall. Therefore, the new window design has changed the original character of the ancient vernacular. But the new variant has improved upon the conditions for inhabitants. The verandah is considered an important part of the house, and the window bank is now seen as a vernacular style.

Figures 6.19a and b Detailed window sashes
Kalpa village

The change from livestock focused livelihoods to off-farm employment such as cash crop industries, hydroelectric power plants, and government service-sector jobs, stimulated and continues to influence changes in the cultural landscape. This economic restructuring is leading to a rapid transformation of the traditional vernacular landscape for Himachal Pradesh (Dasgupta 2008; see also Naidu 1991). Spatial analysis showed that historically, houses were clustered close to the temple and village center (see Appendix B). Later, with the expansion of orchards, houses dispersed across the mountain side. People wanted to be closer to their orchards with the benefit of more space around the home, alleviating the feeling of congestion in town, but changing the clustered appearance of the vernacular landscape.

The overlap is clear in these two agents of change. Road construction goes hand in hand with increased diversity of market products including building materials. Furthermore, the road spurred a burgeoning cash crop industry by providing a means to access the market. Both the road and new industries fed into each other prompting layers of landscape change that go beyond the house including large-scale orchard terracing, flourishing concrete commercial strips, and growth in a tourism industry with its requisite hotels. Exposure to new economies through road building and its subsequent market growth set the stage for expanded options in livelihoods that then in turn prompted additional modification to the vernacular house.

Forest Policy and the Impact on the Vernacular House

Naturally harvested products of the Himalaya, such as timber, stone, and earth, are each more difficult to acquire today. This is due to government conservation policies on timber and stone harvesting, and the growth of commercial plantation systems. The monoculture plantations displace naturally diverse forests, to which locals had tribal forest rights, with private commercial trees. The increasing restrictions to tribal forest rights imposed by the Indian government created the tipping point for change in the Kinnauri vernacular house. Where access is restricted in harvesting local materials, the method of building will change. Increased restrictions on locally obtained resources such as timber, stone, and earth in Kinnaur coincided with the increased availability of concrete for building and metal sheet for roofing. The increased challenges of building

with traditional local materials make the temptation of building with newly available building materials even greater. Limitations on gathering traditionally available building materials resulted in a decline in the wood-dominant vernacular construction. Forest policy and its subsequent materials restrictions inhibit the conservation of traditional building practices and essentially force the adoption of imported materials. The lack of traditional materials alongside the accessibility of modern options facilitated and triggered the adoption of modern materials in this traditional society. The combination of the two circumstances became the perfect storm for cultural landscape change.

Several changes are obvious to the Kinnauri vernacular house. Lack of wood influences roof choice with a move away from the robust wooden framework of slate tiles. A lack of available timber makes metal roofing more appealing for its lighter weight, market availability, and faster construction time. Furthermore, the practice of Kath Kuni wall construction has now been discarded due to its heavy dependence on wood. In this seismically active location, Kath Kuni provided the function of tying the walls together and adding tensile strength. Therefore, modern construction might be more vulnerable to collapse than traditional vernacular construction (Wisner et al 2004).

Construction quality with new materials can be problematic because of lack of builder training. One homeowner interviewed in Kothi explained that both wood and concrete were available during his 1992 construction. He chose wood because it was still difficult to find a builder skilled in concrete construction. But today, more builders are becoming skilled in concrete construction as traditional know-how is replaced with modern construction skills. Some newer houses use a minimal amount of wood laid horizontally in concrete block wall construction (Figure 6.20, see also Figures 6.7a and b). This method aids in securing doors and windows in concrete block construction, but provides very little increase in earthquake safety.

With the current lack of access to timber, many traditional relationships that gave meaning and distinction to the landscape are no longer tenable (Riley 1980; Vellinga 2004). Clearly the lack of available wood for construction has had a drastic impact on

Figure 6.20 Wood layers for construction purposes
Kalpa village

the Kinnaur heritage of wood carving. This is particularly notable in the diminished incorporation of the carved verandah wall panel. Wood is needed for window and door construction, therefore, carving and other ornamental Kinnauri details must be forgone to reconcile the materials on hand. All people interviewed recognized lack of wood as the primary reason for changes to the vernacular house. A lingering respect for the wooden vernacular house was evident. However, one person interviewed in Kothi preferred to have what he viewed as a modern (concrete) house and was under the false impression that all people wanted that. He said he is still "trying to keep it Kinnauri" and one "can't build a 'heritage house' without wood." He had a wooden verandah window bank and jallar from wood that he had already saved. But otherwise, he had a concrete block house with no verandah overhang. This represented a modern style Kinnauri house, but definitely not international style (Figure 6.21). The difference is the incorporation of the verandah wall and jallar.

Figure 6.21 A modern style Kinnauri house
The incorporation of a wooden verandah window bank and wall panel contribute to the way this house reflects the Kinnauri style even though predominately constructed with concrete. Kothi village

True Material Preferences

I asked people if they would build a house in wood or concrete if both were equally accessible and priced the same. All answered that they would prefer wood. "I would build a beautiful house with wood" is how one man put it. These people cited concrete as bad for health and the cause of bone problems because concrete houses are considered very cold for most of the year. Pregnant women are warned against sleeping in a concrete house due to the health problems. One interviewee in Telangi claimed that "in a wood house, 12 months of the year are comfortable." One person said that "everyone would build a wooden house because it is warm. It is better for health and the bones." Some revealed an acknowledgement of earthquake resistance in the older wooden houses that is now lacking with concrete. Also, the point that wood can in fact last longer than concrete was recognized more than once in this landscape of 12th century wooden temples.

Virtually everyone wants to construct their home in wood. However, people felt powerless to decide with which material they could build their house. In effect, everyone echoed the sentiment that "the only option is concrete, but wood is better." People stated that wood is too hard to get, too expensive, or just not available to anyone. One family interviewed in Birlingi noted that in the late 1990s they had enough money to build a wooden addition, but could not get permission for enough of it. The restrictions were a major barrier to vernacular construction. The older generation remembers being able to get as much wood as they wanted. They used large, thick wooden planks on the house. They acknowledge that it is not possible to construct such a building today with large timbers. Today wood is available only as smaller thinner boards.

Sometimes older homes that have deteriorated are salvaged and the planks are cut into smaller boards. If a new house were built of large wooden planks today, it would seem a waste to the people. So much valuable wood should not be squandered irresponsibly I was told. One person voiced concern that to build a "heritage house" (meaning a wooden house like the ancient vernacular) would expose you to the risk of rumors that you had taken the wood illegally, because it would be impossible otherwise. Some people believe that if it weren't for lack of wood all houses would still be constructed with it even with availability of modern materials. People would be proud to have a wooden house.

Young people, age 16 to 24, were asked if they would prefer a home of wood or concrete. They all said "concrete, because wood is not available." They weren't automatically answering what they would prefer, just what was available. It was not a part of their consciousness that a choice could exist. When I asked which they would prefer if both were equally available for the same price, they all said wood. But the process of thinking about a hypothetical scenario seemed very unconventional for them and they are resigned to the fact that concrete is the future. I asked one young man what he would do with an unlimited amount of wood. He said he would build a wooden house and a big verandah, but he knows concrete is his only option. Another young man said he would choose wood because it is warm, long-lasting, and it can be carved and finished nicely. A third young man said that if he had both he would build in wood – "why would we use concrete?" he and his mother said as they laughed to each other.

Although the people of Kinnaur feel that their village character is changing and that concrete is leading to a change in house style, they are showing how they have adapted their vernacular heritage to reflect changing times. Wood is superior for or necessary for certain building applications such as carved trim, frames, and added earthquake resistance. Therefore, people use the quantity of wood they can acquire for certain purposes and incorporate concrete in others. With the wood available to them, people focus their attention on building the door and window frames, verandah space, the wall panel, and the jallar trim, reinforcing their prominence as signature landscape features, and the essential ensemble of the region (Figures 6.22a and b). Concrete

Figures 6.22a and b Concrete houses with wooden verandah ensemble
Kalpa village

continues to be unpopular among the population because it creates a cold environment in the winter. Superstitions surround its potential for making people sick and damaging bones. However, some people supported the use of concrete in certain occasions. Concrete is regarded as clean and has the advantage of improving surfaces for washing-areas such as kitchens, baths, and laundry spaces. It is also noted for remaining cool in the relatively mild summer of the Himalayas. When concrete was used as an addition, the new spaces usually incorporated plumbing – a bath, kitchen, or laundry space. These people maintained that building the kitchen and bathroom in concrete, to facilitate plumbing, and building the rest of the house in wood for warmth would be the best combination, especially since wood is scarce but serves a good function in construction.

In Kothi and in Telangi, several people noted that by having concrete and wooden portions in a house, inhabitants can move around the house throughout the year. Residents can benefit from concrete's advantages in areas that use water, and concrete rooms might remain cooler in the summer. But in winter, people want to spend time in the wooden portions for living and sleeping. This hybrid house form allows the living space to stay warm, while the modern kitchen and bath function better. In creating a hybrid house as suggested, inhabitants can incorporate the advantages of modern building technologies and materials while retaining the tradition and the historically adapted know-how that is embedded in the vernacular house. The evolved Kinnauri hybrid home often has much the same interior layout with a linear room orientation, verandah, and kitchen placement (Figure 6.24, Figures 6.23). But, the use of concrete and concentration of wood on the ensemble creates an evolved, hybridized style.

Although some people admit to the preference of concrete, two women in Telangi adeptly noted that "it is the lack of wood that creates this thinking in the first place." The women, in the midst of preparing apricot wine by hand, went on to say that "the house is changing because the lifestyle is changing, the *wants* are changing. Now people want bathrooms, kitchens, and machines to wash." To elaborate on this, lack of wood instigated the uptake of modern materials, but then mounting ideals of modernization perpetuated the change in the house (as seen in verandah enclosure, kitchen/bath additions, and the use of gas stoves). These modern options seem far more beneficial to today's Kinnauras than investing money into beautiful carving, tradition or not.
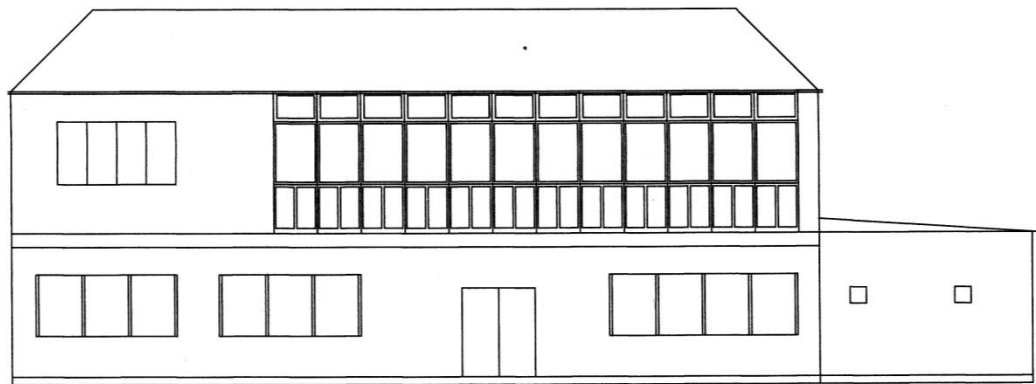
Figure 6.24 Façade of the hybrid Kinnauri house
This house measured in Kalpa (See image 6.19b) is primarily constructed of concrete, but has a wooden verandah window bank, metal jallar trim, and carved wall panel. It has a fully enclosed bottom floor and an attached concrete bathroom. By author.
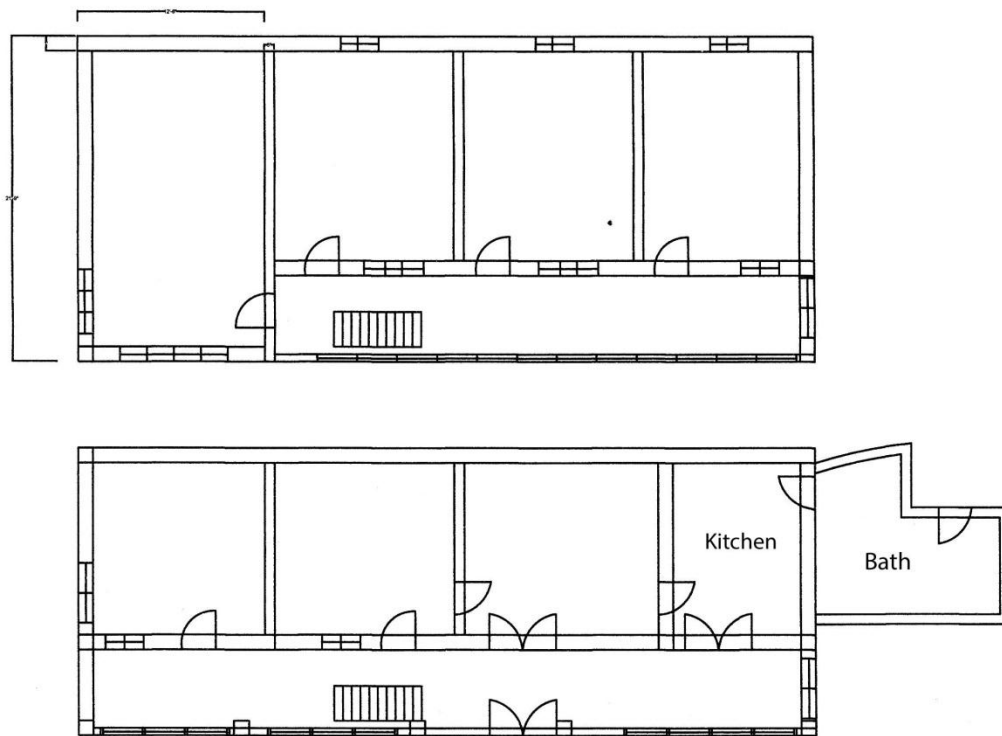
Figures 6.23a and b Floor plans of the hybrid house
The same linear layout is evident in the hybrid house. The traditional kitchen is still located to the right but an attached bath is located on the exterior of the house. The larger house has more space for fruit storage and a Western style sitting room upstairs. By author.

However, even with the new materials in the market, and the increased standard of living from cash crop incomes, the lack of wood is the tipping point for vernacular landscape change.

Bernard Rudofsky's (1964) claimed that vernacular architecture is a form of perfection that should remain unchanged because it addresses the needs of the inhabitants perfectly. However, it must be remembered that times change – needs and wants change – and the opportunities with which to address these changing needs might be obtained through modernization. A balance in modern adaptations and traditional practices can produce a landscape that continues to reflect the identity of the community, respects the cultural heritage, and encourages the vernacular landscape to have a sense of permanence – remaining vital for a changing society.

All participants answered affirmatively when asked if the house is a part of the Kinnaur culture. Despite the physical changes to the house and vernacular landscape, people say that the Kinnauri culture is still strong. It shouldn't be overlooked that the vernacular landscape encompasses many aspects. Locals cite the abundance of festivals, the religion, and the distinct cap as important parts of the Kinnauri culture. Festivals have changed slightly because people are busier. They can't spend the whole day dancing and singing as they had in the past. But all festivals still take place and people still dress traditionally (Figures 6.25a-c). The house is one aspect of the Kinnauri sense of place. In spite of change it still plays a central role in the cultural landscape.

Figures 6.25a-c Traditional dress and Festivals of the Kalpa village region

Chapter 7 - Summary and Conclusions

For my dissertation research, I examined several neighboring villages of Kinnaur district in the Indian state of Himachal Pradesh. A mountainous region of the Himalaya, with a mixed Hindu, Buddhist, and animist population, Kinnaur is a sparsely inhabited district consisting of remote tribal villages. The purpose of my research is to determine the characteristic features of the vernacular house in Kinnaur district and to identify the reasons for and process of vernacular landscape change. This dissertation illustrates that although the vernacular house of Kinnaur district is similar to houses found throughout the Western Himalaya, it has a distinct ensemble of features that together distinguishes it from other regions. I conclude that the presence of small-scale features and their flexibility as an ensemble greatly promotes endurance of vernacular landscapes and spirit of place.

Place distinctiveness is a prominent thread running throughout this dissertation. The works of Edward Relph and Timothy Cresswell are especially evident in my research. I begin from the framework that the dwelling is a truly significant feature of cultural landscapes and a crucial component of place-making (Jackson 1984; Kraftl 2010). Buildings, in fact, "embody the literal act of place-making" and are the "geographical setting" through which spaces and places are made and experienced (Kraftle 2010, 403). Because vernacular buildings so clearly reflect the local ethos, they provide a clear marker in which to see cultural change. I adopted several additional frameworks to analyze the vernacular landscape, putting the vernacular house at the center of study. The concept of essential qualities highlighted by Ron Walkey (1993), and the *Polythetic* range of possibilities or "Multi-attribute approach" argued by Amos Rapoport (1990) were significant influences alongside the work of geographers Richard Francaviglia, Pierce Lewis, and Daniel Arreola. These three geographers promoted landscape analysis which separates the landscape into component parts, encouraging researchers to pay particular attention to the common traits on the landscape and their combinations as ensembles. These particular components of the everyday landscape often go unnoticed.

I have adopted the conceptual framework emphasized today in the interdisciplinary field of vernacular studies which contends that cultural landscapes and vernacular housing styles must change to remain viable and meaningful for their communities (Vellinga 2004; Asquith and Vellinga 2006; Oliver 2006a, 2006b; Heath 2009). This framework argues that preserving a visually pure vernacular landscape that relates only to the past, rather than to the present and future, is an untenable option for the endurance of vital or 'living' cultural landscapes.

To identify what makes the Kinnauri vernacular landscape distinct from others, I analyzed the characteristics of the cultural landscape and vernacular house. I identified distinguishing architectural features on the vernacular house of Kinnaur district to gauge whether the house is distinct to its region. These traits were then used as markers to analyze if the house is experiencing change. I investigated the agents of change that are affecting the local society and vernacular landscape. I implemented landscape analysis and interpretation, including photography of the village region, measured architectural drawings, and mapping of Kalpa village (the primary village of study), coupled with interviews with local residents of varying age groups, income brackets, and house design. Over 50 interviews, including more than nine with woodcarvers, were conducted in seven villages. Interviews were open-ended and semi structured, as well as mixed with direct questioning. Open-ended questions helped to assess the general opinion of the Kinnauri style house and its significant features. Responses to open-ended questions often led to further discussion and new information brought forth by the respondent. Direct questioning pinpointed local opinions on a set of specific features that presented themselves through landscape analysis.

I set out to answer three main research questions:

1) What are the characteristic or distinctive features of the traditional Kinnauri vernacular house, and what are their origins, functions and meanings?

2) To what extent have the characteristic features changed?

3) What processes and influences have led to changes in the ornamental and distinctive features of the vernacular house?

In Chapter 4, I outlined the characteristic features of the Kinnauri house. I determined these select features through landscape analysis and interviews. Accounts

from local residents determined that certain architectural features may have originated in Kinnaur district. People felt that the architectural signatures, such as the carved wall panels and carved trim work (jallar) are distinct to their immediate region. However, those features and others, such as small windows and Kath Kuni log wall construction, can be seen throughout a larger range of the Himalaya. Therefore, determining the origins of such features was inconclusive.

Because the heritage of wood carving is particularly strong in the Khash cultural region, which includes Kinnaur, I intended to advance our understanding of the meaning behind the ubiquitous carving. Since wood carving is such an integral part of the distinctive regional temple design, and based on research by Rapoport (1997), Oliver (1997), and Amita Sinha (2006), I anticipated that a religious or symbolic connection would exist between the temple carvings and similar carvings found on the house. However, homeowners and builders maintained that copying the temple would be inauspicious and that domestic designs were undertaken and respected exclusively for their beauty and showmanship. Interview participants believed that the designs are distinct from temple designs. Historically, status-building was an initial objective of carving. However this has waned in contemporary times as additional opportunities for displaying status have become available. Consequently, for this reason and others discussed in Chapter 5, carvings have become less common in newer house construction.

Chapter 5 outlined the larger socio-economic changes that have taken place in the still remote Himalayan district of Kinnaur. The major agents of change began with the expanding road and communication network after the 1961 Chinese aggressions in the Himalaya. This forgotten buffer region became a strategic location requiring new roads for military movement. I conclude that the increase in road networks triggered yet unseen availability of products in the market ranging from food options, textiles, and building materials. Residents had been accustomed to providing all of these items for themselves through subsistence farming, animal husbandry, and a symbiotic relationship with the surrounding natural environment. Heightened military action in the region spurred road improvements and new infrastructure from bridges to workman's housing, all of which had direct bearing on the expanding market options in building materials.

The increased market availability of industrial building products prompted the incorporation of concrete and metal roofing into the vernacular house.

Additionally, greater interconnectedness from road improvements directly spurred broader market connection and increased opportunities for Kinnauras to join the global market. This led to a booming cash-crop industry which without roads would have been impossible. Through the successful orchard industry, the standard of living improved, which had been associated throughout history with 'rural backwardness' and lack of economic development. Ultimately, in this transition to orchard farming, the Kinnauras experienced a reassessment of traditional practices including animal husbandry, verandah house form, and domestic space use.

The culminating influence in the transformation of the Kinnauri vernacular landscape, as is the case in so many Himalayan landscapes, was the reevaluation by the government of tribal forest rights. Coinciding with increased market access to modern manufactured building materials, a ban on harvesting local timber fractured traditional building practices, procurement systems, and know-how, prompting local residents to accept market options in construction materials. Based on the positive public opinion of wood construction, neither roads nor industry alone would have caused such impressive landscape change. The ultimate absence of wood through the governmental ban on harvesting was the tipping point in vernacular landscape change for Kinnaur district. Regardless of people's desires to continue the wood construction tradition, they are unable to acquire the material. It is the interplay of factors, the presence of concrete and the absence of wood, which produced the end result. The synergy of these circumstances has had dramatic effects on the vernacular house as well as the cultural, commercial, and tourist landscapes of Kinnaur and the greater Himalaya.

How Agents of Change Affected the Vernacular House

Because of lack of wood and the contrasting availability of metal roofing, and concrete block and stucco, these products began to replace vernacular traditions of slate roofs and Kath Kuni wall construction. The labor intensity and dependency on wood for both systems encouraged the adoption of readily available market products brought on by improved road connections. Ultimately, the incorporation of new materials has led to

larger houses and simplified forms than the vernacular styles. This is particularly
apparent in the loss of the jointed roof form and verandah overhang (Figures 7.1a and b).

Figures 7.1a and b New materials and larger house forms
Changes to the vernacular house are particularly noticeable when several select features are replaced.

Changes in livelihood drew the focus away from an animal centered housescape.
This is reflected in the modification to the verandah overhang. A transition away from
animal husbandry and subsistence farming to orchard farming and new government
employment encouraged a reduction in livestock ownership. The transition was
exacerbated by the ease of purchasing essential livestock products such as milk and wool
in the market. The vernacular house with its prominent overhang, traditionally associated
with animal care, is increasingly enclosed by brick walls and reallocated as interior space
rather than animal penning and fodder storage. The enclosure of verandah overhangs
creates a significant change in space use and the visual quality of the vernacular
landscape.

Wood carving, a long-standing cultural heritage of the region, has fallen from use
due to lack of quality wood, the high cost for artisans, and the ability to exchange an
historic status symbol for a contemporary alternative such as an impressive mobile
phone, car, motorcycle, or western clothing. Wooden panels on the verandah wall are
now frequently left uncarved. Over time, incremental changes to the house were

implemented on many levels such as roof material, wall material, building method, the eventual change in house form, and a decline in the wood carving heritage.

A Paradox in Seeing the Landscape

The opinions of locals as to what aspects make up the Kinnauri house overwhelmingly reflect the ancient vernacular elements of Kath Kuni wall construction, small windows, and small doors. However, these features are no longer included in new construction. Due to a lack of wood, Kath Kuni is no longer an option. Additionally, due to less severe winters and a desire to modernize, small windows and doors are no longer necessary or desirable. These traits however, were cited most often in expressing the typical Kinnauri vernacular style. The results exposed the disconnection between what the Kinnauras believe represents their culture – the 'ancient' vernacular house – and what elements actually distinguish their landscape today – the essential features that have adapted and modified over the last half century to exemplify the 'classic' vernacular style.

Local residents are tied to the ancient Kinnauri vernacular style even though it began to change 50 years ago and the iconic features are no longer implemented in new construction. They have become accustomed to, and still identify with, a vernacular house that no longer serves their needs or wants, while they overlook the distinctive landscape which they have built-up around it. I do not argue against their respect for ancient vernacular traits. These traits still play a central role in the landscape. In fact they create a healthy sense of place and this layering and patina add greatly to the depth of the cultural landscape in Kinnaur. A harmony is created from the integration of modified elements, alongside historic elements and becomes a leading contributor to place distinctiveness (Solomon 1966; see also Health 2001) (Figure 7.2). I do, however, feel that this research has exposed a paradox in landscape identity. The community has reinvented certain aspects (the window bank) and cultivated others (jallar – carved trim) to create the contemporary vernacular. Kinnauras have been creating a new vernacular landscape over the last 50 years that is visible to outsiders but still unnoticed by insiders. This is supported by the lack of interviewees who noted the verandah window bank or the jallar for example, as typical Kinnauri vernacular traits. These are the two most common

architectural traits in the vernacular landscape. This invisible landscape represents the unconscious, taken for granted part of their daily existence, so common that it is overlooked.

My landscape interpretation and analysis determined that the ancient vernacular style has evolved into a contemporary vernacular style that although distinct, echoes characteristics of the ancient vernacular patterns. I contend that the common pattern of significant features, used in specific and meaningful combinations, creates an ensemble distinct to the region. The select essential qualities that compose the ensemble are the window bank – with and without decorative sash; the wall panel – especially when carved; and the jallar. These are the housing components that the vast majority of Kinnauras have incorporated into their houses over the last 50 years and still pursue today. Furthermore, the ensemble is rarely seen in other regions. From a landscape perspective, the set of three small-scale characteristic features actually provides a more representative sense of place for Kinnaur than do the ancient vernacular traits that locals cited.

Figure 7.2 The harmony of Kalpa's vernacular landscape, blending old with new

Because the ancient vernacular traits are widespread across the Himalaya, and moreover, are no longer produced in new construction, these select features are what now represent the Kinnauri house by presenting themselves as the most common *and*

distinctive. The distinguishing features that make up the ensemble are the most prevalent, the most regionally significant, and the least conscious. People agreed when asked directly that the three ensemble features were important parts of the house, but they failed to see them when asked an open question of which aspects of the house are 'Kinnauri'. Because the features are so common to the immediate area, the local population does not yet see the new vernacular landscape. Instead they continue to identify more with the ancient traits that have become outdated and actively modified. My point identifies that landscape features, even when abandoned and derelict, can still serve the emotional needs of the population. Identity is drawn through historical icons whether it appears residents are actively creating new examples or not.

Large-scale versus Small-scale Features

The most transformative changes to the vernacular house come in the form of changes to the building materials, construction methods, and house form (as described above and in Chapter 6). Changes at this level of the vernacular house have large-scale impacts on the appearance of the house (i.e. verandah enclosure) and the cultural landscape. However, given the lack of timber access, many of the vernacular changes taking place in Kinnaur are unavoidable. People feel that they have no other options. Furthermore, an increase in non-farm employment which is subject to an imposed schedule makes time for traditional materials harvesting more challenging. For these reasons, it is difficult for the Kinnauras to preserve the material choices and construction method of the ancient vernacular. The large-scale components of building form and material choice are particularly vulnerable to environmental and socio-economic changes. They are heavily influenced by availability of resources and market trends. A change to the house at the 'large-scale level' can have detrimental effects on the continuity of vernacular traditions if major components such as building form and traditional materials are altered. If for example, Kath Kuni was the only distinctive feature of the Kinnauri house, the Kinnauras would be systematically undermining their vernacular tradition and spirit of place through the simple incorporation of concrete walls.

However, while concrete has made great inroads in construction, and social change has perpetuated a shift in house form, there is still a presence of the 'Kinnauri

style'. It is clear that the vernacular house of Kinnaur has not been abandoned but that select aspects have been modified to address changes in material availability (both increased and decreased), and to reflect changes in lifestyle. Despite these incremental changes, and in some cases large-scale changes, a spirit of the vernacular house still exists. Residents are holding on to the essence of the Kinnauri house not through building form or material choice, but through the continued incorporation of smaller-scale decorative features – this includes decoration or any feature that can be regarded as secondary to major components such as form and construction method. Communities have much more control over the small-scale features of the home. Resilient and flexible, small-scale features provide a greater range of acceptable modifications for the vernacular house. After large-scale changes have been made, I assert that small-scale features are what hold the house in the vernacular style. This is illustrated by the Kinnauri ensemble and its ability to represent the essential quality of the Kinnauri vernacular house and contribute to a spirit of place.

The select features have the power to come together into what Walkey (1993) referred to as an image of the iconic house. Even with a change in building method (Kath Kuni), roofing material, and occasionally building form (enclosure of verandah overhang and roof line alteration), the Kinnauri style house maintains something close to its iconic image (Figure 7.3). It is the combination and frequency of these essential qualities that gives cultural congruency to the regional architecture and allows the rest of the house to modernize – without sacrificing that image. Several of these features can undergo adaptation and reinterpretation without losing the essential connection to the iconic vernacular. Keep the essential connection to the iconic vernacular is much more difficult to achieve with larger-scale components alone, such as building form and materials.

Figure 7.3 A modified Kinnauri vernacular style
Even with concrete and verandah enclosure, this house still contributes to a historically congruent
Kinnauri vernacular landscape due to the inclusion of the select essential features such as the window
bank, wall panel, and jallar,. Kalpa village

Using essential qualities to evoke a spirit of place

It is not necessary that a house has each of the characteristic traits to convey an image of the 'iconic house'. Rapoport (1989, 80) argued that a range of variations within defined limits allows for flexibility and "no single characteristic or attribute is both sufficient and necessary." Relph (1993) described the unexpected juxtaposition and unpredictable variations in landscape as 'imperfection' and argued that this is a contributing factor to place distinctiveness. Imperfections make a place real, show human interaction, and verify that there is significance – that residents have invested part of themselves into their place. He called imperfection the mark of life. Therefore, variations and interplay of essential qualities promote distinctiveness. Similar to Walkey's (1993) argument, this highlights how builders worked within a set idea, but with no precise rules or written plans for the outcome. This allowed for imperfection, variation, and spontaneity in the Greek as well as Kinnauri vernacular landscape. No two

houses are the same. Repetition is not mundane, rather it is comforting and the repeated pattern of features creates the ensemble that makes the place unique, yet familiar.

A Kinnauri verandah home can display a decorative window bank and carved lower panel, while forgoing the carved fascia – the most common central quality. It is the frequency and interplay of essential qualities that encourages the cultural congruency of the Kinnauri vernacular landscape, and I argue that this can be achieved with few and small-scale features alone. A modern concrete block building in Kinnaur can echo the spirit of the vernacular house by adding fascia trim and nothing more. That small-scale decorative feature singlehandedly recalls the vernacular tradition and helps a modern house fit into its surroundings, helping hold the essential qualities of an 'iconic house' (Figure 7.4). This is achieved through its high degree of repetition (Rapoport 1981). This example may not be considered a truly 'vernacular building' by many scholars; however, the key to exploring the idea of contemporary vernacular landscapes implores us to ask: does a connection exist, is there an essential quality, and how has this been achieved?

Figure 7.4 Metal jallar helps this concrete house echo the vernacular
Kalpa village
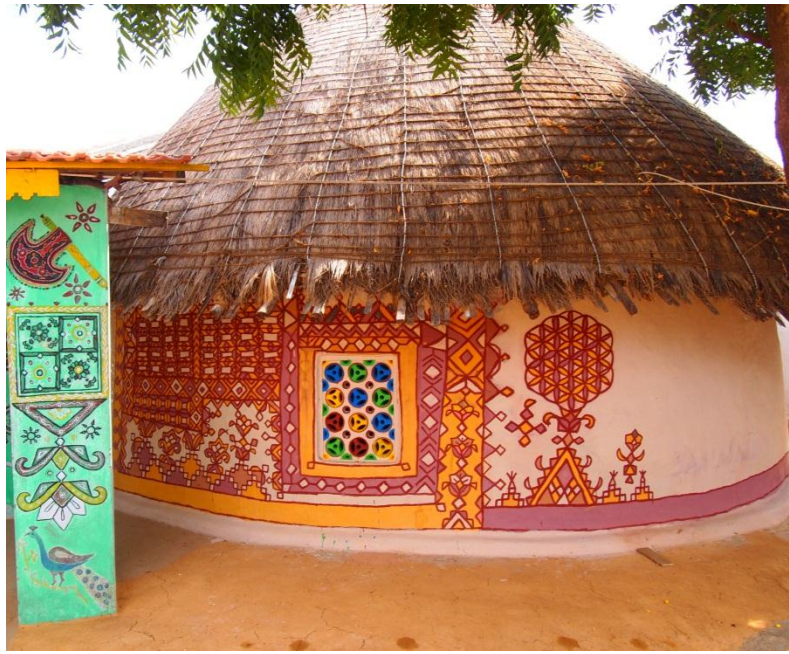
Figure 7.5 The traditional Gujarati house

The argument I make here, that small-scale features have the ability to convey the spirit of vernacular, is supported beyond Himachal Pradesh. In the desert of Gujarat, India the traditional vernacular house is a round hut with pigmented exterior designs (Figure 7.5). The contemporary version is a rectangular house form that has lost all reference to the vernacular house (Figures 7.6a and b). The house form changed for similar reasons as revealed in Himachal Pradesh including increased road access and new materials. However, government housing programs also greatly influenced the application of manufactured materials during rapid construction for environmentally displaces peoples. The use of typical decoration however, reproduced on the new dwellings, allows residents to retain the spirit of their vernacular traditions in a new context, providing a means of cultural congruity and marking cultural identity. The nondescript form comes alive as Gujarati with the addition of traditional painting alone. Furthermore, the painting is easily replicated on the new house form, making it more likely to be retained.

Figures 7.6a and b Modernized Gujarati houses
The presence of decoration helps these houses connect to the vernacular traditions

Another example shows that without decoration the distinctiveness of the building actually disappears. In Russia, carved decorative trim is the central distinguishing feature that defines the traditional cottage or *datcha*. The cottage has a very common form. It is wooden, tends to be small in size and has a steeply pitched gable roof (Figures 7.7a and b). However, as socio-economic changes prompt a modification in construction materials, building size, and roof form, the essential quality of the vernacular tradition can remain intact if the decorative features remain. However, if decoration is removed from this structure, it is distinctive in no way and therefore, loses a great deal of connection to the culture.

Figures 7.7a and b The decorative Datcha of Russia
Photos courtesy of Steve Belz

Figures 7.8 Colonial style carved transoms

Like many Caribbean islands, the Dominican Republic is a colonial settlement. Brightly colored buildings with tile roofs and carved wooden transoms are the historic norm of colonial vernacular architecture (if not the indigenous vernacular) (Figures 7.8a and b). Now a tourist destination, designers often seek to tie new construction into the history of the island. One example at a new condominium complex incorporated window details of the colonial vernacular transoms, suggesting that this contemporary interpretation of a decorative detail is enough to create a link to the colonial vernacular architecture (Figure 7.9). Although historically of wood, the new adaptation uses etched glass. In spite of the extreme difference in building scale, form, and material, this small feature is able to help the structure better relate to its history and setting.

Figure 7.9 Etched transoms in Dominican condominium echo the vernacular trait

Finally, Heath (2001) detailed the historic industrial towns of southern Massachusetts where new immigrants adapted the ubiquitous company-built "Three-decker" house to resemble the houses they left in Portugal. They did this in several ways including the simple incorporation of wrought iron railings in place of straight wooden banisters (Figure 7.10). This simple detail helped reflect an essential quality of their former vernacular landscape and was small enough and easily transferable enough to be transplanted into a new context.
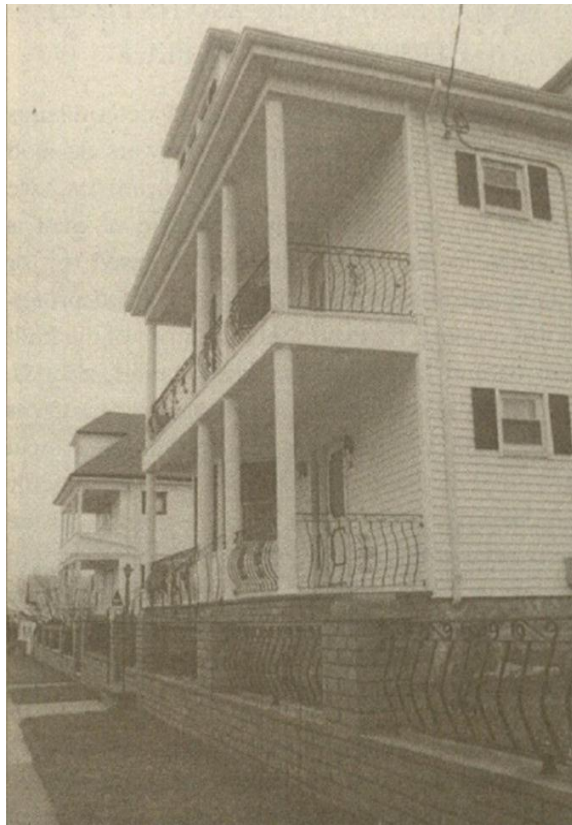
Figure 7.10 Portuguese ironwork on the New Bedford, MA residence
Image used with permission from Kingston Heath, copyright 2001

Again, arguments could be made whether these architectural examples would continue to be considered truly 'vernacular'. However, the examples of small-scale decorative features illustrate their significance as central qualities of vernacular architecture, and particularly as contemporary versions or adaptations of vernacular styles that continue to contribute to place distinctiveness.

Adaptability and the Key to Endurance

Architectural adaptation is a process of incremental change that has taken place over thousands of years as trade routes and migration influence styles and technologies (Abel 1997; Gutschow 1998). Historically, the process of slow modification had fewer drastic impacts on society compared to today's more abrupt changes influenced by media technologies and faster transportation (Gutschow 1998; Singh 1998). The "slow, incremental changes over long periods of time can lead to congruence" (Rapoport 1989, 99). However, if adaptation cannot take place on a rate equal to change, architectural fabric will be lost along with the chance for developing an enduring connection with the landscape (Riley 1980). The alternative, the process of 'replacement' happens when traditional building practices are exchanged with imported technologies rather than adapted to meet new values (Gutschow 1998). However, it is seldom that one culture adopts the ideas of another without modification (Nelson 1963).

Lindsay Asquith (2006) asked if particular traditions are more likely to be preserved than others. I argue that those traditions which are most adaptable are more likely to endure. A crucial part to the endurance of certain architectural features lies in their capacity to fit into new forms and priorities. This is seen in the select vernacular features listed for Kinnaur. As illustrated, small-scale features stand a better chance of enduring than do building form and materials. Small-scale landscape features have one critical advantage in endurance and that is adaptability.

Rapoport (1989, 84) noted that in developing countries certain "essential elements" of tradition will endure while other features change more quickly. These enduring traditions will be combined with new trends. Sufficient flexibility that allows "changes and adaptions" and doesn't "demand that everything must forever be done in the same old fashion" is a key to congruity and distinctiveness (Relph 1981, 172). Flexibility allows a characteristic to suit local customs but remain fluid enough to accept foreign influences without losing the essential connection to the iconic vernacular.

Arreola (1988) credited adaptability and ease of modification as an important attribute to the staying power of the Mexican American housescape. Adaptability allowed the ensemble to remain viable. The local practices of using color to paint the facades of early indigenous temples, making shrines to the folk gods, and creating an

enclosure were all easily adaptable because they were acceptable to both the indigenous and Spanish parties. Throughout time, the bright colors of the Mexican-American house blended well with the growing Anglo preference for the Victorian style, and therefore the bright color choices of the Mexican-Americans were again legitimized and reinforced through Anglo practices (Arreola 1988), mutually beneficial to both parties.

Architectural Historian Labelle Prussin (1973) made explicit this argument of what I call *mutual crossover,* which is a complementary circumstance of adaptability. She explained that traits have to lend themselves well and adapt to a new culture to endure. She used the example of the Islamic faith, which when introduced into a region is adapted. The indigenous elements that are retained are those which adapt themselves most easily to the new faith. Prussin suggested that a similar process takes place in the adaptation of architectural elements. She used the example of ancestral pillars of the indigenous round house of Mali, West Africa which became a dominant decorative feature of the rectangular urbanized home under Islam (Figure 7.11, Figure 7.12, Figure 7.13). They were adaptable to a new house form, transferable, and I would add, suitable for Islamic tendencies towards spires. Therefore, the trait persisted.
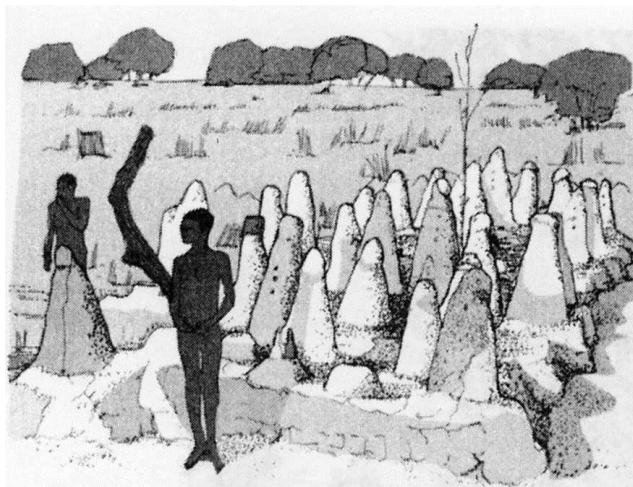
Figure 7.11 Ancestral burial pillars of Mali
Image used with permission from Labelle Prussin,
copyright 1986
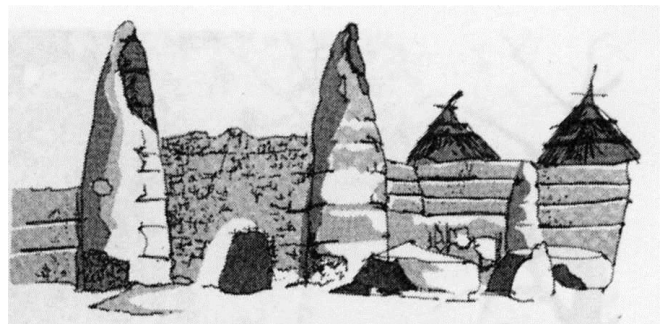
Figure 7.12 Pillars reflected in indigenous architecture of Mali
Image used with permission from Labelle Prussin,
copyright 1986
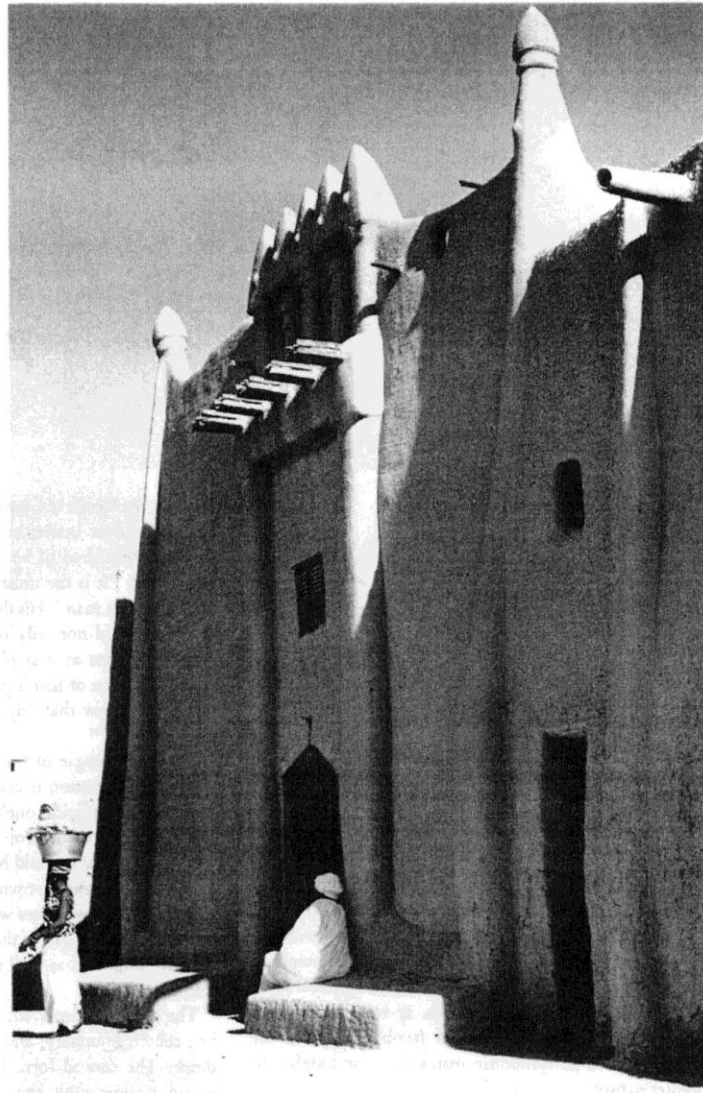
**Figure 7.13 Vernacular architecture of Djenne Mali showing
incorporation of the ancestral pillars into house design**
Image used with permission from Labelle Prussin, copyright 1986

Kinnaur's select features have shown promise in their ability to adapt and to
retain social value, enhancing their chances of endurance. The essential qualities of the
Kinnauri houses are adaptable to new scales, building materials, and applications. The
decorative nature of the features works in contemporary Indian narratives and preferences
for ornamentation (both as jewelry and in architecture), and they continue to show an
amount of status through decoration. Even during times of limited timber, the upper
story wall panel of the Kinnauri houses has persisted. It adapts to less expensive
manufactured plywood as an alternative building material. Although, it does not accept
carving as well as cedar, simplified designs – which seem to be the natural progression –
can still be achieved (Figure 7.14). Furthermore, the construction system allows for the

use of available and less expensive small sized wood. Finally, *reinterpretation* represents the original vernacular trait almost seamlessly.

Figure 7.14 Wood carving on manufactured wood sheets
Kalpa village

Jallar, the carved fascia trim of Kinnaur is the most commonly seen vernacular feature today. The small-scale adaptability played a major role in the process. Jallar transitioned from the religious landscape to the domestic, similar to how Arreola (1988) explained the religious origins of the Mexican American housescape with respect to color, enclosure, and shrine. Perhaps most important today in the widespread popularity of jallar is its availability to the mainstream population. It is small-scale and more affordable than a full sized panel carving. It is easily adaptable to a new house form and can be applied to a variety of structural materials. Furthermore, fascia trim is now

Figure 7.15 Metal Jallar trim
Kalpa village

fabricated in metal, providing an available material during times of timber conservation (Figure 7.15, see also Figures 4.39a -c).

In the Kalpa village region, people said that the metal jallar was fabricated on site, whereas in periphery districts it was available prefabricated in the market. Nonetheless, metal fascia has undergone reinterpretation and change without losing the essential connection to the iconic vernacular. All of these reasons support its resilience and increased popularity. Because the trim piece is easily transferable to metal and compatible with old and new building methods, it becomes the dominant holdover. Wilbur Zelinsky (1973) noted that none of the diagnostic features that he listed in the Pennsylvania town gained strength over time; all the features diminished in prevalence over time. Jallar on the other hand, shows an increase in usage. Therefore, it has unique characteristics and a heightened potential for endurance. The drastic change in the material and its growth in popularity exemplify the importance of adaptability as a guiding principle in enduring styles.

Furthermore, Prussin (1973, 1986) and J.D. Edwards (2008) both made the case that if a trait can serve a purpose in its new setting it is more likely to be retained. Prussin (1973, 1986) noted that the pillar buttresses of Mali were important indigenous social features. They were then adopted as functional buttresses providing structural strength to the new, narrow walled Islamic house form. Their function significantly enhanced their endurance. This is similar to Edwards' (2008) argument that the detached kitchen indigenous to West African tribes was transferred to the American Creole South and advanced by the Anglos because it provided fire safety and separation from heat and unpleasant smells normally associated with the kitchen. But perhaps most important, it was advantageous to the segregated Slave-Anglo relationship. The combination of indigenous significance and social suitability encourages the endurance of certain traditional practices even in the face of major social change. In the Kinnauri context, jallar echoes the temple (the pride of the region) and the Kinnauri love of personal and architectural ornamentation. But beyond its visual qualities it serves the purpose of covering floor boards on the façade and blocking wind from entering where wall and roof meet, supporting heritage alongside function and encouraging its endurance (Figures 7.16a and b).
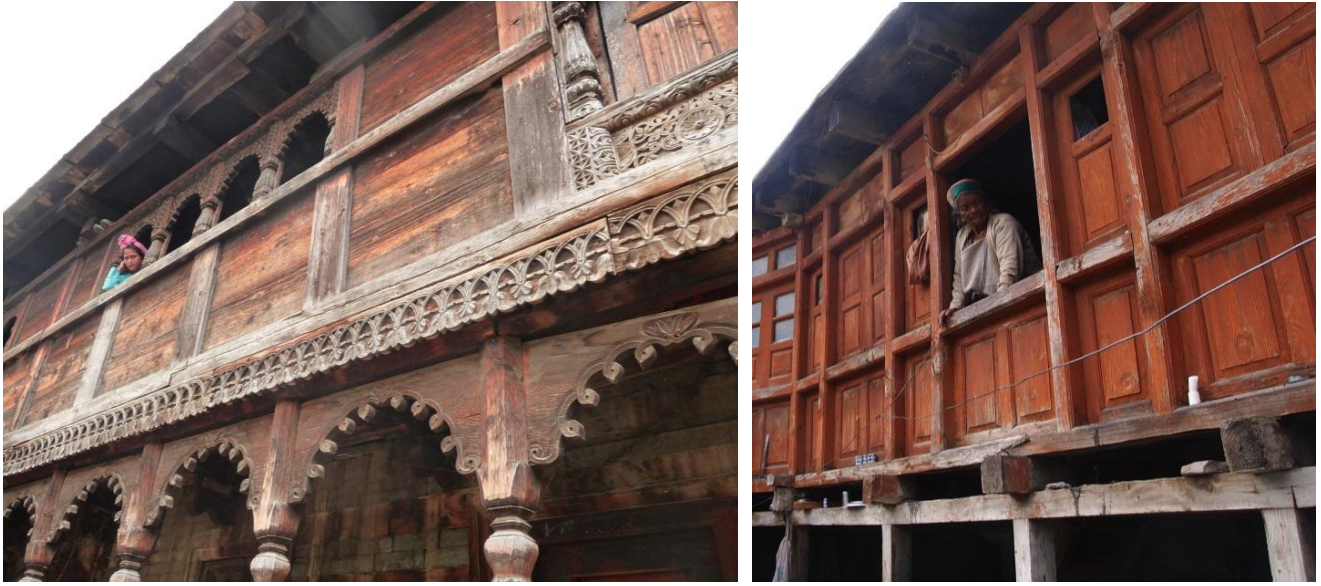
Figures 7.16a and b Jallar (left) covers the floor boards to the house, but is absent in the house at right
Kilba and Kalpa villages

The potential of small-scale features

J.B. Jackson, in his article *First Comes the House* (1959) argued that if the crude vernacular house of the American Southwest had developed with a group of skilled craftsmen – such as carpenters and artisans – it might have become a "genuine architecture". However, he warned that once a style becomes "complex, dependent on the skills of specialists", it will vanish in a generation (19). He believed the very characteristic of complexity would have ultimately led to its demise. The craftsmen would have eventually been lured away to the cities. Dependent on the skills of the absentee craftsmen, the vernacular style would have died out. The very simplicity and crudeness that defines the Southwest adobe house, Jackson believed, was what kept it accessible and enduring for the people. In Jackson's opinion, this core can always be found because there is so little to lose.

Based on the findings of Kinnaur's select features, I come to a different conclusion. Buildings will always be adapted by the people. The scenario predicted by Jackson has played out to some extent in Kinnaur district. People began to out-migrate to the cities with improved roads and increased ease of travel. However, the district has also opened to in-migrants from poorer states such as Bihar, who come to Himachal for the hydroelectric development work and continuous highway construction brought on by

recurrent landslides. They have also taken on work as carpenters. Although many Kinnauri wood carvers remain, these new immigrants take the place of the young Kinnauras who have broken ties to the apprentice system and moved onto cities where they might receive more pay. The carving, though said to be of lower quality under the Biharas, can continue as it is generally copied even by Kinnauri carvers from templates passed down from generation to generation (Figure 5.12). Because the carvers are of different origins, people could argue that the tradition has been fractured, however, emigration did not cause the skill to die out. Many Kinnauri carvers remain and enjoy plentiful work in temple carving which is never short of deodar wood supplies provided from religious forest reserves.

In fact, I contend that cultures rich in decorative features may be more likely to have enduring vernacular landscapes. They have a greater number of adaptable features, therefore, an increased opportunity for preserving the central qualities of an iconic house. I have tried to show here that the large-scale features of the house are more difficult to preserve. After the building form and materials change, the endurance of a vernacular style depends on the small-scale features that give it distinctiveness. The profusion of details in the Kinnauri house, in direct contrast to Jackson's projection, gives the society a cultural complex, a matrix from within which to choose select parts that are most adaptable and enduring.

My initial visits to Kinnaur district led me to presume that small-scale decorative features would be the first thing to disappear in a changing landscape due to their apparent expendability and need for maintenance. The opposite scenario emerged through research. Small-scale and decorative features are in many cases the final distinguishing features remaining on the house and showing cultural significance. This is evidenced in the apparent cultural value of jallar trim work which transformed from wood to manufactured metal in an appeal to continue the trait. The highlighted ensemble is today the primary visual quality of Kinnaur district's vernacular landscape.

Keeping Placefulness

"Consciously or not the words tradition and modernity generally conjure up images of fierce tugs-of-war between opposite and irreconcilable forces" (Abel 1997,

114). However, change to local vernacular houses does not always guarantee destruction of traditional values (Blake and Smith 2000; Shankar 2005; Vellinga 2006; Heath 2009). Meaningful change produces cultural fabric that continues to represent the local goals and the vernacular system (Edwards 2008). Therefore, the resulting landscape can be just as authentic as the unadulterated examples (Jackson 1976). "There is a continuous array of adjustments that will accompany a building … through its usable life" and these modifications are significant because they "grow out of the circumstances of the people who use these spaces" (Heath 2001, 183).

Direct involvement and active participation in a building is the key to the concept of vernacular architecture and this process reinforces the knowledge of future generations (Glassie 1990). Incremental changes allow later generations to continue to connect with the traditional building practices. Kevin Blake and Jeffrey Smith (2000) argued that the multigenerational aspect of the Pueblo Mission church murals made them more significant. Structural changes and restoration actually helped to ensure not only the survival of the building but also the multigenerational permanence of the cultural icon. They considered change and fluidity as necessary to promote a connection with the new generation. Therefore, the process of adaptation can reinvigorate attachment and identity. Not all change is positive however and scholars acknowledge that some traditional styles have been lost (Vellinga 2004; Heath 2009). Nevertheless, the resulting contemporary vernacular style can be more pertinent to the existing local population who has responded dynamically to local events.

Historically, homogeneity was an important characteristic of the cultural landscape. It is in some cases less homogenous today (Jackson 1985). This is due to the evolution of landscapes that now contain several layers and patterns of house types that change more over time than location. Zelinsky (2011, 117, 208) called the contemporary landscape of America "something dynamic and intricate" which will "change ceaselessly during [our] lifetimes." The landscape is now "a more complex panorama, than it has ever been" (Zelinsky 2011, 162). This is because major cultural changes happen in sudden leaps commonly associated with major events and innovations (Lewis 1979a). An inevitable amount of "pre-leap landscape" is left in place, adding to the complexity. This process creates what I call a mature or evolving landscape. This is one that

seamlessly blends old and new traits, scales, and structures – a landscape that provides that inexplicable comfort of place; one that has spirit because it combines a connection to the past and a living vitality that cannot be denied or suppressed.

However, at the same time, people today feel that places are becoming less distinct through the process of globalization, exposing a paradox (Relph 1976, 1993; De Blij 2009). Globalization does both. It "increases cultural homogeneity by establishing common codes and practices", but it also "increases a heterogeneity of newly emerging differences" (Douglas Goodman quoted in Zelinsky 2001, 11). Is this the case for India and Himachal Pradesh? Today the Kinnauri landscape has an increased variety of house forms and materials options, layered over historic patterns. This makes the landscape more complex. Yet at the same time the "international style" has "elbowed its way in" to the commercial strip and housescape. Manufactured materials are becoming ever-present even in remote vernacular environments, giving it that placeless character.

Relph (2009) argued that the 21st century will present social and environmental challenges at a global scale. However, the individual effects will be locally diverse. He reasoned that each place will keep some aspects of placefulness. On a continuum, and at a small scale, we will continue to see locally expressed diversity (see also Riley 1980). This way, the landscape changes, but diversity still exists (Riley 1980; Vale and Vale 1983; Zelinsky 2011). Diversity is a key component to fostering a sense of place and enhancing quality of life.

The idea of sense of place must be malleable for the great changes that have taken place in the world. We must integrate an appreciation of place identity but also allow for the global scale that is evident in change and variety. However, we should remember that iconic buildings, common vernacular houses, and vibrant streetscapes contribute greatly to place distinctiveness and therefore, enhance spirit of place (Lewis 1979b; Speake 2007). The Kinnauri vernacular landscape and its indisputable sense of place are unquestionably enhanced by its distinctive vernacular house and its ensemble of flexible, small-scale features that help keep it placeful as it transitions into the future. The Kinnauri vernacular landscape and its indisputable sense of place are unquestionably enhanced by its distinctive vernacular house and its ensemble of flexible, small-scale features that help keep it placeful as it transitions into the future.

Finally, spirit of place is manifest in the willingness of residents to show concern for continuity of traditions in their careful response to changing circumstances (Relph 1981). Selection of essential features and their ability to adapt to a new context is crucial for any contemporary vernacular. Ultimately, beyond circumstances that enable or prevent the continuation of traditions, endurance hinges upon something much more difficult to predict – whether or not a group continues to hold value in the iconic image.

Impact

The United Nations Educational, Scientific and Cultural Organization (UNESCO) instituted a cultural landscapes category for the World Heritage List in 1992. This illustrates the increased exposure and significance of this field of study. However, many countries continue to find it difficult to understand the concept of landscape preservation, rather than monument preservation, and hesitate to find value in "ordinary landscapes" (Taylor and Lennon 2012). This has led to the conservation of natural areas and monuments alongside the demise of traditional settlements, practices, and livelihoods. These aspects are a crucial component of the 'living cultural landscape' (one with continuing vitality as opposed to relic). An increased awareness of the holistic value of ordinary landscapes, rather than single monuments could lead to greater protections for these important places. Therefore, the study of cultural landscapes has theoretical as well as applied value.

Descriptive approaches to rural and unadulterated vernacular landscapes have been the historic precedent for vernacular landscape study within cultural geography. This dated approach has made it increasingly challenging to place landscape studies in our contemporary context, leading to a decline in the sub-discipline. My dissertation adds to the small collection of work focused on emerging, as well as enduring traditions, looking critically at the way in which the two interact in 'living cultural landscapes'. With an analytical rather than descriptive approach, I place the modernizing vernacular house in the center of study, acknowledging the *hybrid*, which represents the majority of buildings and landscapes today (Vellinga 2006). Scholarship of this type exemplifies action oriented approaches towards vernacular landscapes, examining them as sources of

knowledge that can be integrated with new architectural technologies as buildings modernize (Vellinga 2006), contributing to the continued legacy of living landscapes.

The Himalaya is certainly not the only place dealing with vernacular landscape change, issues of forest management, and increased exposure to global influences. Therefore, it can be assumed that places throughout the world will experience large-scale effects to the vernacular housing stock. These findings and conclusions could be applicable to those situations as well. Scholars have shown that they can apply landscape study at a broad scale (Zelinsky 1973, Francaviglia 1977; Arreola and Curtis 1993) and also at the scale of the house (Arreola 1988; Pavlides and Hesser 1989; Walkey 1993). This research offers a new alternative for the way geographers can approach the cultural landscape by showing that the vernacular landscape can be studied on a very small scale. Analysis at a small scale can present important attributes of society. For example, it shows that details which were once restricted are growing in popularity and are now the most accessible features for conveying identity and showing beauty. This framework of determining distinguishing features can be implemented for identifying culture regions, choosing heritage conservation practices, and choosing specific elements that should be incorporated into design guidelines for historic or heritage areas.

My research identifies that local residents may draw a sense of place from landscape features, such as vernacular houses, that in fact no longer meet their housing needs and are no longer perpetuated. This raises awareness for geographers and those in the design and development field that we as researchers and planners cannot assume that landscape features, even when abandoned and derelict, no longer serve the emotional needs of the population. Identity may be drawn through the historical icons of a place whether it appears they are actively creating new examples or not. This realization highlights the fact that the Kinnaura people are in a stage of transition in their vernacular landscape, not yet recognizing the *classic* vernacular style as part of their identity.

Acknowledging this state of transition within a cultural region can help geographers and preservation planners take fully into account the cultural landscape in question. Furthermore, with an understanding that residents may have less control over large-scale features of the landscape due to regulations, zoning, government policy, and environmental or market issues, focus can be shifted to smaller-scale aspects of the

community which are more directly controlled by the shared institutional behaviors of the population. Additionally, in making explicit the importance of ensembles in the context of cultural landscapes, researchers can approach landscapes with a broader perspective for study. It is not only the objects themselves that may be most significant, but the relationships between objects. Finally, steps can be made in assessing the potential for endurance of vernacular landscapes by considering the abundance of and likelihood of adaptability for the significant features that make up the landscape.

Because the vernacular house is accepted as a product of group values, study can reveal whether changes to ornamentation (or semi fixed features) represent a growing sense of individualism in a modernizing society. Accepting that the house is a reflection of society, analysis of the specific changes to the house alert people to changes taking place in society. It is clear that in looking at socio-cultural situations, the agents of change become evident and the human responses are seen on the house. One must combine the two: a study of the material culture with an analysis of the changing social and economic situation of any place. One without the other provides an incomplete study (Oliver 1969).

Restrictions and Qualifications to the Research

This dissertation singles out the house, which is only one aspect of the vernacular landscape. It by no means intends to suggest that the house is the only part worth study or that it stands alone in the cultural matrix. Numerous other options exist for studying specific elements within the cultural landscape. Small-scale features are also visible in the traditional clothing, agricultural systems, and food ways to name a few alternatives.

Additionally, while I put emphasis on the features determined through *etic* landscape analysis, I am not advising that the outsider's perspective is always more important than that of the insider. It should not be this etic perspective that dictates cultural heritage, but an understanding of both inside and outside. Likewise, the exterior of both vernacular and mass-produced houses is but one small facet of its whole picture. The use of feature focused vernacular analysis should not be used to develop new housing schemes without the addition of research on interior space use, gendered space issues, and belief systems that manifest in the built environment. These issues among

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others are crucial for understanding cultural taboos and required layout for each culture (Rapoport 1969; Oliver 1975, 2003; Pavlides and Hesser 1989b).

Finally, due to the difficult content of some questions, people couldn't answer every question. This therefore reduced the sample for specific questions related to meanings in vernacular designs as these were very difficult for people to answer. This is part of what I explain as the taken for granted landscape in Chapter 4. The landscape features were so common that they were overlooked and the history has been lost. India has struggled over the last generation with an education system which in many cases retained its colonial structure and disregards indigenous knowledge (Thakur 2012). Therefore, the traditional know-how and connection to local beliefs, which is the foundation of folk landscapes, has been fractured, leaving people disassociated from their symbolic landscape. This creates additional challenges for researchers.

Future Studies

Because of Kinnaur's growing economy from hydroelectric power, the horticulture industry, and tourism (especially in Kalpa and Reckong Peo) a repeat landscape study could be valuable in future years. Aspects to consider are the growth of hotels and any destruction of vernacular fabric stemming from that process. This would show a diminished value for the vernacular landscape, which is a large part of the initial draw for tourists. In a repeat study, remapping the village and observing if substantial house change has occurred would be beneficial. Particular attention should be given to old or ancient houses and whether these are being replaced or modified beyond recognition as contributing vernacular fabric. A third phase of study could retrace the three select essential features to see if they are still the dominant distinguishing features of the region or if they have fallen from use into a streamlined modern house. Additionally, they could show adoption by a larger percentage of the population in a reaction to defensive structuring. Because this area is in a state of development, analyzing the way in which the region chooses to grow, what people foster, and what they discard from the past, would be valuable and more feasible with my baseline research. And finally, although I talk about a highway, National Highway 22 is still a bumpy, frightening, narrow cliff-edge road. What changes will occur in the more remote

parts of the region as this road continues to be improved and new branches created? I was able to visit villages that are accessible by foot only and even these villages showed use of concrete, brought in by donkeys. Deeper analysis can be undertaken on the correlation between increased standard of living and vernacular landscape change, aside from road improvement.

I ultimately hope to expand this framework to study the landscape features of predominantly Hindu parts of mainland India to determine small-scale features that span the cultural landscape of religion and identity. A study of the West Indies landscape (particularly Trinidad, Tobago, Guyana, and Surinam) could reveal which landscape elements were relocated and transplanted to a new life in the West Indies from the Indian immigrants who brought with them Hindu beliefs that are so intrinsically displayed on the landscape. By studying distinctive features a clear image of dominant holdovers and retentions will reveal which parts of their landscape were more important and which were most adaptable to a new landscape.

The toughest part to interviewing and research for this dissertation sat in the question of why. Why did these people choose to incorporate specific features again and again throughout the community? Why do they hold value in certain objects and images that they cannot explain? These are important question to ask in a landscape study, but how do we determine value? These questions were very difficult to answer and very little research could be found on the topic of symbolic and architectural design pertaining to houses in the Indian Himalaya. It appears to be a branch of research worthy of additional time, despite the challenges.

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Appendix A – Interviews

Interview Table

Interview Table shows all people interviewed in-depth in the Kalpa village region.

Interview #	Category	Name	Town	Demographic	# of people	House type
1	homeowner	Sharm Seray Negi	Kalpa	elderly man	1	old
2	homeowner	Daughter in law of Negi	Kalpa	mid age woman	1	modern
3	master carver	Bishram Das	Kalpa	elderly couple, mid age man, young man	4	old
4	homeowner	Tashi & Ratandasi	Kalpa	elderly woman, mid age son	2	modern hybrid
5	builders	Durga Temple	Kalpa	mid age men	5	temple
6	homeowner /carver	Chimed Dorge	Kalpa	elderly couple	2	old
7	homeowner	Dhan Raj	Kalpa	mid age man	1	modern
8	master carver	Roshalal	Sang*	old man	1	classic
9	homeowner		Sang	older woman	1	old, carved
10	homeowner		Bir	older and couple	3	old and classic
11	homeowner	Buderisin	Bir	mid age man	1	old and classic
12	homeowner	Tansen family	Bir	mid age couple	2	classic hybrid
13	homeowner	Bandu Blan	Bir	mid age man	1	old and classic
14	homeowner		Kothi	mid age couple	2	modern
15	homeowner / carver		Kothi	man and young man	2	classic

16	homeowner	Vinay Negi temple head	Kothi	mid age man	1	old and classic
17	homeowner	Santilala Deraram	Kalpa	older man	1	ancient fancy house
18	homeowner	Banorilala Sonil	Kalpa	man and young adult son	2	classic
19	homeowner		Kalpa	women	2	old and classic
20	homeowner		Kalpa	various women	6	ancient, classic and modern
21	homeowner		Kalpa	older man youngman	2	ancient and classic
22	homeowner /guesthouse	Neta Devi	Kalpa	older couple	2	old and classic
23	homeowner		Kalpa	elderly man	1	old
24	homeowner		Kalpa	mid age women, youngmen	4	modern hybrid
25	homeowner		Kalpa	older couple	2	old
26	homeowner		Ter	older man	1	old, ancient and hybrid
27	homeowner		Ter	women, young men	4	hybrid
28	homeowner		Ter	older woman	1	old
29	homeowner		Ter	older woman	1	ancient
30	homeowner		Kothi	mid age man	1	Classic hybrid
31	homeowner		Ter	young man	1	old
32	homeowner		Kothi	mid age woman, young adults	3	old and classic
33	homeowner		Kothi	Older woman, mid age daughter young woman	3	old

				daughter		
34	homeowner		Kothi	old couple	2	Old
35	homeowner		Kalpa	old couple	2	classic
36	homeowner		Kalpa	mid age couple	2	ancient and classic
37	homeowner		Kalpa	mid age couple	2	classic
38	homeowner		Kalpa	older men and mid age daughter	3	ancient
39	homeowner		Kalpa	elderly man and daughters	4	old, classic, modern
40	homeowner		Kalpa	elderly woman, young adult son	2	classic
41	homeowner / farmer	Shakr	Kalpa	mid age couple	2	classic
42	homeowner		Kalpa	elderly woman and young adult son	2	classic
43	homeowner		Kalpa	woman, men, young adults	4	mod hybrid
44	homeowner		Kalpa	older woman, young adult son	2	hybrid
45	Shop owner / homeowner / farmer	Rakesh Kumar	Kalpa	mid age man	1	Modern classic
46	carver	Laygram Negi	Peo	mid age	1	
47	official	Amit Sharma	Peo		1	Asst Conservation

						Officer, Forest Dept.
48	official	Hardeep Singh	Kalpa		1	Kalpa Range Officer, Forest Dept
49	official	Shiv Dhal Negi	Kalpa		1	Temple Committ Head
50	official		Kalpa		1	President of Kalpa
51	official	Umong Bhordway Rakesh Rana SR Negi	Peo		3	Dept of Agriculture
52	official	Narender Kumar Sharma	Shiml		2	Census Bureau
53	scholar	Laxman Thakur	Shiml		1	Professor of History HP University
54	scholar	Hari Chauhan	Shiml		1	Director, HP State Museum
55	scholar	OC Handa	Shiml		1	Historian
56	scholar	Pratyush Shankar	Ahme dabad		1	Prof. of Architecture CETP
57	carvers		Nark		2	Hatu Peak Temple
				Total people	111	

* Village abbreviations: Sang = Sangla, Bir = Birling, Ter = Telangi, Peo = Reckong Peo, Shiml = Shimla, Nark = Narkanda

Approximate Interview Question Set

1. Who/how many people live here?
2. When was the house built?
3. Who built it?
4. Is this a Kinnauri house?
5. What is the Kinnauri house style?
6. What makes it Kinnauri? Which particular features represent the Kinnauri style?
7. Why do the doors and windows have so much carving?
8. Are the doors and windows special?
9. If there is carving – who made the carvings?
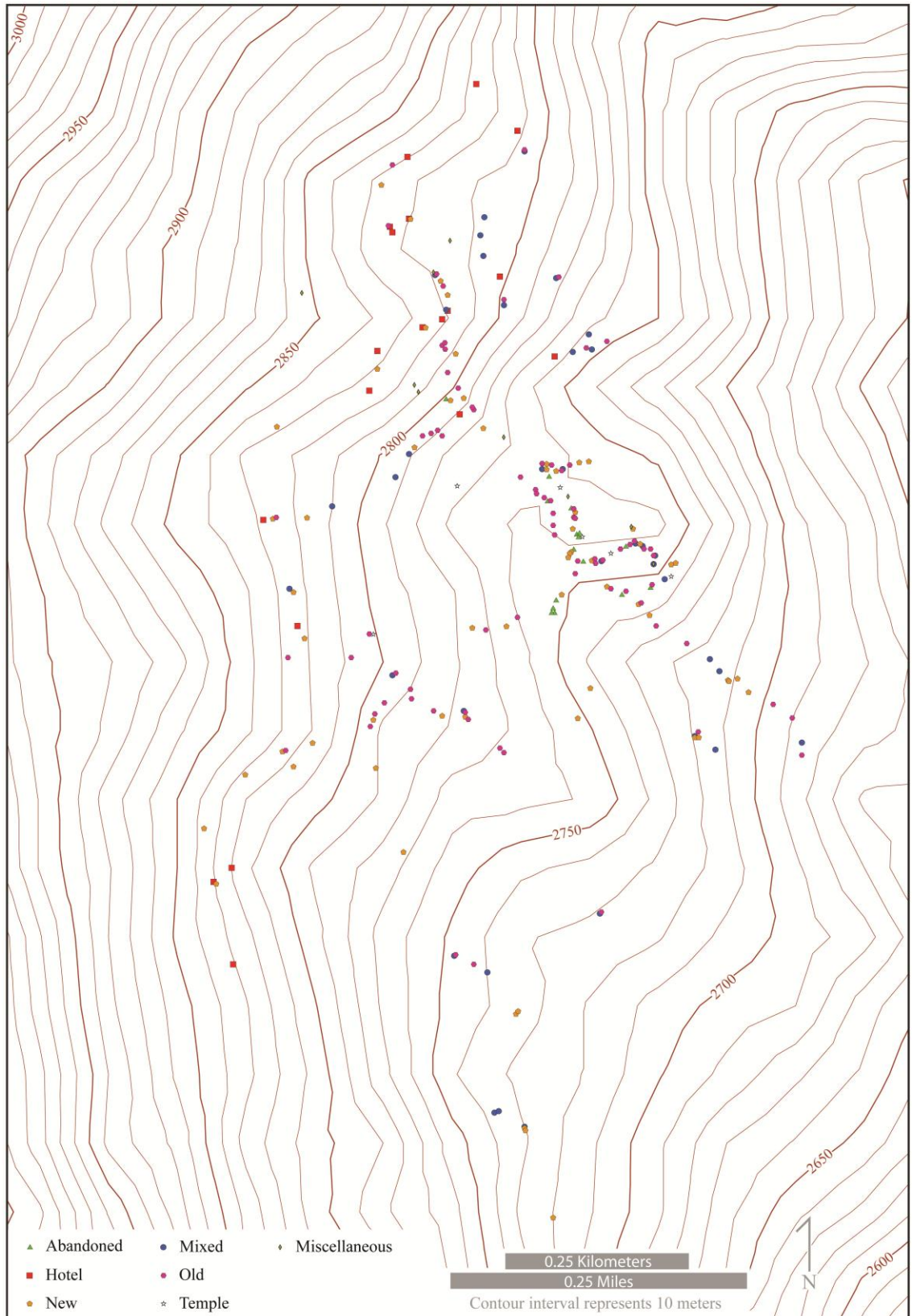10. Who had say in the content of design?

11. What do the carvings mean

12. What does the peacock mean? The flower? …

13. Why do people make carvings on the house?

14. Does the carving have status for the owner?

15. Is the verandah a Kinnauri feature? Is it very important for the house?

16. What is its function?

17. Where is the wood from?

18. How did you procure the wood?

19. Is it difficult to get wood?

20. Is it expensive?

21. What is a TD (timber distribution program)? How many trees can you get?

22. Is there any place to buy wood?

23. Have you heard of the Depot?

24. Who can buy wood at the depot?

25. Is it easier to use other materials?

26. Is concrete less expensive than wood?

27. If you had both available at the same price which would you choose, wood or concrete?

28. Specific to house traits – why the decorations on the ridge? Why the jallar (trim)?

29. Does it mean anything?

30. Does the ridge decoration represent Shiva's trishool? Is it a flower?

31. Where did you get the wood and slate in earlier times? Now?

32. Do you know anything about the fancy houses? The owners?

33. When they were built, did other houses have decoration?

34. Why are they close to the temple?

35. Is that always the case?

36. Were there more of them many years ago?

37. Were the carvers local, and the designs?

38. Do you know any of the meanings behind the designs?

39. Are they personal to the carver or tied to religion?

40. Are house carvings similar to the temple?

41. Why are/aren't house carvings so similar to the temple?

42. Do you think that other houses aspire to have similar designs to the fancy houses?

43. Who was able to have decoration on the house?

44. Do you think these houses represent Kinnaur or another area?

45. What is typical of Kinnauri Style?

46. Were the houses different many years ago? How have they changed?

47. What can you tell me about repairing damaged parts of historic homes?

48. What are some of the difficulties that inhibit repair of the historic home?

49. Is there any religious ritual to fixing or building the house?

50. Can you make repairs to the house? Do you have to ask the local god?

51. Does your house have a private deity? (Some people claimed that the deity must be asked if repairs can be made and sometimes they say no, leaving the homes in disrepair.)

52. Has access to modern or outside building materials changed much over the years?

53. What do you think the biggest influences are for making the village change?

54. Has the road changed much over the years?

55. When did concrete become available?

56. Do you have any photos?

57. What is the evolution of the house over the years?

58. What did the ancient roof look like?

59. For what purpose do people own animals?

60. How has animal ownership changed over the years?

61. Is there a new Kinnauri house style?

62. How did it change? Why?

63. Is slate hard to get now? Is it expensive?

64. Can you get stones for free?

65. How has the town changed?

66. Has tourism been a big influence on change?

67. Is the Kinnauri culture still strong?

68. What aspects are strong?

69. Is the traditional house part of the culture?

Additional questions for wood carvers

1. When did you work as a wood carver?
2. How old were you when you started?
3. Was it an apprentice system?
4. How did that work? What was the system?
5. Is the same apprentice systems in place still?
6. Did you travel for work?
7. Were you paid in trade or in a day's wage?
8. Are there as many wood carvers today as there used to be? Why?
9. Did you perform ceremonies for constructing the house?
10. Who chose the content of the carvings?
11. Do people still want carvings on their houses today?

Appendix B – Kalpa Village Map

Legend:
- ▲ Abandoned
- ● Mixed
- ◆ Miscellaneous
- ■ Hotel
- ● Old
- ● New
- ☆ Temple

0.25 Kilometers
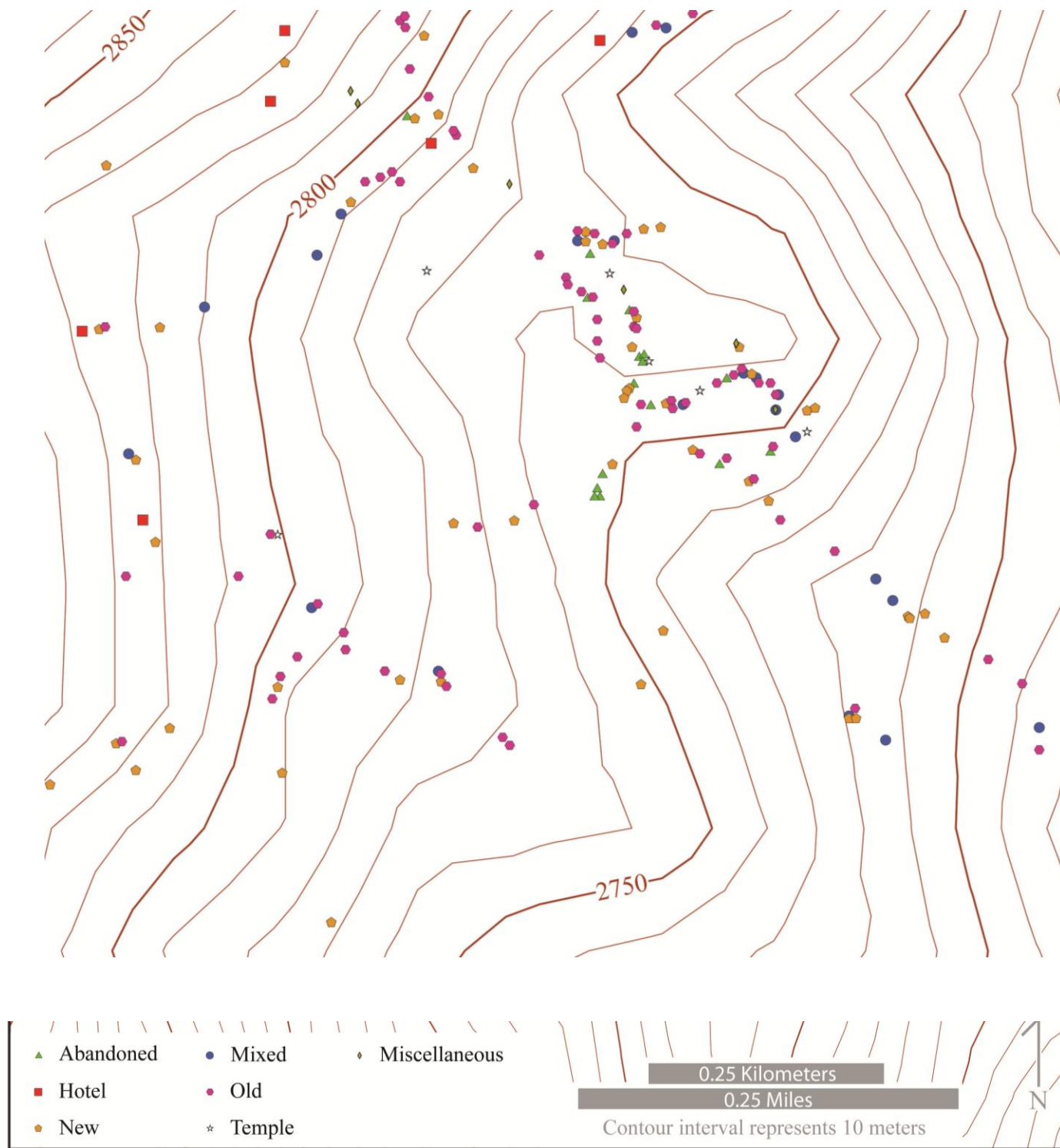0.25 Miles
Contour interval represents 10 meters

N

Figure A.1 Detail of Kalpa village map showing clustering of houses around the temples