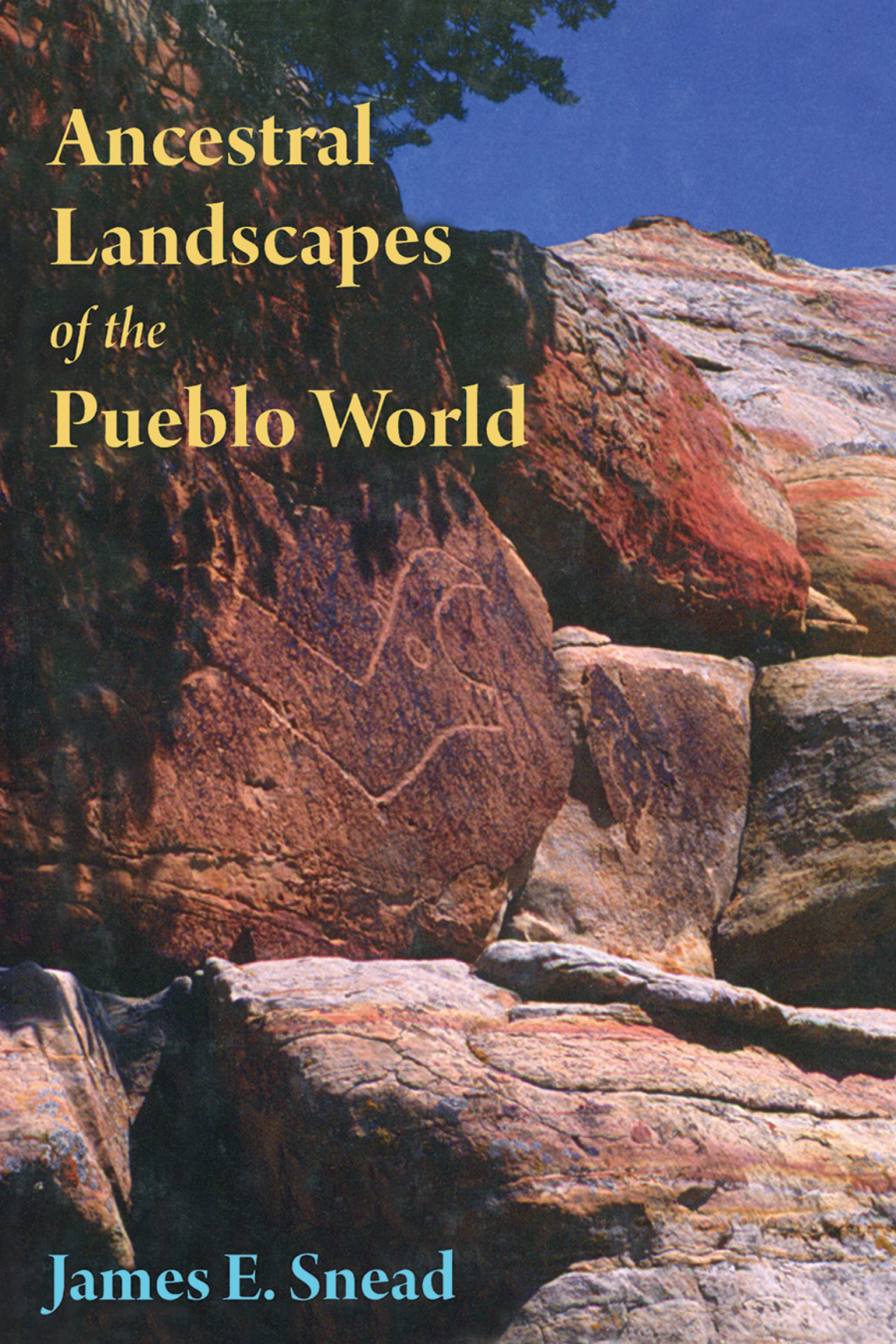
Ancestral
Landscapes
of the
Pueblo World
James E. Snead

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Archaeologists need friends. It is particularly useful if they are the sort of friends who are willing to wander the vast southwestern countryside in the hot sun looking for ephemeral debris of the past, and I am lucky to have quite a few who fit this description perfectly. Otherwise, my fieldwork in New Mexico would never have been launched or completed, and I apologize in advance to those whose names have been inadvertently left out of the summary that follows.

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ANCESTRAL LANDSCAPES
of the Pueblo World

1

Landscapes

> To attempt historical studies anywhere, without first knowing thoroughly the nature of the country, is as futile as to try astronomy without the aid of mathematics.
>
> —Adolph Bandelier, *Final Report*

Flying into the Albuquerque International Airport on a clear day—which is almost any day in New Mexico—a traveler sees the landscape 25,000 feet below as a vast pattern of monumental landforms. The jet approaches from the east, paralleling the route of Interstate 40, and the southern Great Plains give way to the southernmost outcrops of the Rocky Mountains. From this height the basic facts of the land stand out literally in relief. The Pecos and Canadian Rivers sketch narrow, fertile valleys through flat, dry terrain interrupted by mesas and hills. The historic settlement of the region has clearly been influenced by topography and environment. Riverside towns such as Fort Sumner and Santa Rosa, with their associated farmland, are visible on either side of the airplane. The economic structures of modern society also stand out, from the circular imprints of irrigated fields drawing water from subsurface aquifers to the web of highways, roads, and tracks that carry people and goods around the state.

Social elements can be discerned in this tableau, too. The compact grids of small towns contrast with scattered dots that signal the occasional isolated ranch complex. Nearer Albuquerque there are neatly delineated "ranchettes," a few developments with curvilinear plans, and then comes the strict geometry of the city itself. Each layout reflects a different conception of domestic space. It is also possible to see how this built landscape has changed over time. In the southern distance the course of the nineteenth-century railroad parallels the jet's path. An occasional shrunken village along the tracks contrasts mutely with the more prosperous communities linked by the interstate highway.

This aerial panorama conveys a great deal of information about modern society in the American Southwest. Yet looking out the airplane window, I find myself searching for a different landscape, one far more interesting to me than abstract patterns of economy and ecology. Looking north to the rugged

country of the Sangre de Cristo mountain range, I can often pick out places of personal significance—peaks I have climbed, side roads I have driven, and especially the valley of the Rio Sapello, where my family has owned land since the 1880s.

Thinking about the Sapello Valley brings to mind the history of the property, the names and lineages of the neighbors, and many more specific recollections, such as the sweet-sharp flavor of apples from the old trees around the pond. All these experiences are bound up in the physicality of the place, and those who know it well can remember and describe it even if they have been away for decades. To me that landscape is more immediate and perhaps more important than the larger-scale historical and geographic record passing beneath the jet's wings. As the plane descends, I crane my neck and hope that the storm clouds building over the mountains will not block the view and thwart this colloquy between memory and place.

Of course few of these places of recollection can actually be seen from 25,000 feet. The landscape of my personal experience exists on a scale very different from that of the aerial view, a scale at which human actors are invisible. It is only through my ability to associate familiar landmarks with lines on maps and then with the topography itself that I can connect the two. Without a personal frame of reference, identifying a landscape of meaning is impossible, and one's attention turns inexorably to the more accessible overarching structures of the land. But ultimately, which of these landscapes is the more significant? Which has the greater potential to tell us about the people who created it, about their identities and their perceptions of the world around them?

The distinctions between different types of landscapes and the ways we seek to understand them are mirrored by archaeologists' changing interests in the study of geographical space. In the mid-twentieth century, American archaeology was transformed by the advent of "settlement pattern analysis," in which archaeologists systematically examined the surface of the landscape to record the material remains left by earlier peoples. Archaeological surveys evolved from being a simple way to identify good places to dig into a means to study the spatial organization of human culture on a broad scale. This changed the way researchers envisioned archaeological evidence, and they finally acknowledged the importance of modest traces of the past—things such as foot trails and simple scatters of pottery fragments—for which previous generations of scholars had little use.

The study of settlement patterns became a favored tool of the "new" or "processual" archaeology of the 1960s and 1970s, which tried to explain large-scale cultural processes in human populations using a battery of quantitative techniques. Eventually a mature settlement pattern archaeology came to be practiced by archaeologists working nearly everywhere on the globe. Systematic archaeological surveys sampled large regions and documented sites within them. These sites were then grouped in ranks and strata by size and presumed function, classified according to a range of environmental variables, and characterized in terms of their spatial relationships to each other and to certain features of the surrounding terrain. Patterns in the processed data were explained in reference to an analytical vocabulary that linked them to economic and social processes in the societies they represented.

By the 1980s, practitioners of settlement pattern archaeology found themselves under increasing strain. As surveys proliferated and definitions of what counted as archaeological evidence became more broadly encompassing, the quantity of incoming information in some regions became so overwhelming that it threatened researchers' ability to understand it. Bogged down in questions of chronology, unit definition, demography, and environmental reconstruction, archaeologists took refuge in increasing quantification. But the level of abstraction this required was increasingly untenable, and the models used to interpret spatial data came under attack. Studies of space and its construction indicated that there was more to the process than was explained by economy and environment. Cultural meaning, dismissed as a by-product of the search to fill material needs, gained credibility as an independent factor in the ways living people established their worlds. Archaeologists thus faced the likelihood that the way they had used spatial relationships to interpret the past had missed much of the target.

Coming at a time when much of the agenda of the new archaeologists was being criticized by various "postprocessual" scholars, a crisis of confidence in settlement pattern studies was inevitable. It has not gripped archaeologists uniformly, however. There are many places on earth where the history of research is thin and data are scarce, where it is still desirable to remain high above the field—in the airplane, as it were—and to characterize patterns of data with a fairly broad brush. Elsewhere, particularly in places where archaeology is an old and established practice, the need to develop new ways to explain relationships between people and space through material remains has grown acute.

The catchall phrase for these new strategies, "landscape archaeology," has a complex history. *Landscape* can refer to the natural environment, to the natural and cultural setting of human habitation, to wholly artificial representations created by human action, to particular ways of "seeing" archaeological data, and many things in between. In general, there are two schools of thought—one that views landscapes as something archaeologists should be looking at and another that views landscapes as something archaeologists should be thinking about. Both implicitly lead away from large-scale settlement pattern research toward smaller scales and finer grain. In failing to come to grips with the archaeological record at the local level, in all its detail, we have not fully established the foundations from which the broader questions can be addressed. We get useful information about roads and irrigation systems and communities by knowing what they were made of, what sizes they were, and how they interconnected, but we will not really understand more until we determine what they meant to those who built, used, and inhabited them, over time and across space. The challenge to the landscape archaeologist is to find ways to achieve such understandings.

Nowhere do the new landscape strategies in archaeology hold greater promise than in the American Southwest, one of the hearths of archaeology in the Americanist tradition and home to indigenous people who harbor deep memories of the land. Over 150-odd years of archaeological activity, an extraordinary body of information has been assembled, about both the pre-Columbian history of the region and the nature of the archaeological record itself. As of 2006, for instance, the New Mexico Historic Preservation Division maintained records for more than 150,000 archaeological sites in the state, and as many as 5,000 additional site numbers went out monthly.

The northern Rio Grande country of New Mexico is one part of the Southwest where the dilemmas and opportunities provided by this rich body of information are fully displayed. The region corresponds roughly to what was once known as the Rio Arriba ("upriver"), extending from the escarpment of La Bajada between Albuquerque and Santa Fe north to Taos, incorporating tributary valleys and the broad basins between the Jemez and Sangre de Cristo ranges as well as the upper Pecos River to the east (fig. 1.1). This is the eastern Pueblo heartland, with nine modern villages inhabited by speakers of the Tewa, Tiwa, Towa, and Keres languages. Most of the pueblos were established before the arrival of Spaniards in the 1540s, a striking cultural and spatial

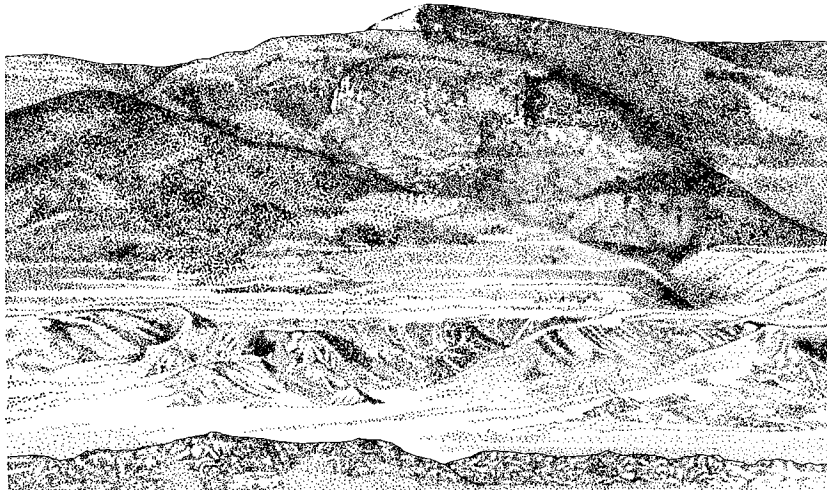

Figure 1.1 Landscape of the northern Rio Grande country of New Mexico

continuum despite warfare, disease, and oppression. Nowadays the indigenous population shares the land with descendants of Spanish colonists and with Euro-Americans, who first began to arrive in the late nineteenth century. But it is Pueblo country all the same, and the archaeological remains of the Pueblo people are to be met nearly everywhere.

It was the relationship between a living population and the antiquities of their ancestors that first brought anthropologists to the northern Rio Grande. Ethnographers have documented Pueblo society in considerable detail, and archaeologists have studied thousands of sites pertinent to the Pueblo past. Chronologies have been developed and refined, providing a widely accepted framework for organizing information about the pre-Columbian centuries. Subsistence strategies have been documented, allowing the variable roles of agriculture and foraging to be assessed for different periods. Survey records depict demographic and spatial shifts in settlement. This information has contributed to the great debates of Southwestern archaeology, such as those over the abandonment of regions, the movements of peoples, and the possible rise of sociopolitical complexity. In some quarters a sense exists that all that remains is fine-tuning and that unanswered questions are largely matters of

detail. The belief that everything is about to be sewn up is a reoccurring trope in Southwest research. A senior scholar once told me there would be "no surprises" in the archaeology of the northern Rio Grande in the foreseeable future.

Yet many of us who work in the region feel a nagging sense that we have somehow overlooked central elements of Pueblo history (see Crown 1998:294). We have always experienced the tension between the scientific methods necessary to evaluate intractable data and the humanistic template required to understand human action. In the process of conducting our research, much of what would have been important to the people we study has evaporated. We look up from measuring stone tools and see faces in petroglyphs staring back from canyon walls, in many ways as inscrutable as they were when Adolph Bandelier first pointed them out in 1879.

There are several reasons for this disjunction between aims and results in studying Pueblo history. I am particularly interested in the frames of reference, conscious and unconscious, that shape our research. Archaeologists have been slow to recognize that their own worldview—the way history and experience structure their perception—inevitably colors the way we view others. It has been argued that the schematic, abstract nature of archaeological practice for much of the twentieth century, which allowed other people's pasts to be held at a distance and generalized about, reflected sociopolitical trends in Euro-American society (see Patterson 1986; Trigger 1986). Social and political realities also set the terms for fieldwork in the Southwest, a circumstance particularly evident in our relationships with the Native American community. Archaeologists have a poor record when it comes to indigenous people, and we have been—with notable exceptions—oblivious to the local ramifications of our work. The shock that went through the archaeological profession in the 1980s when some of its activities were successfully halted by Native Americans concerned about treatment of their own past continues to reverberate, evidence that our practices were uncontroversial only to ourselves.

In addition to historical context, the way we see the past is shaped by our experience of the modern world around us. Very simply, the space within which we go about our daily activities is organized in culturally specific ways, and we often uncritically project this framework onto antiquity. In the case of the Pueblo peoples of the northern Rio Grande, we see their "space" largely in reference to our own. In one simple example, rivers appear to be barriers to people who need bridges to cross them, and archaeologists have so thoroughly

accepted the Rio Grande as an obstacle that they use it to define boundaries between archaeological districts. The actual distribution of archaeological remains, however, indicates that people of the pre-Columbian era crossed it continually, and we now know that it is misleading to think of the river as having divided communities and populations (see Snead et al. 2004). We might gloss such misconceptions as "heuristic devices," but they reflect a fundamental bias that ultimately prevents us from seeing the past as it actually was.

Our preconceptions also fly in the face of considerable ethnographic information concerning the different ways space is constructed in non-Western societies. The difficulty of making the conceptual leap to a perspective more compatible with indigenous worldviews is compounded by the practical matter of organizing archaeological data, for potsherds and archaeological sites at best only obliquely reflect categories of information meaningful to Pueblo people. Not only must we develop new ways of thinking about space, but we must also be innovative in the ways we see space in archaeological terms.

I believe the archaeological study of the cultural landscape provides new ways to both "see" and "think" about space in the Pueblo context and a means to gain new insights into their world. Archaeologists are addressing the duality of the landscape as seen from the air, with its large-scale patterns of economics, demographics, and ecology, and as seen on the ground in local-level history and meaning, from several directions, each of which provides important insights into the way forward.

Landscape Archaeology

Before examining questions of Pueblo history through the prism of landscape, it is important to return to the question of what landscape archaeology *is*. Debates stretching back 20 years have generated a substantial body of theory, for which several overviews are available (Anschuetz et al. 2001; Ashmore 2002, 2003; Darvill 1999; Knapp and Ashmore 1999; Layton and Ucko 1999). The archaeologically focused research examined in these sources is only part of a much broader discussion of landscapes, incorporating a variety of perspectives (see Baker and Biger 1992; Bender and Winer 2001; Cosgrove and Daniels 1988; Hirsch and O'Hanlon 1995). The theoretical approaches embraced in these works reflect most of the philosophical currents of twentieth-century scholarship, from the eclectic historical geography of

John Brinckerhoff Jackson (1994) to the postmodernism of Michel Foucault (1986). In the eyes of some, "landscape" has become a distinct area of study of its own, transcending the boundaries of traditional disciplines.

Rather than tackle this daunting literature head on, I begin with a historical approach because, for members of a discipline intimately concerned with history, we archaeologists have a relatively poor grasp of our own. "If approached analytically," Valerie Pinsky has written, "history can provide a critical tool for . . . evaluating and reformulating contemporary theoretical and methodological dilemmas" (1989:90). Our history allows us to see how we have dealt with particular problems and how those strategies evolved within particular contexts that continue to exert an influence that might be largely unacknowledged.

Research Traditions

In historical perspective, the character of landscape archaeology has depended fundamentally on the nature of the "past" being explored and on the relationship of the explorers to that past. Perceptions of land are constrained by the experiences of the viewers. Students introduced to archaeological surveying are trained to see the land in ways that are often foreign to them, whether in recognizing the angular shadow patterns of pottery fragments on pebbly soil, alignments of stone that betray cultural activity, or landforms that are products of culture rather than geology. This way of seeing is not necessarily pertinent to our daily lives in the twenty-first century and so must be taught. Cultivation of such aptitude over time might ultimately lead to the identification of new patterns, and the archaeological literature is replete with observations made "in the field" that were unanticipated or could not have been made under different circumstances. It is partly for this reason that archaeology has remained a field discipline, in which value is placed on the gathering of primary data, even in the face of great achievements in laboratory research and of vast museum collections begging for analysis.

Differential experience of the land also accounts in part for divergent traditions of archaeological research. Landscape archaeology in Great Britain, for instance, is strongly influenced by the character of the British landscape and of the cultural role it plays (see Johnson 2006). In England, modern walkers can follow paths aligned with Roman roads that carry them past medieval churches and Neolithic mounds, through a countryside to which

they might perceive a personal, historical connection. The field archaeology that has evolved under these conditions favors detailed knowledge and intricate documentation of a diverse array of archaeological features, building on a tradition with deep historical roots (see Marsden 1974; Piggott 1985). O. G. S. Crawford, one of the preeminent British field archaeologists of the twentieth century, attributed its preeminence to good maps, plenty of "raw material," and conditions under which "persons of means, leisure and intelligence have made their homes not in towns but in the country" (Crawford 1960:208). Under these circumstances the study of history and the study of topography were closely intertwined (Ashbee 1972; Aston and Rowley 1974; Daniel 1975:18; Fleming 1998; Fowler 2000).

Euro-American experience of the land in the Western Hemisphere has been quite different, leading to a different archaeology. It requires no great leap of logic to argue that any shared sense of "place" among members of the highly mobile dominant culture in the United States might be different from that of a society with deeper roots (see Jacobson 2002), and that this would produce a distinct archaeological perspective on landscape. The absence of a direct relationship between the Euro-American population and the pre-Columbian past has also been a central element of American archaeology. Archaeologists studying ancient North America are examining someone else's ancestors, a situation that creates both opportunities and liabilities that are absent in the British case.

The history of landscape archaeology in the Americas thus entails a restless, shifting perspective on the land, its inhabitants, and their relevance to scholarship. Nineteenth-century anthropologists argued that geography played a critical role in the evolution of human society, and German "anthropogeography" strongly influenced Franz Boas (Bunzl 1996). The Boasians, particularly Alfred Kroeber and his students, acquired place names and other geographical information from Native people throughout western North America (Thornton 1997:211). Their "ethnogeographies" hinted at the dense layers of meaning associated with indigenous cultural contexts (Barrett 1908; Boas 1934; Loud 1918; Stewart 1943; Waterman 1920).

The American Southwest became a proving ground for anthropological concepts of landscape during the same period, and John P. Harrington's *Ethnogeography of the Tewa Indians* (1916) became the paramount example of early twentieth-century ethnogeography. Building on the topographical research of Adolph Bandelier, who a generation earlier had emphasized the importance of

"knowing . . . the country" (1892:4), Harrington spent nearly a year traveling the northern Rio Grande region with Tewa informants, writing down the names of thousands of mountains, hills, springs, waterways, cultural features, and other landmarks, prominent or otherwise. It is difficult to know what the Tewas made of Harrington, who may have understood their language better than any non-Native anthropologist before or since, although rumors of jokes hidden in the massive tome suggest that his command of the tongue was incomplete. Through his program of diligent recording, however, Harrington documented a rich landscape invested with meaning (see Fowler 2000; Snead 2001c).

Harrington worked with archaeologists, but others of his generation were pursuing research that led away from the interpretive opportunities at which ethnogeography hinted (Snead 2002b). Neither early settlement pattern studies (see Parsons 1972; Willey 1953) nor subsequent efforts took such a nuanced approach. Some popular strategies, such as transect sample surveys, were intentionally nonspatial. As Fred Plog noted, "sample data produce relatively poorer maps" (1990:248), and space was replaced by other variables that could be evaluated statistically. In the processual tradition, method was tightly scripted by research design, making it cumbersome to adapt data collected in such fashion to other questions.

The wide-ranging critique of archaeology that began in the 1970s provided theoretical room for space once more. In our more critical era the sources of inference for archaeological interpretation are rigorously examined and new perspectives on the archaeological record sought. This growing awareness creates opportunities to build new archaeologies of landscape. But on what should we base our interpretations? And what, in the end, should we be looking at?

From my perspective, an archaeology of landscape is inherently concerned with *meaning* and thus with *place*. It is meaning that accords significance to walls, structures, fields, and other features in particular settings, and by assigning meaning to those features, the people who constructed or used them created places (for a discussion of place, see Malpas 1999). Meaning allows us to make sense of landscapes, yet archaeologists face the dilemma that ideas of place developed in cultural contexts that are no longer directly available. The strategies we adopt to interpret places, then, are the most critical components of our arguments about ancient landscapes. In recent landscape archaeology, three common approaches to meaning can be discerned: phenomenology, history, and historical ethnography.

Phenomenology

Since the 1990s, archaeologists have devoted considerable attention to the exploration of meaning in landscapes as understood through humans' immediate experience of them. This approach, derived from the philosophical concept of phenomenology, is concerned with the physicality of the landscape as encountered by the human body, a perspective that has been highly influential in ethnographic studies of place (see, for example, Feld and Basso 1996). British scholars have pioneered efforts to apply this approach to archaeology. "Phenomenology," wrote Christopher Tilley, "involves the understanding and description of things as they are experienced by a subject" (1994:12). Humans interact with their surroundings through their senses, and our shared biology makes the experiences of our predecessors accessible to us. Julian Thomas specifically addressed this issue, arguing that if people "no longer inhabit the spaces we excavate, we must *put their bodily presences back*, through interpretation, if we are to say anything of consequence whatsoever" (1996:88; italics mine). In essence, a phenomenology of landscape means that our own responses to ancient sites in their settings can be a central referent in our interpretation of their original meaning.

In viewing the prehistoric landscapes of Britain, Tilley (1994, 2004) and Thomas (1996) thus gave priority to sensory experience, necessarily couched within the complex issues of chronology and association. Meanings associated with megalithic monuments such as Stonehenge and Avebury, for example, can be approached through their orientation, their relationships to other monuments and topographic features, and the visual effects these relationships create.

The fundamental principle of landscape phenomenology—that our own experience of the land really does have a predictable relationship to archaeological cases—has been criticized in several ways. The most straightforward is empirical, for it is difficult to establish the details of any landscape of the past. Changes in vegetation are an obvious concern. In many cases, lines of sight that exist today might have been obscured by trees in the past, a possibility that casts doubt on the way such vistas might relate to the perceptions of ancient peoples (Chapman and Gearey 2000; Darvill 1999:41). The randomness of preservation and the destruction of archaeological sites have also crippled our ability to reconstruct what once was (Fleming 1999). If we cannot know what earlier people saw, then we must be skeptical about what our own vision tells us.

Perhaps the most trenchant argument against a phenomenology of archaeological landscapes concerns the nature of perception itself. Joanna Brück noted that "the body is a social construct, the product of a culturally specific conception of the universe" (1998:26). Shared physical attributes notwithstanding, experience is shaped by culture. "I would argue," she wrote, "that the way in which we experience the world around us depends on our interpretation of it" (1998:29). This point is reflected in an anecdote from the late nineteenth century concerning the avocational archaeologist T. Mitchell Prudden, who watched a Navajo guide walk up to the rim of the Grand Canyon, which he had never seen before. To Prudden, the vista unfolding before them inspired awe and amazement—arguably an expectation shaped by cultural attitudes emphasizing romanticized grandeur—but his associate, after uttering the Navajo equivalent of "I'll be darned," turned his back on the panorama and went to eat lunch under a tree.

Landscape phenomenologists working in archaeology have also—to date—concentrated on particular types of landscapes, a focus that is central to an evaluation of their approach. Tilley, Thomas, and others (for instance, many of the authors in Nash 1997) have focused on the "monuments" of British prehistory: Megalithic tombs, earthworks, standing stones, and related features. Richard Bradley described monument building as intended to create "an entirely new sense of place . . . to ground the experience of place in deliberate, human constructions" (1993:5). Monuments are thus products of a particular kind of conscious action. A landscape of monuments is overtly *ideational*, a type defined by Bernard Knapp and Wendy Ashmore as only one of many possible categories of landscape (1999:12).

Deriving meaning from features that were always explicitly "meaningful" is a logical strategy, except that it implies that other aspects of the landscape "meant" less. For instance, systems of prehistoric land boundaries in upland Britain have been subjects of considerable analysis, but discussions of them are scarce in the phenomenological literature. Andrew Fleming's study of the Dartmoor reaves (1988) offers detailed evidence for the organization of social and economic groups at a variety of scales, as seen through field systems, trackways, and farmhouses. Studies of this kind have broadly defined goals of documenting "human communities and the way that they inhabit a world of their own creation" (Darvill 1999:38; see also Caulfield 1983). Attempts to create a single analytical framework for such "complete" landscapes exist, one being John Barrett's concept of "inhabitation" (1999). Nonetheless, the im-

pression remains that certain kinds of experiences—those of humans harnessing the infinite, rather than of humans harnessing a plow horse—are favored.

Landscape phenomenology thus tells us more about ourselves than about the past. Tilley acknowledged that megaliths "respond to a modernist historical sensibility" (1993:50), raising concern about our ability to see them for what they were rather than what they are today. Fred Myers noted that phenomenology has its own context within Western philosophy, associated with a search for the "primitive" in reaction to a culturally based mistrust of rationality (2000:77). Even our ideas about the forces we might perceive at work in such a landscape—power and authority, for instance—have implications for us that might not have been shared by our Neolithic predecessors (Brück 1998:31; Cooney 2001:167). I do not deny that such forces existed in different pasts, but their significance and the ways they played out in people's daily lives may be less predictable than phenomenological analysis requires.

Theories about landscape analysis that rely on phenomenology thus run the risk of either reducing meaning to sweeping and fairly trivial statements or becoming mired in debates over cultural relativism. If we foreground our own physical experience, then we inevitably make our predecessors more like us, a conclusion that flies in the face of recent anthropological thought. Bradley's call for an "archaeology of natural places" (2000) addresses this issue by shifting the focus toward the interaction between culture and topography, and Barrett noted that the "act of inhabiting a place is meaningful to the inhabitants according to their own experiences and desires" (1999:259). As these approaches indicate, understanding meaning in the landscape requires staying close to the experiences of those who created and lived it.

History

An alternative strategy for identifying meaning in archaeological landscapes is to seek it in history. Heightened awareness of the way our own perceptions and constructions of landscape have evolved over time should provide relevant information about similar processes in other cultures. This approach is not necessarily deterministic but rather uses the experiences with which we can be most familiar for purposes of comparison.

Much influential theory in landscape studies in the United States, particularly that of John Brinkerhoff Jackson, is derived from a historical perspective. Jackson focused his attention on the development of the American landscape, looking at both its various components and its overall effect (1984,

1994; see also Tuan 1977). Broad statements about landscape are drawn from these studies as well as from a certain level of "shared experience." This approach has been adopted by writers in many intellectual fields, such as the historian Simon Schama, who argued that "inherited landscape myths and memories share two common characteristics: their surprising endurance through the centuries and their power to shape institutions that we still live with" (1995:15).

Historical archaeologists have recently employed more specific strategies to chart changing perspectives on space and its creation in different historical contexts, often drawing on critical geography (e.g., Soja 1989). Mark Leone's influential research (1984) on gardens and ideology in Georgian Virginia inaugurated an entire research tradition. Other scholars have examined the countryside, finding meaning in nineteenth-century farming landscapes (Joseph and Reed 1997) and in overlapping landscapes of gentry and slaves in colonial Virginia (Upton 1990). Jim Delle has used both archival and archaeological sources to examine landscapes of power involving Caribbean plantations in the eighteenth and nineteenth centuries, identifying different "spatialities of control and resistance" (1998:155) constructed by slave owners and the enslaved.

The historical perspective on landscape of Leone, Upton, Delle, and Paul Shackel (2003) derives from a rich cultural and temporal context, making it a source for substantive comparisons but also leaving broader application subject to question. It is difficult to assess how conclusions about Euro-American history as seen through the lens of landscape might be applied to other times and other cultural traditions. Many of these landscapes were products of events that took place over only a few decades. They are understandable as places but must be significantly different from places established over generations or centuries. If our cultural memory of the American landscape is defined by such brief association, can we expect conclusions derived from it to be useful for other cultures and places?

More specifically, the central question of many landscape studies in historical archaeology concerns the growth and implications of capitalism, a socioeconomic system of historically recent origin despite its pervasiveness. The vast critical literature on social power and ideology associated with capitalism is directly relevant, but what these insights might tell us about other societies depends on our belief in universal processes. We are thus returned to the dilemma of generalization and self-reference presented by phenomenology.

Perhaps the greatest limitation in the archaeology of historic landscapes is

the extent to which they are archaeological at all. With a scant few decades of substantive work behind them, American historical archaeologists are only beginning to produce the empirical data required to complement the available textual sources. The strength of Delle's analysis of Jamaican coffee plantations, for instance, lies in his evaluation of maps and related imagery produced by eighteenth- and nineteenth-century planters, which he described as depicting "cognitive space" pertaining to control and production (1998:99). In contrast to this rich body of information, the material record at the sites of the plantations themselves is poor. The data that would allow comparison between the cognized space of the planters and the realities of plantation life are stubbornly ephemeral, and identifying the "spatialities of resistance" of the enslaved population anywhere except in documentary sources proves remarkably difficult (1998:163).

As constructed by historical archaeologists, a focus on landscape is heavily reliant on the ways in which people communicated ideas *about* landscape rather than on the way the landscape might actually have been. The unique character of such information—in particular, the device of the map—is a distinct challenge to any broader application of such a strategy. Another dilemma is evident from Kathleen Stewart's ethnography of Appalachian landscapes (1996a, 1996b), which demonstrates that ideas of place are as grounded in the spoken word as in the material world. The historical approach to landscape thus reinforces the importance of meaning but does not necessarily provide a key to extending that meaning beyond particular places and times.

Historical Ethnography

A final source of inference in landscape archaeology is historical ethnography. If phenomenology is overreliant on shared bodily experience and if history is of greatest relevance in specific contexts, then examinations of *different* bodies in *other* contexts requires a different strategy. Without negating real concerns about bias, developing a better understanding of how other cultures perceive, construct, and use space has wide applicability to archaeological cases.

Ethnographic research on the subject of space and landscape, however, is sparser than might be expected. Even though early anthropologists were interested in geography, the dominant paradigms for much of the twentieth century focused on other topics. It is also rare to find discussions of space in *etic* terms—that is, from an insider's perspective—that examine the material components

of such perceptions. Nevertheless, interest in the subject has expanded as questions of space and place regain popularity, and the body of comparative literature is growing rapidly.

Landscape studies have been especially important in recent ethnographies of hunter-gatherers, perhaps because of our impression—erroneous though it may be—that foraging people are more intimately embedded in the land than are farmers. For example, the indigenous maps of trap lines maintained by Athapaskan people in northern Canada, described by Hugh Brody (1982), reflect distinct spatial perceptions incorporating time, topography, and experience. Perceptions of landscape are of long-standing relevance in studies of Aboriginal Australians (e.g., Gould 1969; Munn 1970). They are most forcefully articulated in Fred Myers's ethnography of the Pintupi people. "It is impossible to listen to any narrative," he wrote, "whether it be historical, mythological, or contemporary, without constant reference to where events happened. In this sense, place provides the framework around which events coalesce, and places serve as mnemonics for significant events. . . . Upon close examination, it is activity that creates places, giving significance to impervious matter" (1986:54; see also Morphy 1995).

Landscape studies are less common for agricultural peoples. Robert Thornton's examination of the Iraqw of Tanzania emphasized the "cultural creation of space," a process wrapped in a complex understanding of the relationship between the wild and the domestic (1980:17–18). Susan Kus and Victor Raharijaona (2000) explored concepts of space and local knowledge as expressed in Merin architecture in Madagascar. Landscape scholarship is becoming increasingly extensive in Oceania and Melanesia, ranging from full-scale ethnogeographies (Bonnemaison 1994) to more localized examinations of the relationship between culture, land, and memory (Ballard 1994; Toren 1995; Weiner 1991). Richard Parmentier's work on the Micronesian island of Belau (1987) displays a sensitivity to landscape in the context of a semiotic analysis of the relationship between history and material culture.

The relevance of such information about indigenous concepts of place for archaeological studies of landscapes is less straightforward than it might appear. Landscape theorists have employed comparative ethnography largely to develop models concerning territoriality (see Ingold 1986) and to develop broad concepts such as "Nonwestern/precapitalist space" (Tilley 1994:21). It seems probable that "place making" is fundamental to human experience, because, as phenomenologists assert, it is rooted in biology and perception. Yet the cumula-

tive effect of cross-cultural ethnography suggests that the meanings people assign to place are extraordinarily diverse. The construction of stone monuments in the Zafimaniry communities of Madagascar described by Maurice Bloch (1995) might stem from impulses similar to those motivating the building of mounds by the Mapuche people of Chile (Dillehay 1990, 2007), yet the responses of those who experience these places must be dramatically different. People might build monuments for the many reasons that Bradley described (1993, 1998), but the cultural tapestries from which such structures emerge and within which they are perceived and interpreted are distinct.

Archaeologists can rarely avoid generalizing, because so much of the particular in the past left no material trace or has vanished with time. Yet to avoid reducing ancient lives to numbing essentials, some comprehension of context must be achieved. Even a flawed historical ethnography offers a route away from Westernized perspectives on non-Western pasts. Historical ethnographic approaches logically offer the greatest potential when they operate within specific historical-ethnographic traditions. Just as Delle's research on the Jamaican landscape deepens our understanding of the Western leitmotiv of capitalism and slavery, so recent archaeological studies of the Australian landscape (e.g., David and Wilson 1999; Fullagar and Head 1999; Head 1993; Taçon 1994, 1999) illuminate the vital indigenous worldview of the Aboriginal population. New studies of the ritual landscape of the Aztecs have been built from sophisticated interpretations of the ethnohistorical record of the Valley of Mexico (Broda 1999; Carrasco 1999). Some of the most successful collaborations between ethnographers and archaeologists on issues of landscape have come from the Pacific (see Ayres and Mauricio 1999), particularly from the Anahulu project of Patrick Kirch and Marshall Sahlins (Kirch 1992; Sahlins 1992). Focusing on the transformations associated with contact-period Hawaii, they based their study on the complementary evidence provided by ethnohistory and archaeology in what Sahlins called a "dialectic of subdisciplines" (1992:1). In this case it is landscape that provides the unifying concept, a matrix within which disparate sources of information are successfully integrated to locate meaning within a particular historical realm.

Contextual Experience

Drawing from these related perspectives in historical ethnography, I advocate a landscape archaeology of *contextual experience*.[1] This approach neither denies

the relevance of settings established by topography and the built environment nor imposes a generalized interpretation of such places. Instead, it seeks to illuminate the ways in which places are established within cultural frameworks. This is not excessively particularistic, because viewing space as a cultural construct necessarily implies acceptance of concepts that are shared by an identifiable segment of humanity. It does, however, work from the premises that the researcher's own responses to the land should be treated carefully and that the cultural contexts of archaeological landscapes must receive as much attention as do artifacts and features themselves.

A landscape archaeology of contextual experience in the Pueblo Southwest most appropriately begins with the historical traditions of the Pueblo peoples themselves. Recent research on Native American concepts of place in the greater region (see Carmichael 1994; Gelo 1994, 2000; Kelley and Francis 1994; Laird 1976; Stouffle et al. 1997) offers direction. Keith Basso, for example, has articulated the active role the landscape plays for the Western Apaches, who "are forever performing acts that reproduce and express their own sense of place—and also, inextricably, their own understandings of who and what they are" (1996:110). Pueblo ethnography, too, provides a culturally specific window into a living tradition rooted in the land

Building an archaeology of contextual experience requires attention to method as much as to conceptual foundations. To avoid perpetuating the static, documentary approach of Harrington's day, we need to incorporate the gains and advances of the intervening decades into a new approach. Studies of place have their own peculiarities, and the problems inherent in our degree of separation from the people who made those places must be addressed. I believe the new approach should have three basic components: "deep mapping," research at the scale of the community, and an integrative perspective.

Deep Mapping

Michael Shanks (1997) called for an archaeology of "deep maps" that would capture the subtle meanings with which landscapes have been invested over time. At a minimum, deep mapping calls for the reconstruction of context. Landscape archaeology depends on our perceiving connections between things in their places, requiring us to emphasize relationships, both spatial and temporal, among the elements that mark human activity. A small petroglyph panel on a boulder, for example, might contribute limited information on its own, yet it might well be related to other features—to a trail passing nearby, to a

field in an arroyo below, or to a favored spot from which the open countryside beyond might be seen. Such associations might reflect different meanings, different historical circumstances, or both simultaneously.

Asserting the value of context is easier in the abstract than in practice. Inevitably such information must be addressed selectively in order to be comprehended and communicated. For instance, members of the Bandelier Archaeological Survey, a large project in Bandelier National Monument, New Mexico, in which I participated in the 1980s, defined 50 different units of analysis, including 9 classes of major surface features, 31 classes of minor features, 5 types of kivas, 5 types of refuse scatters, and the catchall category "isolated occurrences" (Powers et al. 1999). Even greater detail is produced by non-site surveys, such as the one Mark Lycett (1995) conducted in the Galisteo Basin of New Mexico, which documented tens of thousands of artifacts in a relatively small area. A map incorporating all such information can hardly be imagined (see Fish 1999:204). As a compromise, the creation of different maps establishing different contexts can lead to a careful unpacking of nested relationships in ways that do not unnecessarily obscure the bigger picture. Such partial maps amount to different views of the landscape that might help us perceive from the outside what those who created the landscape saw as a single perspective.

Deep mapping inevitably treats chronology in ways different from those of other archaeologies. Assigning dates to artifacts and features recorded during survey is always complicated, relying on elaborate chains of reasoning that are continually under revision. This negotiation, ironically, is pronounced in the Southwest, where one of the most refined chronologies in archaeological practice dates past events to within the span of a single generation. Further precision is unlikely, and landscape strategies must work from the contention that general patterns of association between sets of features for which some contemporaneity can be established is sufficient. Temporal "blurring" cannot be avoided but can be minimized by careful consideration of relationships.

Finally, one of the central characteristics of landscapes is that they reflect human activities over time. From the perspective of a human life, topography remains largely unchanged, but vegetation might be altered slowly by climate and human action and buildings might rise and fall rapidly. Some elements of the built environment persist in one form or another and can be assigned multiple meanings by successive generations of viewers. Landscapes are never static constructs but represent for those living in them "the cumulative

material conditions which they inhabited" (Barrett 1999:258). Temporal context, as well as other contextual relationships, are thus critical elements of deep maps.

Community Scale

The second basic component of an archaeology of contextual experience is research at the scale of the community. The concept of community has a long history in anthropological research (see Arensberg 1961; Murdock and Wilson 1972; Redfield 1967). Archaeologists working in the Southwest have embraced the notion of community as both a unit of sociopolitical organization and a unit of analysis. Although it has been variously defined, community-centered analysis has been a topic of considerable comment (see Drennan 1999; Hegmon 2002; Mahoney et al. 2000; Wills and Leonard 1994) as well as the basis of several studies (for example, Adler 1990; Fish and Fish 1992; Varien 1999).[2]

Traditionally, however, Southwestern survey-based research has emphasized the large scale, typically focusing on "regions" that incorporate dozens, if not hundreds, of square kilometers. This focus usually correlates with an interest in "explaining change and continuity in networks of social and ecological interaction above the scale of the locality and local community" (Kowalewski 1990:34). In recent years the case for pursuing research at an even larger scale has been advanced (Hantman 1987; Lekson 1999; McGuire et al. 1994; Wilcox 1999).

Yet it is precisely the community scale, which regional and macro-regional strategies are designed to transcend, that is the critical locus of meaning in human societies. Drawing from others (especially Adler 1996b; Lipe 1970), I define a community as "a minimal, spatially defined locus of human activity that incorporates social reproduction, subsistence production, and self-identification" (Kolb and Snead 1997:611). In spatial terms a community is "micro-regional"—typically an area only a few kilometers across (Gaffney and Tingle 1989). Despite suggestions that this approach confuses archaeological and sociological concepts (see Yeager and Canuto 2000:5), the fact that communities are widely considered to be identifiable on the ground (see, for instance, Kantner and Mahoney 2000; Maxham 2000) argues that the concept is useful, offering a "scale of attack which is both analytically meaningful and operationally practical" (Wobst 1973:148).

Familiarity and repeated action shape the country around home and fields

into a conceptual whole, so that the notion of *community landscape* provides a particularly dynamic frame of reference (Adler 2002b; Kolb and Snead 1997). Home environs do not incorporate all the important activities of a social group, but they encompass many of those that are the most deeply laden with meaning. Farther afield the country becomes both less understood and more likely to overlap with that of other communities, and so it is more ephemeral and more complicated. In strictly archaeological terms, the process of landscape research, particularly the need to record detailed information, is an additional, pragmatic constraint against the large scale.

All these factors suggest that the community scale is particularly appropriate for studying the Pueblo landscape. In many ways, studies of societies defined locally are complementary to both regionally based studies of interactions between communities and macro-regional examinations of such processes across the Southwest and even beyond. A better understanding of community organization builds the foundation upon which other research agendas can be based, enhancing our comprehension of the whole. Merging sociopolitical ideas about community in the Pueblo cultural context with community landscapes on the ground in the Pueblo countryside provides a useful application of contextual experience.

Integrative Perspective

The third essential component of landscape archaeology is an integrative perspective. Many commentators have noted that landscape can be a unifying concept in historical scholarship, drawing diverse theoretical agendas and different interest groups into a common framework (e.g., Darvill 1999:33). Knapp and Ashmore have argued that landscape is "a domain for fruitful interaction, 'cross-cultural' communication in many senses" (1999:4). In building new landscape archaeologies, this larger intellectual context must remain with us, so that our efforts will allow us to speak across philosophical divides and address many divergent needs. Contextual experience is most useful when it is envisioned as bringing together multiple perspectives.

One problem of landscape archaeologies based in particular ethnographic traditions is that they may tell us only what we already know. The risk of tautology—of our interpreting everything in terms of what we see today or believe to have existed recently, uncritically applying an already imaginary ethnographic present to the distant past—is considerable. Among other things, such a circular argument would make it difficult to perceive culture

change, perpetuating a common misunderstanding of the character of indigenous societies.

In order to prevent landscape approaches from becoming ends in themselves, we must use them to engage larger debates. Despite divergent research traditions, there is much common ground in archaeological thought. Queries about human organization, change over time, the nature of power, and the role of belief systems all remain current and have relevance for the study of landscapes. Thus, many of the questions about the Southwestern past that have emerged over the last century remain vital.

In the northern Rio Grande region, the archaeology of the late pre-Columbian era is inherently about the process of "becoming" Pueblo (Anschuetz 1998:473). It is generally agreed that the peoples whom the Spaniards met at the end of the sixteenth century lived in roughly the same places and had identities similar to those of more recent peoples, but also that conditions 500 years earlier were considerably different. Archaeologists approach this transformation in different ways—as a result of waves of migrants (Ford et al. 1972), as a product of new religions (Adams 1991; Crown 1994), as a response to demographic and environmental stress (Hill et al. 1996), as a reorganization of socioeconomic relationships (Habicht-Mauche 1993), and as the complex interplay of many such factors (Cordell 1989). This tangle of possibilities reflects ambiguous data, but it also arises from the fact that many people are thinking about this transformation, proof that questions about the cultural origins of the Pueblo people are essential to understanding the region's past. In seeking to account for present circumstances, we are required both to understand those circumstances and to remain open to new research strategies with interpretive power.

The issue of audience cannot be cast aside lightly, either, particularly because engagement with an ethnographic tradition requires engagement with a living one. This brings opportunities for a deeper understanding of the relationships between people and land and an awareness of the political context of such ties in the modern era. Advocacy brings out conflicting emotions in social scientists, in part because of ingrained skepticism and awareness of the multiple roles of "authority" in such situations. Yet our responsibility toward the descendants of the people whom we study is real, and negotiation is continuous.

An integrative approach must thus be employed on multiple levels. Addressing different audiences and different questions keeps landscape archaeol-

ogy from sliding into particularism. Rising to Knapp and Ashmore's challenge to use landscape as a forum for communication between cultures (1999) is perhaps the most fruitful way for any insightful approach to proceed and will keep the strategy in a continual state of evolution.

Through deep mapping, a community focus, and an integrative perspective, contextual experience represents a new approach to the study of archaeological landscapes. Although bypassing some of the blind ends of other landscape strategies, contextual experience contains its own dilemmas. I previously referred to the risk of particularism that emerges from the need for close examination of the archaeological record and from immersion in sources. It is also true that our modes of understanding the past inevitably disembed the object of study from its appropriate context. Archaeology is an inherently Western mode of historical practice, and our attempts to incorporate "other voices" into its narrative can be naive.

Ultimately, however, archaeology is one means through which we explain others to ourselves. If performed with respect and heightened awareness, it can potentially define a middle ground, approaching indigenous worldviews in ways that neither denigrate them nor reconstruct them as ahistorical cognitive straightjackets. By treating Pueblo landscapes as meaningful places rather than as abstract spaces, we come closer to achieving this ambition.

Knowing the Country

The archaeology of contextual experience is built on historical ethnography and the significance of place. On a grand scale, my work emphasizes the northern Rio Grande region of New Mexico in the late pre-Columbian era. Landscape research in this region has attracted considerable attention since the 1980s, and my arguments build on the empirical and theoretical contributions of many others. This book is an early step in what I see as a logical movement away from the generation-long theoretical and methodological debate within archaeology in general and the Southwest in particular and toward field-based applications of new concepts. In these first years of the twenty-first century there are old boundaries, primarily intellectual, to cross, but also new boundaries, largely cultural, to be respected. It is only through the application of data to problems that these lines of constraint can be identified.

Having just argued for deep maps and integration, I devote the next few chapters to pulling the Pueblo landscape apart in order to identify patterns and

trends in certain topics of interest. The empirical basis of this research comes from five study areas, all within 50 miles of Santa Fe, a landscape that is home to the Keres- and Tewa-speaking Pueblo peoples. Each study area incorporates significant evidence for community landscapes created in the late pre-Columbian era. My colleagues and I documented these places during several field seasons between 1992 and 2006, using a relatively standard strategy discussed in chapter 2.

In chapters 3, 4, and 5 I emphasize three themes in the cultural landscapes of the study areas, the first being provision. The issue of subsistence has always been central to studies of Pueblo peoples, particularly in light of a climate widely perceived as difficult for sustainable agriculture. Diverse farming strategies were important in Pueblo lifeways, and the social and political organization of agricultural subsistence was a fundamental element of Pueblo society. The ritual significance of corn and other plants constituted an ideological component of cultivation as well. All these factors are present in the landscape and reflect the changing significance of "provision" over time.

In the chapter on identity I examine the ideational landscapes of Pueblo communities, focusing on features associated in the ethnographic record with belief and integration—topography, architecture, shrines, and petroglyphs. Rarely monumental in the traditional sense, these landmarks are nonetheless symbolic constructions and can be expected to reflect categories of meaning. I am particularly interested in the way suites of features bearing on group identity and boundary maintenance were employed at different times and how relationships between topography and the built environment reflect shifting concepts of so-called sacred space.

The chapter on movement addresses a more specific question concerning the archaeology of the Pueblo world, that of the flow of people across the terrain. Where people go and when is central to the question of community organization and how it changes. In archaeological terms, movement is accessible through the study of trails, which is made possible in the northern Rio Grande by favorable preservation. Trails reflect social, economic, and historical relationships within and between groups, but they are also of ideological significance because movement is intrinsically linked to boundaries, tangible and perceived. Studying trails is an important means of stepping away from landscape as a static image in favor of landscape as something in a constant state of change.

I bring these separate "maps" together in the conclusion, chapter 6. In

reintegrating the landscape of the study areas I return to larger-order questions of change in the region as a whole. As the Pueblo world takes form in the physical sense, so does Pueblo history and identity. Ultimately I assess archaeological discussions of the transformation of the final pre-Columbian centuries in the Southwest as seen through the landscape, particularly in light of what can be known about changing concepts and constructions of place. My goal is less to suggest a broadly applicable model than to comment on the relevance of such an approach at all.

In the end it is important to return to the theme that began this introduction, that of space as analyzed and place as experienced. Our distance from the archaeological past, our separation from it in almost every sense, is entirely analogous to the view from an airplane. Some things are visible, some are not, and some things that we know are there do not stand out. My argument, applied but not limited to the Southwestern past, is that what we see is entirely dependent on how we look, and contextual experience is an important way of looking. In endeavoring to know the country, as Bandelier suggested, we stand to gain remarkable insights into the lives of the ancestors and thus to enrich our own.

2

Histories

> The Tewa have a marked fondness for geographical conversation.
> —J. P. Harrington, *Ethnogeography of the Tewa Indians*

The northern Rio Grande region of New Mexico is defined both environmentally, as a region of relatively well-watered lowlands, high peaks, dry grasslands, and hills covered with juniper, piñon, and ponderosa pine, and culturally, as the historic home of the Tewa, Towa, Keres, and northern Tiwa peoples. Archaeologists have constructed the region in their own way, in a mosaic built by generations of scholars diligently examining the material culture created by the Pueblo inhabitants. These different perspectives are joined in the landscape and must be understood if an archaeology of landscape is to usefully address questions about the region's past. This requires exploring the development of the Pueblo world as seen from within, by the Pueblo people themselves, and from without, as it has been structured by archaeologists. In the process, some common ground can be established, a place from which new research strategies can begin.

Archaeology, Ethnography, and Place

As described by ethnographers who wrote down Pueblo oral traditions, the pre-Columbian history of the Pueblo people was one of constant movement, leading up from various lower worlds to *shipap*, the place of emergence, and then, through many vicissitudes, to the sites of their modern villages. Adolph Bandelier summed up the journey as seen by the Tewas when he wrote that the "Tehuas came from the north, and settled about the north first; then they drifted southward, on the west side of the Rio Grande, and crossed to the east side, settling and abandoning one pueblo after another. . . . The plain of Santa Cruz and San Juan was then very wet and muddy, therefore uninhabitable; so they remained on the eastern heights until it dried up, and then finally settled where they are now. This is said to be their tradition" (Lange et al. 1975:51).

Other versions of the journey are preserved, some of which suggest that different groups of Tewas came into the region at different times (see Ellis 1967b), but the general outline of the histories is the same.

The Keres people also say they originated elsewhere. Upon emerging into this, the White World, from the Red World below, they lived in a number of villages and ultimately at White House, a place in the west where many of their traditional ways were established. Conditions at White House eventually deteriorated, leading to more journeying, ultimately to the banks of the Rio Grande (White 1962:118–121). In many accounts, considerable further movement took place within the region thereafter (see Bayer et al. 1994:7). Both the Tewa and Keres peoples identify specific locations along these migratory pathways, and many of the archaeological sites of the region are associated with events that occurred during their travels.[1]

Ideas of place, too, are central to Pueblo history. In contrast to the metaphor of movement that dominates perceptions of the distant past, the historic villages are universally seen as fixed and permanent. When the people came into this world they knew nothing of it, not even the directions. Their journeying shaped them and the terrain as well, because, as Bandelier noted, even the land was soft and malleable. The establishment of the historic villages can be seen as the culmination of a process of place-making (Naranjo 1995). "The town itself," wrote Elsie Clews Parsons, "is thought of as the Middle Place for which the ancestors were searching" (1996 [1939]:98).

Archaeologists have seen pre-Columbian Pueblo history in terms that are usually thought of as quite different from those of the indigenous people. Within parameters established by more than a century of fieldwork, common questions have emerged that can be summed up as having to do with *origins* and *organization*. In the succinct words of Linda Cordell, "the history of archaeological research in the areas that are occupied by Pueblo peoples is also a history of trying to resolve the origins of the people and the modern villages" (1995:203).

The question of origins remains central to archaeological discussion today. The linguistic diversity of the Pueblo peoples confounded early scholars and remains difficult to account for. It has long been believed that large populations were a relatively late phenomenon in the northern Rio Grande, and that in earlier times the center of the Pueblo world had been on the Colorado Plateau farther west. Recently, however, strong arguments have been made that large numbers of people lived in the region throughout the pre-Columbian era and

that the demographic expansion of later times was thus more complicated than previously supposed. Various explanations have been offered (for instance, Crown et al. 1996; Steen 1977:40), but migration has received the most attention (for instance, Dutton 1964; Ford et al. 1972; Herr and Clark 1997; Spielmann 1998).

The issue of organization has a more complicated history. The first few generations of archaeologists believed that questions about the structure of Pueblo society in the past could be answered via ethnography. Living communities were thought to "preserve the ancient culture of the Southwest in almost its aboriginal purity" (Kidder 1924:144), so addressing questions of organization was more a matter of sorting out details than explaining dramatic transformations. Disjunctions in the archaeological record were known, yet researchers rarely argued that any such changes were deviations from the ethnographically documented pattern. Anna Shepard's ceramic studies, for instance, which documented widespread exchanges of pottery among the pre-Columbian pueblos, remained controversial for many years because no ethnographic precedent existed for trade on that scale (Shepard 1936; Thompson 1991:19).

From the traditional archaeological perspective, the principal change in organization in the Pueblo past was the historically attested coming together of small groups into larger villages, a process that came to be known as "aggregation." I agree with Stephen Lekson (1990:337) that the concept of aggregation in part reflects the sociopolitics of the late nineteenth century, when the term was coined (see, for instance, Mindeleff 1900:643). But it has proved durable, as the vast literature on the topic demonstrates (see references in Cordell et al. 1994).

The issue of organization was central to the reevaluation of archaeology in the Southwest that took place in the 1980s (Cordell and Plog 1979). For instance, clusters of residential sites had long been known at the regional and macro-regional scales (e.g., Mera 1934, 1940), but in the 1980s they were reinterpreted as evidence for types of social organization without known, local, historical precedents. The societies thought to have produced these clusters have been variously termed "alliances" (Creamer 1996, 1998, 2000; Plog 1983; Upham and Reed 1989), "ethnic alliances" (Wilcox 1981, 1984, 1991), "clustered confederacies" (Spielmann 1994), and "complex tribes" (Habicht-Mauche 1993).[2] The debate over these concepts invigorated archaeological thinking, but a consensus about them failed to emerge, largely because of the multiplicity of options available. This critique is also best understood when

placed in the context of archaeopolitics at a contentious time (compare chapters in Thomas et al. 1985; for one perspective, see Reid and Whittlesey 2005).

In some instances the critique of the 1980s involved an explicit rejection of Pueblo ethnography, which was described as having exercised a "tyranny" over archaeological interpretation (Upham 1986). Ironically, at the same time, Southwestern ethnography was undergoing its own revolution. For example, new examinations of the famous "split" of the Hopi village of Oraibi in 1906 revealed that the fission might have been a reaction to inequalities based in clan affiliation and control of arable land (Levy 1992) or the intentional destruction of the ceremonial cycle in the face of American interference (Whiteley 1988a, 1988b). A new appreciation of the role of secrecy and knowledge in Pueblo society also emerged (see Brandt 1994). All these perspectives represent a much more nuanced understanding of the issue of organization as seen in Pueblo ethnography and ethnohistory.

Much recent archaeological research has reengaged ethnography in an effort to establish common ground. I was in the audience at the biennial Southwest Symposium in Tempe, Arizona, in 1992 when the ethnographer Jerrold Levy first lauded archaeologists as the saviors of anthropology in the Southwest and then pointed out that we still get it wrong. In fact, despite the noise and confusion, I am struck by the consistent parallels between ethnographic and archaeological understandings of the Pueblo past. Both perspectives regard movement and transformation as fundamental historical Pueblo themes. That this congruence is obscured by our internal debates should not be a distraction.

Archaeologists and ethnographers do differ, however, over causality. Engagement with the past is central to the Pueblo worldview, so that origins and organization are two sides of the same card. Archaeologists usually treat the two separately, and process is the central matter. This is particularly true for those of us steeped in the processual paradigm, because from that perspective only our most universally applicable conclusions have relevance. Our search for new strategies is more an expression of dissatisfaction with the answers offered by our predecessors than a rejection of the questions they asked. New evidence pours in, we conduct more surveys and excavate more test units, but—barring the unusual find—our ability to advance any particular hypothesis about structure and change in Pueblo society appears not to move very far. Once they mastered contemporary jargon, Adolph Bandelier and his successors would be quite comfortable with the archaeology of the northern Rio Grande in the

twenty-first century. This is not necessarily a bad thing, because a formidable body of empirical data has been acquired, but it does reflect a disjunction between what we say and what we do.

Recognizing congruities in our perceptions of the past is a major step toward bridging the gap between ethnographic and archaeological histories. If we are all telling the same story, then the differences between those tales become less important than their similarities. Ethnographers and archaeologists might emphasize different themes because of their interests or the nature of their evidence, but these need not be seen as opposing histories told with different intents. Fundamentally, I think we have to accept that the deep structure of Pueblo society—definable cultural modes that include concepts of spatial organization—has been present from a very early time. Living communities evolve and change, but relationships with the land are perpetuated by centuries of association. Understanding these relationships, not as bound by static rules but as dynamic, historical interactions, will greatly enrich our knowledge of the Pueblo world. Archaeological and indigenous perspectives on the past are not permanently sundered, and it is in the landscape that the two will ultimately meet.

Approaching landscapes through contextual experience provides a powerful way into the pre-Columbian Pueblo world. In terms of the Southwestern archaeological record, this approach begins by defining community landscapes —entire arrays of physical features and other cultural manifestations associated with particular groups in particular places.

Pueblo Communities in the Northern Rio Grande

The chronology most commonly used for the pre-Columbian northern Rio Grande differs from chronologies employed elsewhere in the Southwest. It divides the pre-Columbian era into three periods: the Developmental (AD 600–1150), the Coalition (AD 1150–1325), and the Classic (AD 1325–1550). Each of these is further subdivided into phases (Wendorf 1954; Wendorf and Reed 1955), but archaeologists apply them inconsistently. Spatially the region has been divided into numerous, variably defined "districts." I refer to nine of them, based largely on watersheds: the Chama, Galisteo, Jemez, Nambe-Tesuque, Pajarito, Pecos, Santa Cruz, Santa Fe, and Taos districts (fig. 2.1; see Snead et al. 2004).

Our understanding of the Developmental period in much of the region is

Figure 2.1 Map of the northern Rio Grande region, illustrating topography, modern pueblos, the five study areas, and archaeological sites mentioned in the text.

growing rapidly (see, for example, Boyer and Lakatos 2000). In broad outline, Pueblo settlement at this time is represented by pithouses and associated features, typically located on river terraces or similar landforms overlooking permanent sources of water (see Biella 1979:110; Cordell 1989:305; McNutt 1969; Stuart and Gauthier 1984:48). Only rarely are pithouses found in clusters indicating social groupings of any size. Over time, surface structures and apparent kivas appear in association with pithouses, occasionally forming larger clusters that have been identified as villages. Population seems to have been concentrated in certain areas, such as along the Rio Grande itself or in the Taos, Tesuque, Nambe, and Santa Fe Valleys (see Creamer and Haas 2003; Maxwell et al. 1998; Post and Snow 1992; Skinner et al. 1980:32; Stubbs 1954). In contrast, there is little evidence for Developmental period use of surrounding hinterlands such the Pajarito Plateau and the Galisteo Basin until the very end of the period (Lang 1977:22; Powers and Orcutt 1999:553; Ruscavage-Barz 1999:95).

These circumstances—comparatively dispersed populations living in relatively well-watered valleys—changed rapidly toward the end of the twelfth century. An increased use of surface structures, typically the multiroom, masonry or adobe "small houses" called *roomblocks* (Biella 1979:110; Carlson and Kohler 1990:9), characterized the early Coalition period. Single kivas are associated with some roomblocks, and there are cases in which roomblocks cluster into larger complexes. The area of settlement also expanded as new sites were established in previously underinhabited uplands. Population increased dramatically during the decades before 1250 on the Pajarito Plateau and in the vicinity of Santa Fe (Biella 1979:142; Dickson 1979:41; Kohler and Root 2004; Powers and Orcutt 1999:558; Ruscavage-Barz 1999). Settlements also appeared in the Chama and Galisteo districts, particularly toward the end of the thirteenth century (see Peckham 1981). Over the course of the Coalition period, Pueblo communities developed even beyond the eastern flanks of the Sangre de Cristos, marking the maximum extent of the Pueblo world in that direction (Spielmann 1996:182). The organic-paint pottery known as Santa Fe Black-on-white provides a horizon style for the Coalition period and was used throughout this zone.

The demographic expansion of the Coalition period was accompanied by a notable reorganization of settlement. Larger "plaza pueblos"—roomblocks tightly enclosing a central plaza space—were established in some areas. These plaza pueblos are sometimes isolated but are also found together with clusters

of other roomblocks, particularly in the Pajarito and Galisteo districts (see Lang 1977:224; Ruscavage-Barz 1999; Steen 1977:34; Van Zandt 2006). In contrast, survey and excavation in the Pecos Valley indicate that the Coalition population there was centered on single small pueblos such as Rowe (LA 108; Cordell 1998; see also Head and Orcutt 2002). Settlement along the Santa Fe River included several residential sites near one another, forming "a large continuous community that was 3.2 kilometers . . . long" (Post and Snow 1992:17).

Population at the local and regional level was remarkably unstable during the Coalition period. Residential sites had brief use-lives—less than a generation, in Charlie Steen's estimate (1977:7). Many of the Late Coalition settlements in the Galisteo district, some substantial in size, were deserted by the end of the period. On the Pajarito Plateau, the expansion of settlement in the early 1200s was followed by a rapid dispersal before the end of the century (Kohler and Root 2004; Orcutt 1999:224). A similar process apparently took place in the Santa Fe district (Dickson 1979:41). Some authors have detected complementary patterns in the expansion and contraction of sites in adjacent parts of the northern Rio Grande, suggesting the cycling of population among different settlements (see Lang and Scheick 1989:105).

The trends of the Coalition period—expansive but unstable settlement and diverse patterns of local organization—extended into the subsequent Early Classic, a time characterized by the founding of many new communities. The Classic period is distinguished from the Coalition principally by the appearance of new ceramics derived from the upper Little Colorado River region of Arizona, pottery known as Rio Grande glaze wares (Habicht-Mauche et al. 2000; Mera 1940; Shepard 1942; Vint 1999; Warren 1979).

As the fourteenth century progressed, modes of settlement grew increasingly standardized. Large "community houses," consisting of multiple roomblocks surrounding plazas, came to dominate the landscape. Some of these ultimately grew to remarkable size. The Galisteo Basin pueblo of San Marcos (LA 98), for instance, is estimated to contain more than 1,500 rooms surrounding 10 plazas (Ramenofsky 2001; Thomas 2001). Similar architecture is found in all the districts of the northern Rio Grande (Creamer 1993; Creamer et al. 1993; Elliott 1982; Lang and Scheick 1989; Morley 1910; Nelson 1914; Reiter 1938; Snow 1976; Wendorf 1953). As the community houses grew larger, with populations "aggregating" into them, their total number decreased.

The residential areas that Pueblo people established in the northern Rio

Grande from the Developmental through the Classic period were accompanied by a wide range of associated features in their surrounding landscapes. Prominent among these were field structures, generally understood to have been small "ranchos" built away from the pueblos for use during the agricultural season (see Orcutt 1993; Skinner 1965; Ward 1978). Other widespread features associated with farming were checkdams, grid gardens, cobble-mulch fields, and field systems of many kinds (Anschuetz 1995, 1998; Lang 1995; Maxwell and Anschuetz 1992). Symbolic, sacred, or "socially integrative" features such as kivas and shrines have been widely documented, and petroglyphs are ubiquitous (see Munson 2002; Olsen 2004; Schaafsma 1975, 1992a, 2000). In some places trails that connect these varied locations are also preserved, along with special-function structures such as reservoirs (Snead 2002a, 2006b).

The way of life that became established in the northern Rio Grande during the Classic period endured for centuries. Many of the same features that archaeologists describe for the late pre-Columbian era were later documented by Spanish and American colonizers in the region. For example, an entry in Adolph Bandelier's journal for April 17, 1882, describes the people of Cochiti leaving for their ranchos to begin the agricultural season (Lange and Riley 1966:265), a practice much like that followed by their ancestors 500 years earlier. That pueblos and kivas remain part of a vibrant culture today is testimony to the extraordinary resilience of the Pueblo people.

The Ancestral Pueblo Community Study

My discussion of the changing character of Pueblo community landscapes in the northern Rio Grande is derived from archaeological surveys I directed in five study areas between 1992 and 2006. This research program, which I called the Ancestral Pueblo Community Study, used teams of students and local volunteers and was carried out in close collaboration with the land managers of several different jurisdictions.

The first phase of the project, consisting of my dissertation research (Snead 1994, 1995), focused on Tsikwaiye and T'obimpaenge, two communities extant primarily during the fourteenth century. In subsequent years I reoriented my fieldwork to collect information about changing landscapes over time and included two additional study areas, the Burnt Corn and Los Aguajes communities, that had been established in earlier and later periods. The final study area, the Tsankawi community, was the setting of specialized research I

conducted in the late 1990s, making it a useful comparative case. The primary occupations of these five communities spanned the late Coalition through Middle Classic periods, from roughly AD 1250 to 1500.

The communities examined during the Ancestral Pueblo Community Study represent different districts of the northern Rio Grande and different ecological zones, but otherwise they share many characteristics. Most of them were centered on community houses of only a few hundred rooms, which were used as residences for only a few generations. Few of the community houses were substantively reoccupied after people left them, although their associated landscapes were used for longer periods of time. All of them are in relatively peripheral areas and had received little previous attention from archaeologists.

Looking at communities with brief occupations helped me seek the central tenets of landscape organization in the Pueblo world. The establishment of new places involved many elements, including the organization of subsistence production, the building of structures for social interaction, and the making of ideological statements. Community founders had to define residential space, establish plazas, set up field structures and garden plots, and construct shrines. Over time this initial organization would become obscured by responses to new conditions, a process that is inevitably less advanced in places that lasted only briefly. In other words, looking at communities that were viable for only a few generations allows us to better understand the ways in which Pueblo people structured the world around them and how such organizational principles might have varied from place to place.

My focus on smaller, relatively peripheral communities rather than their larger, better-known contemporaries also minimized difficulties in collecting and interpreting archaeological evidence. The material records of large Pueblo communities are often extremely complex, featuring remodeling, periods of abandonment, and the serial occupation of different parts of community houses and community landscapes. Because landscape features can be difficult to date under the best of circumstances, associating them with different time periods characterized by different circumstances is a formidable problem. This difficulty does not disappear in communities inhabited more briefly but is comparatively manageable.

I accept that a focus on such briefly inhabited communities might produce an artificially simplified view of pre-Columbian Pueblo society. But because I believe that the shaping of place is a fundamentally conservative process, I think these places should be relatively accurate mirrors of their larger contemporaries,

and because they are more archaeologically "visible," they can be productively examined to understand common traditions. I do not ignore variation or unique historical processes in community organization; on the contrary, by being focused on the core elements of the landscape in detail, my approach makes it possible to identify such factors.

The survey methods we employed were designed to identify places within community landscapes that were either obvious nodes of activity or at least concentrations of archaeological evidence. This "site survey" approach, the standard mode of research in the region, produced evidence broadly comparable to that from work done in other projects. I also adopted the Bandelier Archaeological Survey's category of "isolated occurrence" to capture information from small, scattered features and artifacts that might otherwise slip through the recording process. In all cases the survey areas were transected at 10-meter intervals, and standard recording procedures were employed.

The scale of survey was another critical variable. Community landscapes are big and hosted many different kinds of human actions. Each community's landscape would have overlapped with those of others as well, because some resources—material and conceptual—would have been shared. My main interest, however, lay in the *community core*, the portion of the landscape that saw constant use by local residents.

To define the community core for the site survey, I turned to the anthropological and geographical literature, which suggested that most activity by agricultural groups takes place in a zone with a radius of 700 meters to 4 kilometers from the principal residence (see Chisholm 1979:61; Preucel 1990:168; Stone 1991:347). I arbitrarily defined the community core as an area 2 kilometers in radius centered on the community house, and I tried to survey these zones in their entirety. In practice, time, terrain, and property boundaries exerted constraints, so I did not achieve this target every time. I am satisfied, however, that my team's documentation was sufficient to provide detailed pictures of the core community landscapes and to permit comparison between them.

I refer to sites by their names when they exist, using indigenous terms when available. Although recently collected toponyms are not necessarily reliable information about past cultural affiliations, the mere existence of names emphasizes particular relationships between people and land. When no site name is known, I use the LA (Laboratory of Anthropology) number designated by the New Mexico Historic Preservation Division, or a temporary field number as a last resort.

Burnt Corn

The Burnt Corn community is situated along Cañada de la Cueva, an intermittent tributary of Galisteo Creek that drains the open plain south of Santa Fe. In this area the broad plateau drops gradually into the western Galisteo Basin, creating a band of hilly, wooded terrain periodically interrupted by volcanic dikes and outcrops (Lucas 1982; Smith et al. 1991) and commanding wide southerly views. The Burnt Corn community lies in this transitional zone, not far from the famous western Galisteo communities of San Marcos and San Lázaro (LA 91/92). Until the early eighteenth century the Galisteo Basin was home to the Tewa-speaking Tano people, and some Keres speakers lived in the western basin. In the aftermath of the Pueblo Revolt the basin was abandoned by its indigenous inhabitants, some of whom moved to Hopi country and established a new community on First Mesa (see Dozier 1954, 1966; Reed 1943).

In the present day, much of the Galisteo Basin is under private ownership, with only isolated parcels of public land. Part of the Burnt Corn community lies on public land managed by the Bureau of Land Management. The rest occupies state trust land, open space owned by Santa Fe County, and private ranch land. Burnt Corn Pueblo (LA 359) sits on a narrow, north-south ridge overlooking the *cañada*, or dry riverbed (fig. 2.2). It consists of nine masonry and adobe structures, most of them single-story roomblocks containing 10 to 20 rooms but one a larger, multistory plaza pueblo with 40 to 50 rooms. Another, smaller plaza site, Pueblo Escondido (LA 358), sits on a low bench on the south side of the cañada. Tree-ring dates fix the primary occupation of the Burnt Corn community in the AD 1290s (Snead 2004; see also Robinson et al. 1972:25).[3] The pueblo was destroyed by fire sometime before 1320.

Burnt Corn was first documented in the 1930s by Harry P. Mera. Later archaeologists visited it several times and re-recorded it but conducted no excavations. The pueblo was heavily looted during the 1960s and 1970s, and almost every roomblock is marked by eroded pits and mounds of dirt. A site documentation project conducted by the Elderhostel program at the College of Santa Fe (Peck 1999) inaugurated modern interest in Burnt Corn. Our work there to date has consisted of five field seasons between 2000 and 2006.

My colleagues and I surveyed approximately 200 hectares in the community core and recorded 49 sites and 129 isolated occurrences. Our finds included small residential sites along with artifact scatters, petroglyphs, and shrines. In addition to sites associated with the Coalition period, considerable

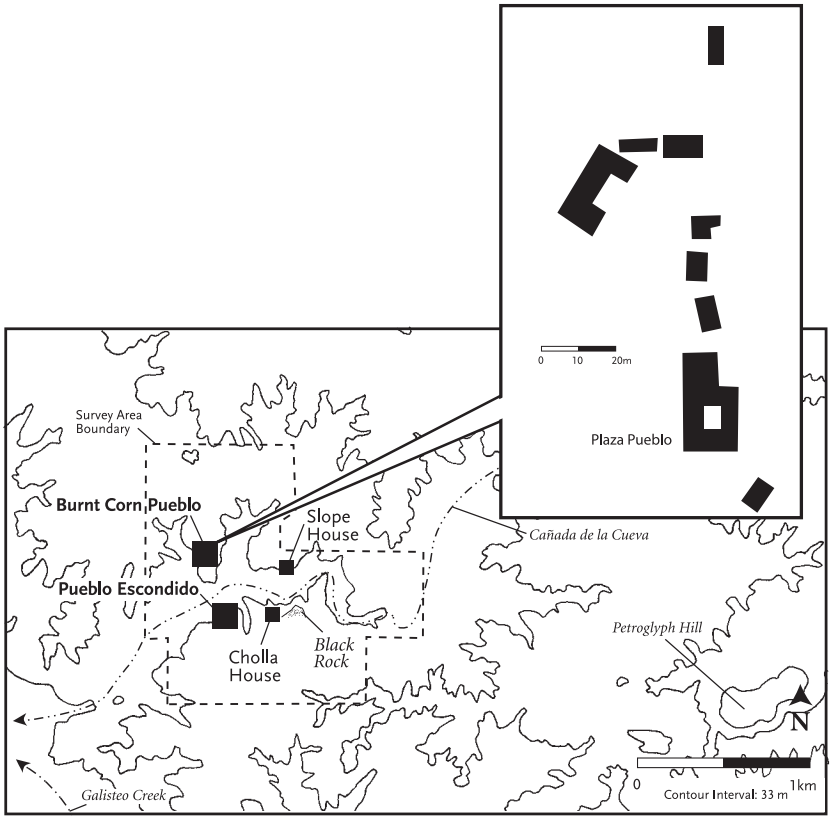

Figure 2.2 The Burnt Corn community

evidence existed for later occupation, predominately during the fifteenth century, a time when Cañada de la Cueva was part of the San Marcos hinterland.

T'obimpaenge

T'obimpaenge, a Tewa term translated as "beyond Piñon Mountain" (after Harrington 1916:379; see Bandelier 1892:84; Hewett 1993 [1908]:33), refers to the countryside surrounding the valley of the Rito Sarco, a north-flowing intermittent tributary of the Rio Santa Cruz in the Sangre de Cristo foothills northeast of contemporary Nambe Pueblo. The rugged terrain there is cloaked in piñon-juniper woodland, with remnant stands of ponderosa pine and riparian habitat in the valley bottoms. This is Tewa country, and J. P. Harrington's

consultants provided detailed toponyms for the region. According to tradition, the Pueblo residents of T'obimpaenge ultimately moved south to Nambe, which maintains ancestral ties to the landscape (Ellis 1967a).

Today T'obimpaenge is divided among numerous public and private landowners. Most of the central part of the Rito Sarco Valley lies within the boundaries of Camp Frank Rand of the Great Southwest Council, Boy Scouts of America. The Boy Scouts share responsibility for natural and cultural resources on the property with the Bureau of Land Management, which also directly manages two of the major archaeological sites in the area. The Santa Fe National Forest lies directly east, and there is considerable private land in the vicinity.

What I call the T'obimpaenge community is part of a larger site cluster that I call the Cundiyo Group: Cundiyo (LA 31), K'ate Ouinge (LA 245), La Caja (LA 10999), Nambe Bugge (LA 254), and Pueblo Sarco (LA 264) (Snead et al. 2004).[4] Each is an aggregated adobe community house of multiple roomblocks and eclectic ground plan, some with identifiable plazas and kivas, ranging from 75 to 200 rooms (fig. 2.3). This settlement cluster is spatially discrete, with the nearest contemporaneous communities located along the Rio Santa Cruz to the north and the Rio Nambe to the south. Our work focused on a corridor along the Rito Sarco, encompassing the land surrounding K'ate Ouinge, Pueblo Sarco, and Nambe Bugge. No reliable tree-ring dates are available for the T'obimpaenge community, but ceramics indicate a primary occupation during the Late Coalition and Early Classic periods, probably between AD 1275 and 1375, with only limited use of the vicinity either before or afterward.

Despite early documentation of T'obimpaenge sites by Harrington (1916), Mera (1934), and Florence Hawley Ellis (1964), there has been almost no follow-up. Our surveys in 1992–1993 covered a total of 450 hectares and found 66 sites and 74 isolated occurrences. Small structures and artifact scatters were the predominant types of sites, but shrines and other features were also present. The "multicentric" aspect of T'obimpaenge makes it distinctive among the five study areas but is representative of the diverse forms of community organization that existed during the thirteenth century.

Tsikwaiye

Tsikwaiye is the Tewa name for parts of the Caja del Rio Plateau, a basalt uplift at the center of northern New Mexico, just west of Santa Fe and separated from the Pajarito Plateau by the canyon of the Rio Grande. The

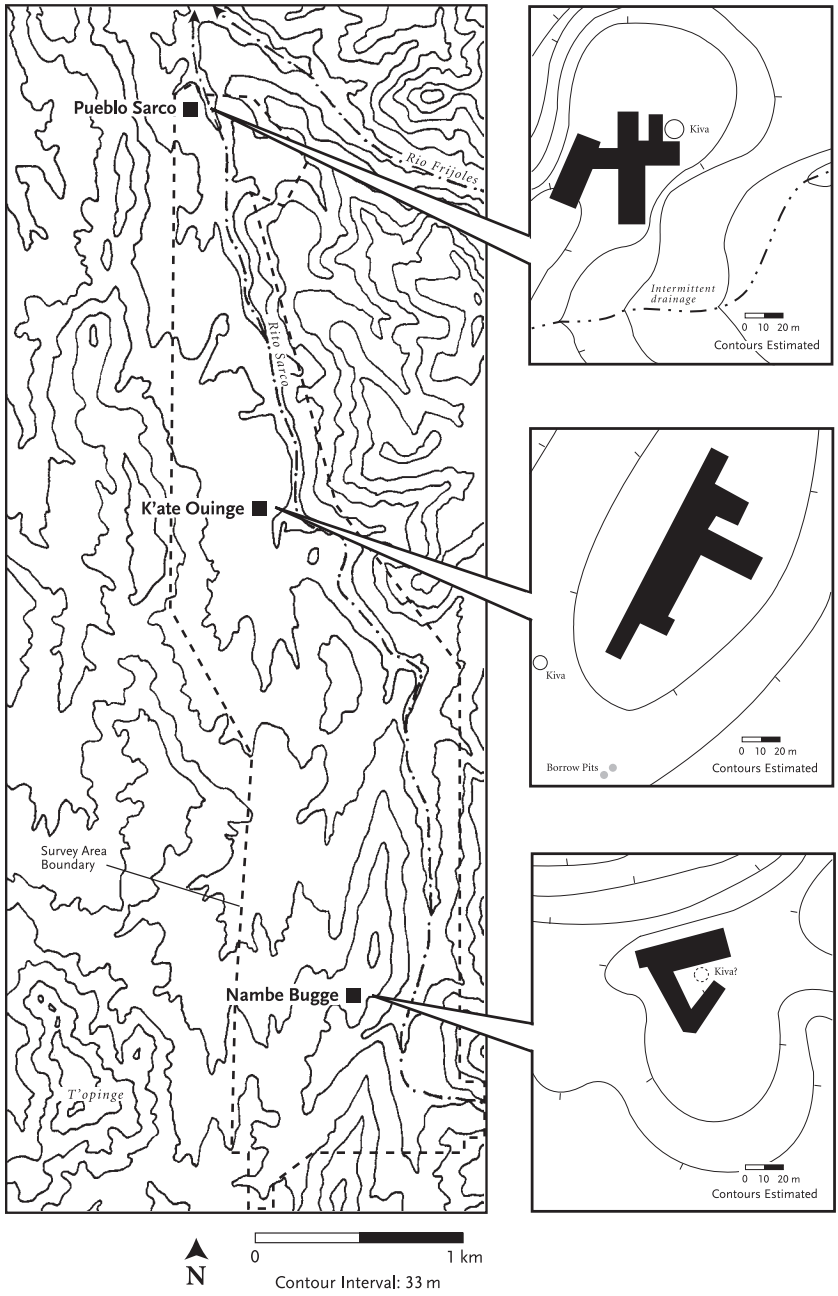

Figure 2.3 The T'obimpaenge community

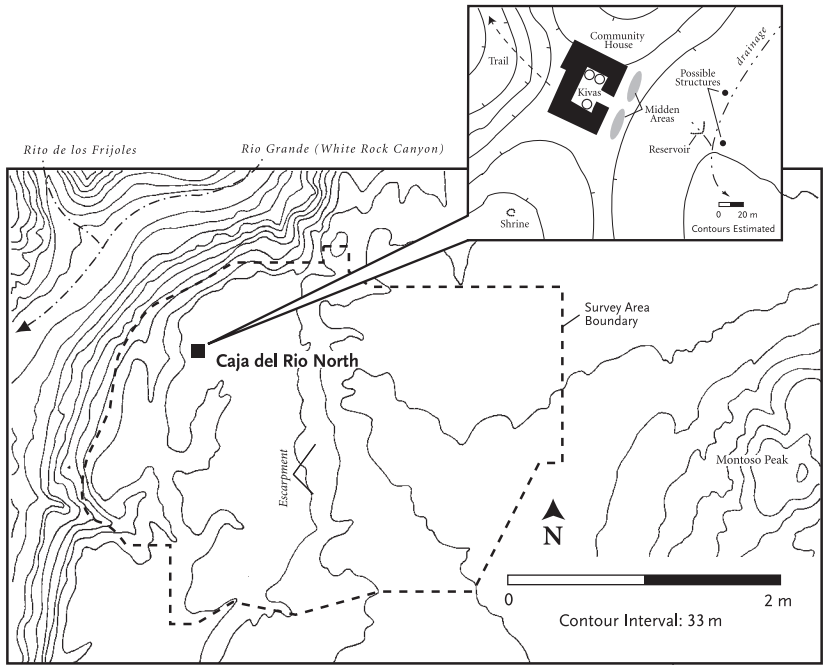

Figure 2.4 The Tsikwaiye community

name Tsikwaiye refers to the cliffs along the river and translates as "basalt height" (Harrington 1916:457). The principal geological features of "the Caja," as the plateau is called locally, are a series of minor volcanoes called the Cerros del Rio (Aubele 1979), which are surrounded by low hills and comparatively flat terraces. There is no reliable surface water on the Caja, but its ubiquitous piñon-juniper woodland provides substantial forest resources. Tsikwaiye sits along the western edge of the Caja and encompasses two broad, stepped terraces, divided by a low escarpment, descending from Montoso Peak to the rim of White Rock Canyon. In cultural terms the Caja del Rio Plateau spans the traditional divide between the Tewa and Keres groups. Today it falls within the Santa Fe National Forest, with areas to the north and south under the jurisdictions of San Ildefonso Pueblo and Cochiti Pueblo, respectively.

The Tsikwaiye community was centered on the Caja del Rio North community house (LA 174), a masonry plaza pueblo of an estimated 300 rooms situated on a high terrace 250 meters above the river (fig. 2.4).[5] It was comparatively isolated from other, contemporaneous communities, the closest

being Tyuonyi (LA 82) across the river on the Pajarito Plateau. The Pueblo population of this part of the Caja del Rio was modest relative to the populations of more favored locations nearby. The Tsikwaiye community was associated principally with the Early Classic period. Except for brief visits by Nels Nelson and Harry Mera, no fieldwork was conducted in the area until the 1970s, when the UCLA Pajarito Archaeological Research Project surveyed transects nearby and excavated in the Caja del Rio North middens (see Hill et al. 1996; Hill and Trierweiler 1986; Trierweiler 1989).

There are no tree-ring dates from Caja del Rio North, so the local chronology remains tied to ceramics. Black-on-white types dominate at the community house, but the consistent presence of early glaze wares implies that it was occupied during the early Classic period, between AD 1325 and 1375. This correlates with period 7 of the Bandelier Archaeological Survey chronology (see Powers and Orcutt 1999:577).[6]

Our 1992–1993 work in the Tsikwaiye community focused on the community core surrounding Caja del Rio North. The 470 hectares of this area that were surveyed contained 107 sites and 74 isolated occurrences. Site types included small structures, shrines, petroglyphs, agricultural features, and artifact scatters. Many of these were contemporaneous with Caja del Rio North, although significant parts of the landscape were used during the fifteenth century as well.

Los Aguajes

The site and community of Los Aguajes are located in open country toward the southern end of the Caja del Rio Plateau, on the northwest side of prominent Tetilla Peak. There the Arroyo Tetilla has scoured several shallow basins in the basalt that hold water during the dry season and are known by the Spanish word *aguajes*. Immediately west the land drops sharply into the Arroyo Colorado and overlooks broken terrain extending several kilometers to the Rio Grande. Piñon-juniper woodland is typical of the surrounding slopes, but there is considerable open grassland as well. The area is associated with the Keres people of Cochiti Pueblo; the current boundary of Cochiti land lies only a few hundred meters west of the aguajes. The remaining acreage is administered by the Santa Fe National Forest.

The community house of Los Aguajes (LA 5) is an H-shaped, single-story adobe construction with an estimated 150 rooms, lying immediately north of the catchment basins (fig. 2.5). This was one of the most isolated Pueblo

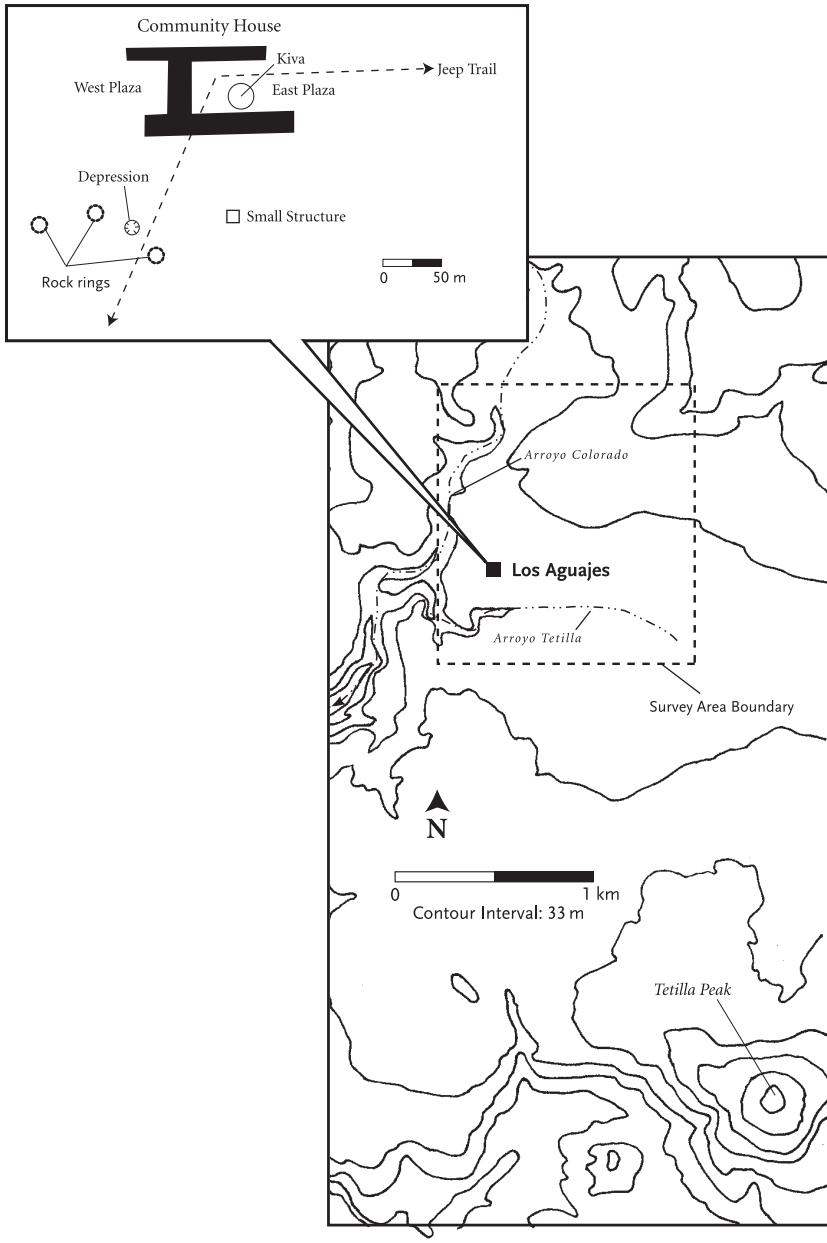

Figure 2.5 The Los Aguajes community

communities in the entire region, roughly equidistant between the populous valleys of the Rio Grande and the Santa Fe River and 10 kilometers south of Tsikwaiye. Despite its remote locale, Los Aguajes has attracted considerable archaeological attention over the years. Nels Nelson worked at the site in June 1915 (Nelson 1915), and much of the remainder was excavated during the 1930s. Little documentation is preserved from this work, and Gwinn Vivian's summary (n.d.) is the only substantive report available. Some sites in the vicinity were documented during site surveys in the early 1970s (Dickson 1979; Hill and Trierweiler 1986). Tree-ring dates derived from charcoal fragments indicate that the community house was occupied during the second half of the 1400s (Smiley et al. 1953:16).

My colleagues and I surveyed Los Aguajes as part of my postdoctoral fieldwork in 1995, covering an area of 238 hectares inside the national forest. In addition to the community house, we recorded 52 sites and 42 isolated occurrences. They included several large shrines, small structures, trails, artifact scatters, and numerous petroglyph panels. Ceramic evidence indicated that these small sites were contemporary with the community house and dated primarily to the fifteenth century.

Tsankawi

The ancestral Tewa pueblo of Tsankawi sits on the central Pajarito Plateau, atop a high mesa with views to the horizon on all sides. The surrounding countryside is characterized by narrow, steep-walled landforms called *potreros,* separated by open valleys, a topography created by erosion of the consolidated, Pleistocene-era pyroclastic ash flows associated with eruptions of the Jemez volcano. Vegetation is dominated by piñon-juniper woodland. In pre-Columbian times, water probably flowed reliably through Los Alamos Canyon, to the north, although at present this and other streams in the vicinity are intermittent. The Tewa residents of San Ildefonso Pueblo maintain close ties to Tsankawi, one of their ancestral homes.

A 334-hectare area of the Tsankawi community core presently forms the Tsankawi Subunit of Bandelier National Monument. The community clearly extended beyond this, into adjacent areas now administered by Los Alamos National Laboratory and San Ildefonso Pueblo.

Tsankawi itself (LA 211), one of the larger community houses on the Pajarito, is composed of several multistory roomblocks built of masonry and

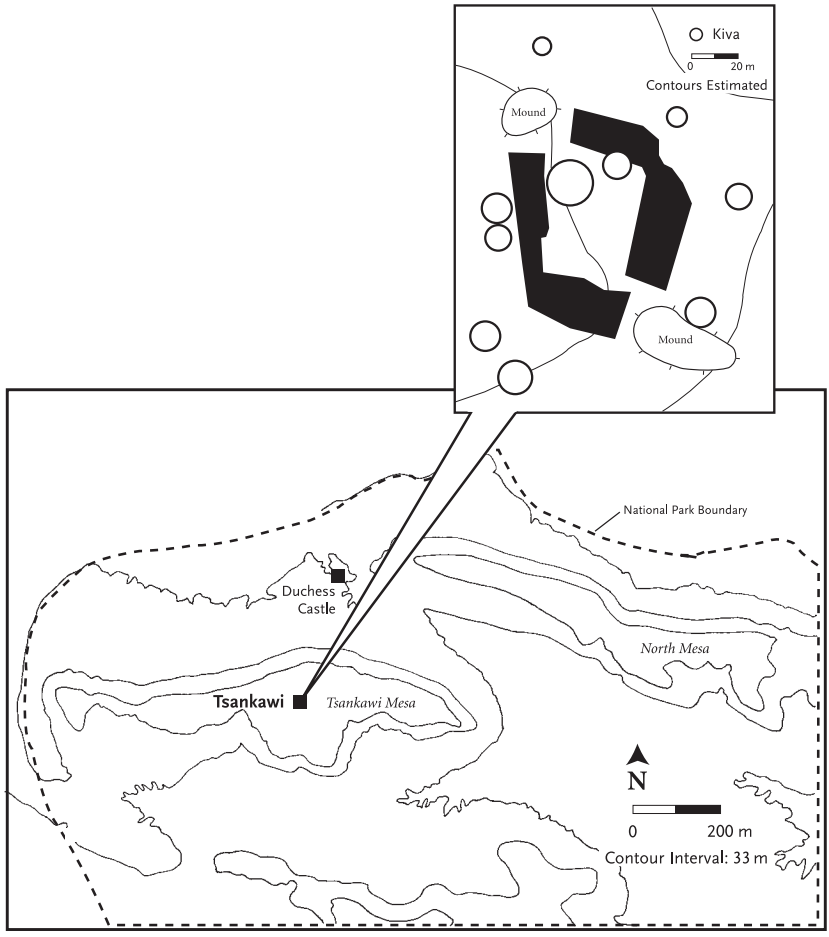

Figure 2.6 The Tsankawi community

enclosing a central plaza (fig. 2.6). More than 200 rooms are indicated, with 10 kivas, at least two reservoirs, and other features in direct association. The southern flanks of the mesa are lined with "cavate" structures cut into the soft rock of the cliffs, which represent additional residential space. Parts of the pueblo were excavated in the late nineteenth and early twentieth centuries, efforts that produced little usable data and collections that have largely been dispersed (Hewett 1904, 1953:109). Nonetheless, it is evident that the

Tsankawi community house was occupied throughout the Classic period, probably beginning in the mid-1300s and extending into the late fifteenth century or even beyond (Powers et al. 1999:212).

Tsankawi was not one of the areas originally targeted for the Ancestral Pueblo Community Study, and because the landscape was thoroughly documented by the Bandelier Archaeological Survey in the late 1980s, I have not conducted my own systematic site survey in the vicinity. However, Tsankawi has been a central focus of another landscape-related effort in which I am involved, the Pajarito Trails Project. In 1999 and 2001 we mapped the Tsankawi trails, collecting evidence from 94 trail segments extending over 7 kilometers (Snead 2001a, 2002b). Movement is a central feature of community landscapes, and considerable evidence exists for patterns of movement through and within the other communities discussed here as well. The Tsankawi trails and their associations are thus important for my larger argument, and I return to them in chapter 5.

In the next four chapters I use evidence from these five community landscapes to discuss the transformation of Pueblo society in the northern Rio Grande region during the late pre-Columbian era. With the exception of Tsankawi, each is of relatively modest size, characterized by a brief primary occupation, and located on the margins of the core settlement areas of the day. In all cases they include the complex landscape features associated with the period, reflecting subsistence practices, social organization, and systems of belief. Collectively they represent a time period between AD 1250 and 1500, 250 years during which the Pueblo world as known in colonial times emerged.

3
Provision

> Although he continued to gather and prepare wild fruits, nuts, and grains, one added source of supply—corn—outweighed them all; for was it not the author of his improvements, the object of his affection, care, and devotion, the sure promise of his mastery of the desert?
>
> Frank Hamilton Cushing, *Zuni Breadstuff*

Farming people rely on the land to sustain them, investing time and labor to make it productive. Agriculture requires not only favorable terrain, fertile soils, and available water but also a complex array of related, built features designed to promote success. These conditions and practices shape *landscapes of provision*. The ways in which such landscapes change over time and across space reflect people's accommodations to changing circumstances and provide insights into the ways they sustained themselves.

Access to land is as much a result of social and political action as of economic decision-making. In the semiarid northern Rio Grande, good places to grow crops are scarce. Under such conditions, agricultural production is inevitably linked with social reproduction and founded in land tenure and territoriality. The symbolism of agriculture is also deeply imbedded in Pueblo culture. Corn, in particular, is an essential ingredient of ritual, and the yearly ceremonial cycle is intricately related to the cycle of production. These elements are all manifested in places, which are actively established and maintained by members of communities and embedded in landscapes for all to see.

Landscapes of provision are the visible manifestations of farming and landholding, with all their technological and social parameters. By organizing the land for agriculture, people are "providing" for themselves and their descendants in every sense of the term. The concept of provision also includes hunting, gathering, and other non-agricultural subsistence practices, but because these practices are represented by landscapes with characteristics different from those of farming (see Bradley et al. 1994; Fullagar and Head 1999; Ingold 1986; Potter 2004), I do not discuss them here. In the Pueblo past, knowledge about crops and the land was passed down over time, although each generation necessarily faced new and unanticipated circumstances that led

them to structure their own landscapes of provision in distinct and dynamic ways. Left for the archaeologist are the superimposed signatures of these practices of provision, an important but challenging topic for study through the lens of contextual experience.

Agriculture in the Pueblos

Agriculture is what first attracted anthropologists to the American Southwest. In the mid-nineteenth century, scholars interested in Native Americans were galvanized by reports of the cornfields of the Southwestern Pueblos. The veracity of those reports undermined many existing prejudices about the indigenous peoples of the continent (see Gallatin 1845:201). Over the subsequent decades, ethnographers working in New Mexico and Arizona documented farming practices representing more than a thousand years of adaptation to dry, unpredictable weather. Ironically, archaeological interest in the details and contexts of Pueblo agriculture got off to a slow start. I attribute this to a variety of conceptual and empirical challenges, including the belief that agriculture had been so ubiquitous in Pueblo society that its presence and organization could be assumed.

I have also argued that the research questions favored by Southwest archaeologists throughout much of the twentieth century skewed their perception of Pueblo society. A chronological perspective (Snead 2002b) emphasized the importance of well-dated residential sites to the exclusion of other types of archaeological information, including data relevant to agriculture. This produced considerable confusion. For instance, speculation that the gridlike agricultural features found on terraces along the Chama River might instead have been buildings of some sort persisted as recently as the 1930s (see Hibben 1937:16).

Archaeological evidence for pre-Columbian agricultural practices did accumulate, however, often as a side benefit of major excavation projects such as those at Sapawe, in the Chama district (Skinner 1965), and at Point of Pines, Arizona (Woodbury 1961). When large-scale, intensive surveys commenced in the 1970s, material evidence for agriculture appeared everywhere (for instance, Rohn 1977). Studies associated with this new body of information were largely functional and typological, enabling archaeologists to better understand farming technology in marginal environments (see Fish and Fish 1984; Ward 1978). Eventually, interest began to turn toward the organization of such

systems in relation to other aspects of Pueblo society and to the social context of subsistence. This attention coincided with the reengagement of Southwestern archaeology and ethnography but also with a growing archaeological interest in agricultural landscapes worldwide (Barker and Gilbertson 2000; Killion 1992; Wilkinson 2003).

The Pueblo ethnographic record includes a rich and complex body of lore and practices related to growing crops in a dry country. "Farming in this upper world could be harsh," noted a recent history of Santa Ana Pueblo, and responses were diverse (Bayer et al. 1994:7). In the 1930s, John Hack documented 12 different agricultural strategies on the Hopi Mesas, each with distinct material components (Hack 1942:26). Farming in the broad washes took advantage of intermittent flows of water during summer storms, and runoff was collected at the mouths of smaller arroyos and on alluvial fans.[1] Low checkdams of brush and stone were constructed to slow these occasional flows, to spread the water across small fields, and to collect soil (Forde 1931:364). Seeps and springs were surrounded by small but elaborate networks of fields designed to maximize the use of these rare sources of perennial water. Hopi farmers also took advantage of the mulching effect of sand and regularly planted in dune fields.

Throughout the Pueblo world, agricultural strategies varied to certain extents in different parts of each community's landscape. Intensively worked gardens adjacent to homes contrasted with more dispersed fields at greater distances (Maxwell and Anschuetz 1992:39). Structures were built at remote locations, providing "shelter from heat or storm" during the growing season (Forde 1931:391). In some cases specialized farming villages were occupied during the summer, as at Ranchitos, near Santa Ana Pueblo (Bayer et al. 1994:80), and at Nutria and Pescado, near Zuni (Rothschild et al. 1993).

Matters of land and land use were central organizing principles of Pueblo society. In the words of Mischa Titiev, the "all-pervading concern of the Hopi with land problems can be fully appreciated only when one realizes how utterly dependent they are on the soil and how precarious such a dependence must always be in the face of an unfavorable environment" (1988 [1944]:188; see also Aberle 1948). Traditionally, ownership of agricultural land was associated with groups larger than the family. At Hopi, land use was regulated by clans, with some oversight from community leaders (Titiev 1988 [1944]:16). Plots in the floodplains were restricted clan holdings parceled out to clan women, whose husbands worked them and whose daughters stood to inherit. As a

practical matter, however, fields within clan lands were moved as local environmental conditions changed, and clan members had some claim to produce from land that had been worked by others. Clan ownership was thus more an ideal than a strict reality (Forde 1931:373), and it is possible—though disputed—that control of productive areas was a source of social power for principal clans (Levy 1992; see also Whiteley 1988a, 1988b). Similar ambiguity prevailed at Zuni, leading Frank Cushing to argue that although an individual might "own" land, it was "spoken of as the property of his clan" (1920:132).

Tension between the needs of families and the needs of larger social groups permeated Pueblo farming. Families relied on dispersed holdings to spread the risk of crop failure and typically worked multiple plots. High-quality land was the subject of disputes within and between communities. Daryll Forde found that people still argued about one land-division episode on First Mesa at Hopi hundreds of years afterward (1931:366; Beaglehole 1937). Boundary stones and topographic features were used to signify property. Conditions were less competitive away from the desirable floodplains, where land was less productive, and fields were found throughout the countryside (Cushing 1920:154). Even in relatively remote places, however, care was taken to ward off interlopers, and ownership of fields could be signified by cairns or similar markers (Freire-Marreco, in Forde 1931:365).

Most of this information comes from Hopi and Zuni because of their relative isolation from colonial interference, but also because the scarcity of permanent streams in these areas means that agriculture organized around the capture of rainfall or groundwater is often the only realistic farming option. At the time these accounts were taken down, the small populations of the pueblos and their decreasing reliance on agriculture for subsistence meant that a surplus of arable land existed, a circumstance that might not have been typical before the nineteenth century. Hopi farmers on Second Mesa told Ernest Beaglehole that metal implements enabled them to clear much larger areas to cultivate than in former times (1937:37). In these and many other ways the ethnographic record for Pueblo agriculture might be considered suspect, but there are sufficient points of agreement in the different accounts to suggest common themes that can be looked for in the past.

Ethnographic information about farming in the Rio Grande pueblos has also been critiqued. Subsistence production is one area in which Spanish influence on the Native peoples of the region was profound, from the importation

of livestock and new crops to technological innovations such as irrigation. It is generally accepted that the lowlands along the Rio Grande, which to modern eyes represent a favorable niche for farming, were less attractive in late pre-Columbian times because of the risk of flooding (Orcutt 1991).[2] The development of flood control and sturdy irrigation systems, particularly in the nineteenth century, thoroughly restructured Pueblo agriculture. Traditional landholding was also disrupted by colonial mandates, particularly the imposition of artificial "grants" of land to colonists, which hemmed in the Pueblo communities. Demographic collapse, the encroachment of Spanish settlers on the pueblos, and ultimately the creation of a market for property all eroded social relationships built around land. Even in the late 1800s, when the first visits of anthropologists established an ethnographic "baseline," these processes were well advanced, making it difficult to perceive how landscapes of provision might have been structured in the absence of Western intervention (Maxwell and Anschuetz 1992).

There is ethnographic evidence, however, that in former times elaborate dryland agricultural regimes similar to those documented at Hopi also characterized the Rio Grande pueblos. Pueblo farmers practiced rainfall agriculture in the hills west of Santa Clara Pueblo and in the arroyos behind Cochiti well into the twentieth century (Hill 1982:26; Lange 1959:38). The notes of Adolph Bandelier contain numerous references to the persistence of traditional farming strategies (Lange and Riley 1966). It is clear that although irrigation was added to the Pueblo agricultural repertoire, it did not completely replace alternatives until quite recently.

Landholding in the Rio Grande pueblos was communal, but often only in theory. In the absence of a strong clan system, some decisions about land were made by leaders of the community as a whole. At Zia, according to Leslie White, people had "only the right to use land which has been assigned to them. In practice, however, it appears that a person actually owns outright any land which has been allocated to him: he might sell or trade it to someone else. Even if he ceases to use it and allows it to remain idle 'they will not take it away from him' " (White 1962:98). The situation described by Charles Lange for Cochiti was oriented even more toward the individual, although permission to use community land or to bring waste land into production had to be sought from the pueblo authorities (Lange 1959:40). The governor and council at Santa Clara also oversaw the transfer of land, making detailed inspections to determine whether competing claims existed (Hill 1982:20).

In what follows, I examine landscapes of provision in pre-Columbian Pueblo communities. Using examples from the various study areas, I focus on two topics of interest—agricultural strategies and landholding—as they are manifested in the archaeology and environment of each place. Other community landscapes in the region provide more spectacular examples of Pueblo farming practices, but these two case studies may be more representative of such landscapes as they existed throughout the region and as they changed over time.

Agricultural Strategies

The most basic aspects of landscapes of provision in the Pueblo world are the agricultural strategies they reflect. The material correlates of different practices are widely represented in the archaeological record. Regional diversity—attributable to strategy, culture, ecology, and social motivations—should thus be identifiable in the countryside. This evidence, in turn, is an important source of information about community organization.

Patterns of Evidence

Direct archaeological evidence for Pueblo farming in the northern Rio Grande is plentiful. The array of constructed features includes "systems of stone grids with and without borders, grids and terraces and waffle gardens, terrace systems, grid borders with gravel mulch and raised fields, and series of check dams" (Cordell et al. 1984:236). In some areas these landscapes of provision are elaborate. Richard W. Lang (1995) and Dale Lightfoot (1990) each documented hundreds of agricultural features associated with San Marcos Pueblo, including 41 hectares of labor-intensive gravel mulch fields (Lightfoot and Eddy 1995:463). In recent years the most thorough recording of formal fields has been done in the Chama district (Anschuetz 1998; Buge 1984; Maxwell and Anschuetz 1992), and additional evidence comes from the Cochiti district to the south (Wills et al. 1990). Masonry field structures have also been identified throughout the region (Biella 1979; Kulisheck 2005; Orcutt 1993; Preucel 1990; Van Zandt 1999, 2006).

These landscapes of provision are remarkably diverse. For example, the situation at San Marcos appears to be different from that at San Cristóbal, just across the Galisteo Basin, which Lang (1977) studied in the 1970s and where no gravel mulch fields have yet been documented.[3] Field structures are ubiqui-

tous on the Pajarito Plateau and in the Jemez Mountains but much less common in the Chama region. Archaeological surveys in the Pecos district have documented a landscape in which neither formal field systems nor field structures are common (Cordell 1998:203; Head 2002:108). Even where districts share similar types of agricultural features, they are often organized in different ways. Field structures associated with small sets of grid gardens, for example, are standard features of the landscape on the central Pajarito Plateau (Hoagland et al. 2000), much unlike the vast field systems spanning entire river terraces in the Chama district.

Agricultural strategies across the region are also widely believed to have changed over time. As Lang summed it up for the Galisteo Basin, the Coalition period exhibited a "generalized and comparatively low-investment agriculture," and the proliferation of different types of water-control features was associated primarily with the subsequent Classic period (1995:66). Arguments to the contrary are beginning to develop. Kurt Anschuetz, for instance, associates some of the more formal field systems in the Chama district with the Coalition period (personal communication, 2003), and even Lang recorded some fairly complex Coalition agricultural features in the Galisteo Basin.[4] Nevertheless, technological advancement over time remains the orthodox position.

Assessing variation in farming practices across space and over time requires a detailed, contextual approach to community landscapes of provision. In particular, it is important to distinguish agricultural strategies that hinge on environmental conditions and economic decisions from those imbedded in social organization and politics. Here I turn to Burnt Corn and Tsikwaiye, looking at patterns of archaeological evidence in two very different settings.

Burnt Corn

Burnt Corn is the earliest of the communities in this study. Tree-ring dates from the pueblo itself range from the late AD 1270s through 1302, and there is strong ceramic evidence that other Coalition sites in the Burnt Corn community were occupied during the same interval. I believe this pattern represents a "new foundation," with the residents of Burnt Corn having originated elsewhere in the region or perhaps beyond (Snead 2004).

The local environment at Burnt Corn offers a variety of opportunities for dryland farming. Well-drained upland soils typify much of the area (Folks 1975). The intermittent Cañada de la Cueva, which flows through the study area, has a considerable catchment. Burnt Corn Pueblo itself sits at the

confluence of the cañada and two large arroyos draining from the north, and a number of smaller washes run down the slopes of the surrounding ridges. I watched water flowing through these arroyos during the wet summer of 2006, simulating—despite historic-era downcutting—appropriate conditions for floodwater farming.

Given these favorable circumstances, it is interesting that direct archaeological evidence for agricultural practices in the Coalition Burnt Corn community is almost entirely absent. Only one site with checkdams, associated with minor arroyos on the ridge slopes, was recorded during our survey, and although the survey crews puzzled over several possible checkdams in similar situations, these were all notably insubstantial. Linear alignments of stone and gravel in the cañada floodplain were carefully examined but appeared to be geological features produced by flooding. None of the relatively flat ridgetops examined showed evidence of gravel mulching, and identifiable field structures were scarce.

The rarity of farming features at Burnt Corn is part of a broader pattern. Surveys conducted on adjacent tracts have found more elaborate agricultural sites (Haecker and Haecker 1997; Roney and Williams 1994; Snead and Head 2007), but all of them date to later time periods, following the abandonment of Burn Corn. They were probably associated with the Classic period San Marcos, 5 kilometers to the northwest.[5] Field structures are also present in the broader landscape, but most of them date to the Classic period as well (see McGraw 1998; Snead 2004).

In the absence of field features and field structures, the most convincing evidence for subsistence practices at Burnt Corn comes from habitation sites. Besides the pueblo itself, residential space in the community consisted of small roomblocks concentrated along low terraces above the arroyo bottoms and on the adjacent ridgetops. No architectural remains of any kind were noted on the slopes and summits of the uplands farther north and south of Cañada de la Cueva, land that accounted for a substantial percentage of the survey area (fig. 3.1).

I think these small roomblocks were farmsteads, habitations probably used for lengthy periods of time. Their association with the cañada clearly indicates a farming strategy based on capturing water flowing along the floodplain during summer rains and diverting it onto adjacent fields. The earth and brush features used for this purpose would have been continually under repair and would have left few archaeological traces.

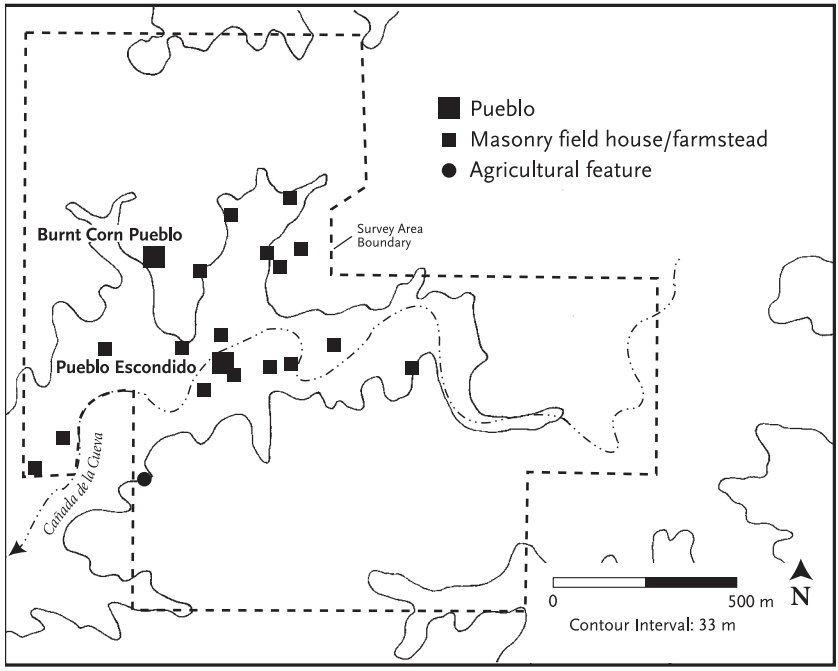

Figure 3.1 Farmsteads and farming features in the Burnt Corn community

It is possible that some of the Burnt Corn community's fields were located elsewhere, perhaps along Galisteo Creek. This broad, flat valley, probably with perennial water, lies only 2 kilometers to the south, within walking distance of the community center. The margins of the river, however, are now private land and mostly unsurveyed, and the few studies that have been conducted in this area have documented no Coalition period agricultural fields (Futch et al. 1996; Roney and Williams 1994; Snead 2004; Snow 1994).[6]

I infer from this evidence that the people who settled along Cañada de la Cueva in the late thirteenth century were floodwater farmers who focused their attention on the drainage margins where seasonal flooding was most likely. Slope wash could also have been collected in arroyos in the adjacent uplands, and small fields were probably established to take advantage of such conditions, but the limited archaeological evidence for this implies that it was a secondary option. Some use of fields and field structures at greater distances can also be assumed, but this, too, appears to have been of limited popularity.[7]

Overall, farming in the Burnt Corn community was a focused strategy that did not require labor-intensive rainfall collection technology.

Tsikwaiye

The landscape of provision in the Tsikwaiye community provides a good comparison with that of Burnt Corn. Unlike the dissected terrain of the western Galisteo Basin, the Caja del Rio is an open plateau with weathered volcanic soils. The basalt geology, shallow watersheds, and relatively low elevation mean that there are no permanent sources of water, and surface runoff is scarce.

Despite these unpromising circumstances, substantial evidence exists for farming at Tsikwaiye (fig. 3.2). Formal field systems, consisting of rows of cobble alignments placed on terraces along minor drainages, perpendicular to the course of the stream, were recorded in four places, one with an additional large checkdam nearby. We saw flash flooding in local arroyos in 1993, and these fields were clearly designed to capture surface water flowing in this way. We also found numerous masonry structures of one or two rooms, many of which were associated with areas of agricultural potential and thus could be interpreted as field structures. Fieldwork conducted elsewhere on the Caja del Rio indicates that these structures are common throughout the area and often lie many kilometers from the community houses (see Hill and Trierweiler 1986; Preucel 1990).

Indirect evidence for agricultural practices in the Tsikwaiye community is also present. One of the volcanic deposits in the area is a distinctive white pumice associated with the late Pleistocene El Cajete eruptions (Craig Allen, personal communication, 1993). Although pumice deposits are relatively small features, nearly half the sites within 1 kilometer of Caja del Rio North are associated with them. El Cajete pumice might represent an agricultural microenvironment that retained moisture, retarded erosion, extended the growing season, or all three (Snead 1993). Preliminary analysis of sites associated with El Cajete pumice across the river on the Pajarito Plateau suggests similar patterns (see Gauthier and Herhan 2005). These potential benefits closely resemble those conferred by the artificial gravel mulches used elsewhere in the northern Rio Grande and indeed might have provided a model for their construction. Only with further examination and possible experimentation, however, can the reality of such "pumice fields" be established.

The Rio Grande itself might have offered an agricultural opportunity for the Tsikwaiye residents, but to an unknown extent. The river runs at the

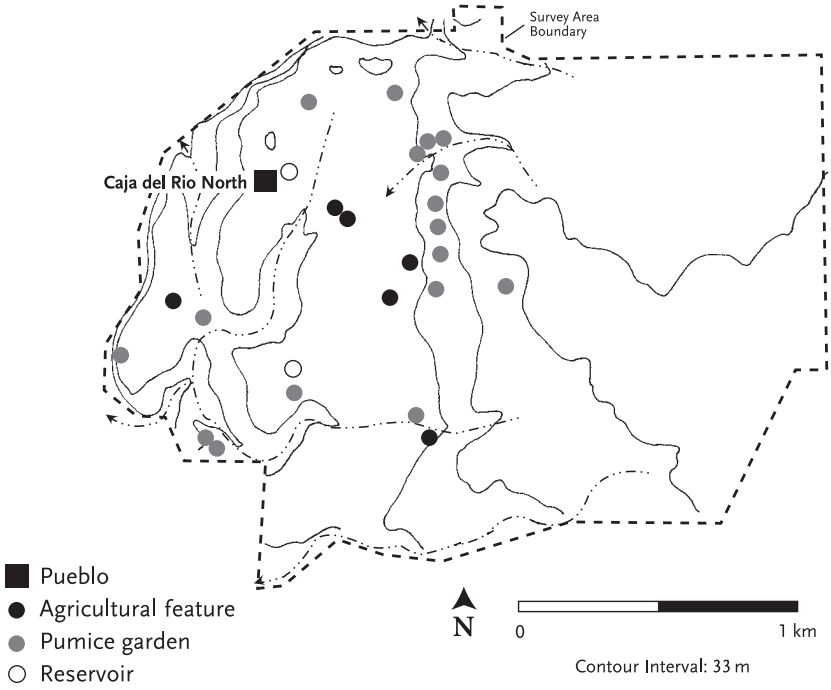

Figure 3.2 Farming features in the Tsikwaiye community

bottom of White Rock Canyon, 250 meters below Caja del Rio North, and the floodplain is both narrow and susceptible to flooding. On the west side of the river, however, is a small delta created by the Rito de los Frijoles that represents likely agricultural land. Because Caja del Rio North is the only community house nearby, it is possible that people living there crossed the river to plant their corn.

Despite the forbidding circumstances that the Caja del Rio presents to the modern eye, it thus seems evident that it provided agricultural opportunities for its Pueblo inhabitants. The diversity of farming strategies adopted by those who established the Tsikwaiye community in the fourteenth century is notable. Because our survey focused on the community core, even this complex picture is only part of the original whole. Evidence that field structures, pumice deposits, and other potential agricultural features are widespread on the Caja suggests a landscape of provision of considerable complexity (see Preucel 1990).

Discussion

Several points of comparison between agricultural strategies are evident at Burnt Corn and Tsikwaiye, and they are particularly interesting because the two communities were established only about a generation apart. Neither location is ideal for farming, even relative to other parts of the northern Rio Grande, and indeed they might have been settled during periods of unusual moisture or shifting seasonal patterns of rainfall that made them more appealing. Janet Orcutt (1991, 1999) has had some success correlating large-scale settlement shifts in the region with wet and dry years. She has argued that environmental unpredictability influenced the clustering and dispersal of population, and we might be looking at just such responses in these cases.

Although changing weather might explain why places like the Galisteo Basin and the Caja del Rio were settled at particular times, it does not account for their inhabitants' differences in farming strategies. The specialization in floodwater agriculture evident in the Burnt Corn community contrasts notably with the emphasis on rainfall capture at Tsikwaiye. It is unlikely that this contrast can be attributed to cultural differences between the two groups. There appears to be no correlation between particular ethnicities in the northern Rio Grande and particular agricultural modes, and I cannot imagine that the Galisteo farmers at 1300 were unaware that their neighbors were capturing rainfall through terraces and checkdams.

That different farming strategies correlated with different local environments is a stronger argument. Cañada de la Cueva represents a more stable source of water flow than would have been available on the Caja del Rio, where opportunities to capture surface water were scattered unevenly across the landscape. One of the agricultural sites in the Tsikwaiye community, for example, is situated at the precise point where a deep arroyo cuts through an escarpment and emerges onto an open plateau, flowing through a relatively shallow draw for only a few hundred meters before again carving a deeper channel. It was thus the best location in which to capture water and redirect it across adjacent plantings. The use of pumice fields, too, was a localized strategy, because such natural features exist only on the Caja del Rio and Pajarito Plateaus. Thus it might be that whereas Tsikwaiye farmers were forced to draw on their ingenuity to produce reliable crops, those at Burnt Corn—where more elaborate methods of capturing surface runoff were simply unneeded—felt less pressure.

Circumstances in the other study areas shed light on the environmental parameters that shaped different agricultural strategies. The history of the

T'obimpaenge community spanned that of Burnt Corn and Tsikwaiye, but the deeper valleys of the Sangre de Cristo flanks and the more permanent water supply provided by the Rito Sarco constituted a distinctly different environment. Evidence for formal field systems in the T'obimpaenge landscape is limited to a few rock alignments directly associated with the community houses. Probable field structures in the study area were mostly located on terraces immediately above the river, indicating that farmers placed their priorities on the narrow floodplain, a land use practice closely resembling that at Burnt Corn.

The surroundings of Los Aguajes resemble those of Tsikwaiye, but agricultural strategies were not as similar between the two as this might suggest. At Los Aguajes, rock alignments were recorded at the bases of hill slopes, on ridge saddles, and along arroyo-side terraces, but they were not abundant. Relatively few field structures were recorded in the study area. We surveyed less hectarage here than in the other study areas, however, and in general worked closer to the community house, which limits some points of comparison.

I am particularly interested in two patterns evident in all the study areas, the first being that, holding environmental variables constant, agricultural strategies changed little over time. The simple terrace fields employed at Tsikwaiye are indistinguishable from those used at contemporaneous T'obimpaenge and the ones built at Los Aguajes a hundred years later. Over the course of two and perhaps three centuries, nothing new was added to the agricultural repertoire, even though more intensive techniques were employed elsewhere in the region during the same period.

The second pattern is that, on balance, none of these communities made much investment in formal agricultural features. The total hectarage of field systems recorded at Tsikwaiye would probably have met the nutritional needs of a few families at most, far fewer than the 100-plus inhabitants estimated to have lived there (see Trierweiler 1989:60).[8] Even fewer modifications of the land for farming were made at T'obimpaenge and Los Aguajes. Consideration of field structures changes the picture, because it is probable that they were surrounded by planted fields. It is obvious, however, that most crops were raised without the benefit of elaborate strategies, at least as reflected by constructed features.

If environment was the major deciding factor in agricultural strategy, then limited investment in formal agricultural features seems counterintuitive. In the dry climate of the northern Rio Grande, one would expect farming people to take advantage of any technological strategy that might increase their success

in planting. It is indisputable that such "intensive" agricultural practices were known to these farmers, for they were in use nearby. Elaborate agricultural fields associated with the Tzenatay community (LA 7, La Bajada), at the southern end of the Caja del Rio, were built perhaps a hundred years before Los Aguajes was established (Wills et al. 1990). Similar examples can be found elsewhere in the region.

This implies that the construction of elaborate field systems and associated features was a result not of cultural ties or technological innovation but of specific conditions in the places where they were employed. That such labor-intensive strategies were adopted only selectively suggests that many of the region's inhabitants did not see such effort as worth the cost. Others decided differently and created more physically elaborate landscapes of provision. Although I have been receptive to environmental factors here, I also see considerable similarities between areas where intensive farming strategies were adopted and some of those where they were not.

I think the missing ingredients in understanding the organization of these landscapes of provision are social and political. In particular, it appears that the communities themselves played no major role in agricultural strategies. Theoretically, community labor could have been invested in agricultural improvements, thus reducing the risk for the group (see Kolb 1994). Yet there is no evidence of any large-scale labor investment in agricultural features in any of the communities studied. If labor was available to community leaders at Tsikwaiye, then it was not devoted to building field systems.

If communities played little direct role in creating agricultural infrastructure, then decisions about the use of different farming technologies must have rested with individual farmers. Because technology was not a limiting factor, I am persuaded that explanations for the agricultural strategies adopted must lie in the social realm. There are several angles to explore in this direction, but I believe patterns of landholding were key to the organization of Rio Grande Pueblo landscapes of provision.

Landholding

It is thus critical to explore the means by which the inhabitants of Burnt Corn, Tsikwaiye, T'obimpaenge, and Los Aguajes acquired land and maintained their access to it. Concepts of landholding, a subject inextricably entwined with the nature of the local community itself, have been well thought-out by

archaeologists working in the Southwest. Michael Adler, in particular, has used Southwestern and cross-cultural ethnographic data to highlight the importance of land tenure, arguing that the community provides the "context within which individuals, groups, households, and other actors argue for their share of the essentials of life" (2002a:31; see also Adler 1996a, 2002b).

Patterns of Evidence

The challenge, as always, is to perceive landholding processes through archaeological evidence. Domestic architecture, both as stand-alone structures and as components of larger, aggregated pueblos, can provide information about the sizes and organization of family groups (see Adler 2002a; for the northern Rio Grande, see Carlson and Kohler 1990; Creamer 1993; Shapiro 2005; Van Zandt 1999, 2006). But extrapolating from such evidence for households to the organization of the surrounding landscape remains a significant challenge. We know that extended families lived close together, but did they work their fields together as well? How was their access to those fields established? How was it maintained?

Above all, we need to identify the ways in which different groups within a community established boundaries, either physical or symbolic, between themselves and their neighbors, especially with regard to agricultural land. The presence, absence, or relative intensity of "boundary maintenance" among such groups is intrinsically associated with landholding (see Stone and Downum 1999). The ethnographic literature describes many ways in which Pueblo farmland was marked, including rocks placed upright on field boundaries, marked stone slabs identifying clan lands, and sight lines linking topographic landmarks, and shrines (Beaglehole 1937:14; Cushing 1920:153; Forde 1931:367; Titiev 1988 [1944]:62). The archaeological evidence for such features is intrinsically scanty and was made all the more so by the likelihood that as land boundaries shifted over time, markers were adjusted as well.

One tactic archaeologists have used to identify boundary maintenance is to measure people's investment of labor in the land. The argument is straightforward—construction of formal features and facilities associated with farming not only enhances production but also signifies ownership. If we can get a handle on different levels of investment within a particular farming context, then we should be able to associate them with degrees of competition over farmland within the local community.

At one level, even the simple presence or absence of formal agricultural

features can be used as a gauge of labor investment. A study that Genevieve Head and I conducted on the Pajarito Plateau used landscape data to investigate the relationship between formal features and boundary maintenance. While working with the Bandelier Archaeological Survey in the late 1980s, we noticed that formal agricultural features dating to the Classic period were often closely associated with small pueblos of the earlier Coalition period. Indeed, alignments of stones marking later fields often ran right over the tops of the older habitations. We first evaluated the idea that soils around the abandoned pueblos were particularly fertile, making these locations attractive to later farmers. The argument had merit, but because only a fraction of the older sites had been treated this way, we concluded that the superimposition of agricultural features over older dwellings instead represented a way to "mark" the older sites, perhaps to establish claims to associated farmland (Head and Snead 1992; see Ruscavage-Barz 1999:134; Van Zandt 1999:375).[9]

Archaeologists working in the Southwest have also turned to field structures in an effort to understand the relationship between agricultural strategy and social process (see Kulisheck 2005; Moore 1978; Sebastian 1983; Travis 1990; Wilcox 1978). Traditionally, we have interpreted these structures as products of the distance between home and field. Geographers have used the idea of "economic distance" to suggest that at a range beyond 1 kilometer from a village—and particularly beyond 3 or 4 kilometers—the cost of traveling back and forth becomes significant. It is thus desirable to build structures in these more distant fields for storage of tools, protection from the elements, and short-term stays rather than to constantly walk home (Chisholm 1979:61; see Stone 1991). Robert Preucel, for instance, used a similar argument to interpret the distribution of such field structures on the Pajarito Plateau as reflecting patterns of agricultural mobility (1990).

It has also been suggested that besides providing shelter, field structures had important symbolic value in Pueblo society, reflecting land tenure practices. This position is most closely associated with Timothy Kohler, whose argument is succinct: "if fieldhouses were constructed partly or primarily to make a statement about ownership, they should be most common when ownership might be contested" (1992:622). Key to demonstrating the viability of Kohler's argument is discovering a correlation between various levels of labor investment in field structures and soils of different qualities. The assumption is that more substantial field structures were built on better land, and labor invested in field structures in marginal locations was largely symbolic (Kohler

1992:621). Janet Orcutt (1993) used Pajarito data to examine ideas about field structures, including Kohler's land tenure hypothesis. Despite having a large data set, she could not correlate more labor-intensive field structures with high-quality agricultural land, and it proved especially difficult to evaluate different degrees of labor investment in small stone structures.

Using field structures as indicators of competition and land tenure thus requires finding a new way to identify differences among them. I think, first, that a more specific set of terms for these features needs to be employed, particularly because they are so diverse in the ethnographic record. Victor Mindeleff (1891:217–219) described lean-tos, windbreaks, and ramadas in the Hopi region, all built of perishable materials (fig. 3.3), whereas more substantial masonry structures were common at Zuni. The "huts," "ranchos," and "ranchitos" described in the literature clearly refer to several different types of structures (see Forde 1931:391).

This profusion of terms for structures associated with farming can be reduced to two essential functional categories. Some of these structures were intended for relatively long-term use, providing overnight shelter and space for domestic activities during the agricultural season. These are cross-culturally identified as *field houses* and are distinct from what I call *field shelters*, which had the more limited function of providing shade and storage during short-term visits to keep track of crops.

While specific terms help to clarify the roles of field structures, we also need to expand the category of relevant archaeological evidence. Ethnography makes it clear that people put various levels of effort into building different field structures, so we must look beyond their most visible attributes—masonry architecture—and consider their more humble aspects. Here I follow Lynne Sebastian (1983), who suggested that different types of field structures can be distinguished by the types of artifacts present at them. Field structures that people visited only occasionally during the agricultural cycle—what I call field shelters—should have limited arrays of associated artifacts, such as jars for drinking water and a few tools. Structures used more regularly—my field houses—should be accompanied by larger suites of domestic debris (Sebastian 1983:406–407).

Sebastian's argument emphasizes determining the different functions of structures, but I think it also applies to identifying similar functions at different types of sites. I am particularly interested in artifact scatters—sherds and stone tool fragments found without accompanying architecture. Sites of this type

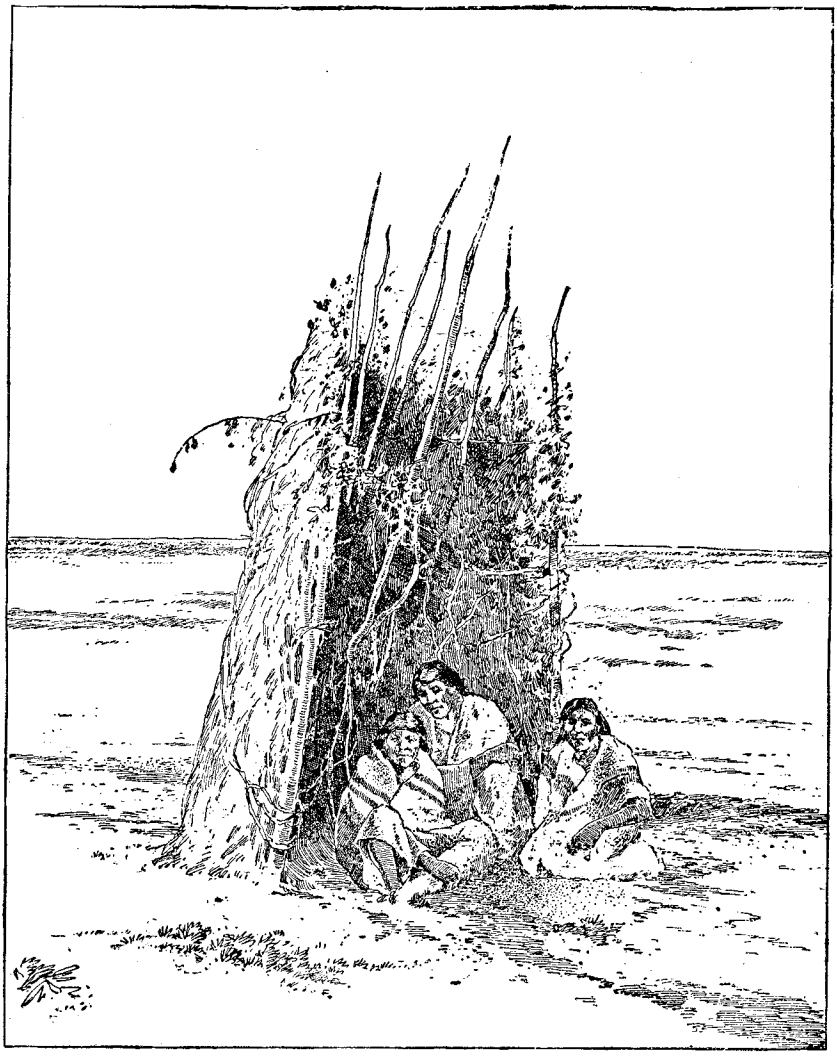

Figure 3.3 A nineteenth-century Pueblo field structure built of perishable materials. (Reprinted from Mindeleff 1891, fig. 111: courtesy National Anthropological Archives)

make up a large percentage of all archaeological evidence recorded in the Southwest but are so diverse that they are difficult to evaluate. Yet because we derive the functions of different types of sites by analyzing their associated artifacts, it is possible to treat scatters the same way.[10] In other words, if artifact assemblages at field structures are similar to those in artifact scatters, then they might reflect similar functions. The principal difference would be architecture, with the scatters probably representing field structures built of perishable materials.

If we can distinguish functional types of field structures, then we can more clearly identify differences between construction related to length of occupation or travel distance and construction intended to signify ownership. Because it required more work, farmers would have used masonry only in specific situations, one of which was to claim land. In contrast to Kohler (1992:621), I think more modest field shelters were responses to functional needs, and greater investment may be attributable to the symbolic role the structure was meant to play.

To explore these issues, I looked at the ratios of bowls to jars in ceramic assemblages at small structures and in artifact scatters at Tsikwaiye and T'obimpaenge (Snead 1995). This ratio has the advantage of being relatively easy to establish and closely correlated with function (Sebastian 1983:407). I assumed that assemblages dominated by jars pertained to a limited set of activities, principally water storage, whereas assemblages with large percentages of bowls reflected a broader range of domestic practices. I first calculated bowl-to-jar ratios for sites with small masonry structures, to identify any functional differences among them, and then compared these to the ratios for artifact scatters. In this way I established a picture of local patterns of activity. Then I distinguished field houses and field shelters of various architectural configurations and examined the more detailed landscapes of provision they represented.

Tsikwaiye

I used data from 16 small masonry field structures at Tsikwaiye to develop a functional profile for sites of this type. The mean percentage of bowl fragments at these sites was higher than the mean for sites as a whole, implying domestic activity. This pattern was supported by a relatively large proportion of ground stone artifacts in these assemblages, suggesting that food was prepared at such structures. The activities taking place at them were consistent with those expected for field houses.

I next calculated bowl-to-jar ratios for 43 artifact scatters in the Tsikwaiye community.[11] Thirteen scatters had ratios similar to those calculated for field houses, implying similar function. Indeed, these sites closely resembled each other in other ways, including size and percentage of ground stone artifacts, suggesting to me that they were functionally identical. I am thus convinced that these 29 sites served as functional field houses, the principal difference between them being that two-thirds were built of masonry and one-third of perishable materials that left no trace on the surface.

Another group of scatters that stood out in this analysis consisted of 12 that were similar in size to the field house assemblages but had much larger jar percentages and very little ground stone. Together with the relative absence of lithic debitage, these characteristics make it unlikely that domestic activities took place at these locations. Instead, they are consistent with a pattern of short-term use, probably related to the agricultural cycle, and thus were probably functional field shelters.

To summarize, my analysis suggested that three types of structures were associated with farming in the Tsikwaiye community (fig. 3.4). Legitimate field houses, occupied for periods of time while people worked their fields, included some built of stone and others built of perishable materials. The third category consisted of expedient field shelters, probably fashioned of wood and brush, which people used occasionally when they visited fields to monitor their crops.

This more nuanced view of field structures clarifies the organization of the landscape of provision at Tsikwaiye. Field shelters were dispersed fairly evenly throughout the community, and several were close to Caja del Rio North. In contrast, the field houses all lay at least half a kilometer from the community house, mostly above the escarpment to the west, on a broad and relatively flat plateau. Distance from place of residence thus appears to have been a relevant factor in their construction. This pattern is roughly what would be expected if principles of economic distance were at work in the Tsikwaiye community—the farther from the center a field was situated, the more difficult it would have been to return home from it to fetch tools or have a meal, and so the more inclined a farmer would have been to set up a field house.

The builders of both masonry and non-masonry field houses tended to put them in places where water flowing down slopes could be captured. This pattern appears not to reflect the distribution of high-quality agricultural land, for soils in the area are relatively homogeneous. People did, however, build the

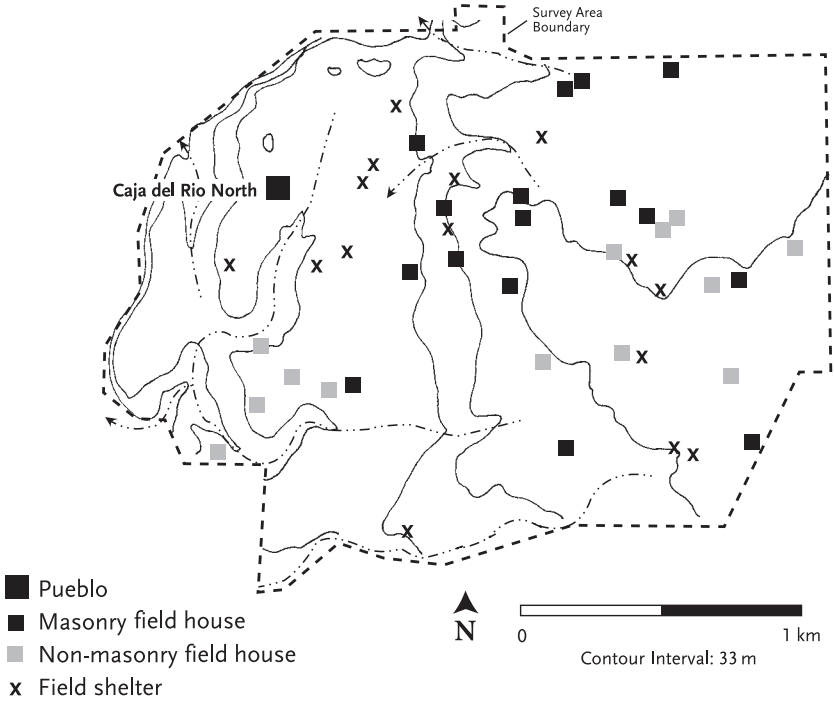

Figure 3.4 Field structures in the Tsikwaiye community

two types in different kinds of locations reflecting the availability or scarcity of building stone, which is distributed unevenly in the Tsikwaiye community. Much of the surveyed area contains almost no surface rock at all. Exposed basalt bedrock and accompanying cobble and pebble pavements are found largely along the central escarpment and on the low ridge bordering White Rock Canyon. For building masonry field houses, then, different locations represented different costs in terms of providing stone for construction.

The correlation between the easy availability of stone and the construction of masonry field houses is close. Ten of the 16 masonry field houses were situated in places where basalt cobbles were immediately available. Three of the remainder serve as the exceptions that prove the rule. They were built during the secondary, fifteenth-century occupation of the Tsikwaiye community, a time when Caja del Rio North was no longer a primary residence. At that time the nearest community house was Tyuonyi, 4 kilometers to the west.

I assume that these people spent many days in their field houses and built accordingly. That these three structures were on average larger than the other masonry field houses is additional supporting evidence.

Thus, people used masonry for field houses either where it was convenient or where a long hike from home justified building a sturdier structure. It is evident that the Tsikwaiye field houses and field shelters were—as advertised—built to provide shelter in different degrees for farmers walking out from Caja del Rio North or, later, crossing the river from Tyuonyi, and they reflect decisions made on the basis of those circumstances. Although the constructions themselves would have served notice that adjacent farmland was "claimed," no particular effort was expended in emphasizing the symbolism. If stone was handy, a family might build a relatively substantial house for the agricultural season, but only when people had to travel truly long distances was it clearly worth the effort.

Because factors of economic distance and convenience apparently guided decisions about the placement and construction of field structures in the Tsikwaiye community, I infer that competition for agricultural land was light. The country was dry, especially in comparison with the Pajarito Plateau to the west, and posed few topographical barriers to local movement. It seems likely that the network of field houses found throughout the Caja del Rio was established in part by farmers from the Tsikwaiye community, who had little difficulty finding places to plant their corn in such an open landscape. Under these conditions, landholding would have been relatively uncontested.

T'obimpaenge

I approached the T'obimpaenge sites as I did those at Tsikwaiye, identifying functional field houses by looking for domestic artifact assemblages. The 15 small masonry structures that had associated ceramics also had relatively large percentages of ground stone, at least superficially indicating domestic activity. On closer inspection, jars predominated over bowls at most of these sites, undercutting the interpretation that they were structures of long-term use. The same pattern was evident in the 25 artifact scatters I examined, 10 of which fit the "field shelter" model of jar-dominated, localized assemblages.

The most straightforward interpretation of this evidence is that the landscape of provision at T'obimpaenge was dominated by masonry field houses and impermanent field shelters (fig. 3.5). This is a sharper dichotomy than that evident at Tsikwaiye. Moreover, the limited evidence for domestic assemblages

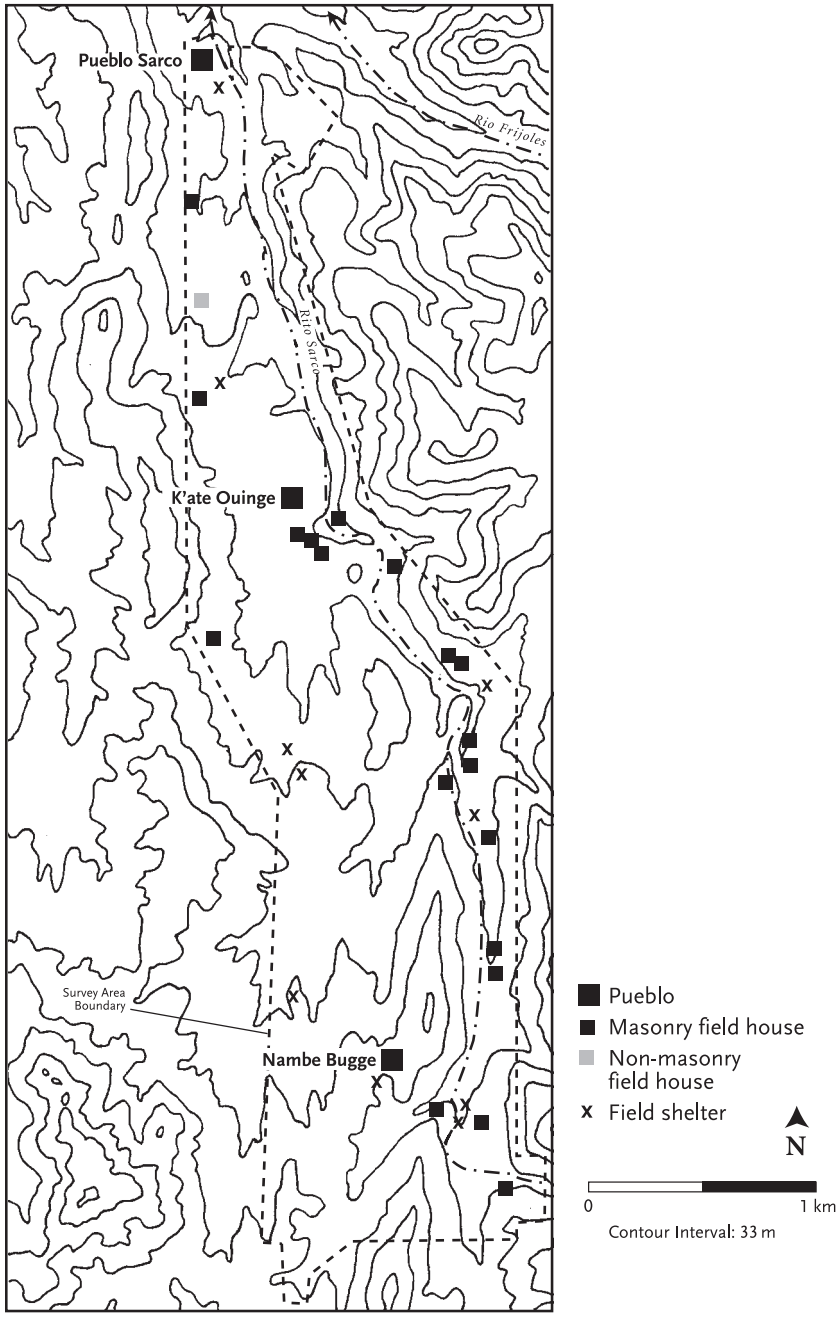

Figure 3.5 Field structures in the T'obimpaenge community

at even the most substantially built T'obimpaenge structures suggests a significantly different pattern of use. If this organization reflects economic distance, then it is difficult to evaluate, for the close spacing of Pueblo Sarco, K'ate Ouinge, and Nambe Bugge means that no recorded site in the community lies farther than 1 kilometer from a community house. The shape of the study area also hampers spatial analysis, because some areas close to the community houses could not be surveyed.

The local factor most heavily influencing the spatial patterning of field houses and field shelters was topography. Twelve of the 15 field houses are located within 100 meters of the Rito Sarco, typically on narrow terraces above the floodplain. In contrast, half the field shelters are situated away from the river, on the western flanks of the valley. This pattern does not correlate with the distribution of building stone, as at Tsikwaiye, because the local granite is ubiquitous. Stone is as easily available in the marginal areas associated with the field shelters as it is on the riverside terraces where the field houses were built.

Overall the spatial patterning of field houses and field shelters suggests that although fields were established throughout the valley, prime land along the Rito Sarco received the greatest attention. It is surprising that *any* functional field houses were built in T'obimpaenge, because the close spacing of residences minimized travel time in all cases. Yet not only do masonry field houses cluster in this zone, but there also is some correlation between size of field house and quality of agricultural land. The three largest sites of this type are all found at places where tributaries of the Rito Sarco approach the main drainage, creating more open space for planting.

These patterns convince me that building masonry field houses at T'obimpaenge was a symbolic act for local farmers and that land along the Rito Sarco was such a high-quality agricultural resource that it became an object of competition. Even riverside fields within sight of the community houses have associated masonry field houses. Beyond modest scatters of domestic artifacts, there is little surface evidence to indicate that these structures were intensively used; their most distinctive feature is substantial construction. They are thus a good fit for field houses as symbols of landownership, implying that riverside locations were scarce, desirable, and contested. In contrast, rain-fed fields established along the valley flanks were marked only by basic field shelters for occasional use.

It also appears that the symbolic role of field houses—and thus compe-

tition over land—increased over time. The majority of the field houses at T'obimpaenge are found in the southern half of the valley, where they are associated with the land between K'ate Ouinge and Nambe Bugge. Most of them also date to the final years of occupation, toward the end of the fourteenth century. Farther north, in the vicinity of the older Pueblo Sarco, there are fewer field houses. This pattern might be misleading—the river bottom is more constricted in the southern part of the valley—and is obscured by the fact that we have almost no information for the northernmost community house in the valley, which is buried beneath the historic village of Cundiyo. I am compelled, however, to think that the increasing emphasis on field house construction in T'obimpaenge over time is evidence that competition was increasing as well.

Rarely cited fieldwork conducted in areas bordering T'obimpaenge illustrates that the organization of field structures related to valuable agricultural resources was widespread. Survey of the open, dissected countryside to the west in 1974 by a team from Texas Tech found only 19 possible structures in an area 1,254 hectares in size (Thoms n.d.). My team and I revisited some of these structures, and they were quite ephemeral in comparison with those along the Rito Sarco. In contrast, a survey-and-excavation project conducted in the floodpool of Nambe Lake, to the south of T'obimpaenge, produced significant evidence for field houses in an area less than 40 hectares in size.[12] Eight of these were located in areas adjacent to the Rio Nambe, where floodwater farming "could have been easily carried out" (Skinner et al. 1980:35). These sites were apparently close to large community houses known to be on adjacent land outside the survey area (Skinner et al. 1980; see Ellis 1964). Other field houses were situated on ridgetops overlooking prime farmland.

Constructing masonry field houses on agricultural land near community houses and expending little effort on less desirable locations at greater distances was thus typical at T'obimpaenge and across the eastern Tewa Basin. Permanent and intermittent streams flowing out of the Sangre de Cristos were the key agricultural resource, allowing either floodwater farming on their modest floodplains or perhaps pot irrigation for fields on adjacent terraces. The widespread use of field houses in these localized areas supports the idea that access to such fields was competitive. The scarcity of such structures in hinterland zones, away from water, suggests a pattern of limited, episodic use. Effort was clearly expended only when necessary, and land for dry farming in the countryside was sufficiently plentiful that fields there attracted little effort.[13]

Discussion

The difference between field structures in the Tsikwaiye and T'obimpaenge communities is dramatic. The inhabitants of Tsikwaiye lived in a relatively open landscape where corn could be planted with little concern over the reaction of neighbors. In contrast, the people of T'obimpaenge found themselves in direct competition over the limited and desirable farmland along the Rito Sarco. They controlled access to their plots both physically and symbolically through the construction and maintenance of field houses. Those who were unfortunate enough not to control any of these fields made do with less productive terrain elsewhere in the valley or farther afield, which attracted less attention.

Evidence from the other study areas bears on the relationship between field houses and competition. The distribution of settlement in the Burnt Corn community, for instance, was focused on the intermittent drainage running through the heart of the community and closely resembles that in T'obimpaenge. The small sites at Burnt Corn are more likely to have been longer-term residences than field houses, so any architectural symbolism would have been reinforced by the constant presence of people. The limited evidence for field houses in areas beyond Cañada de la Cueva also emphasizes the desirability of fields along the drainage and the importance of maintaining access to them.

The relatively small number of field structures at Los Aguajes probably reflects the smaller size of the survey area, but the fact that these were found largely away from the community house implies an economic distance correlation like that at Tsikwaiye. I have not analyzed the artifact scatters at Los Aguajes, and it is likely that a study of this kind would clarify the situation. A few of the field structures were located on terraces along the bottom of the Arroyo Colorado, which might have been a productive area for floodwater farming, and building stone was widely available. A probable field house, LA 114030, was built within sight of the community house and overlooking a series of arroyo-side fields marked by rock alignments designed to divert rainfall. In such a favorable spot, one farmer apparently found it useful to build a more substantial shelter, with possible symbolic connotations. That so few neighbors did the same, however, suggests that the landscape was relatively open.

Thus, where the best farmland was distributed relatively evenly throughout a community, local residents saved their time and energy for pragmatic aspects of farming. They built shelter where it was required, but it held little

symbolic value. When one rain-fed field was much like the next, there was little reason to compete. On the open slopes of the Caja del Rio, land was the one freely available commodity. Consequently, field structures near Caja del Rio North and Los Aguajes were usually built with available materials, and greater labor was employed only in places far enough from the community houses that it was costly to travel back and forth.

Where agricultural resources were concentrated, competition was the rule of the day. In the case of Burnt Corn, people lived adjacent to their floodwater fields. At T'obimpaenge, substantial masonry field houses were built on riverside fields, even close to the K'ate Ouinge and Nambe Bugge community houses. Despite the effort devoted to building these structures, they were not intensively occupied. For the people of T'obimpaenge unfortunate enough to have no access to riverside fields, the field houses would have symbolized differential access to resources, perhaps identifying families within the community whose rights to that land had been established by history, precedence, or fortune.

Small populations might also have reduced local competition. Relatively few people lived at Tsikwaiye, Los Aguajes, and Burnt Corn—probably no more than a dozen families at each—and none had particularly close neighbors. I think the Caja del Rio served historically as an outlet for the larger populations of the adjacent Pajarito Plateau, being settled by people in need of new land during wetter times and abandoned during dry years. At no point does the Caja appear to have been heavily used, a circumstance reflected in the absence of competition among the people who were there.

Higher population density was the order in T'obimpaenge, where closely packed community houses lined the Rito Sarco. The community houses were not all occupied simultaneously, but even the indirect demographic effect would have been unavoidable, given the longer history of the community and the inevitable degradation of associated resources (see Snead et al. 2004). The tradition that the valley was ultimately abandoned in favor of Nambe, which had originated as a "farming village" of Nambe Bugge (Ellis 1964), suggests that economic and social conditions in the community ultimately deteriorated beyond salvation.

Reconciling these conclusions regarding field houses and competition with data from elsewhere in the northern Rio Grande is not yet possible and will require additional detailed histories of local populations. The ubiquity of good construction stone on the Pajarito Plateau obviously makes it difficult to

assess investment in field houses beyond that already investigated by Orcutt. The lack of chronological control for the thousands of field houses in the Jemez Mountains will continue to hamper comparisons, although Jeremy Kulisheck (2005) has recently conducted a thorough analysis of these features. In both locations more detailed treatments of artifact scatters might provide new angles for inquiry, but particularly in the Pajarito case the very richness of the data will present its own problems.

Landscapes of Provision

Evidence of agricultural strategies and landholding practices for the four study areas I have discussed produces a detailed picture of landscapes of provision in the northern Rio Grande. Integration of this information in turn provides an opportunity to better understand the role of farming as a fundamental structure of local society and the organization of agriculture for the region as a whole. Corn outweighed all the other elements of subsistence in supporting Pueblo life, and the facts of its production and control were central.

A complex relationship exists between the less intensive farming strategy signified by field houses and the more intensive approach typified by formal field systems. Each of these elements is found in the different communities presented here to a greater or lesser extent. In other districts of the northern Rio Grande such diversity of approach is even more evident, with field houses dominating the landscape in some places and virtually absent elsewhere, and field systems similarly variable.

The passage of centuries exerted little influence over the organization of these landscapes of provision. The only change in farming strategies was associated with patterns of residence and took place early in the Pueblo sequence, when long-term residence near fields, such as that typical of the Burnt Corn community, gave way throughout the region to use of fields in more dispersed locations. Thereafter, investment in field houses reflected local considerations rather than cultural or technological trends in Pueblo society at large. Thus the people who lived at Los Aguajes in 1450 organized their landscape of provision in much the same way as had those who established the Tsikwaiye community more than a hundred years earlier. Although it is likely that residents of Los Aguajes would have recognized the symbolism associated with more competitive conditions such as those at T'obimpaenge, they did not adopt such strategies themselves.

The clearest trend within the studied communities is that although formal field systems are present throughout the sequence, they are not ubiquitous. This implies, first, that there was no consistent community involvement in their construction. Checkdams, small bordered fields, and modest terraces exist on a scale entirely in keeping with their having been built by small production units, probably extended families. This pattern is supported by the ubiquity of field houses and longer-term residences associated with fields, which also reflect farming at a small scale. In other words, the basic unit of production in all these cases was the family, and the organization of the landscapes of provision reflects decisions made at the family level.

Where formal field systems are present, they were employed selectively and built in places where they would provide maximum gain. This appears to reflect a shared perception among Pueblo farmers over time and across space that the effort required to construct and maintain formal field systems was worthwhile only under certain circumstances. That this reluctance to invest in formal features is evident in communities where farmers faced different types of soils and terrain also indicates that the circumstances within which their use was appropriate did not pertain strictly to growing conditions.

One variable that at least three of these communities shared was an absence of social crowding. Burnt Corn, Los Aguajes and Tsikwaiye were characterized by different conditions for agriculture, but none had populous neighbors. In contrast, in areas of the northern Rio Grande where social crowding is the most evident, the use of formal field systems was the most extensive. The distribution of community houses along the Chama River and its tributaries, for example, described by Severin Fowles (2004b:20), is denser than elsewhere in the region and represents the persistence of a large population over a long period of time. I am persuaded that this social crowding underlay the widespread use of formal field systems in the area and that such field systems are manifestations of particular social conditions in Pueblo communities rather than, strictly speaking, the needs of corn, beans, and squash. It is indeed well established that gravel mulches extended the growing season in fields and hindered the evaporation of moisture. Even given these advantages, however, such a labor-intensive strategy came with costs that contemporaries were unwilling to pay.

Formal field systems were also clear and unmistakable marks on the land. In circumstances where landscape embodied meaning, modifying that landscape was a principal means of establishing social realities. And when the land

itself was contested, the meaning of labor invested in shaping the land to enhance its productive qualities would have been tangible and unmistakable. Michael Adler has called the construction of field systems a "hegemonic strategy" (2002b:209), and the distribution of such features throughout the northern Rio Grande clearly reflects patterns of response to social pressure. Considering field houses as elements of a landholding system strengthens the correlation between agricultural features and competition, because the one community in my sample where social crowding was the highest is also the one in which field house use most clearly reflects competitive conditions.

The association between field systems, field houses, and competition for resources—along with evidence that decisions about land use were made by small groups—suggests that landholding was the fundamental organizing principle of landscapes of provision in the northern Rio Grande. In none of my four cases, however, do I find persuasive evidence that this competition took place *between* communities. The lack of community involvement in agricultural production is telling. Kurt Anschuetz has pointed out that even the most elaborate Chama field systems were probably constructed by small groups (personal communication, 2002; see Arbolino 2001; Stone and Downum 1999:119). Because the investment of labor in field systems and field structures was the result of decisions made by farming units, it was more likely a response to the neighbor in the next field than to the neighbor over the hill.

Even where neighboring communities might not have been direct threats to agricultural land, their presence was significant, because they reduced the available options. On the Caja del Rio, farmers seeking new land could strike off into relatively open territory, but along the Chama River there were settlements and claimed fields in all directions. Assuming that most of these communities were relatively autonomous, such movement would have been challenging. This implies that the pressure felt by farmers in the Chama Valley was directly related to their lack of potential mobility. If finding new land was difficult, then the value of existing land increased, as inevitably would competition to use it.

There are alternative explanations, but I am not convinced that archaeological patterns in the Chama Valley reflect a classic intensification strategy, in which greater investment of labor was required to produce more food for an expanding population. From my perspective it was not the number of people but their distribution that created these patterns. Pecos Pueblo, for instance,

had a population of hundreds of people, and yet neither field systems nor field houses are much in evidence in the surrounding countryside. An even more compelling case is that offered by Kuaa-Kay (LA 12, Arroyo Hondo Pueblo). This community house of more than 1,200 rooms was built rapidly in the early thirteenth century, representing a large population (Creamer 1993) that would have had an acute need for quality farmland. The Arroyo Hondo survey, however, documented almost nothing that could be described as field structures or field systems (Dickson 1979). It is difficult to explain these circumstances in functional terms, but without any dominant agricultural resource as a focus for competition within the community, and with an absence of near neighbors who might have constrained options from without, landholding practices may have experienced little pressure. The landscapes of provision at Pecos and Kuaa-Kay are thus ephemeral (Cordell 1988:203; Head 2002:108), a dramatic contrast to those built by their cousins elsewhere (for a different case, see Arbolino 2001).[14]

Frank Hamilton Cushing (1920) described the elaborate care and planning that an individual Zuni farmer invested in his fields. We pay attention to his careful selection of proper terrain, the details of his preparation of the soil for planting, the construction of earthen berms to protect the seedlings, and the building of complex diversions to spread water over the field when rainfall made it available. For me, however, the most telling aspect of Cushing's tale concerns the relationship the farmer established with the place itself. "Not infrequently even years before the land is actually required for cultivation," Cushing wrote, "the 'sand is lifted' and a stone of peculiar shape is placed at one corner as a mark of ownership. Ever after, the place is, unless relinquished, the exclusive property of the one who lifted the sand" (1920:153).

By the time of the founding of the Burnt Corn community, people in the pueblos had a knowledge of agriculture reaching back more than a thousand years. It allowed them to seize the opportunities of wet years and survive the risks of drought. With such detailed collective experience, the most difficult problems were not technological but social. Decisions could be made about planting, nurturing, or harvesting crops in the abstract, but in practice such choices were always impinged upon by human relationships. The imperative would always have been ensuring access to land.

The organization of landscapes of provision in the northern Rio Grande reflects this social equation. Formal field systems and field houses always

functioned on the multiple levels of the pragmatic and symbolic. When a resident of K'ate Ouinge gazed out across the T'obimpaenge community, she saw not simply fields of corn but a landscape of social relationships constructed by preceding generations and vigorously maintained by her own. A visitor from Tsikwaiye would not have understood the specifics of those relationships but would have shared their cultural conception. Landscapes of provision provided both food for consumption and a legacy of meaning.

4
Identity

> Although in most instances these shrines are now little more than rings of stones, occasionally an offering is found in them that reveals the presence of reverence.
>
> —Jesse Walter Fewkes, "Hopi Shrines near the East Mesa, Arizona"

It is difficult to imagine life without place. Association, affiliation, and belonging are fundamental to daily life, and ways to express them are part of the cultural organization of the world around us. Humans project their concerns onto the natural environment through myriad landmarks and realize them with their buildings and monuments, in the process creating *landscapes of identity*.

Although we can accept that place and identity are closely correlated, extracting meaning of this sort from the landscape without interpreters is challenging. Keith Basso (1996) described places around the Arizona settlement of Cibecue associated with morality tales that are the foundations of Western Apache social order. To outsiders, these places appear only as meadows or cottonwood trees (Basso 1996:28). The role of the "material" in landscapes of identity is thus elusive, and Basso's comment that "relationships to places are lived most often in the company of other people" encapsulates the problem faced by archaeologists interested in the role of place—they do not have the opportunity to learn about it from the living.

Faced with this impasse, archaeologists have emphasized the role of architecture as an expression of cultural values and social needs, drawing from a long tradition of anthropological research on the relationship between meaning and the built environment. In the Pueblo context, architectural analysis sometimes includes domestic spaces but concentrates on "public" facilities such as kivas and plazas, specialized structures such as great houses, and overtly symbolic features such as shrines. Relationships between this architectural suite and the surrounding topography are widely noted in the literature, as are similarities between the architectures of different eras. Such schematic correlations are not substitutes for richly meaningful "lived" places, but because architecture is the result of conscious effort—in effect, of place-making—it reflects people's categories of meaning.

Identity is fundamental to the built environment. A stranger might not see the meaning in an unusual rock formation, but a structure takes on more widely recognized significance. Landscapes of identity in the Pueblo context are thus partly constituted by the array of built features we can identify in the countryside and by the relationships between these constructions and their surroundings at multiple scales. Because I discussed agricultural features in the previous chapter, I devote little attention to them here. Instead, I look at features that are more overtly symbolic. Contextual experience offers a nuanced strategy for evaluating this information, with insights emerging from historical ethnography and a close reading of the material evidence.

Place and Identity in the Pueblos

Ethnographers were quick to grasp the role of place in Pueblo culture. Bandelier, Cushing, Jesse Fewkes, Walter Hough, the brothers Victor and Cosmos Mindeleff, and others in the first generation of scholars to work in the Southwest all devoted attention to the contexts—natural and constructed—within which cultural practices took place. What I have called a geographic perspective also characterized interpretations of archaeological evidence during their time, particularly because archaeologists and ethnographers were usually the same people (Snead 2001c). Thus Edgar Lee Hewett and his students visited and documented shrines on the Pajarito Plateau while they excavated Tyuonyi and Long House, and discussions of these features appeared in their reports (Hewett 1953).

With the emphasis on chronology that preoccupied the next generation, interest in the complexities of space and place waned to the point at which even major shrines and petroglyph panels received only cursory mention (for example, Kidder 1958). When such information appeared in the published literature, it was usually associated with archaeologists who maintained close personal relationships with Pueblo people, such as Florence Ellis (1969) and Richard Ford (1972), who incorporated shrines and other sacred places into their interpretations of the Pueblo world.

The Pueblo people inhabit an ordered, living cosmos suffused with meaning. For the Tewa and Keres people of the northern Rio Grande, the land is defined both by the cardinal directions, including zenith and nadir, and by distance, with each village as the notional center point. Each direction has its associations, including color and certain animals and trees. For the Keres, the

quarters of the world are also associated with specific genders, and the Tewas associate cardinal directions with the seasons. Lived space is organized in nested zones radiating from the center outward to the horizon, each bounded by cardinal hills and peaks. A traveler leaving home passes first through familiar fields of corn and beans, followed—at least in the pre-Columbian past—by territory used for hunting and gathering, which overlapped that used by other villages, and then an outer periphery holding sites associated with history, the ancestors, and ritual practices, leading ultimately to the peaks bounding the known world. Beyond these lay land poorly known and of sacred character, where places such as Yellow Woman's House of Leaves could be found (derived from Ortiz 1969, 1979; White 1942, 1962; see also Snead and Preucel 1999).

The original "place," *shipap*—where the Pueblo people first emerged—is both a lake and an opening into realms below. It, too, is found in the outer region. According to J. P. Harrington, the Tewas identify *shipap* with Sand Lake, a pool in southern Colorado, which he described, quoting E. L. Hewett's diary, as "black, forbidding-looking water" (Harrington 1916:567). In a Cochiti version of the story, *shipap* is called "the doorway of the rainbow" (Benedict 1931:13), where the people climbed up a tall spruce to enter this world.

This paradox—that the center of the Rio Grande Pueblo world in fact lies on its far periphery—is resolved by the repetitive associations people make between local sacred sites and the actual center, so that each village contains a shrine that both represents and is *shipap*. The names for these shrines—for the Tewas, *nan echu kwi nan sipu pingeh*, or "earth mother earth navel middle place" (Ortiz 1969:21)—indicate that they serve as talismans of origin and as physical analogs to the original center (see Whiteley 1988a). Under certain circumstances this center-shrine can even be entered, like *shipap* itself (Parsons 1996 [1939]:309).

Thus the Pueblo world as a whole contains myriad centers, each replicating the whole from its distinct perspective. This "centeredness" has important implications for the issue of identity. The legitimacy of a local community is based on its role as the center of the whole, and establishing the right to claim this role is critical. Available descriptions of the founding of new Pueblo villages concur throughout the Pueblo world that the essential act was establishing shrines that linked the new community to *shipap*. Regarding the creation of the village of Laguna, Ellis wrote that the "new two-story houses of stone set in clay mortar made a hollow square with a southwestern entrance where they

buried their basketful of sacred objects to make a shrine at the opening of the plaza" (1979:441). The founding of the Hopi village of Bacavi in 1906 included a similar process of shrine construction (Whiteley 1988b:126).

The community landscapes of the Pueblos contain additional metaphorical referents to the larger world. Topographic features such as lakes, hills, and mountains share some of the characteristics of *shipap* and can be places of communication with other realms. Certain lesser supernaturals have their homes close to the local communities and play a part in everyday activities (White 1942:86). Although the more powerful beings usually live beyond the horizon, local Keres shrines serve as proxy "houses" for them where, with the appropriate ritual precautions, they can be addressed. The conception of shrines as places of residence was widespread, and the generic term for Hopi shrines is "prayer-stick house" (Parsons 1996 [1939]:200). The various organizations, or "societies," that fulfill specific tasks in Pueblo communities have their own shrines and sacred places. Because society members often adopt the roles of their supernatural patrons, these places might also be analogs to the primal houses. Every correlation between houses, shrines, and centers at different scales strengthens the physical congruence between the universal and the particular.

Access to shrines is complex. Because some of these places are associated with particular social groups, it can be assumed that they are unsafe for the uninitiated. Others appear to hold significance for all community members, although they must be approached with caution. The unpredictable consequences of contact with other worlds are staples of Pueblo tales. Certain shrines retain their sacred character even after local populations have moved elsewhere. Elsie Clews Parsons noted that "any ruined site to which migration legend attaches will contain a shrine" (1996 [1939]:309), and Fewkes argued that tracing the ownership of shrines in remote parts of the Southwest was the key to understanding ancient migrations (1900, 1906:347). Not all shrines remain in use over time, however. The sacred character of these sites may persist even in the absence of ritual practice, but in some instances both natural and built places can be desacralized. Such changes "result from economics, acculturation, proximity of non-Indian residents, or even the death of particular religious societies responsible for upkeep and use of the shrine" (Ellis 1994:106). Parsons described a dry lake near Nambe as having been "deserted" by the cloud beings who inhabit bodies of water (Parsons 1929:269). Even so, these places are always treated with respect.

In material terms the types of shrines in use in the Pueblo world during the

late nineteenth and early twentieth centuries are well documented. This information needs to be handled carefully, because it represents some of anthropologists' more callous intrusions into Pueblo affairs. Fewkes (1906) defined an entire hierarchy of Hopi shrines, including those dedicated to specific supernatural beings, plaza shrines, directional or "world quarter" shrines, society shrines, and shrines associated with particular historical events. The construction of new shrines was a regular event in his time, although we have little detailed information about the process (Fewkes 1906:350). Shrines could also be numerous. J. A. Jeançon counted more than 30 shrines in the hills west of Santa Clara Pueblo early in the last century (Harrington 1916:249).

In the Tewa and Keres countries some standard shrine architecture is evident. The only one of the major, mountaintop world quarter shrines to be recorded is that on Tsikomo, "obsidian covered mountain" (after Ortiz 1969:19), the west mountain of the Tewas. The shrine was described by William B. Douglass as a circular enclosure of stones with internal features and several openings around the perimeter that might have related to the different communities using the shrine (Douglass 1912, 1917:346). It must be assumed that if the shrines on the other boundary peaks were similar in design, they have since been wrecked. Circular shrines appear to be typical at Santa Clara, San Ildefonso (Parsons 1929), and Cochiti (Dumarest 1919), and a C-shaped configuration is also common. These features, however, represent only a selection of sacred sites in the Pueblo world. Parsons noted that "any place which is visited habitually to pray and make offerings might be considered a shrine" (1996 [1939]:307). Douglass described juniper trees marked only by feathers as important ritual places (1917:365).

In total, this complex array of features represents a landscape of identity organized by cultural concepts of legitimacy and a sense of place. Both history and action are contained within the land. Mountain, lake, shrine, and tree are woven into a fabric of meaning, establishing a rich context for daily life.

Studying Identity

The concept of a landscape of identity provides the opportunity to make meaning in the Pueblo past accessible. Once again I am concerned with the intermediary role of empirical evidence in bringing concept and interpretation together. Archaeological research on landscapes of identity has focused on three variables—public architecture, formal shrines, and petroglyphs. My field

teams and I documented all these site and feature types in the survey areas, and I discuss each in turn.

Patterns of Evidence

Analyses of public architecture, formal shrines, and petroglyphs in the Southwest have very different histories. Public architecture has received the greatest attention from archaeologists, beginning with the influential work of the Mindeleff brothers (V. Mindeleff 1891). Kivas, plazas, and community houses, as the ethnographic settings for public activity, have been repeatedly analyzed, often from a typological standpoint or as static equivalents of social units (as noted by Ferguson [1996:1]). Many of these early concepts have been evaluated on the levels of theory and data (see Lipe and Hegmon 1989; McGuire and Schiffer 1983). Only since about 1990 has public architecture in the pueblos been evaluated less as a "container" for social activity and more as an active element of social interaction itself (for instance, Ferguson 1996; Fowler and Stein 2001; Lycett 2002; Stein and Lekson 2001; Van Dyke 1999b).

Detailed architectural analyses have been relatively infrequent in the northern Rio Grande. This reflects the difficulty of studying important sites such as Puye (Morley 1910) and San Cristóbal (Nelson 1914) that were dug up early in the twentieth century, as well as the paucity of major excavations since then. We are thus reliant on studies of the few well-documented community houses that have been excavated more recently, such as Kuaa-Kay (Creamer 1993: Shapiro 2005), Rowe (LA 108; Cordell 1998), Burnt Mesa Pueblo (LA 60372; Carlson and Kohler 1990; Kohler and Root 2004), and T'aitöna (LA 260, Pot Creek; Crown 1991; Fowles 2004a). These studies are necessarily focused on the intricacies of the architecture itself, defining construction sequences, occupation histories, and functional associations, often linked to broader interpretive issues such as aggregation. Many of us have commented on the symbolic aspects of Pueblo architecture, but we have rarely committed our remarks to print. Robert Preucel's integration of archaeology and ethnography in his interpretation of the seventeenth-century refuge site of Kotyiti (Preucel 2002) remains so far unique (but see Liebmann 2006).

Clearly there are problems with evaluating public architecture from survey records, which offer not even this level of detail. Such data leave us only a few variables to work with—layout, elevation, associations, location. The survey approach has been successful, however, for projects such as the Bandelier

Archaeological Survey, in which detailed architectural recording was part of the research design (see Van Zandt 1999, 2006). We may be unable to see inside the rubble mound, but we can use contextual information to good effect. Kivas, plazas, and related structures mean different things when taken in context than they do as statistical abstractions. Context will not necessarily tell us who lived where or how they organized their internal space, but it can suggest what they saw as they walked home from their fields. Symbolism is one of the few architectural subjects for which survey data are relatively well tailored, and I am influenced by Jerry Moore's comment that "there is a direct relationship between a monument's design and its communicative potential" (1996:98). Because this relationship is part of what public architecture is all about, the meaning that is stimulated by the design should be relatively accessible—if not in detail, then in the "structure" of the message (see Ferguson 1996; Fowler and Stein 2001; Lekson 2000).

Shrines have received much less archaeological attention than architecture. Jeançon (1923) documented an extensive shrine network associated with the fifteenth-century pueblo of Poshuouinge in the Chama Valley, and in the course of his excavations in the Galisteo Basin, Nels Nelson (1914) recorded shrines associated with nearly all the large sites he visited. More recently the major site surveys on the Pajarito Plateau have recorded numerous shrines (Steen 1977:17; Powers et al. 1999:146). Practically every large pueblo site that has received archaeological attention has shrines either in close association, as at Te'ewi (Wendorf 1953:36), or nearby, as at Kuaa-Kay and Chamisa Locita (see LA 125568). Others shrines, such as the significant one on Tetilla Peak, are associated with prominent topographic features in the northern Rio Grande landscape.

Researchers generally agree that there is considerable similarity between ethnographically known and archaeologically known shrines in the region. They are clearly derived from the same architectural canon, and even ephemeral archaeological remains of shrines are quickly recognized. They are also organized in similar ways. Jeançon interpreted the Poshuouinge shrines in light of ethnographic evidence, arguing that they represented a "world quarter system" similar to that of San Juan Pueblo (1923:71).

There are also differences between the formal shrines of the present and those of the past. The presence of images or figures within shrines, as at the two stone lion shrines near Yapashi (LA 250) on the Pajarito and at Pueblo Largo (LA 189) in the Galisteo Basin, seems to be a characteristic of older shrines in

the northern Rio Grande. The most obvious difference, however, is scale. Not all pre-Columbian shrines are grandiose—there are shrines in the Pajarito and Chama districts that are relatively modest in construction—but many of the archaeologically known shrines were built much more elaborately than their ethnographic counterparts. The Yapashi stone lions shrine, surrounded by vertical stone slabs weighing hundreds of pounds each, is the most obvious example, but the Galisteo shrines are similarly massive. A less well understood shrine composed of large boulders near Tsiping, northwest of the Chama district, is another case. At a minimum these features are substantially larger and more intricate than their known counterparts in modern use.

One obvious reason that formal shrine construction has been subtler in recent history was Spanish and American hostility toward indigenous religious practices. Missionizing efforts were intensive, particularly in the seventeenth century, and the destruction of kivas and ritual paraphernalia was widespread (see citations in Slifer 1998:86). Hilltop crosses, common in the region, are probably tangible reminders of the "Christianization" of Pueblo sacred places. Just as traditional ritual practices were forced underground in the colonial era, so the outward manifestations of these practices—including the shrines that were the focuses of some such activities—were hidden, and they largely remain so today. Modern tourists attending dances at the pueblos might be surprised that the seemingly insignificant "rocks" in the corner of the plaza are vigilantly protected.

This deemphasis of formal sacred places—at least in a superficial sense—despite their centrality to the Pueblo landscape thus reflects historical contingency. When early ethnographers saw shrines as they passed through the countryside, they were often surprised that their Pueblo guides denied any knowledge about them. William Douglass, whose behavior toward sacred places was particularly offensive, wrote that people were frequently met atop Tsikomo but were never willing to account for their presence on a remote mountaintop miles from the nearest village (1917:355). I infer that the secrecy demanded by colonial-era circumstances modified the Pueblo people's traditional approach to shrine construction even while the meanings of such places remained substantially unchanged. Small features lost amid the piñon trees on a hilltop are much less likely to attract the scrutiny of a rancher on horseback than are more substantial constructions.

Building the more massive pre-Columbian shrines would have required significant effort, which implies that many members of the community were

involved. This implication provides one way to approach shrines archaeologically. The spatial organization of formal shrines is also relevant, because it allows us to examine the time depth of the ethnographic Tewa and Keres pattern and other, local connections between the different features of the communities.

A final point to make about the archaeology of formal shrines is that the ones we can see represent a limited sample of the sacred places that must have existed in the Pueblo world. Many of the smaller types of shrines known ethnographically either are now invisible or are rarely recognized. This problem can be partially addressed through intensive survey strategies. The Rio del Oso survey in the Chama Valley, conducted by Kurt Anschuetz in the 1990s, documented seven categories of shrines, including single, shaped stones and otherwise unmodified boulders (Anschuetz 1998:460). The success of this strategy depends entirely on the archaeologist, which makes comparisons difficult.

I have adopted a simplified typology for the shrines recorded in the five study areas discussed here. Shrines that relate by structure or orientation to the large-scale spatial organization of the community I designate "community shrines." Others, more idiosyncratic in location and plan, which were probably used by societies or other groups within the community, I designate "local shrines." This typology glosses over some variability but represents a relatively straightforward approach to the features in their context.

Of course many sacred places are not, strictly speaking, archaeological at all. In a Tewa-Keres framework, lakes and springs are by their very nature sacred sites, but no physical evidence of their sacredness can necessarily be found in the vicinity. This problem is not insurmountable. We are accustomed to using associations between archaeological features and elements of the environment to make *economic* inferences. Interpreting springs as sources of drinking water for a nearby residential site does not require the discovery of water jars there. We look at this association and say "how important, to have water close by," without recognizing that in the Pueblo worldview this importance—in terms of sustaining life—was inextricably entwined with spiritual significance. In a similar vein, hills were more than sources of wild game, timber for construction, runoff for fields, and redoubts in times of conflict.

Besides being more receptive to the ideological significance of topography, we must also take a fresh look at archaeological features that cut across the artificial sacred-profane boundary. For example, I recently studied features that archaeologists identify as "reservoirs" or "water catchment systems." Typically

linear or C-shaped berms constructed of stone or earth, they are found at archaeological sites across the Southwest. Published discussions of reservoirs logically emphasize their role as sources of water for drinking and irrigation (Bayman and Fish 1992; Crown 1987; Haase 1985; Scarborough 1988; Turney 1985; Wilshusen et al. 1997).

Yet a purely functional interpretation does not always fit the reservoir pattern well, as many of these authors point out. Some of these features are small, and others are built in places that would have collected little runoff, reflecting an investment of labor disproportionate to the amount of water that could have been captured.[1] Water quality in many cases would have been poor, as at Kuaa-Kay, where the catchment included heavily trafficked pueblo plazas (Creamer 1993:87). Algae growth would have been a problem without constant water flow (Turney 1985:46).

For most of the year these reservoirs would have been marshy puddles rather than pools of clean water. They thus make sense only if seen in the appropriate Pueblo context (Snead 2006b). Given the ideological importance of lakes and ponds as metaphors of *shipap*, it might be that within the bounds of a community, the simple presence of a wet environment—probably with cattails and frogs—was the critical factor. Reservoirs, in this argument, are yet another form of shrine, metaphors for the natural wet places on the landscape to which people such as the Tewas attached great importance (Harrington 1916:264; Hewett 1953; 135). In the Hopi case, Peter Whiteley described two ponds at the new village of Bacavi that were "ritually established and cared for," implying that their significance had little to do with drinking water (1988a:99). I do not deny that Pueblo people built some functional reservoirs in the pre-Columbian era, but clearly archaeologists must expand such conceptual categories in order to make sense of what they see.

Together with adopting a more inclusive approach to sacred places in the archaeological record, defining landscapes of meaning requires that we make better use of the evidence for symbolism we already have. This is particularly evident in the case of rock art. It is generally agreed that pictographs and petroglyphs are laden with meaning, and researchers have identified stylistic trends over time and across regions with great success (see Schaafsma 1992a). Large-scale documentation programs are making considerable headway (Brody and Brody 2006; Olsen 2004; Schaafsma 1992b). But although petroglyphs have been systematically recorded during many recent survey projects, they still tend to be discussed in chapters of their own and are seldom

integrated into the final analyses. Contextual studies are rare and usually address specifics of the locality—the nature of the rock surface, exposure, and sometimes viewshed (see Rohn 1989). Research on places of particular significance, such as the Pine Tree site in the Galisteo Basin (Schaafsma 1990) and Las Estrellas on the southern Pajarito Plateau (Munson 2003), is beginning to address the complexities of context. Marit Munson's detailed study of Pajarito rock art (2002) is one of the few regional studies so far that demonstrates the importance of seeing petroglyphs in the broader landscape of the northern Rio Grande.

In particular, understanding where rock art is in relation to other archaeological features—residences, fields, shrines—will enable us to develop new arguments about community organization. It is clear that petroglyphs and pictographs are found across the general landscape and that this distribution is not random. Individual glyphs or small panels are seen on isolated boulders or outcrops, some of them close to features such as field houses and trails but others without obvious local associations.

I am influenced by the idea that some petroglyphs and pictographs in local context represent a form of boundary maintenance. The argument is that regardless of content, rock art is a form of symbolic communication, significant both to those who produce it and to others who might see it. It is a form of inscription, a marking of the landscape through conscious action (see Wilson and David 2002). Some such inscriptions—including those made in the hard Rio Grande basalt—are permanent, at least from the perspective of an individual lifetime. There are certain places where this form of communication is most appropriate, and those places vary with intended audience. If rock art is meant to be seen by outsiders, then it will be found in places where those others might venture, particularly along routes of travel passing into or through the community. Petroglyphs conveying messages to more restricted groups will have a different distribution. Where they are placed within a community will tell us something about local perceptions of "boundedness."

Using the distribution of petroglyphs within community space as a measure of local boundary maintenance is one of many possible strategies by which to evaluate these features. Taken in the context of a landscape of identity, it provides an additional angle to pursue along with the assessment of formal shrines and a more detailed reading of the country.

As in chapter 3, I put these arguments about landscapes of identity on a better footing by drawing examples from the community study areas. This

approach has certain limitations, because the grand scale of the Pueblo world far exceeds that accessible through a single archaeological project. The core community landscapes surveyed at Burnt Corn, Los Aguajes, T'obimpaenge, and Tsikwaiye cannot be expected to incorporate all associated shrines and related features. Still, I believe the available evidence is sufficient to shed light on the subject, particularly because additional elements of the landscape of identity farther afield have been identified either by reconnaissance or from other sources. This is one topic for which integration of data in the broadest sense of the term is mandatory, and I am aided by the vast body of archaeological information available for the northern Rio Grande as a whole.

Burnt Corn

The setting of Burnt Corn Pueblo is both surprising and dramatic. The surrounding terrain is rugged, so that when approached from the north—the modern mode of access—the pueblo seems low and lost amid a wilderness of arroyos. Standing among the roomblocks, however, one finds that the confusion of topography recedes, and the commanding nature of the ridge on which Burnt Corn sits becomes clear. A watcher on the roof of the plaza pueblo would have seen a broad sweep of countryside, a view that at the end of the thirteenth century would have included farmsteads and small hamlets (Snead 2004).[2]

Perhaps most significant is that Burnt Corn would itself have been a landmark for all to see. Coming up Cañada de la Cueva from Galisteo Creek—which I infer was a common route in the pre-Columbian era—the ridge on which the pueblo sits bars the view. Indeed, the cañada narrows considerably at this point and is bounded by steep slopes, so that the ridge becomes a physical barrier that would have been difficult to pass unseen. The visual effect of the pueblo looming above this narrow passage would have been significant.

Burnt Corn is also highly defensible, and the organization of the surrounding community reflects tactical considerations. Potential attackers would have had either to climb steep slopes on three sides or approach down the ridge from the north, where the advantage would have lain with the defenders. Access routes into the heart of the community were blocked by outlying roomblocks, which effectively served as watchposts. Pueblo Escondido, on a terrace immediately below Burnt Corn, occupies a similarly strategic position, effectively blocking any travel along the cañada. Despite the convoluted terrain, all the small farmsteads recorded during the survey are within sight of Burnt Corn Pueblo, indicating a concern for intervisibility (Haas and Creamer 1993:30).

Burnt Corn is less advantageously located for subsistence needs. Drinking water would have been scarce. As I suggested in chapter 3, the vicinity does offer good opportunities for floodwater farming, yet such terrain is also available elsewhere along the cañada. That most of the Burnt Corn farmsteads are situated on lower terraces indicates that, on balance, people spent considerable time near their fields in preference to the pueblo. Building the heart of the settlement away from optimal economic places implies a compromise among multiple needs in the establishment of community centers.

The longer our field teams work at Burnt Corn, the more I am convinced that the site offered subtler advantages. Contrary to initial appearances, there *is* water to be found there, in the form of a catchment in the canyon bounding the site to the west. It is a small, wet place for water-loving plants and animals, and when we visited in 2006 it swirled with tadpoles. Such tiny water sources can be found elsewhere, but we have not seen another close to Burnt Corn. Although it would never have provided much drinking water, from a Pueblo perspective it would have been a beneficial place to have near home.

Burnt Corn also has a unique relationship to the local and regional topography. The horizon on three sides is relatively open, but the east is dominated by the prominent volcanic knob known as Petroglyph Hill, roughly 3 kilometers distant. Also in an easterly direction, but much closer to Burnt Corn, is a dramatic outcrop of rhyolite we have called "Black Rock," a monumental wall of stone rising out of the cañada between the pueblo and Petroglyph Hill in the distance. Relationships with such striking terrain are not coincidental in Pueblo landscapes. The direction of the rising sun holds particular symbolism, and many shrines and ritual practices are oriented in that direction. For parts of the year, the sun rises directly over Petroglyph Hill before striking Burnt Corn.

Taken in its setting, then, Burnt Corn suggests that several factors influenced the community's founders. If defensibility was paramount, then there were numerous other empty ridgetops in the vicinity, including one to the south that offered even better command of the surrounding countryside. The more conceptual attributes of the place could also have been duplicated elsewhere, for some potential building sites lie closer to Petroglyph Hill along the same easterly alignment. Only at this location, however, did these things come together. The overall impression is that Burnt Corn was carefully positioned to be a place where economic, political, and ideational factors were united in the landscape.[3]

If the site of Burnt Corn reflects a juxtaposition of desirable factors in the natural environment, then the people who built the community set about enhancing those attributes with direct action. Through the means readily available to them—public architecture, shrines, and rock art—they inscribed their identity into the landscape in a way that would have been unmistakable to their contemporaries. We do not have their advantage, but the available information nonetheless paints a compelling picture.

In addition to topographical relationships, the architecture of the Burnt Corn community was clearly meaningful on its own terms. Most of the structures at Burnt Corn Pueblo are simple, single-story roomblocks built of masonry and adobe that probably served as homes for extended families or somewhat larger kin groups. The farmsteads along the cañada are similar but smaller. The major exception to this pattern of modest structures is the plaza pueblo at the extreme southern end of the ridgetop. It is a rectangular structure built around a central plaza, which might have contained one or more kivas but at present is largely filled with melted adobe. A possible eastern entrance to the plaza is also obscured. Our excavations in 2002 and 2005 found multiple stories in at least part of the plaza pueblo. Parts of the structure were built with different materials, including fine coursed masonry and adobe (Smith 2005; Snead 2006b).

Plaza pueblos are a style of building specifically associated with the later Coalition period, perhaps the years between 1250 and 1325, and their significance has been widely discussed. Because of their windowless exterior walls and the limited access they provide to their plazas, they have been considered defensive (Wilcox and Haas 1994:222). Another interpretation is that because they appear to have been planned in a coordinated fashion, they represent a mode of settlement associated with a single large social group (Cordell 1989:322, 1998:88; Steen 1977; Van Zandt 1999:375). It has also been proposed that the increasing popularity of public ceremonials during this period created a need for enclosed plazas to serve as ritual spaces (Adams 1991).

The Burnt Corn plaza pueblo might fit any of these models. It is demonstrably defensive and associated with a settlement that was established relatively quickly. Linda Cordell has cautioned, however, that the details of plaza pueblo construction often suggest more complicated histories (1998:89). One relevant factor at Burnt Corn is that construction on the plaza pueblo continued until the community's demise. It is therefore difficult to see it as representing the founding population.

In fact it is the architectural "statement" of the Burnt Corn plaza pueblo that is most striking. Regardless of the stimulus for its construction, it served as a dramatic landmark within its context. Its high, massive walls must have stood out sharply against the surrounding terrain, maximizing a high-visibility location (fig. 4.1). This is architecture with a message that echoes the intricate conversations between buildings and spaces known from earlier periods on the Colorado Plateau (see Fowler and Stein 2001; Lekson 2000). The Burnt Corn plaza pueblo is not a great house in the Chaco sense, but it speaks a similar language.

Archaeologists assume that the plazas of these sites were used, among other things, for dances and related ceremonials, but imagining archaeological evidence that would directly reflect such activities is difficult. We are left with the plazas themselves, which in the case of the Burnt Corn plaza pueblo is almost entirely obscured. Notably, there is no other formal plaza space on the ridge, although the partially enclosed plaza at nearby Pueblo Escondido was close by.

A survey of shrines in the community also begins at Burnt Corn Pueblo, where a depression ground into an andesite outcrop strongly suggests a center shrine in the Tewa tradition. Until 2006 we had documented nothing else in the broader landscape that fit the bill, but at the end of that season we came across an unmistakable example atop a low summit 300 meters north of the pueblo. Site CDC-39, a relatively circular construction of piled stone 12 meters across with an opening to the east, is clearly a community shrine. Afterward we reexamined our notes and identified another community shrine south of the pueblo that we had overlooked. Both have obvious cardinal orientations. Our survey coverage does not extend very far west, but this array—with Black Rock and some possible ephemeral shrine features to the east—reflects a thoroughly sacralized landscape (fig. 4.2).

One of the unique characteristics of the Burnt Corn community is its density of modified outcrops. They include a small number of distinctive "cupuled" boulders found around the perimeter of the pueblo. Grinding slicks appear in dramatic numbers—as of 2006, 497 such features at 158 localities, the vast majority of them on the ridge immediately adjacent to the roomblocks. Some of these slicks were undoubtedly utilitarian, but a surprising number were made at oblique angles, making it difficult to use them for grinding corn flour.

Oblique grinding slicks might instead have been parts of the landscape of identity. Richard Ford (personal communication, 2006) has suggested that

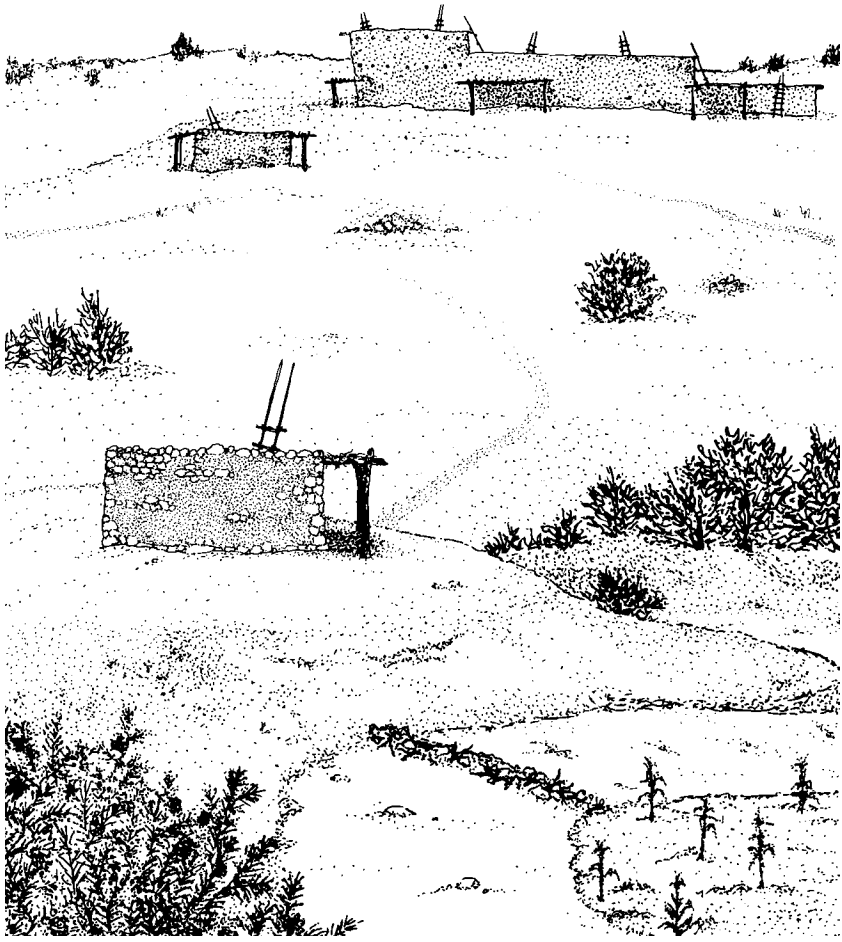

Figure 4.1 A reimagining of the Burnt Corn community core, illustrating a farmstead in the foreground, with the Burnt Corn plaza pueblo and an associated roomblock on the horizon.

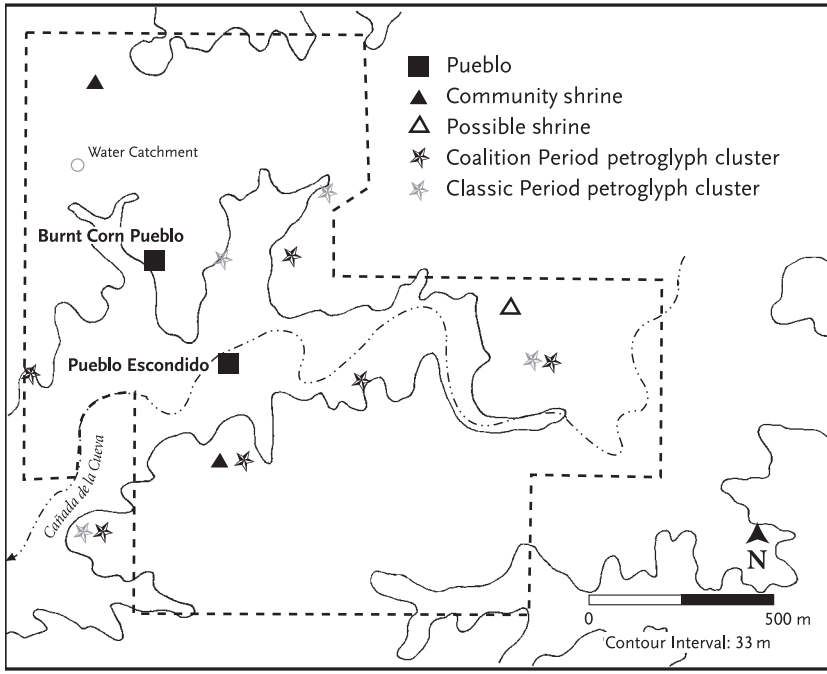

Figure 4.2 Shrines and petroglyph clusters in the Burnt Corn community

such features were originally used for sharpening stone axes as land was cleared for farming, a process that became ritualized over time. Some of the grinding slicks recorded away from Burnt Corn Pueblo are indeed in places overlooking prime farmland. It is also possible that oblique grinding slicks were used for grinding pollen, an important Pueblo ritual practice. In this regard it is interesting that many of these features are oriented toward prominent topographical landmarks, including Petroglyph Hill and the Ortiz Mountains to the south. Sorting this out will require further analysis, but it is clear to me that the high density of grinding slicks surrounding Burnt Corn pertains less to making lunch and more to the embedding of some particular aspect of local identity in the landscape.[4]

Finally, there is the matter of petroglyphs. In general stylistic terms, the Burnt Corn petroglyphs consist of spirals, zigzags, conjoined circles with central dots, some anthropomorphs, turkey tracks, crosses or "stars," and occasional stick-figure humans and animals. They belong to a form of representation

typical of the Coalition period, with relatively few of the elaborate masks and other imagery associated with the Rio Grande style of the subsequent Classic period (Schaafsma 1992a). Coalition petroglyph styles have been relatively little studied, but the rarity of masked anthropomorphic figures and other imagery associated with Classic period ceremonial practices implies an older symbolic suite.

The Galisteo Basin is famous for its petroglyphs, but most documented examples either pertain to major known shrines or are close to the vast Classic period communities such as San Cristóbal and Pueblo Blanco (LA 40). Although smaller petroglyph panels and isolated glyphs have been recorded by members of different projects working in the region (Futch 1997; Roney and Williams 1994; Snow 1994), at present we have little knowledge of their distribution in relation to other cultural features in the basin. Thus there is little contextual information to use in analyzing the Burnt Corn case.

Two types of petroglyph sites appear in the Burnt Corn landscape, the first of which is complex petroglyph panels associated with the basaltic dikes that protrude from the hills of the survey area. All these are high above the valley bottoms and overlook either Burnt Corn Pueblo or the route between Burnt Corn and Galisteo Creek. In 2006 we surveyed a segment of one of these dikes northeast of Burnt Corn Pueblo and found, to our surprise, very few petroglyphs along its length. In other words, the distribution of petroglyphs was not simply a matter of available rock surfaces, and people spent little time marking the land in the more marginal parts of the community .

The second type of petroglyph site consists of small numbers of elements in more direct association with places of cultural prominence. Some are near shrines, but others are relatively isolated. Indeed, they are sufficiently idiosyncratic to make me think that they pertained to very specific practices, reflecting local traditions rather than any broader pattern of landscape symbolism.

All told, this is a modest inventory of petroglyphs in comparison with those of other major Galisteo communities, a pattern of rarity confirmed by our survey of land to the east of Burnt Corn. This pattern makes the 1,800 petroglyphs recorded by Marit Munson (2005) on Petroglyph Hill even more remarkable. As a topographic feature alone the hill is a major node in the landscape of identity associated with Burnt Corn, but it is additionally enhanced by the elaborate inscribed symbols on the rocks around its summit. My limited observations of these petroglyphs suggest that older styles predominate and that the period during which Burnt Corn was established and inhabited

was also a time of great activity on Petroglyph Hill. This spatial and temporal pattern underlines the association between community and physical landscape and also illustrates how such a relationship could be "intensified" through inscription.

I can make only a few inferences from the Burnt Corn petroglyph data as a whole. The strategic placement of the rock art is important, because it is often thought that petroglyphs are found wherever usable "canvases" are available. Instead, most of the Burnt Corn landscape is devoid of the sort of overt symbol-making that petroglyphs represent. The selective location of some petroglyph panels on abrupt volcanic outcrops mirrors the locations of the later, major shrines such as that at the Galisteo Crestón (Brody and Brody 2006) and implies that these landforms held a particular significance. Petroglyph Hill clearly served as a major regional shrine during the Coalition period, and now that we are paying attention, it is remarkable how visible the hill is from places far and wide across the northern Rio Grande.

The distribution of petroglyphs at Burnt Corn seems a poor fit with the idea that petroglyphs served as symbolic markers for boundary maintenance. One shared aspect of all the Burnt Corn petroglyph panels is that they are removed from primary routes of travel through the community. Even where inscribed basalt faces are near probable trails—such as at Black Rock, in the cañada east of the pueblo (LA 134188)—the associated petroglyphs sit above and away from passersby. These places almost universally command views but cannot themselves be seen without effort. The more idiosyncratic features share similar characteristics. I am left with the impression that the Burnt Corn petroglyphs were not designed to be seen by travelers passing through but were instead made by and for local people.[5]

Los Aguajes

The setting of Los Aguajes appears diametrically opposed to that of Burnt Corn. Modern dirt roads leading to the community arrive from the east across a flat, barren plain at the heart of the Caja del Rio. High hills on three sides dominate the location, which can seem windswept and desolate. The low mounds of the community house are so inconspicuous that people have parked their cars on top of them, searching in vain for the site.

As elsewhere, however, spending more time at Los Aguajes helps make the inherent logic of the location clear. The aguajes themselves are hidden in the shallow Arroyo Tetilla immediately to the south, and several hold water for

much of the year, particularly the main aguaje, which is preserved despite the Depression-era masonry abutments built to "improve" it. Almost no surface water exists elsewhere on the Caja, and at Los Aguajes the presence of Archaic period artifacts alongside historic corrals in the vicinity makes it clear that this has been an attractive place for thousands of years. When we worked there in 1995 we were often awakened by the sounds of wild horses drinking at the main aguaje before dawn.

Immediately west of the pueblo the character of the land changes dramatically, where the rim of the deep Arroyo Colorado forms a north-south rampart overlooking broken country extending toward the Rio Grande in the distance. We have not surveyed to the west, but the onward path of the Arroyo Colorado demarcates a likely route toward Cochiti. Favorable topography for travel and the presence of water sources would have made this a popular trail in the pre-Columbian era, connecting communities along the Rio Grande with contemporaries along the Santa Fe River.[6]

The position of Los Aguajes between two of the major summits of the Caja del Rio is especially intriguing. To the south-southeast, Tetilla Peak looms on the horizon and can be seen from practically all corners of the country beyond. The mountain features prominently in Cochiti history and ritual practices (Lange 1959) and is the location of a major shrine. To the north is the flat-topped profile of Cerro Colorado, comparatively isolated but also with shrine features on its summit. These two mountains are cardinal anchors for Los Aguajes, providing dramatic and appropriate topographic context.

As at Burnt Corn, the setting of Los Aguajes brings together numerous desired characteristics. The location is not particularly defensive but might be considered *defensible*, particularly against attacks coming from the west, a heavily populated area. A stub of a butte that extends outward from the escarpment just west of the community house would have made an ideal watchpost.

Even more than at Burnt Corn, it is the appropriate ideational qualities of the landscape surrounding Los Aguajes—water, hills, cardinal orientation—that are most striking. Circumstantial evidence at the main aguaje suggests that it might have been a sacred site, or at least one that was used for long periods both before and after the pueblo was inhabited. A rock outcropping overlooking the pool is densely incised with petroglyphs, many bearing the dark patina of age.

The remains of the Los Aguajes community house are not visually strik-

ing, and even when the structure was standing it would have been unobtrusive in the surrounding plain. The complex consists of several single-story adobe roomblocks oriented around two open plazas in an east-west, H-shaped configuration (see fig. 2.5). Unlike Burnt Corn, it shows no manipulation of massed masonry and height, but its ground plan may reflect other important cultural considerations. Robert Preucel has interpreted a similar dual-plaza layout at Kotyiti as an architectural strategy reflecting the broad revival of traditional Pueblo beliefs during the Pueblo Revolt (2002; see also Elliott 2002). He and I have argued that the similarity between Kotyiti and Los Aguajes might reflect elements of cultural continuity (because both are ancestral Keres sites), similar ideological motivations, or both (Snead and Preucel 1999). On the basis of historical ethnography and Preucel's fieldwork we know much more about the Kotyiti case than about Los Aguajes, but the resemblance is compelling.[7]

The most striking built elements of the landscape of identity at Los Aguajes are the formal shrines associated with the community (fig. 4.3). These include four community shrines located along a north-south axis passing through the pueblo and extending into the surrounding hills. This system is anchored by an elaborate circular construction on a hilltop south of Arroyo Tetilla, made from piled basalt cobbles and featuring several short, upright interior slabs. Another community shrine, consisting of a broad circle of single stones, lies on a terrace closer to the pueblo, and a C-shaped, east-facing shrine was recorded on a gently sloping ridgeline 1 kilometer to the north. The last community shrine, another C-shaped feature, is on a low summit beyond the survey area to the south.

It is unclear whether the north-south alignment of this cardinally oriented network of community shrines is matched by similar shrines to the east and west. No survey was conducted beyond the national forest boundary to the west, and although our informal exploration of the eastern hills well beyond the boundaries of the survey area turned up some possible stone features, we could not be sure of their associations. Future work might resolve the matter, but for the moment the formal character of the community shrines is distinct. The level of labor invested in these features is also striking. They were not casual constructions but would have required significant effort and participation to construct.

The four community shrines are complemented by three other shrines recorded in the community core, including two stone enclosures associated

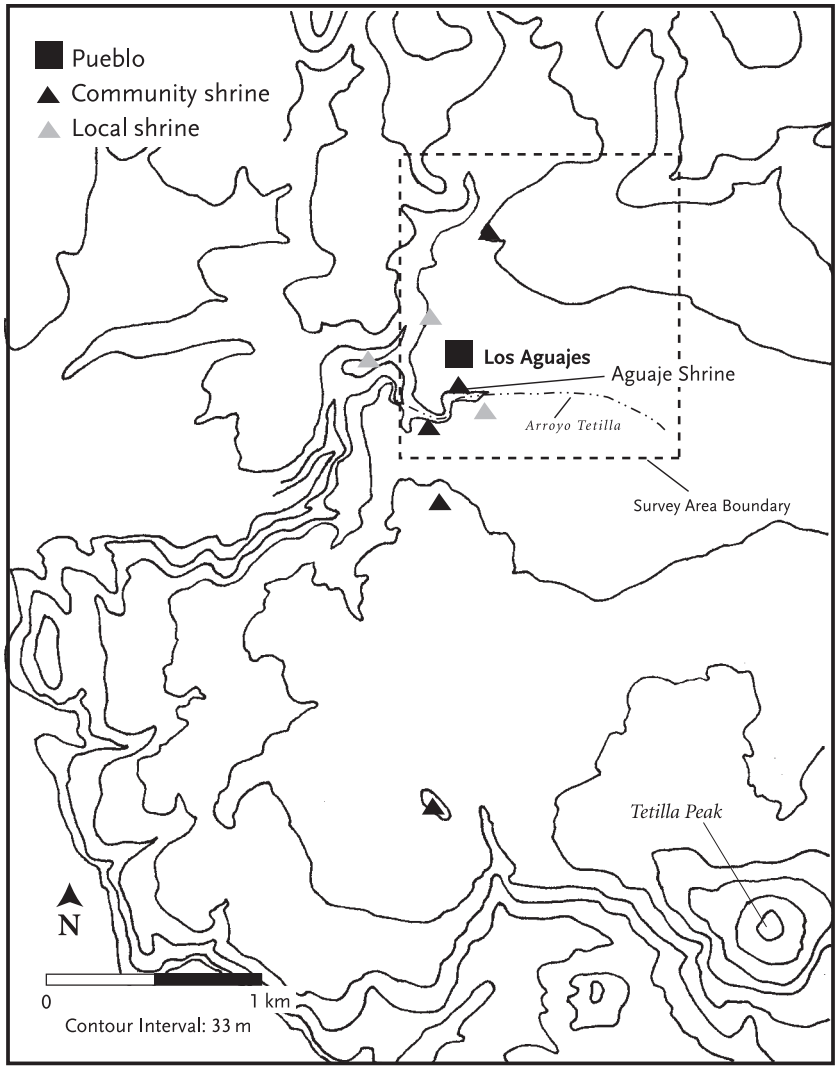

Figure 4.3 Shrines and related features in the Los Aguajes community

with petroglyphs overlooking the Arroyo Colorado. By analogy I think these might be places associated with distinct subgroups such as hunting or curing societies that existed in the Los Aguajes community. The final example, an upright stone recorded as an isolated occurrence, is a good candidate for a "field shrine" as found throughout the Pueblo world. If the main aguaje is included, then there are 5 community shrines and 3 local shrines, a significant total because it is certain that many have been missed. The landscape of identity at Los Aguajes as represented by shrine features was thus highly articulated.

The petroglyphs associated with the local shrines and the main aguaje represent only a small part of the dense accumulation of rock art at Los Aguajes.[8] The many petroglyph localities are situated almost exclusively along the escarpment of the Arroyo Colorado and the exposed basalt flanks of the Arroyo Tetilla. The imagery is diverse but includes life-size katsina figures as well as other anthropomorphs, stalks of corn, birds, and assorted geometrics. This symbolic vocabulary resembles that recorded by Polly Schaafsma (1975) along the Rio Grande a few kilometers to the west and is broadly associated with the post-1300 Rio Grande style as she has defined it.

Los Aguajes is well-endowed with outcrops of basalt, so the distribution of petroglyphs does not simply reflect opportunity. Most of the rock art localities correlate with two simple factors—the top of the escarpment, with its broad western views, and watercourses, specifically Arroyo Tetilla. There are two isolated petroglyph panels along routes leading into the community, but otherwise it is notable that little rock art is found below the escarpment, closer to the bed of the Arroyo Colorado, nor was any recorded along the other minor drainages in the survey area. Because the Arroyo Tetilla feeds the aguajes, I am persuaded that the petroglyphs along its course pertain to the general sanctity of those water sources. Those incised into the escarpment rim present a more complicated case. Most of them command spectacular views, which might have had some significance. The escarpment represents a topographic barrier between Los Aguajes and the west. Anyone climbing the trails up from the Arroyo Colorado would have been faced with this dense array of symbols, just as those inscribing them into the landscape would have been conscious of the drama of the setting.

Discussion

Before bringing in comparative information from the other study areas and elsewhere, let me briefly compare landscapes of identity at Burnt Corn and Los Aguajes. In both cases the pre-Columbian residents had a profound

awareness of the symbolic dimensions of their environment and terrain. The founders of both communities used hills, water sources, other natural landmarks, and cardinal orientations to establish an appropriate context for community life. This emphasis was not in preference to aspects of provision but was integrated with them.

Otherwise the two communities show marked differences. The architectural vocabulary of each place is distinct, with Burnt Corn conveying a sense of monumentality and manipulation of place that is absent at Los Aguajes. The high walls and prominent setting of the Burnt Corn plaza pueblo mean that it was intended to be seen and understood by outsiders, a point that is particularly striking because the other structures in the settlement are so modest in design. In contrast, Los Aguajes practically fades into the background, its symbolism reflected in a dual-plaza ground plan that would have been most evident to those living in the community rather than to passersby.

Both community landscapes were symbolically structured through shrines, but Los Aguajes is especially dense with such constructed meaning. The relative scarcity of petroglyph panels at Burnt Corn, like that at other Coalition communities in the wider region (Schaafsma 1975:31), contrasts with their ubiquity at Los Aguajes. Over the hundred-odd years between the destruction of Burnt Corn and the founding of Los Aguajes, many organizational principles of the Pueblo landscape of identity were retained, but scale and intensity changed dramatically (for a comparative case, see Anschuetz 1998:472).

The other case studies help round out the picture. At Tsikwaiye, the Caja del Rio North community house embodies both architectural and locational symbolism. As a multistoried masonry plaza pueblo enclosing three kivas, it is a distinct landmark, and its position at the rim of White Rock Canyon makes it defensible if not particularly defensive. Caja del Rio North was clearly situated in relation to the massive Montoso Peak on the eastern horizon, but the site also reflects ideational and political associations in the other direction, where it overlooks the Pajarito Plateau. The view from this location includes Tyuonyi, the large, contemporaneous community house 4 kilometers to the west along the Rito de los Frijoles, a vantage that is unique to this spot.

A complex network of formal shrines also exists at Tsikwaiye. A large community shrine featuring an east-facing entry lies 800 meters south of the community house (fig. 4.4) and would have required considerable labor to construct. At least one example of a local shrine, a petroglyph panel in a side canyon sheltered by a stone enclosure, was recorded. The two reservoirs

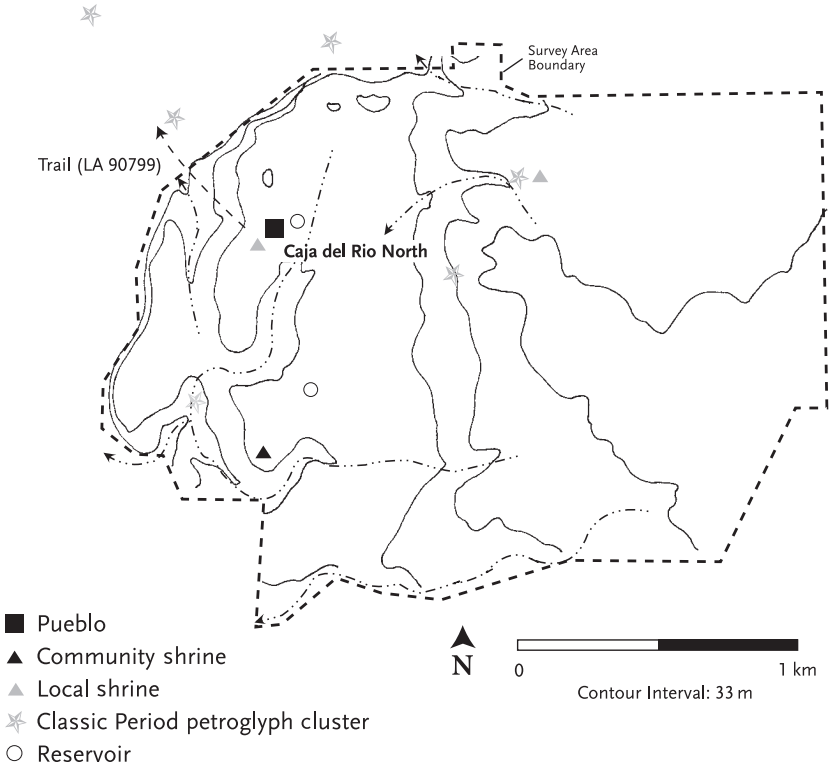

Figure 4.4 Shrines and related features in the Tsikwaiye community

associated with the community are also central to the landscape of identity. One of them is close to the community house, but the second sits in an isolated spot on an open hill slope. Our field team tried in vain to come up with a functional explanation for this location, because there is no evidence for residences or agricultural features nearby. I am persuaded that the symbolism of a small pool of water in this place was the important factor, particularly because the reservoir is located immediately below the community shrine.

The overall distribution of rock art at Tsikwaiye is also distinctive. The largest petroglyph panels sit along routes of access to the community core, visible to people climbing up from the canyon to the west along trails and drainages. A few panels are found elsewhere—one of them along the easterly alignment between Caja del Rio North and Montoso Peak—but the overall distribution suggests a pattern of boundary maintenance.

The multicentric structure of the T'obimpaenge community makes assessing the landscape of identity there more complicated. The architecture of the community houses is eclectic, and because all of them were built of adobe, they have eroded into amorphous mounds. Single large kivas were directly associated with two of the community houses, but more might have been present. Nambe Bugge contains the only enclosed plaza among the three, and its two-story north roomblock would have been a prominent landmark. The narrow valley and the high wall of the Sangre de Cristos to the east constrain the local horizon, but even within this context concern for the proper placement of community houses is evident. Nambe Bugge sits high on a saddle between two summits, with an excellent view of the valley northward. K'ate Ouinge is less dramatic but was built on a hilltop overlooking valley-bottom agricultural land. Pueblo Sarco has steep slopes on three sides and would have effectively blocked traffic into the valley from the north. All three community houses are notably defensive.[9]

Shrines recorded in T'obimpaenge reflect the now-familiar pattern of cardinal orientation and places of particular sanctity. A large circular feature that probably served as a community shrine was recorded on the ridge west-southwest of K'ate Ouinge, adjacent to a major pass out of the valley. Two other likely community shrines are indicated as well.[10] One local shrine—a bedrock protrusion the size of a tabletop with several incised grooves on the flat surface and cupules pecked into the vertical sides—is particularly distinctive.

In general, shrines in the T'obimpaenge community were more simply constructed than others we have studied. I assume that the dimensions of the study area could have skewed this pattern, and there might be larger shrines beyond the valley, although they have not been found during other survey projects in the vicinity (Thoms n.d.). I am also convinced that modern development has had a severe effect on the T'obimpaenge shrines. The most unfortunate example of probable shrine destruction comes from T'opinge itself, the "Piñon Mountain" for which the region is named and obviously a place of some importance in Nambe tradition. It is now the site of several telecommunications towers, and Richard Lang (1979), who examined the area in the 1970s before one of these installations was built, suggested that a shrine on the summit had already been obliterated. My colleagues and I visited the mountaintop one afternoon and found that the construction had been depressingly thorough.

Taken as a whole, this information tells us a great deal about landscapes of identity in the northern Rio Grande, what they shared, and how they differed

in time and place. Each community reflects a common concern for a proper setting that included hills and water sources. This conceptual organization was fully developed from the beginning and changed little over the course of centuries. There was a proper place for a pueblo, and considerable time and thought must have gone into establishing new communities in the correct manner.

In design, context, and location, most of the community houses in these study areas were built to impress. There are many other examples of this architectural strategy in the region, most dating to the Coalition period, and collectively they echo the architectural canon of the old Pueblo heartland on the Colorado Plateau.[11] Places like these provide evidence for researchers who argue that some of the thirteenth-century communities in the northern Rio Grande were built by immigrants from outside the region, although in the absence of more detailed information they could also be examples of local people emulating other architectural styles (Van Dyke 1999b:482).

The principal exception to this pattern of massed and massive community house architecture is Los Aguajes. The significantly different template evident there is typical of the later, Classic period community houses in the region. These complexes are arrays of conjoined roomblocks, many of them built on low ground with limited views of the surrounding countryside. The design of Los Aguajes is thus typical for its time. Such a temporal trend away from a more "monumental" approach to community house architecture is not absolute, and not all Coalition community houses have the characteristics identified here. Nonetheless, to walk the few kilometers from the dramatic verticality of Burnt Corn to the sprawl of San Marcos is to traverse a significant change in the way lived space was conceptualized in the final pre-Columbian centuries—a change that took place over the few decades that separated the two places in time. In this regard I was interested to observe that the most architecturally "massive" roomblocks at San Marcos are also the oldest.

Shrines and shrine networks in Coalition landscapes also show an intriguing continuity with older Pueblo tradition on the Colorado Plateau. Arthur Rohn noted in the 1970s that shrines recorded at Mesa Verde resembled later Tewa features (1977:109), and Scott Ortman has documented a network of directional shrines surrounding Castle Rock Pueblo in southwestern Colorado (2005). No consensus exists about this cultural relationship, and Kurt Anschuetz has argued that the organization of the Coalition period shrines identified in his Rio del Oso survey does not entirely conform to the subsequent

Tewa model (1998:472). As more landscape-oriented fieldwork is conducted, we will be able to better sort this out, but I am increasingly persuaded that there is no cultural "break" in the Pueblo shrine tradition between the Colorado Plateau and the northern Rio Grande.

Shrines might have retained similar structure and organization over time, but their scale and number increased dramatically in the northern Rio Grande region.[12] Shrines found near later communities, like the shrines at Los Aguajes, are much more labor intensive than those that came before or after. Shrines associated with Classic period community houses can also be much more numerous. Lang recorded 28 shrines in the vicinity of San Cristóbal, eight of which were highly formal (1977:429).

The more elaborate construction and greater numbers of Classic period shrines might simply reflect the longer life spans of their associated communities. I believe our evidence from Los Aguajes disproves this assertion, however, because even though the community house there was probably inhabited for a generation or less, it is ringed by elaborate shrines. Time was undoubtedly a factor, but I have no doubt that greater energy was invested in the establishment of shrines toward the end of the pre-Columbian era than in previous generations. It is also worth noting that the largest reservoirs were built during this period (Snead 2006b). If I am correct that they were as important for their symbolism as for their drinking water, then they also reflect an increasing investment in identity.

It is more difficult to find patterns in the rock art observed in our study areas, particularly because each set is distinct. At Burnt Corn the petroglyphs were placed to be seen by people who lived there, whereas the Tsikwaiye petroglyphs appear to have been aimed at outsiders as well. Los Aguajes is practically ringed by petroglyph panels, but there are few beyond this cordon.

The most straightforward correlation is that petroglyphs were placed more selectively in the earlier periods. Both Burnt Corn and Tsikwaiye have numerous rock faces that would have been at least technically appropriate for rock art but were not used. I am also influenced by the organization of Petroglyph Hill, where panels were tightly clustered near the summit and scarce in the surrounding countryside. At Los Aguajes the distribution of petroglyphs can almost be said to fall off with distance from the center. Focusing on the absence of something does not make for a robust archaeological argument, but I am persuaded that the more discrete distribution of petroglyphs in the Coalition landscape is meaningful.

A second simple pattern I see in this evidence is that later occupations had more petroglyphs. Burnt Corn and Los Aguajes were inhabited for relatively similar lengths of time, yet the number of petroglyphs in the later community is much greater.[13] It is widely agreed that rock art imagery in the northern Rio Grande changed over time (Schaafsma 1992a), but it also appears that the ubiquity of petroglyphs increased. In other words, I believe that use of petroglyphs as a symbolic medium became increasingly popular over the course of the fourteenth and fifteenth centuries. This does not necessarily mean that a close correlation existed between the medium and the message, but the permanence of the images and the level of artistry often displayed suggest to me that making petroglyphs was more than a fad.

To draw together the information from community houses, shrines, and petroglyphs, it appears that one transformation—a shift in the design of community houses—was paralleled by an increasing emphasis on other sorts of landscape symbolism. Pueblo people built larger shrines in greater numbers and created rock art in profusion in newly appropriate places. The community houses remained the centers of this network but were defined in less overt ways. The overall pattern is that landscapes of identity in the northern Rio Grande underwent a dramatic intensification in the final pre-Columbian centuries, one that redirected attention from the community houses as constructed places to the equally constructed, lived landscape surrounding them. Whereas earlier the residences had been the primary landmarks, later the entire community was inscribed onto the land at a much grander scale.

Landscapes of Identity

Public architecture, shrines, and petroglyphs in the northern Rio Grande represent elaborate landscapes of identity. From the perspective of a mobile people without writing, the land was the only permanent feature. It represented history and thus morality, the source of all legitimacy and meaning. Some of this meaning sprang from associations between places and events, associations enshrined in memory but thus subject to reinterpretation or forgetfulness. Other places were the products of specific actions, of a human interest in creating permanency. The point such places made on behalf of their builders was simple—we are here and have always been here.

I have argued that the Burnt Corn plaza pueblo was meant to be seen and would have been a prominent landmark on the Galisteo Basin horizon.

Community residents and outsiders alike would have observed such a message. It was thus an overt projection of identity, perhaps reflecting openly competitive conditions. That the only other example of such construction among the study areas is Nambe Bugge, built in a similarly defensible location, suggests that people drew on this "great house" mode of architectural symbolism only under certain, possibly hostile, circumstances.

Shrine construction represents a different kind of boundary maintenance. The increasing emphasis on symbols of continuity and permanence in the landscape over time implies that these ideational factors were under threat. Shrines are not fortresses, so the competition they reflect was not necessarily physical. The location of Burnt Corn reflects a perception of real danger, but such evidence is sporadic for later settlements, many of which were established in notably indefensible locations. It was precisely in these communities that shrine construction was most significant.

I do not think the elaboration of shrines reflects a specifically ideological struggle within the Pueblo populace. It is true that the Classic Period saw the development and elaboration of the katsina cult, and the fact that this religion made only limited inroads in Tewa regions north of Santa Fe implies that not everyone was receptive to its message (Adams 1991). Tewa and Keres shrines and conceptual organization remained similar despite the fact that the Keres responded more favorably to the katsina "message," which implies to me that competition over belief systems did not radically affect ritual practices linked to the landscape of identity.

Shrines might be powerful symbols, but their symbolism is directed toward a local audience. Outsiders might have seen shrines in the northern Rio Grande communities, but the shrines did not necessarily lie along routes of travel, and at the least I imagine it would have been impolite to visit them without sanction. They were built by and for the local group, and the act of creation was as significant as their presence on a hilltop thereafter. Rather than build walls, people built shrines, indicating that their focus was on establishing and maintaining internal social cohesion rather than on barricading themselves against invaders.

In the previous chapter I suggested that families in local communities enjoyed considerable autonomy and that the construction of elaborate field structures and formal garden features came about as a result of competition between these small-scale producers. If these sites reflect family responses to competitive conditions, then shrines and related features reflect community-

level reactions to those conditions. In other words, competition over land pulled people apart, but communities worked to hold them together.

Membership has its privileges, as the advertisement says, but such advantages are worthwhile only if members perceive them. From my perspective, symbolizing "belonging" and linking it to the land maintained the social integrity of Pueblo communities and was the driving force behind shrine construction. Local leaders must have been constantly challenged to keep groups from fissioning, and manipulating symbols to emphasize the continuity of the social group would have been among their strategies. Just as the holders of the best land emphasized their claims by investing labor in field houses and gravel mulches, so community leaders used their authority to bring families together and erect monuments to their collective identity. One pushed, the other pulled, and under ideal circumstances—for a decade or two, here and there—a certain balance was achieved.

When the founders of Burnt Corn came up Cañada de la Cueva in the late thirteenth century looking for a new home, they sought a place in nature that could become a human place, with all the complex requirements this entailed. Their choice would have been framed by pragmatism and tradition. They might already have had ties to that particular countryside, or they might have been complete newcomers. Either way it would have been imperative for them to establish their rights in response to direct competition with other communities, as well as to ensure social cohesion within their own.

As they looked for likely locations for fields and high ground for good views and fresh breezes, they also kept their eyes on the horizon, where the sun rose and set, and on places in the larger landscape that already held meaning for themselves and anyone else living in the vicinity. Perhaps they knew Petroglyph Hill as an important sacred place, in which case they took advantage of the opportunity to define a relationship with the tradition it represented. Perhaps it was relatively unmarked at that time, so that it was established as a sacred place when Burnt Corn was built. Once this was done, the founders of Burnt Corn turned their attention to the routine of daily life, but they reestablished their relationship with the land every time they looked to the east or ground their axes, corn, or pollen on a bedrock slick.

What took place at Los Aguajes more than a century later reflected the same process under different pressures. Far from other communities, in one of the most isolated habitable areas in the region, the people of Los Aguajes nonetheless felt the need to aggressively mark their place in the landscape. That

they invested their collective effort in shrines rather than in agricultural systems suggests that the conceptual integrity of the community was at stake. That a community was established in this remote place at all implies something unusual, and it might be that some inaccessible historical issue was the reason it was founded there. Given the limited resources of the area, this decision reflects competition, and the fact that communities across the northern Rio Grande were manipulating similar symbols in similar landscapes indicates that they were all feeling the same strain.

5
Movement

> The ancient trails wind still along valleys and canyons, and over the upland summits, turning aside to springs and water-pockets, now worn deep and plain in the softer rock, now faint and grass-grown, or lost here and there in the sand.
>
> —T. Mitchell Prudden, *On the Great American Plateau*

My discussion of movement begins not with the concept of mobility, which has been a favorite of Southwestern archaeologists (e.g., Powell 1983), but with the passage of people through the country in the literal sense. The idea of a *landscape of movement* might seem paradoxical, given the sense that landscapes are, ultimately, static. Yet movement is a human activity like any other—physical, patterned—operating within material, social, and ideational constraints. Where people go, both in the course of a day and over the passing of generations, tells us a great deal about how they organized their world, how they perceived their surroundings, and how their ideas changed (see Bender 2001; Broodbank 2000; Ingold 1986).

For the Pueblo people, trails are a central aspect of place. In the northern Rio Grande, trails run between home and field, from community to community, and sometimes to more distant destinations.[1] Journeys made along them, whether brief or lengthy, took place within different frames of reference. With few exceptions, however, archaeological discussions of trails have been peripheral to the principal questions of the day, and attempts to thoroughly contextualize trails in the Pueblo setting have been rare.

Trails pose unique problems of interpretation, so in order to explore them I have organized this chapter differently from the others. I focus primarily on research conducted in the Pajarito Plateau community of Tsankawi, where my colleagues and I spent some weeks recording trails and generated a substantial body of information. I use it here to build a picture of Pueblo trail networks, which I then compare with evidence from the other communities. Trails allow us to walk in the literal footsteps of the ancestors, making contextual experience a particularly powerful paradigm for their study.

Trails in Pueblo Communities

A thread of commentary on Pueblo trails runs through the history of anthropological research in the northern Rio Grande, beginning in 1879 with James Stevenson's description of worn pathways near Puye.[2] Adolph Bandelier and his successors traveled across the Pajarito Plateau using what was erroneously called the "Old Navajo Trail," through its association with nineteenth-century raiding (Bandelier 1892:146–147; Hewett 1906, 1909:437). Bradford Prince described these ancient routes as "footsteps . . . in the rocks of eternity" (1903:7), and they excited much comment.

References to trails in the archaeological literature of subsequent decades are sparse, and where they appear, they are typically in the context of "trade routes" with little mention of empirical circumstances (e.g., Colton 1945). It was not really until the 1970s that interest revived (see Britt 1973; Hartmann and Hartmann 1979; Pattison and Potter 1977), although this research was conducted largely in isolation from trail research elsewhere (see Blakeslee and Blasing 1988; Campbell and Field 1968; Johnson and Johnson 1957; Loendorf and Brownell 1980). Such parochialism is surprising, because at the same time a burst of interest in "roads" associated with the Chaco phenomenon was under way (e.g., Kincaid 1983; Powers 1984).

Ethnographic information about Pueblo trails is rare, and Harrington commented that details were "surprisingly hard to get" (1916:107). He was able to obtain names for several long-distance routes, such as the "eagle gap trail" that ran north from San Juan Pueblo toward the Ojo Caliente area (Harrington 1916:205). Most ethnographers of the late nineteenth and early twentieth centuries mentioned trails in passing, including some in the vicinity of Jemez Pueblo (Parsons 1925:104), those used on religious retreats by the people of San Felipe (Parsons 1996 [1939]:291), and trails connecting the Keres communities (White 1942:37). Trails leading to the Zuni Salt Lake are guarded by spirit beings, and the routes taken to such sacred places appear themselves to be bound up in the sacred character of the destination (Hart and Othole 1993:96, 105; Marshall 1997; see also Jett 2001). Some trails appear to be associated with events in the histories of the Pueblo peoples. Harrington described a San Juan tradition that a rock outcrop beside a major trail was an old woman who had failed in an important duty and been turned to stone as she fled (1916:208).

Trails are also rich sources of symbolism and metaphor in Pueblo society.

The Tewa words for "trail" and "water" are identical, implying the same sense of motion (Harrington 1916:84).[3] The routes which the sun and moon travel across the sky are known as "vapor trails" (Harrington 1916:46). Road markers, indicating appropriate routes of passage, are components of Hopi rituals, some of which also involve the making of cornmeal "roads" (Parsons 1996 [1939]:190, 289–290, 316, 362–363). Spiritual beings travel these routes during ceremonies. Symbolic trails, also called "rain roads," are components of some shrines (Parsons 1929:241). Trails being used for ceremonial purposes can be marked with sanctified objects or symbols (Parsons 1996 [1939]:190). Foot races associated with certain ceremonies appear to have their own trails, and such ritualized movement relates closely to movement in the natural world, such as the growth of crops and the passage of rain clouds (Parsons 1929:393).

As landscape features, then, Pueblo trails prove to be appropriate subjects for study. On the one hand, they are literal records of people's coming and going. On the other, movement as a meaningful act extends beyond logistics and into symbolic realms. Sensitivity toward both perspectives is required for a better understanding of the Pueblo worldview, and the archaeology of trails provides a means through which such an understanding can be developed.

Studying Movement

Trails are rarely well preserved, tend to cross modern property boundaries, and are famously difficult to date. Because we archaeologists like our material evidence to come in discrete packets, defined by space and time, trails have caused us considerable regret. We are aware of their potential but cannot use traditional strategies to study them. It is thus fortunate that conditions in the northern Rio Grande are favorable for trail preservation, providing a unique opportunity to bring these features into a larger research framework (for another case, see Zedeño and Stoffle 2003).

Circumstances are especially promising on the Pajarito Plateau, where the friable tuff bedrock is literally worn away by the passage of human feet. Following the work of Hewett (1906) and Steen (1977), the Bandelier Archaeological Survey identified 70 trail components within the national monument (Van Zandt 1999:333). Many others have been documented by archaeologists working with Los Alamos National Laboratory and the Pajarito Archaeological Research Project (e.g., Hill and Trierweiler 1986; Hoagland et al. 2000; Larson

1987). It is safe to say that the Pajarito represents one of the best opportunities for the archaeological study of trail systems to be found anywhere.

Even when we can see trails, understanding their context is a formidable problem. Trails have rarely been documented in their own right and are most typically noted when they pass near more traditional archaeological features. For example, the protocol established by the Bandelier Archaeological Survey in the late 1980s classified trails as secondary features, so we often recorded them in relation to nearby structures and pueblos. This accidentally created a situation in which multiple segments of the same trail were attached to different and otherwise unrelated sites. Now it is difficult to use this information to reconstruct the trail as a whole. In my first paper on the subject (Snead 1991) I used such site-level data to suggest that several trails converged at the sacred site of Painted Cave, a hypothesis later disproved when I returned to actually trace the individual trails and found them to be largely unrelated to Painted Cave at all.

Trails rarely respect the limits of archaeological survey units or sampling schemes. On many occasions I have stood at a modern fence, unable to cross into an adjacent property, watching a trail that I had followed that far disappear in the distance. This is true even on the relatively open Pajarito Plateau, because long-distance trails are likely to cross land managed by the National Park Service, Los Alamos National Laboratory, the Santa Fe National Forest, and the pueblos of San Ildefonso and Santa Clara. Sometimes boundaries are a result of research design rather than fences, because survey parameters are often established by arbitrary spatial or topographic distinctions. Thus the many trail segments recorded in the 1970s by the Pajarito Archaeological Research Project are, within the context of a rigorous transect sample, suitable for statistical analysis but completely detached from the surrounding landscape.

These issues of scale and strategy are particularly relevant for the Tsankawi area. Tsankawi itself is part of a subunit of Bandelier National Monument that is only a few square kilometers in size. Members of the Bandelier Archaeological Survey examined most of the Tsankawi Subunit, but survey in adjacent jurisdictions has largely been opportunistic and conducted with different recording protocols. Even studying trails within the Tsankawi Subunit is confusing, because the archaeological landscape is so elaborate that sorting out features and relationships within it—and visualizing this complexity through the medium of archaeological site forms—is daunting.

Studying the trails of the Pajarito Plateau in general and Tsankawi in

particular thus required a new approach. In the early 1990s I began a research program called the Pajarito Trails Project, starting as an effort to re-record the Bandelier trails but quickly moving on to independent fieldwork. Thus a trail survey of portions of the San Ildefonso reservation adjacent to Tsankawi was followed by work on Los Alamos land, allowing my team and me to link new discoveries with bits of existing information that had previously been isolated. A series of articles and reports followed (see Snead 2000, 2001b, 2002a, 2002b).[4]

Over time I developed a strategy for recording archaeological trails derived from other work on trails and roads in the Southwest. The first step was to move away from a strictly site-based approach and to treat the trails as single features of undefined length. Discontinuities, whether products of changing terrain or of the temporary invisibility of the trails where they crossed valley floors, were accounted for by dividing the trails into segments. A single trail might hypothetically consist of hundreds of segments (Marshall 1991; see also Darling and Eiselt 2003:214), each of which might have measurable characteristics. I defined cases in which several trails were spatially interlinked as *trail networks*, which for purposes of recording were also treated as single features with multiple segments (Snead 2000:7). Like all other defined archaeological units, these trails, trail networks, and trail segments are analytical devices, meant to capture observable phenomena within a particular frame of reference, in this case landscapes of variable scale.

In addition to the spatial organization of trail networks, trails in and of themselves contain information relevant to understanding landscapes of movement. *Trail structure* refers both to the physical character of the trails and to features directly associated with them (Snead 2002a). For instance, looking at the depths of trails is a potentially useful way to document different patterns of use. I am convinced that, all other things being equal, the degree of trail erosion reflects the length of time a trail was used and how intensively it was traveled. Multiple, parallel routes of the same trail—a phenomenon known as *braiding*—characterize Pajarito trail structure, bearing on traffic patterns and changing movement over time. Constructed steps of various degrees of formality are also present. Associated features such as trailside berms, flanking or axial walls, cairns, and petroglyphs can also be considered aspects of trail structure.

Where trails go and what they pass en route are critical to their character. In pragmatic terms, context assists with the difficult issue of chronology.

Because we cannot date trails directly, a sound understanding of what they connect is a useful proxy. We have considerable survey data for the Pajarito and can thus compare the organization of trail networks with the distribution of settlement there during different time periods. This can be a straightforward process in the case of shorter trails, because often they are directly associated with other types of sites. At a regional level, it is possible to compare the relationships between trails and obvious destinations such as community houses and major resource areas.

Over the course of several field seasons, members of the Pajarito Trails Project have documented features across the central and southern Pajarito Plateau. As of 2006 we had recorded 173 trail segments extending for more than 11 kilometers in total length. The picture derived from these networks stretching along the mesas and canyon sides is remarkably detailed, a portrait of the landscape of movement in the Pueblo world.

The Tsankawi Trail Network

The sheer red cliffs of Tsankawi Mesa emerge from the relatively open valleys of the central Pajarito, climbing upward to the gentler white tuff slopes below the flat summit. The Tsankawi trails are dramatic features, running here and there across the flanks of the mesa, channeling movement today as they have for centuries. Generations of hikers and schoolchildren have climbed to the top to see the ruins, which, as low mounds covered in grass and chamisa, usually prove less memorable to visitors than the grooved bedrock trails they followed to get there.

The Pajarito Trails Project defined several trail networks and many additional segments at Tsankawi, extending for more than 7 kilometers through the surrounding countryside (fig. 5.1).[5] Collectively they make up the best-documented local trail system in the Southwest. Even so, the complexity of such a network as it originally existed can only be approximated, for in most cases the visible trails are only a fraction of those originally used by the inhabitants.

Spatial Organization

At Tsankawi the most obvious trails are those worn along the mesa flanks, connecting dozens of cavate pueblos, storage cists, and other features. Some of

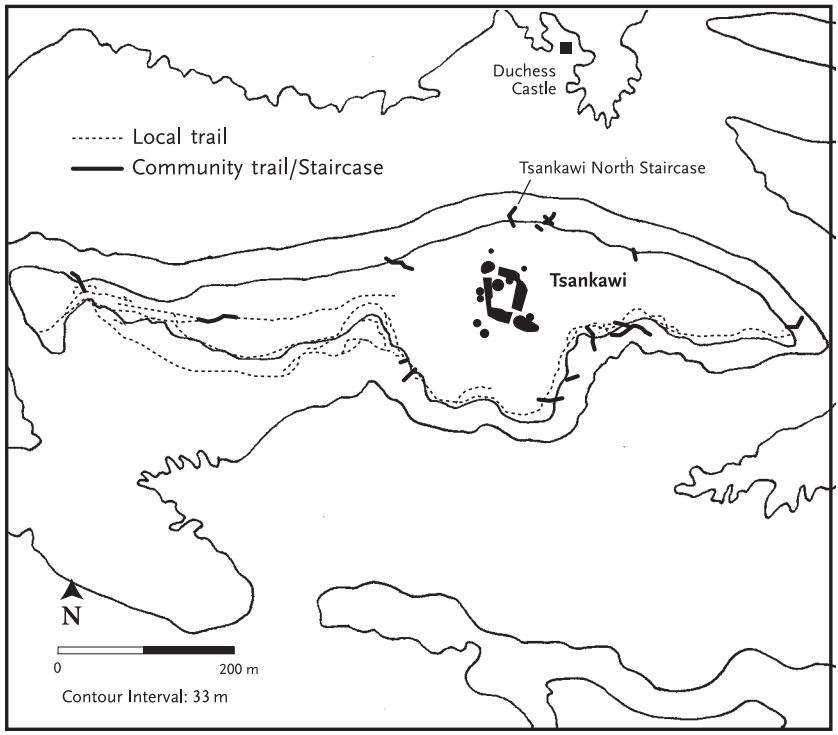

Figure 5.1 Local and community trails on Tsankawi Mesa. (Base map courtesy of Kay Beeley, Bandelier National Monument)

these segments are short, often only a few meters in length, and provide ways around obstacles in the terrain or steps up a low outcrop. In general they have the redundant character expected of short routes in constant daily use (see Purser 1988:122).

At a slightly greater scale, the Tsankawi community was tied together by trails that cut across these shorter paths. Although the people of Tsankawi lived in the mesa-top pueblo and in adjacent residences, water and the best agricultural land is in the valley below, reached by a series of steep trails or "stairs." These climb down from the vicinity of the community house, intermingle with the maze of trails below, and descend the lower cliff, ultimately disappearing into the deeper topsoil of the lower slopes. I assume that most of these once

led to the fields, water sources, shrines, and other features of the community landscape. The trails leading up and down Tsankawi Mesa are not as redundant as others in the vicinity, and because the cliff can be descended in only a few places, many appear to have been used for long periods of time. Trails of similar design climb other mesas nearby, most of them connecting to special activity areas or shrines.

At the greatest scale, a small number of regional trails provided connections to the broader world. The most obvious are found on the narrow potreros that separate the valleys of the central Pajarito. In 1988 we were surveying the potrero immediately north of Tsankawi Mesa—known uncreatively as "North Mesa"—and recording numerous trail segments climbing up and down its flanks (see fig. 2.6). This was confusing, because there were no residential sites above, nor any other feature that we recognized as significant. It gradually became clear that the trails themselves were the primary feature of North Mesa. We were looking at local links to a major trail running along the flat, bedrock summit. The potrero extends several kilometers east to the Rio Grande, making it an ideal route for moving through the region. Years later we were able to document that this trail network continued westward. The entire system was a major geographical conduit of travel linking the river with the Jemez Mountains.

The potreros run roughly southeast-northwest, and trails on their flat summits represent movement along the path of least resistance. Travel that crosscuts the grain of the land is more difficult to document, because in this direction the steep-sided potreros represent barriers rather than highways. Such routes usually appear for brief stretches only where they cross canyon rims. Elsewhere, however, telltale evidence pinpoints their presence, leading me to believe that a single central route—what I call the Old Pajarito Trail—once covered much of the length of the plateau, for a north-south distance exceeding 20 kilometers.[6] Seen as a whole, the Pajarito trail system thus resembles a ladder made up of the single central "upright" of the Old Pajarito Trail and the lateral "rungs" of the potrero trails.

Trail Structure

The structure of the Tsankawi trails is relatively consistent. They average about 30 centimeters in width, uncomfortably narrow for modern, boot-shod hikers.[7] The worn grooves range from a few centimeters to more than a meter

in depth. These wear patterns are influenced by topography. On relatively gentle, open slopes, the trails spread out and braid. Where obstacles create bottlenecks, the trails converge and are often deeply worn. At the western end of Tsankawi Mesa, several trail segments come together at a single cleft in the cliff and climb upward, creating a remarkably deep groove that has been smoothed by the passage of thousands of feet.

All the different types of stairs known from the Pajarito are present at Tsankawi. Hand and toe holds are ubiquitous amid the dwellings cut into the rim of the mesa, providing access to their upper stories and to different levels of the cliff. Most of the stairs that climb up and down from the mesa top are more elaborate, consisting of narrow steps pecked into the rock. The most formal of these features are what I call "staircases," with deeply incised steps and often other, constructed features. The Tsankawi north staircase, for instance—a narrow, stepped groove in the tuff, lined with handholds—connects the community house to the valley bottom down the steep north slope of the mesa. The staircase would have been even more impressive in its original state, because ladders would have been used to climb the final sheer cliff to the summit (fig. 5.2).

The structure of the regional trails away from Tsankawi Mesa closely resembles that of the local trails. The North Mesa trail is deeply worn in several places. A pattern of parallel trails is also present, even in the absence of terrain constraints. There are formal stairs along these routes and on the feeder routes leading to them. We recorded many associated features, including walls built perpendicular to trails where they arrive at mesa summits, effectively constricting the way up. In several cases petroglyph "trail markers" are found in close association with these regional routes. The symbolism embodied in these panels is difficult to penetrate, but it is evident that they represent direct communication between resident and traveler.

Context

Information collected by the Bandelier Archaeological Survey and archaeologists at Los Alamos National Laboratory adds considerable context to our picture of the Tsankawi trails. The primary occupation of the Tsankawi community spanned perhaps two hundred years, from the late fourteenth to the sixteenth century. Pueblo people lived nearby, however, beginning at least as early as the mid-1200s (Steen 1977:8). It is also evident that despite the

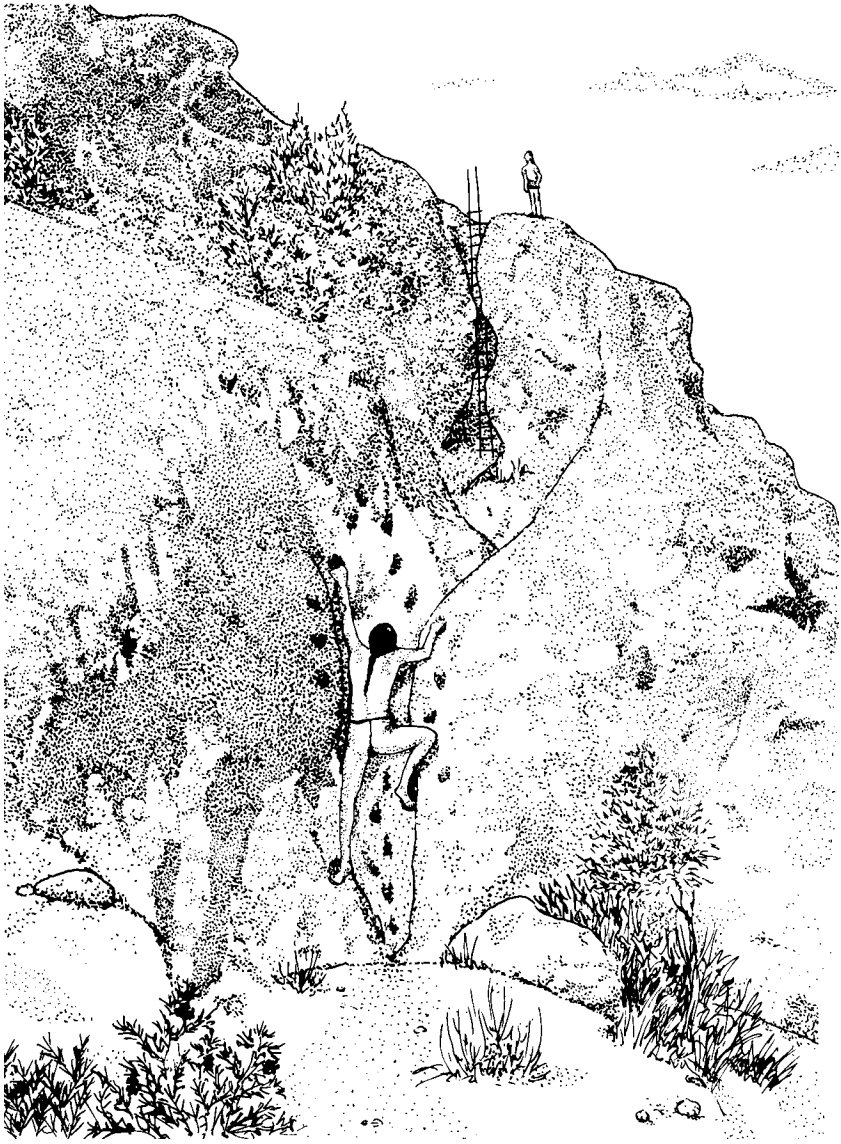

Figure 5.2 A reimagining of the Tsankawi north staircase

apparent absence of permanent residence on the Plateau in the early colonial period, it has continued to be used by the inhabitants of the Tewa and Keres pueblos right up to the present.

Local trails reflect expedient daily activities, and their contexts tell us more about short-term, pragmatic movement than about larger issues of community organization. People moved easily between structures, establishing patterns that changed with circumstances. Such subtle shifts, representing months or years rather than generations, cannot easily be seen in archaeological evidence, and trails are no exception. What *is* preserved in the local trails of Tsankawi is the aggregate effect of such activity, a densely inscribed landscape of movement. There is less variation in the stairs connecting mesa and valley, because they reflect severe terrain constraints and were probably in use for as long as people lived at Tsankawi. Modern foot traffic provides interesting insights into these patterns. Some of the local trails are now used as part of the interpretive trail system maintained by the park and show modern scuffs and wear. Because tourists come from the parking lot on the west side, however, and do not climb down to the valley, the stairs that would lead them in that direction are unmarked and comparatively pristine.

It is at the broadest scale that context provides the greatest amount of information about the spatial organization of the trail system. I am confident that the regional trails date at least to the earliest period of Pueblo settlement on the Plateau. Several of the early communities are located near Tsankawi, and they all lie along the trails. For instance, both LA 394 and Sandia Pueblo (LA 12609) are Coalition period sites associated with the Sandia Canyon trail network. The structure of these trails also provides evidence for their antiquity. On one flat mesa top, for instance, the presence of a braided trail worn into the rock indicates considerable traffic over a long period of time. I am thus convinced that the pattern of movement across the Pajarito originally developed as a reflection of both topography and settlement.

Over time, while the locations of settlements changed, the established trail system remained in use. Tsankawi Mesa was uninhabited in the earlier periods and so was bypassed by the trails. When the older communities were abandoned in the fourteenth century in favor of the Tsankawi community house, new trails had to be built to connect it to the older network. Despite the 200-odd years during which Tsankawi dominated the landscape, most of the routes leading to it are still relatively insubstantial in comparison with the deep ruts of the older trail, clearly the preferred route.

The lack of fit between the later community houses and the regional trail system implies that despite the "pull" exerted by the population centers that developed in the Classic period, the traditional patterns of communication and interaction were strong.[8] There is evidence that settlements themselves were modified to accommodate this persistence of the traditional pattern of movement. Duchess Castle (LA 42), a small complex dating to the Classic period, was newly established along the old regional trail as it passed through the valley north of Tsankawi. At Navawi (LA 214), Tsankawi's neighbor to the south, a small outlier called the Navawi Long House was built between the new community house and the main trail. To me, the construction of these smaller residences—bucking the trend toward larger pueblos during that period—indicates that traffic continued along the old routes despite major residential shifts, and the organization of regional settlement developed accordingly.[9]

Looking at the trails in context also helps to identify patterns in the distribution of formal stairs. Today the approach to Tsankawi from the west leads us to perceive that direction as the "entrance" to the community core. The highly formal Tsankawi north staircase, however, makes it clear that to the Pueblo inhabitants the gateway to their community lay to the north. The head of the staircase overlooks both North Mesa Trail and the Old Pajarito Trail, with Duchess Castle at the junction. The Tsankawi north staircase thus represents the most important connection between Tsankawi and the world beyond, a spatial relationship clearly reflected in the formality of the staircase itself.

With the ultimate decline of Tsankawi it was the new trails that fell out of favor while the traditional pathways remained in use. Their structure in this late period reflected changing patterns of activity on the plateau at a time when few people lived there regularly. For instance, bedrock pits were cut more than a meter deep into the trail surface at two places along a regional trail in Sandia Canyon. These "game traps," believed to have been used for hunting deer, would have been awkward when the trails were in continuous use by local residents. I think they were instead made by Pueblo hunters in fairly recent historic times, when the routes were more commonly taken by deer than by people (Steen 1977:8, 30).

Discussion

The Tsankawi trails provide several insights into the overall organization of the Pueblo landscape. This landscape of movement speaks not only of the way people went about their daily lives but also of the ways in which their

activities might have changed over time and what cultural meanings might have been associated with such patterns.

My inference that the locations of Classic period community houses do not map onto the traditional trail system is supported by evidence from elsewhere on the Pajarito. Although the southern potreros are wider, making it difficult to track trails there, the trails that are visible still seem to correlate most closely with the earlier, Coalition period settlement. The contrasting deviation of the Classic period community houses is also evident. For instance, the Tyuonyi community house was built nearly a kilometer from the point where the Old Pajarito Trail crosses the Rito de los Frijoles. The later strategy of constructing small pueblos along those trails is evident there as well, with Rainbow House (LA 217) built at this same crossing.

The construction of community houses away from the principal routes of travel from the mid-1300s onward suggests the perception of threat. Stereotypically, trails are considered features of communication and integration, linking people over long distances. Yet routes of travel can be used by foes as well as friends, and cross-cultural ethnography is filled with references to this possibility (e.g., Zedeño and Stouffle 2003:66). Trails used by the indigenous peoples of the Colorado Desert in what is now California, for example, served as conduits for war, and one major route was designated the "Mohave War Trail" (Laird 1976:135; Pigniolo et al. 1997:93; Rogers 1966:51; Von Werlhof 1988:58). In competitive times, putting some distance between home and "highway" would have been a prudent choice.

The construction of small satellite pueblos at trail junctions also looks like a strategic decision. I am particularly struck by their resemblance to the historical "guard pueblos" at Hopi (Connelly 1979:540–542). The community of Hano, for instance, was established when Tewa refugees from the Rio Grande were permitted to settle on First Mesa to protect the other villages already there (Dozier 1954, 1966). Guard pueblos like Hano would have been "residential buffers," intermediate between the liminal space represented by the trails and the more densely settled community cores, and providing security against any threat that might come along.

The locations and associations of Duchess Castle, Navawi Long House, and Rainbow House make them all good candidates for guard pueblos. The Tyuonyi community is actually surrounded by such small outliers, including Frijolito (LA 78) to the south and the House of the Water People (LA 10942) to the northwest (Van Zandt, in Snead et al. 2004). All these sites are

anomalously small for Classic period residences, but they were positioned to intercept travelers entering the area from any direction.[10] I am encouraged in this interpretation by one of Hewett's ethnographic notes, indicating that Navawi Long House was "traditionally said to represent a late accession of clans from a neighboring small pueblo who were allowed to become 'trail keepers' " (1904:645).

Buildings along the trails served not only as functional watchposts but also as material signals emphasizing connections between the local community and the larger world. Trails are more often thought of as links between places than as places themselves (e.g., Ingold 1993:156), but it is clear that they acquire meanings of their own, particularly as time goes on and they become more deeply inscribed in the landscape. Trails are the physical embodiments of relationships between groups, implying "the possibility, as well as the obligation, for following the path in exchange, marriage, cooperation and competition"(Parmentier 1987:109). As I have argued for shrines, the construction of other features in association with places of high symbolic content is a way in which builders connect themselves with the meanings of those places. Such relationships are thus "materialized" (De Marrais et al. 1996:19) by the act of construction, which creates a tangible statement experienced by all who pass by.

Another aspect of trail structure that reflects such symbolic intent is the construction of staircases. Many of these features are "overbuilt," with substantial steps, handholds, and related features that exceed functional requirements. I also think the parallel routes characteristic of these locations, which include the Tsankawi north staircase, represent the periodic reconstruction of the staircase rather than accidental preservation of shifting traffic patterns. The repeated reconstruction of staircases would have been an especially meaningful symbol in the Pueblo cultural context. Elsie Parsons argued for the general significance of repetition in the ritual process (1996 [1939]:490), and repetition is particularly evident in material action. The annual replastering of houses, linked to ceremonial events, has been noted (Dutton 1963:37), and kiva walls were continually replastered and repainted. Watson Smith listed 25 archaeological cases of kivas with multiple layers of wall plaster, including one kiva along the Rito de los Frijoles that had been replastered 20 times (1952:17, 1990:40–41). In Smith's interpretation, this resurfacing was unlikely to have been a functional requirement but was instead a ritual process (1952:20).

Patricia Crown and W. H. Wills documented similar patterns of "ritual renewal" in archaeological evidence from Chaco Canyon (2003:523). They

identified the regular reconstruction of kivas and the repetitive refiring of certain types of ceramic vessels cached at Pueblo Bonito. These activities might reflect various processes, they argued, but at a fundamental level they established "a foundation in collective memory" (Crown and Wills 2003:529).

The locations of the Pajarito stairs are additional evidence for their symbolic role. Because many of the most elaborate examples are associated with community houses, I believe they represent formal entryways. Pueblo people did not build gates but rather "gateway trails" (Snead 2002a). Anyone walking a gateway trail would have been immediately conscious of the difference in trail structure and so notified that he or she was crossing from what might have been neutral territory into land that had been thoroughly claimed.

Gateway trails might thus be another archaeological case for Pueblo ritual renewal, representing a periodic reconnecting of communities with the tradition symbolized by the trails that linked them to one another. This process reinforced such connections but enhanced local identity, for it was undoubtedly through community action that the stairways were constructed. Trails might have represented common tradition, but stairs were the result of local action and defined local space in relation to that tradition.

Other Trails

Although most prominent on the Pajarito Plateau, trails have been documented in the archaeological record elsewhere in the region and were present in three of the other study areas. Many of the patterns evident in the Tsankawi trails are echoed in these places, but some distinctive characteristics help expand the definition of a Pueblo landscape of movement.

Conditions for trail preservation are poor in the Burnt Corn and T'obimpaenge communities, although Harrington collected names for some of the regional trails associated with the latter (1916:383). We have had better luck in the lonely spaces of the Caja del Rio, documenting trails in several locations. Both Bandelier and Hewett noted that the main route east from Tyuonyi crossed the river to the Caja (Bandelier 1892:146; Hewett 1909:437). The archaeological signature of this route (LA 90799) passes Caja del Rio North and probably once ran all the way from the Jemez Mountains to the Santa Fe River, connecting communities along the way (Snead 2002a). A similar situation exists at Los Aguajes, where two trails descend from the community house into the adjacent canyon and presumably follow it westward toward Cochiti.

Community trails are also evident in the study areas, including one at Los Aguajes associated with the north shrine. This pathway is a faint swale or "hollow way" worn into a hill slope, so ephemeral that it is best seen in the light of early morning (Snead and Preucel 1999). Some of the Pajarito trails also lead to shrines, and a similar association between a trail and a shrine has been noted at Pecos (Boyer et al. 2002:415). The single archaeological trail found in T'obimpaenge connects Pueblo Sarco to the Rito Sarco immediately below and was probably traversed dozens of times daily by people carrying drinking water.

Guard pueblos are less conspicuous in the larger landscape of the northern Rio Grande than on the Pajarito. The outlying roomblocks of Burnt Corn Pueblo might have played such a role, however, and perhaps further survey in the area will identify others. One possibility is that Caja del Rio North itself served as a guard pueblo for Tyuonyi. That the pueblo lies on such a major route and overlooks Tyuonyi from a distance is suggestive. There are two other plaza pueblos, LA 12579 and LA 5137, on the east side of the Rio Grande, and each is associated with a major route. I think the placement of these sites must have been a product of some relationship between the people of the Caja and their Pajaritan neighbors, and it makes sense to consider them watchposts.

The basalt bedrock of the Caja del Rio Plateau provides little direct evidence on the subject of trail structure, but associated features are present. The most substantial is a berm built of cobbles and small boulders that lines the downhill margin of trail LA 90799 for a distance of more than a hundred meters. Measuring up to 3 meters wide and 0.4 meter high, this feature represents an investment of labor far exceeding that needed to keep travelers from falling. It is impossible to determine whether it was constructed over a relatively brief period or whether it represents the generational clearing of rubble off the trail and piling it to one side. It is a visually distinctive feature, however, and I think it is analogous to the gateway trails of communities farther west.[11]

The absence of systematic studies of trails in other parts of the Rio Grande hinders a broader discussion of their nature. Trails documented a generation ago link the site of Gran Quivira in central New Mexico with water sources and possibly with other communities (Howard 1959; Mathien 1991:103; Toulouse 1945). There is anecdotal evidence for a trail connecting San Cristóbal with Pecos Pueblo (Douglas Preston, personal communication, 1999), and initial documentation of trails in the Taos district is under way (Richard Ford, personal communication, 2006). The *camino real*, or "royal road," trav-

eled by Spaniards during the colonial period probably followed traditional Native routes; it passes directly through the Classic period community house of Tzenatay (Marshall 1991). These are only fragments of the larger network hinted at by Harrington, itself a fraction of the system that had existed generations earlier.

Comparing the trails of the northern Rio Grande region with the Chaco roads in the San Juan Basin provides a clearer picture of what they are and are not.[12] The Chaco roads are now believed to have had limited economic significance (see Mathien 1991; Vivian 1997b:61) but were certainly highly symbolic. Some researchers have suggested that they were cosmological, oriented cardinally or toward topographic landmarks and representing the Chaco worldview on a dramatic scale (e.g., Marshall 1997). Others have emphasized the roads' political-ideological symbolism, often at a local level (Kantner 1997; see also Hurst et al. 1993; Severance 1999; Till and Hurst 2002). In some cases Chaco roads might have served as "time bridges," linking ancestral communities with successor groups (Fowler and Stein 2001:117; Van Dyke 2003:192). According to Gwinn Vivian, "roads would preserve the existing social and political order by reducing the effects of fissioning through tangible, visible, and conceptual proof of sustained ties and communication between previously united but now dispersed social units" (1997b:57). He also argued that Chaco roads could be interpreted as "flags" (1997b:58), implying that they were part of the suite of built features that represented a social group.

The differences between the Chaco roads and the northern Rio Grande trails at first glance appear to be overwhelming. John Kantner has suggested that the Chaco roads were complemented by a network of more expedient pathways would have, which served the prosaic needs of the communities along the way (1997:59–60). These less formal features seem a better fit with those we have recorded at Tsankawi.

Nevertheless, many aspects of the Pajarito trails, such as formal stairs and berms, at least find antecedents in Chaco roads. Staircases along the roads can be highly formal (Pattison 1985:71) and show signs of repetitive reconstruction (Rory Gauthier, personal communication, 2003). The multiple, parallel routes present in some Chaco cases (Vivian 1997a:19) have been interpreted as representing aspects of Pueblo historical traditions (Marshall 1997:69), thus reflecting processes similar to those I have suggested for the Pajarito trails. Even the more prosaic trails described by Kantner (1997:59) are characterized by the presence of "stone circles" that might have been symbolic.

Thus, although the Pueblo trails of the Pajarito Plateau are distinct from the landscape features devised by their Chaco predecessors, historical and cultural continuities can be discerned. I think gateway trails might have had symbolic connotations similar to those inferred from Chaco roads, although they signified autonomy rather than integration. It is presumed that Chaco roads were constructed over relatively brief intervals and that their symbolic or ritual significance was inherent from the outset. In contrast, the Pajarito trails were not necessarily built as cosmological or ideological statements but instead appear to have acquired their meanings over centuries of use. These meanings were enhanced through the construction of stairs, the piling up of berms, the pecking of trail markers, and the founding of habitations along the route.

Relationships between groups, whether contemporaneous or separated by time, and whether actual or invented (Hobsbawm 1983), can be established by the structure of movement. Both real and created connections were realized in the Pueblo world through trails. Signifying such ties "on the ground" would have been a particularly powerful metaphor.

Landscapes of Movement

Archaeological evidence for trails in the northern Rio Grande represents a landscape of movement. In the course of their daily lives people traveled both within and between places, engaged in the repetitive tasks that defined existence. Trails reflect these practices, presenting us with a static record of a dynamic process.

Changes in patterns of movement at different scales and over time tell us about the organization of Pueblo society. The intricate, braided character of the local trails at Tsankawi articulates the linkages between people and a range of common activities. Women and men climbed down the long stairs to the valley floor, heading out to work in the fields or to get water. On certain occasions people visited their neighbors or local shrines, paying attention en route to signs and symbols marking their passage. These patterns of movement changed gradually over time as homes were abandoned or reestablished and new fields planted, processes reflected by subtle alterations in the routes that made this travel possible.

Longer-distance trails represent the passage of Pueblo people through the country at a much different spatial and temporal scale. On the Pajarito, the trails ran along the high, narrow mesas, above the lower ground, which was

divided into fields, garden plots, and other claimed resources. Travelers using these trails would have seen the world from above. The presence of trail markers associated with climbing up to or down from these trails suggests that they might have been distinguished from other categories of social space. The ethnographic record is mute on the ownership of trails in Pueblo society, and the implication is that they were neutral ground along which many different people could walk. Not all space was open in this fashion, however, and features such as gateway trails communicated boundaries as effectively as walls or barriers.

Despite the possibly ambiguous territorial status of the trails, they represented a rich and, from the perspective of the traveler, unchanging historical setting. People walking the trails would have passed the overgrown mounds of earlier settlements, places that held particular meaning for the descendants of those who had lived there. The country through which trails passed would have been similarly defined by many such landmarks. Berms, cairns, and markers all contributed to this fabric of meaning.

Unlike the constantly shifting local routes, which responded to immediate needs, the major trails thus had a permanence that ultimately established the social contexts for travel. Such meanings would have accumulated over time, so what began as a way to get from place to place according to the dictates of the terrain eventually came to shape perception of the land itself.

Thus human intent and action created the trail, but ultimately the trail imposed its own order on human experience. The longevity of the regional trail system suggests that it represented a conservative force in the landscape. To the inhabitants of the country, such "trails of tradition" would have been literal signs of history and identity, a narrative reinforced by the simple act of walking from one place to the next (Snead n.d.). In the northern Rio Grande, trails are evidence for cultural continuity in the face of considerable change. The structure of the trails themselves represents a break from the more remote past—they are not direct correlates of Chaco roads or paths—but a continuous thread of movement-related symbolism can be discerned. The social reorganization that came with the Classic period also changed movement through the landscape. Yet even while new conditions provoked new responses, the power of the past was fundamental. Members of local communities returned to the old trails regularly to rebuild the stairways and link their own ambitions to the tradition the stairways represented.

That the inhabitants of the pueblos of the fourteenth and fifteenth

centuries found it necessary to continually reemphasize their ties to the past represented by the trails—even while physically removing themselves from such routes or building barriers against them—suggests that identity took on a new urgency during those years. A competitive climate made the construction and definition of place far more overtly important than in earlier times, and the new guard pueblos suggest that this competition could be lethal. The sun and the moon knew their paths, as did the people who watched them move through the northern New Mexico sky, but in aggressively staking their claims to their own trails the people betrayed an unease over their place in an order that had once gone unquestioned.

6
Competition

> We have, it is true, been dealing with people long dead, But we have made small effort to bring them back to life.
>
> —A. V. Kidder, *Pecos, New Mexico: Archaeological Notes*

I began with a quotation from Adolph Bandelier, so I end with one from A. V. Kidder, for the few decades that separated them in the history of Southwestern archaeology marked a fundamental transformation of the field. Bandelier's study of the people of the northern Rio Grande incorporated archaeology and historical ethnography to a greater extent than perhaps anyone has attempted since. Yet only a brief interval passed before a new generation of Southwestern scholars discarded this approach. Nels Nelson, Clark Wissler, Sylvanus Morley, Neil Judd, Alfred Kroeber, and Leslie Spier championed the new emphasis on chronology, but it was in Kidder's hands that it took its most coherent form. That his summary of Southwestern archaeology (1924) remains in print more than 80 years after it was published testifies to the enduring legacy of this paradigm.

At the end of his career Kidder, having spent two decades away from the Southwest, had the rare opportunity to return, in an intellectual sense, and reevaluate his contributions to the field. His final remarks on Pecos Pueblo (1958) are poignant, expressing pleasure at revisiting old achievements and regret at missed opportunities. The preceding epigraph illustrates Kidder's concern that he and his colleagues had left out of their conclusions what should have been the most important aspect of their research—the lives of the ancient inhabitants of Pecos Pueblo.

Archaeologists of the last few generations have worked to put people back into the pueblos and have made some progress. The survey data I have presented here collectively represent the product of one approach to repopulating the Southwestern past, an approach I call the archaeology of contextual experience. Deep mapping, a focus on communities, and an integrated perspective on the Pueblo world of the northern Rio Grande help to address some of the overlooked topics Kidder had in mind. The maps I have derived from this

process—landscapes representing provision, identity, and movement—embody three themes that bear directly on social and political organization in the late pre-Columbian era. My choices are selective, and there are other obvious possibilities—economic interaction, for instance—for which equally deep maps could be made.

To conclude and to bring these maps together, I return to the larger questions about the Pueblo past that I described in chapter 2. "Origins" are not directly accessible here, but "organization" certainly is, and one organizational theme that leaps out is that of *competition*. On the surface this might seem counterintuitive, because the subjects I have examined do not necessarily represent competitive processes. Growing corn, building shrines, and traveling through the countryside are not as obviously reflections of social strife as walls or fortresses would be.

Competition is also a tricky concept in Southwestern archaeology because it requires getting around a central preconception about Pueblo history. We are much happier thinking about cooperation, and many of our models of pre-Columbian society in the region are built around strategies of social organization that were consensual and collaborative. This bias—analogous to Lawrence Keeley's "pacified past" (1996), often pointed out by warfare theorists—has been traced in part to Ruth Benedict's vision of an Apollonian Zuni of the 1930s (Fowler 2000:340; see Haas and Creamer 1997:239; LeBlanc 1999; McGuire 2002). It is ironic that a desire for a peaceful Pueblo past is a case in which archaeologists have perhaps given too much credence to ethnographers, without being more skeptical of their motivations and those of their sources as well.

I am not looking for war here—although I think it happened—but for something more fundamental in Pueblo society. Competition is not necessarily associated with marauding armies or blatant social inequalities but is instead a more basic factor underlying human interaction. I am convinced that in the pre-Columbian Pueblo world, competition—between people, groups, communities, and perhaps larger social entities—was a central tension running through a social order that arose in a land of scarcity.[1]

To examine competition as a fundamental condition of society in the northern Rio Grande at the end of the pre-Columbian era, I bring together my different maps of community landscapes and treat them collectively. It is also possible at this point to investigate the ways in which these landscapes changed over time. I believe competitive pressures existed within and between commu-

nities, and these conditions changed over the course of history. Indeed, each of the community landscapes I have discussed reflects distinct historical circumstances, through which overall trends and distinctions can be discerned. Looking beyond these communities, patterns of evidence discovered by other researchers elsewhere in the Southwestern Pueblo landscape reflect competitive processes at a broader scale.

Competition within and between Pueblo Communities

Landscapes of provision in the northern Rio Grande provide the most compelling evidence for competition *within* Pueblo communities. The groups studied here probably had populations of similar sizes, no more than a few hundred people. Thus each experienced similar demands for food and exerted similar pressures on the local environment. The way in which competition took shape in each of these settings sheds light on how competition shaped the Pueblo world throughout the Southwest.

First, I need to identify the relevant actors and their roles. It is apparent, for instance, that each community as a whole had a relatively small set of functions. In particular, I do not think the community played a significant role in the actual growing of crops. Theoretically, it would have been possible for community leaders to use the available labor pool for communal projects, and agriculture would have been a likely target. However, none of the study areas showed evidence for the investment of substantial labor in agriculture. Formal field systems were scarce, and even where they existed, they appeared to have been built by small groups of people.

Instead, agricultural features in the study areas were associated entirely with family-scale farming. The modest rock alignments near Los Aguajes, intended to divert seasonal rainfall running down arroyos into gardens on adjacent narrow terraces, could have been built by a small group in an afternoon, and few of the field systems we noted elsewhere required more time than this. Archaeologists who have worked even with the larger field systems in the northern Rio Grande now tend not to see them as having been built by large gangs of laborers working at the behest of community leaders.

It is also evident that the community had only limited control over arable land. My evidence for this is the distribution and organization of agriculture within the community cores, with particular reference to field structures and theories of economic distance. Where the land was of relatively

uniform value for farming, people constructed field houses only when the distance from home was great enough to make it costly to walk back and forth every day. Even under these circumstances they used masonry only when stone was easily available. Otherwise, expedient materials sufficed. Closer to home, more ephemeral field shelters were put up to meet the simplest needs of shade and storage. An example of this scenario can be found at Tsikwaiye, where land was fairly uniform and widely available, where field houses were most common at greater distances from the community house, and where sources of masonry were nearby.

In contrast, when environment and topography provided an unusually favorable location for farming, people built field houses even when fields lay only a short walk from home. Structures in these places were much more formal than circumstances required. An example of this scenario exists at T'obimpaenge, where masonry field houses are distributed along the Rito Sarco even a stone's throw from nearby community houses but are relatively rare in the less valuable land beyond.

My inference is that the T'obimpaenge field houses signified ownership of the adjacent prime agricultural land. The pattern is similar at Burnt Corn, where small farmsteads in the community occupy the best land along the wash. Archaeologists usually assume that people in the late 1200s lived in those farmsteads for long periods of time during the agricultural season, in order to be close to their fields. The selective continuity of this pattern in subsequent times, when community houses were the primary residences and field houses came into use—but only at long distances or where good farmland was scarce—indicates that establishing field houses had more than simply a functional purpose. In the absence of significant community control over access to land, and thus only limited community authority to ensure fairness and adjudicate disputes, the investment of labor in such symbolic architecture was a practical way to signify ownership and rights.

I am persuaded that formal field systems can be interpreted as symbols of land use rights in addition to means of enhancing success in farming. I am also tempted to argue that the absence of field features in some areas where they would have been useful is additional evidence for their dual nature. That there are so few checkdams and grid gardens in the Burnt Corn community, even though such features were built in the same area generations later, implies that they were not always worth the trouble. Given the constant risk of crop failure in such a marginal environment, I assume that people took steps to im-

prove farming conditions where needed, so the selective construction of formal features—marking the land in ways we can still see hundreds of years later—was less about crops and more about rights to land.

My conclusion that communities had limited involvement in agriculture at all levels might seem to contradict recent research that has found evidence for community involvement in mediating land disputes cross-culturally (see Adler 2002a:30). My hunch is that this reflects differences between ideology and practice, at least in the Pueblo case. In other words, it might have been widely accepted that the community had oversight of land tenure even if that nominal authority ultimately made little difference. One of the things that struck ethnographers in the pueblos was the lengthy debates people engaged in over almost every topic. Fred Eggan commented that communities on First Mesa at Hopi were "beset with factions which argue endlessly," but he also implied that resolution or communal action was rare (1950:119). Thus, although shared ideology might have asserted that the community supervised landholding, in practice farmers made most of their own decisions.

In contrast to the community's limited involvement in matters pertaining directly to farming, landscapes of identity seem to have been a more important concern at this social scale. In 2005 I revisited Los Aguajes and was again struck by the massiveness of at least one of the shrines in the community. In the Tsikwaiye case, considerable labor was invested in almost every element of the community landscape *except* agriculture. The hilltop shrines required considerable effort to build, as did the reservoirs, which, as I have argued, seem more likely to have been part of the landscape of identity than part of the landscape of provision.

It is not unusual for archaeologists to argue that symbolic boundary maintenance was a key element of Pueblo community landscapes, but for me its importance for the subject of competition is that such activity was targeted at the *local* audience. Outsiders would have seen shrines occasionally, but their primary significance would have been for people living in the community. They were places of ritual significance, but most importantly shrines reified the social group and materialized it within the landscape. Given the relative autonomy of smaller kin groups and families that is indicated by the landscapes of provision, the priority placed on shrine construction is noteworthy. More effort was expended in establishing symbols of group membership than in supporting that cohesion in a more material way.

Community investment in symbols of belonging can also be seen in

landscapes of movement. At one level trail markers demarcate territory in a literal sense, and some of them were aimed at near neighbors rather than at "others" passing through. I am particularly struck by the significance of the Tsankawi north staircase and the labor-intensive trailside berm at Tsikwaiye. The evidence for ritual renewal in these gateway trails indicates that landscapes of identity were continually maintained. The overall effect might have been directed at travelers, but the process itself required local residents to reestablish the relationship between community and landscape. The act of building the symbol was as important as the symbol itself and reinforced the values behind the symbol in the minds of the builders. Over and over again, by replastering kiva walls and reinscribing staircases into the bedrock, people engaged the ideal of community in its historical and ideational sense.

In sum, there is a notable discrepancy between what was being said symbolically and the reality of community life. At a basic level, kin groups made their own decisions about subsistence, signaling their intent both symbolically and through direct action. Community authorities enjoyed only weak oversight of this process. At the same time, considerable effort was spent on symbols of unity, a form of material persuasion intended to maintain the integrity of the community as a viable unit by appealing to deep cultural concepts of place.

Heavy investment in symbols of group identity implies that the community was under continual threat of disintegration. Families constantly assessed the conditions under which they lived, making decisions to stay and farm or to depart and follow kin ties leading to other communities. Such movement threatened the viability of the whole, and indeed many communities appear to have survived for only short periods. That others succeeded over generations, however, implies that there was a benefit to belonging. Regardless, the tension was real and permeated the landscape.

Competition within communities was a constant feature of life in the pueblos, but competition *between* communities created additional risk. Using evidence from community landscapes to assess competition at a greater scale is challenging, because relationships between larger groups are most obviously manifested at the regional level. Nonetheless, our work in the different study areas provides some intriguing indications that community autonomy and the correlative struggle between such independent groups were central elements of the political system in the northern Rio Grande throughout Pueblo history.

The available information implies that the most extreme form of com-

petition—open conflict or warfare between communities—may have erupted in the region at various times. Our evidence does not bear on buffer zones between communities, but I have previously argued that tightly clustered Coalition period settlements such as Burnt Corn represent a perception of threat at a large scale (Snead 2004). As we expand survey coverage throughout the western Galisteo Basin and find more Coalition sites, I am reevaluating this position, but some of these earlier communities still appear to have been more spatially bounded than their successors, the sprawling settlements of the Classic period. I think this is meaningful evidence for competitive pressure.

Most of the community houses in our study areas had defensive aspects, and Burnt Corn and Nambe Bugge were clearly built on ridgetops with an eye to potential attack.[2] They are also intervisible with other parts of the T'obimpaenge community. The visual link between Nambe Bugge and K'ate Ouinge is clear, and the linkage between farmsteads and the community house at Burnt Corn was also enhanced by sightlines. These connective patterns are not universal in the northern Rio Grande but are common enough to suggest that broadly similar processes operated throughout the region. Conventional wisdom suggests that this concern for visibility and surveillance reflects a readiness for attack (Haas and Creamer 1993:30).

Competition between communities is muted in landscapes of identity. Because symbols of belonging are associated with maintaining group cohesion, I expect they are imperfect indicators of larger-scale processes. Nonetheless, indications that boundaries were maintained between communities are present. The towering plaza pueblo at Burnt Corn was a potent and widely visible symbol of the social group that built it, to members of the group and to all other witnesses. The placement of petroglyphs along routes of travel into the Tsikwaiye, Los Aguajes, and Tsankawi communities might signify boundaries, and although this pattern does not appear in the other communities discussed here, there are similar examples elsewhere in the region. Overall it might be that long-term changes in the organization of the landscape of identity, which I take up later, most clearly indicate the processes of competition between communities.

Landscapes of movement, in contrast, clearly reflect competitive pressures. Guard pueblos placed along trails are compelling evidence for overt conflict. The people living in them were strategically placed to warn of the arrival of hostile forces before they reached the community core. The correlated movement of community houses away from the traditional routes of travel was also a

response to threat. When the Pajarito was first settled, the trails brought people together, but in later years they seem to have brought enemies as well. Taken in combination with other evidence, such as the post-1300 prevalence of warlike imagery in rock art (Schaafsma 2000), it is difficult to avoid the conclusion that lethal violence was a feature of daily life during this time.

Such conflict was neither universal nor constant. For instance, the widespread distribution of field structures throughout the region, often in places remote from community houses, suggests a certain sense of safety. A dispersed system of land use would have been risky in times of war, given the scattering of small groups during the farming season, often far from their neighbors. This implies that easy access to farmland received priority over defense, a decision that would have been difficult to sustain if raiding parties roamed the countryside.[3]

Correlating the presence of field structures with the absence of conflict presents complications. I have already noted several areas in which field structures were always rare, such as in the Kuaa-Kay community landscape, and although I believe this scarcity pertained to competition between farming groups, the threat of war would have added an additional twist. Lang (1977:26) argued that the extensive network of field structures used during the fourteenth century by the inhabitants of San Cristóbal had "collapsed" by 1425. He suggested that this was a result of drought, but I think it equally likely came in response to literal threat. In contrast, field structures on the Pajarito were particularly *prevalent* during the same period. Maps of fifteenth-century sites show a halo of field structures extending many kilometers out from Tyuonyi (Powers and Orcutt 1999:58)—but this was also the time when Tyuonyi was ringed by guard pueblos.

The siting of community houses, particularly those constructed after AD 1350, is also problematic from a strategic point of view. Although the enclosed plaza-roomblock construction of these complexes has been perceived as defensive in itself, and pueblos such as Tsankawi were clearly positioned with conflict in mind, many of these huge sites were built on low-lying ground—locations with limited visibility in any direction. Most of these do have adjacent hills and ridges that would have been good places for lookouts, and it is obvious that the larger numbers of people in such settlements was a factor in defense. But choosing open sites for the locations of community houses was a shift from earlier, defensive thinking, which implies a different perception of risk.

A classic case is presented by Las Madres (LA 25), a fourteenth-century

community house located on a highly defensible ridegetop (Dutton 1964; Schaafsma 1993). It sits immediately across Galisteo Creek from the low-lying and extensive Pueblo Galisteo (LA 26), which was built slightly later and presumably was home to the descendants of those who lived at Las Madres. If this was the case, then it is hard to imagine such a shift occurring unless the conditions that prompted the construction of Las Madres in such a fortified location had changed.

Thus, although the integrated evidence I present here does indicate competition between communities, the nature of the competitive pressures is less clear. Other archaeologists working in the region, following other lines of evidence, have likewise suggested that boundary maintenance, and thus competition, was increasingly pervasive in the northern Rio Grande after 1300. I am particularly convinced by Michael Walsh's Pajarito work, which demonstrated that access to lithic resources there was restricted during periods of population expansion. During those times, certain communities exercised control over the sources of stone, effectively preventing neighbors from using them (Walsh 1998).

Walsh and other researchers who have addressed the issue of emergent boundaries in the archaeological record (for instance, Fowles et al. 2007) do not suggest that they represent open warfare. Instead, they perceive social and economic competition between relatively autonomous political units. This implies risks and opportunities different from those that would have existed if deadly conflict had been the rule, and it requires further investigation. In order to determine whether this alternative explanation can be "synchronized" with the landscape evidence of concern here, I shift to a broader spatial and temporal scale.

Community Landscapes in Context

Looking at changes in community landscapes over time and at different scales completes the process of integrating them into a synthetic discussion of the dynamics of Pueblo settlement. Here I can finally move toward the deep maps that I promised in the introduction. The community landscapes studied for this project were originally selected because they seemed to have been in use only briefly. In all cases the primary occupations did prove to have been short-lived, but our surveys collected evidence reflecting additional use of these areas over much longer periods.

Once farming peoples brought the countryside into use, it remained a landscape of provision and identity long after the first community houses and their associated features fell empty. In other words, the "permanence" that people sought by organizing their landscapes in particular ways was, by some definitions, achieved, but the associated meanings inevitably changed with new circumstances.

This is a complicated argument and involves historical processes to which I have so far alluded only briefly. Here I return to the study areas and discuss their histories over the longer term. I draw on my team's own survey evidence but also take advantage of the wealth of archaeological research in the northern Rio Grande for an enhanced perspective.

Burnt Corn

The founding of the Burnt Corn community in the late 1200s makes it the earliest of the five communities studied and reflects conditions in the region at the end of that century. We cannot yet determine the sequence of events that led to the establishment of the pueblo. Nearby San Lázaro and San Marcos appear to have had contemporary settlements (Janet Orcutt, personal communication, 2003; Ann Ramenofsky, personal communication, 2003), so that all three may have been founded at the same time. These communities were widely spaced, however, and the only contemporary settlement closer to Burnt Corn is a small cluster of farmsteads that might have been a seasonal farming hamlet.[4] My review of sites recorded during contract surveys in the region (Snead 2004) identified a few other scattered settlements and isolated farmsteads. All in all, it is safe to say that the western Galisteo Basin was relatively uncrowded in the 1290s.

The open landscape implied by this larger-scale perspective is contradicted by the defensive orientation of Burnt Corn itself. Our ongoing work there is addressing the issue of conflict, but for the time being the pueblo's defensiveness seems to reflect either the concerns of the first inhabitants, who might have moved to the Galisteo Basin at a time of turmoil, or a quick response to local hostility after their arrival. After a brief occupation, all nine structures at Burnt Corn Pueblo and at least one of the farmsteads were systematically burned to the ground under circumstances that suggest intentional action rather than accident or brush fire, testifying that these fears were justified (see Snead 2005, 2006b).

The destruction of Burnt Corn took place sometime in the first 20 years of

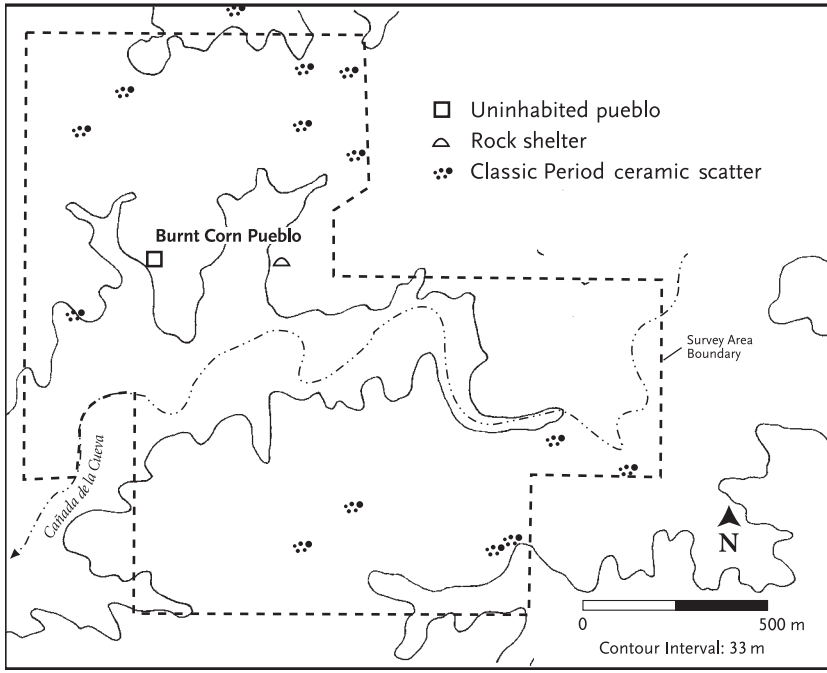

Figure 6.1 Distribution of features in the Burnt Corn landscape during the Classic period, illustrating the "void" at the former community core

the 1300s, and its aftermath presents an interesting interpretive challenge. After a hiatus of unknown length, perhaps only a generation or so, people returned to the area, leaving scatters of glaze-ware ceramics on the slopes and ridgetops as signs of their presence. We presume that these families had their long-term residences at San Marcos, because it was growing rapidly during this time, and that they grew crops and collected wild resources in a substantial hinterland that incorporated the old Burnt Corn community landscape and extended far beyond it. This pattern persisted well into the fifteenth century but seems to have come to an end before the arrival of the Spaniards.

What is particularly interesting in this afterlife of the Burnt Corn community landscape is that the site itself was never reoccupied. Indeed, a zone several hundred meters in radius surrounding the old community core shows almost no sign of later use (fig. 6.1). This is notable on its own, because episodic reuse of older sites and landscapes is commonplace in the Pueblo world (see, for

example, Head and Snead 1992). I have argued that such "permanent" abandonment cannot be accounted for in terms of resource exhaustion, for at least some of the conditions that had made the pueblo's location desirable in the first place, such as opportunities for floodwater farming, would have persisted.

Instead, I believe Burnt Corn was left empty because of its associations with death and destruction. In Pueblo tradition, communities come to grief as a result of the moral failures of their inhabitants (see Malotki 2002), and the stark ruins left behind represent landscapes of meaning that can be clearly read by all. I interpret Burnt Corn as a haunted house, a relic of ill omen for generations of Tano people as they passed along Cañada de la Cueva heading toward distant shrines, cornfields, or piñon groves (see Snead 2004).

The history of Burnt Corn is one of conflict—anticipated, realized, and remembered. Of all the communities studied here it represents the best case of short-term settlement and thus the opportunity to see landscapes as discrete concepts. One lesson it provides is that landscapes of identity do reflect competition between communities, but it is over time that this correlation is most clearly revealed.

Tsikwaiye

The view from Tsikwaiye is dominated by the Pajarito Plateau, and it is obvious that the history of the place was inextricably bound to events farther west. Settlement elsewhere on the Caja del Rio also looks toward the Pajarito, and most of the community houses there are within a short distance of the Rio Grande. Because detailed surveys of both plateaus have been conducted, it is possible to create integrated histories of the landscapes associated with the communities along the river, among which Tsikwaiye was prominent.

The Early Classic period was a time of settlement expansion on the Pajarito Plateau, following a widespread abandonment at the end of the Coalition period (Powers and Orcutt 1999:559). This is particularly clear along the Rito de los Frijoles, and Tineke Van Zandt has argued that a major expansion took place at Tyuonyi itself in the mid- to late 1300s (1999:345). Given the visual relationship between Caja del Rio North and Tyuonyi and the existence of a trail connecting the two, I see this expansion of Pajarito settlement as directly related to the establishment of Tsikwaiye. The Tsikwaiye community was probably founded by people from Tyuonyi, perhaps to serve as a guard pueblo on the eastern flank of an expanding sociopolitical system.[5]

Thus, when the people who lived at Tsikwaiye looked west, they saw the

fields and homes of close relatives with whom they participated in shared social and ritual events. This was a relatively brief episode, however, because Caja del Rio North was empty by the end of the 1300s. The Tyuonyi community survived much longer and even grew. In the next century, Tyuonyi-based farmers brought the community landscape of Tsikwaiye back into use and built the substantial field houses discussed in chapter 3.

If we assume that the people who lived in the Tsikwaiye community landscape were affiliated with Tyuonyi in both periods, then the change between the fourteenth- and fifteenth-century occupations amounts to a significant political reorganization. In the 1300s the identities of those who lived on this part of the Caja were associated first with Caja del Rio North and then with Tyuonyi, implying a certain degree of autonomy even within some sort of overarching system. A century later their descendants, if such they were, lived in a more centralized landscape in which Tyuonyi was the dominant referent for group identity.

Caja del Rio North was not absent in this reorganized terrain, but because it was no longer a "lived" place, it must have attained a different significance. The paths in and out of Tsikwaiye undoubtedly remained the same, but their associations had changed. We cannot determine, for instance, whether the older shrines remained subject to veneration in this new era, but without a community house at their center they must have played different roles as well.

This pattern of landscape reuse resembles that at Burnt Corn, and as at Burnt Corn, later people avoided the former Tsikwaiye community core (fig. 6.2; Snead 2004). None of the later field houses is within a kilometer of the empty community house. Unlike at Burnt Corn, however, we have no evidence for catastrophic destruction. Several looted rooms are visible at Caja del Rio North, and none was clearly burned. We thus have no evidence to help us distinguish between different scenarios for the abandonment. Whereas Burnt Corn was a haunted house, Caja del Rio North might have been a more ambiguous historical referent, particularly because the people who passed by the old community house on the way to distant fields likely were descendants of those who had once called it home.

I am intrigued by the possibility that a causal relationship existed between the political reorganization of the Tyuonyi community and the desertion of outposts such as Tsikwaiye. The older system, in which confederations of otherwise autonomous communities were linked by history and genealogy, gave way to a more centralized political structure, a circumstance that might

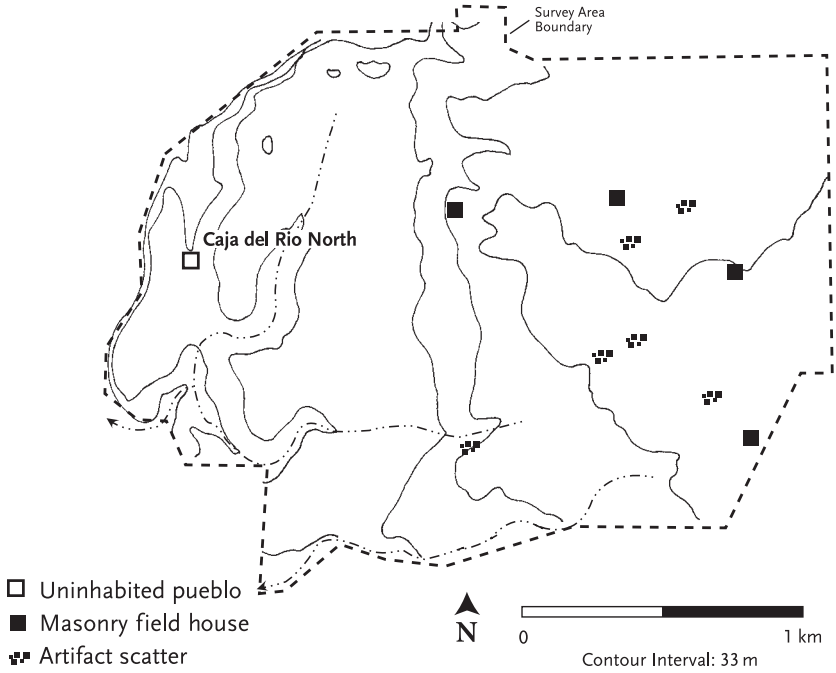

Figure 6.2 Distribution of features in the Tsikwaiye landscape during the Classic period, illustrating the "void" at the former community core

reflect competition between social groups. Whatever the proximate cause of the episode, the remains of Caja del Rio North would have served as a cautionary tale to later inhabitants. The story might not have had the terrifying ending attached to Burnt Corn, but the inevitable message in Pueblo tradition—that the demise of the community was the result of incorrect behavior—was similar. The history of Tsikwaiye was thus one of reorganization and its consequences.

T'obimpaenge

Unraveling the history of T'obimpaenge from the community landscape presents the most complex challenge of any of the study areas. Along the eastern perimeter of the Tewa Basin we have no well-excavated contexts and few modern-day surveys to help us draw a more regional picture. My team's own survey information conveys the image of a community with more than one center undergoing continuous change.

Adopting a slightly larger scale adds clarity and provides interesting points

of comparison with the other cases. We have remarkably little evidence for earlier Coalition settlement in the entire area. Only La Caja and poorly known sites along the Rio Chiquito farther north, including Pueblo Quemado (LA 57), are possible candidates.[6] We found no evidence that we could recognize for earlier occupation along the Rito Sarco, nor did anything beyond a few stray sherds suggest significant use of the region after the fourteenth century. Unlike the situation on the Pajarito Plateau, where communities such as Tyuonyi were occupied for generations, the Sangre de Cristo flanks were left behind quite early.

It is also interesting that these valleys did not continue as agricultural hinterlands in the later periods, as occurred on the Caja del Rio. When people moved downslope to places such as Nambe—inhabited since roughly 1350—they largely left the higher valleys behind. Florence Ellis (1967a, 1967b) argued that other people already lived in the lowlands when the Tewas arrived from the north, and the newcomers remained in marginal areas until the threat of conflict with their neighbors diminished. It is difficult to sort this out using present information, but the fact that all these communities were empty after 1450 does suggest that they were in relatively undesirable locations, at least for farming.

Seen from above, T'obimpaenge appears to be a clustered settlement reflecting complex and possibly integrated political entities like the one I have described for Tyuonyi. On the ground, the case is less clear. The northern T'obimpaenge community houses were built first, implying a southward progression of settlement over time. This process is evident even in the landscape data, for although earlier, black-on-white ceramics were found throughout the valley, the later glaze wares were restricted to the southernmost areas. Without better dates, we cannot make more definite correlations, but I believe that what we are seeing in the T'obimpaenge landscape was the end product of a century of shifting settlement (Ellis 1964; Snead et al. 2004).[7]

I interpret the progressive establishment of new community houses and the gradual abandonment of old ones in T'obimpaenge as an archaeological example of mother-daughter village fission. There are many ethnographic cases of this process, particularly from Hopi, where the Oraibi split of 1906 led to the establishment of several new communities and where similar but less violent episodes on Second Mesa led to the division of Shongopavi, Shipaulovi, and Mishongovi (see Bradfield 1971; Cameron 1992; Levy 1992; Titiev 1988 [1944]; Whiteley 1988a, 1988b). In some of these cases, functional

relationships were maintained between the ancestral village and descendant communities (Connelly 1979). A Keres example is provided by the Tamayame people, who now live at Santa Ana Pueblo. The record of their journey to that place is replete with stories of communities fissioning and recombining. This process is ongoing: Santa Ana has been gradually depopulated in favor of the village of Ranchitos, where more agricultural land is available. In this situation the mother village remains the ritual center of the community, despite the fact that on an average day only a few caretakers live there (Bayer et al. 1994; White 1942).

The organization of the landscape at T'obimpaenge—closely spaced community houses with overlapping chronologies, intervisibility, and a related distribution of small structures—implies to me that this was a "Santa Ana" situation. Older community centers at T'obimpaenge were gradually emptied in favor of new ones, until people left the valley itself in favor of new territory to the southwest (Snead et al. 2004). The whole was thus less than the sum of its parts, and although there were times during the fourteenth century when a multicentric community did exist in T'obimpaenge, they would have been brief. Despite the limited archaeological evidence for use of the vicinity in subsequent centuries, the Tewa place names recorded by J. P. Harrington indicate that some associations between the people of Nambe and their former homes were ongoing. It is likely that hunters, foragers, and ritual specialists visited the area regularly.

The history of T'obimpaenge is thus one of fission and movement. The builders of Nambe Bugge looked northward to K'ate Ouinge and perhaps even farther to Pueblo Sarco, where their grandparents had lived. Their own children would cast their eyes still farther south, where a few farmsteads were already thriving. Ultimately T'obimpaenge would become a place of memory for those descendants, an episode on the long journey to find home. If my interpretation of competition between residents for access to good farmland is correct, not all of these recollections would have been positive.

Los Aguajes

The open terrain of the Caja del Rio was not particularly attractive to a Pueblo community, even in times when rainfall agriculture was possible. This watering place along the dusty trail had been used for centuries before the community house was constructed and would continue to be visited after its

demise. Yet during a brief interval Los Aguajes was built and ritually established as a lived place, adding a new layer to the already complex local associations.

Los Aguajes is also anomalous in the regional sense. The fifteenth century was a time of settlement contraction, not expansion. Large areas that had once been heavily populated—such as T'obimpaenge, the eastern margins of the Santa Fe district, and the northern Pajarito Plateau—had now been left largely to hunting parties. New residences built during this time were generally guard pueblos or other functional offshoots of older, long-term communities. Los Aguajes is the only case I know of what appears to be a fifteenth-century community house founded in isolation.

Two scenarios make some sense of this situation. The first is that Los Aguajes actually was part of a larger community. Equidistant between the Rio Grande and the Santa Fe River, it also lies between the major contemporaneous communities along those rivers, particularly Tzeguma (LA 16, Cieneguilla) to the east and a cluster of sites near Cochiti to the west that include Kuapa (LA 3444) and Pueblo del Encierro (LA 70). It is harder to make direct associations between Los Aguajes and these other places because of the distance between them, but they might have existed.

In an era of competition, establishing control over the water source at Los Aguajes could have been important, both because the location is a strategic bottleneck along the east-west trail and because it allowed for control of the important shrine at that location. It would be interesting to know how the use of shared sacred places by different pueblos was adjudicated, whether ritual specialists from one community could control springs and related features to the exclusion of others, and whether such exclusion could be a source of conflict. There is some ethnographic evidence for this; springs at Hopi were "owned" by particular clans (Beaglehole 1937:13; Fewkes 1906). Answering these questions for the northern Rio Grande, and especially determining whether control of such places could change through direct action, would be an important step.

I see an alternative interpretation for the establishment of the Los Aguajes community in the similarities between the community house and the historic refuge site of Kotyiti. Bob Preucel and I (Snead and Preucel 1999) argued that this resemblance reflected attempts by leaders in the years following the Pueblo Revolt to revitalize their community by adopting traditional architectural symbolism. I now wonder whether the similarities result from Los Aguajes itself

having been a refuge from some fifteenth-century conflict. This would certainly account for its isolated location and its relatively pristine double-plaza layout. It might also explain the residents' intense focus on building identity through shrines and other landmarks. They might have been doing a little revitalizing of their own, and the tenuous identity of a refugee group would have required continual maintenance.

Given the complex settlement history of the northern Rio Grande, it would not be surprising to find evidence for groups fissioning off and attempting to establish themselves as autonomous entities. By the fifteenth century, however, any such attempts would have been bucking the trend. Los Aguajes did not last long, probably only a generation or two, so whatever window of opportunity—or necessity—led to its founding was brief.

The history of Los Aguajes was thus one of opportunity and isolation. By 1500, only adobe walls eroding into the plain remained. Such a sacred locale would have been associated with many stories and legends, of which the creation and demise of the community house would have been a part.

Tsankawi

Because of the specialized nature of the evidence I have used here, it is infeasible to present as thorough a historical scenario for Tsankawi as for the other communities. Nonetheless, some comments regarding this community are relevant, not least because they help supply regional context. They also add a final perspective on the importance of landscapes of movement in building such context, making the case for why collecting more archaeological information about trail features should be a high priority.

Tsankawi Mesa has always been seen as a spectacularly defensive location. As it comes into view around a bend in the trail to the west, it stands out against the far horizon and dominates the central Pajarito Plateau. The implications of its defensiveness, however, have rarely been explored. Indeed, many Pajarito community houses of both earlier and later date—notably Sandia Pueblo, the Guaje Mesa site, Shufinne, and Puye—were built on mesa tops. Others, such as Otowi, were constructed on relatively high points overlooking surrounding farmland.

Trails shed light on this situation, particularly by indicating that even defensively positioned Coalition sites such as Sandia Pueblo were well integrated into the regional system of movement, whereas the later sites were not. Trails provide additional evidence for increasing competition over time. Otowi

is characterized not only by an impressive gateway trail leading north—the Bayo Staircase, with a huge petroglyph trail marker that would have been visible for hundreds of meters—but also by a trail leading up the isolated potrero overlooking the community house. There is little on the summit of this rock, but it certainly would have served as an excellent redoubt in times of crisis (Snead 2001b:10).[8]

The implications of the widespread defensive posture of communities on the central Pajarito Plateau would have been profound. It is unclear who the "enemy" was, but if community autonomy was as well developed here as elsewhere in the region, then it is likely that people at Tsankawi saw even close neighbors as potential threats. I am thus unconvinced that the "Tsirege Group," made up of the major community houses on the central Pajarito, was more than a historically related cluster of settlements without significant integration.

Under such circumstances, even traveling to and from fields would have been both logistically difficult and potentially perilous. The difficulty of holding small farming groups together in the face of such a threat would have been significant, and I think that the boundary maintenance represented by the gateway stairs is one reflection of the continuous reinforcement of local identity required to prevent community dissolution. That Tsankawi appears to have been relatively long-lived suggests that some success was achieved, but it would have come at a significant cost.

The history of Tsankawi is one of autonomy and conflict, and it is all the more interesting because Tsankawi was quite different from its southern neighbor, Tyuonyi, during the same centuries. Although many aspects of the landscapes surrounding the two are similar—guard pueblos, stairs, isolated community houses—the Tyuonyi community in the fifteenth century seems to have been dramatically larger, reflecting a more centralized regional political system. This might be an illusion, because our dates are not always good enough to indicate how closely contemporaneous sites were, and the Tsankawi community might have been more extensive than I think. Regardless, it appears evident that whatever caused the competitive climate at Tsankawi ultimately contributed to the community's demise. Life on the Pajarito would have been challenging even without the addition of open warfare, and ultimately the appeal of less competitive circumstances at Perage (LA 41) or some other community in the Rio Grande Valley below would have been impossible to resist.

Each of the five study areas I have described has a distinct history, and each scenario I have provided can of course be questioned on numerous counts. My point is that our ability to generalize about large-scale processes in Pueblo societies is challenged by increasing evidence for small-scale differences between them. Yet accounting for distinct trajectories of historical change ultimately strengthens our understanding of the Pueblo world, both because it brings us closer to the way things actually were and because there are points of convergence in these ostensibly individual narratives.

Causes and Comparisons

Increasing competition over time might indeed be the only common thread in all Pueblo landscapes. Each of the configurations of community I have described—the doomed defenses of Burnt Corn, the guard pueblo at Tsikwaiye, the restless village fissioning of T'obimpaenge, the wary isolation of Los Aguajes, and the gateway stairs of Tsankawi—reflects a competitive social environment. That these mechanisms proliferated over the centuries indicates that there was no respite.

My approach to Pueblo history is interpretive rather than explanatory, but because I have argued that the traditional archaeological questions asked in the region continue to have relevance, the matter of cause is hard to avoid. My focus here is on landscape, so it will not be surprising that my thoughts about the roots of competition in the region always return to *land*. The need to organize communities around provision is particularly acute in small-scale farming societies such as that of the Pueblo people, and in the northern Rio Grande the scarcity of terrain appropriate for raising corn, beans, and squash is inescapable. In the earliest agricultural times, this need was manifested in movement, and there is little argument that the relatively ephemeral occupations of the Developmental and Early Coalition periods reflect a constant, shifting response to conditions for growing crops.

As time went on, however, it became harder to move, for several reasons. First, humans' alterations of the land and its resources would have been cumulative. Soil fertility would have been exhausted, trees cut down, game hunted—and in some cases favorable conditions would have returned only slowly. It took 50 years of reduced firewood consumption in the mid-twentieth century for the piñon woodlands around Santa Fe to regenerate, and in historic photographs of the region the hillsides are notably bare. In pre-Columbian times

similar patterns of overuse might have affected critical resources, creating circumstances in which daily human needs were increasingly difficult to satisfy.

Direct archaeological indications of the progressive degeneration of land and resources in the northern Rio Grande region are limited, partly because we have not really looked for them. Circumstantial evidence, however, is widespread. For example, ceramic firing features found far from residential areas (Post and Lakatos 1995) imply that the high-quality wood needed to achieve the proper temperatures was scarce closer to home, perhaps because of overcutting.[9]

I am not going to present a more detailed argument for resource degradation, and I think there were other factors in the landscape that promoted competition. I have argued for the consideration of meaning in the land and the way such meaning shaped the options and activities of the people who lived in it. This meaning was cumulative, so that over time the landscape became increasingly structured and dense with associations. The terrain did not exclusively represent an array of resources; it also encompassed a thick network of places layered by human action. The adobe mound of a roomblock left behind would have represented stories about those who had built it in past times and parables about what those lives meant to the living. The meanings of places would not have been quickly supplanted, and the range of responses to them would have been limited. For instance, who had the right to visit a place? Who could bring it into use once more, grow crops there, or build a "new" home? And if conditions were poor, what alternatives in a historicized landscape were actually available?

Interestingly, archaeologists are increasingly identifying long-term cultural associations with particular parts of the Pueblo country. Samantha Ruscavage-Barz has defined settlement clusters on the Pajarito Plateau that persisted even while residential areas within them changed fairly frequently (1999:132). This is remarkably similar to Mark Varien's postulation of "persistent communities and mobile households" on the Colorado Plateau (2002) and the "pattern of succession" that might characterize change in community organization in that country over time (Fowler and Stein 2001:116). For my purposes, this implies deep cultural and historical ties to landscape throughout the Pueblo world, forming one component of what can be considered "tradition." And tradition, as a set of norms and practices, has particular implications for individual responses.

Over time—and whether due to history or to ecology—there were fewer

and fewer appropriate responses to changing circumstances. Competition would have been an inevitable result, as would efforts by community leaders to contain such divisiveness by emphasizing local identity. A "tragedy of the commons" scenario (Hardin 1968; see Kohler 1992) might lurk in this pattern, in which constraining the actions of small groups in the short term was the only way to ensure success for the larger community in the long run. Such a social system would have been characterized by continuous tension and division. But in a historicized landscape, the fate of those who had flaunted social norms was visible everywhere, providing a powerful incentive to conform.

Considerable archaeological information from parts of the Southwest beyond the northern Rio Grande bears on the issue of competition within and between communities (see chapters in Adams and Duff 2004). One-to-one comparisons, however, are difficult, because research strategies differ, and I am convinced that local conditions play a central role in the way competition is manifested. I also believe the Pueblo world changed dramatically in the wake of the thirteenth century, and a bright line separates the Pueblo IV–Classic period from what went on before.

I am thus particularly attracted to the situation at Homol'ovi, an area of post-diaspora ancestral Hopi settlement along the Little Colorado River in east-central Arizona. Archaeological research at Homol'ovi has been ongoing for more than 20 years, and I draw from a subset of the substantial number of publications available (particularly Adams 2002; Lange 1998). In broad outline, Homol'ovi was first settled by Hopi people in the mid-1200s, and the subsequent 150 years saw the development of complex patterns of social and political interaction before the populace departed, probably back to the Hopi Mesas. Ultimately, seven large residential complexes were established and abandoned during this period, along with an intricate landscape of field houses, shrines, and related features.

The initial settlers of Homol'ovi built in defensible locations, although no signs appear of overt conflict between them. They preferred the floodplain of the Little Colorado River for their fields and only later began to use the surrounding uplands for dry farming. Elaborate features for capturing rainfall were always rare. Field houses were constructed in some areas, and concentrated sherd and lithic scatters, broadly similar to those I interpret as field shelters, were also present.

Field houses are particularly associated with the sites of Homol'ovi I, founded in a second wave of settlement toward the end of the 1200s, and

Homol'ovi II, established a generation after that. Shrines were particularly associated with Homol'ovi II, and Charles Adams has argued that the proliferation of such features by the mid-1300s might have resulted from a need to establish boundaries (2002:236). Autonomy on the part of communities that were nonetheless linked by history and genealogy seems to have been the political mode throughout. Some level of cooperative activity is implied by the locations of residential structures relative to each other and to agricultural land (Adams 2002:229). That such relationships could also be sources of stress is reflected in the eventual reordering of Homol'ovi settlements toward more open plaza plans and the appearance of symbols associated with the katsina cult thereafter (Adams 1991:125).

As documented by Adams, Richard C. Lange, and their colleagues, the history of Homol'ovi was bound up in developments at Hopi, thus reflecting causes and effects unique to that setting. Yet—and although they might disagree—the broad outline they provide is similar to what I see in the northern Rio Grande during the same period. Although they identify little competition between the Homol'ovi communities, the evidence I would interpret as indicating competition within them—a proliferation of field houses, shrines, and architectural expressions of a need to bind local populations together—is increasingly present over time.

Contextual Experience and the Pueblo World

The interpretive framework I have employed here can be critiqued in several ways. Issues of scale, sample, and inference repeatedly creep into the discussion, and the pages of this book are weighed down by caveats. I was once told, however, that the intractability of archaeological data means that you simply have to pick your problem and stick with it, come what may, and I think that was good advice.

One issue especially demands further attention. My colleague Stephen Post has pointed out that the "Pueblo world" I have constructed is an artificial one, made up of cultural elements derived from societies scattered across thousands of square miles. In seeking to identify parameters common to these groups, I have minimized diversity. In fact ethnologists point out many central differences among the Pueblo peoples, particularly between the Hopis and those farther east. Thus, while many of my citations pertain to the Hopis, it is not clear that the ideas and practices they describe can be applied to people

most closely related to the Tewas or Keres. That ethnographic accounts from the Hopi Mesas are more recent and more detailed than those available for other communities inevitably sends us in their direction, but a certain homogenization creeps into the mix. A "Hopi-centric" approach to Southwestern archaeology can emerge from this perspective, to the detriment of regional diversity.

I should thus be talking not about one Pueblo world but about "worlds." Several current archaeological studies focus on particular Pueblo worlds. Robert Preucel's work at Kotyiti is enriched by his work with the people of Cochiti, whose ancestors built the site, and the historical relationship between Homol'ovi and the Hopi Mesas has been central to the approach adopted by Charles Adams and his team there (see also Bernardini 2005; Lyons 2003). Another logical step toward building archaeologies of Pueblo worlds is that taken by Severin Fowles, who interprets T'aitöna in contexts derived from Tiwa history (2004a). Thus he frames archaeological information from the Taos district in terms of the movements of Winter People and Summer People who ultimately came together to create the pueblos of Taos and Picurís, an intriguingly synthetic approach.

Moving from "world" to "worlds" can be a slippery path, however, because in a historical sense there are no limits to the particular. Even very small groups have their unique histories and traditions. Fowles, for instance, points out that the information available to him was weighted more toward Taos than toward Picurís, and perhaps more toward some Taos subgroups than others (2004a: x). It is desirable to engage these more localized accounts, particularly because Pueblo culture values autonomy, but the challenges presented by such a "micro" approach are clear.

Recent research by T. J. Ferguson and Chip Colwell-Chanthaphonh moves in the opposite direction as they present several different indigenous voices in their study of pre-Columbian and historic settlement in Arizona's San Pedro River valley (2006). Their approach makes it clear that there is no single "Native" perspective, but that presenting multiple viewpoints side by side can greatly enrich our understanding of the landscape.

The evolution of Southwestern archaeology in the twenty-first century thus presents us with several potent models to follow. My decision to work with a single Pueblo world in this study correlates with my insistence that contextual experience must have an integrative perspective. If the approach is

to draw from and engage larger discussions in archaeological interpretation, then it must err in the direction of generalization. Perhaps it is a "stage" of research, one that will become outmoded when more detailed contexts are developed, but that would be a wholly positive step.

Southwestern archaeology in the field is a remarkable experience. Our time at each of our study areas was highlighted by remarkable sights. We watched wild horses at Los Aguajes, spectacular sunsets at Tsikwaiye, and hawks gliding high over Tsankawi. We listened to coyotes howling after rainstorms at Burnt Corn and spent several evenings keeping our eyes on a forest fire creeping down from the mountains above T'obimpaenge. The daily routine in these places brought intimate acquaintance with rolling hills and the vanilla smell of ponderosa pine, with dry arroyos and graveled terraces, with blue sky and rising thunderheads. Our perception of the archaeology underfoot in the northern Rio Grande was inevitably shaped by its overwhelming natural context. This lure has been felt by archaeologists from the beginning and is captured by an oft-quoted elegy of Edgar Lee Hewett's. "If you want to feel the power and pathos of time," he wrote, "roll up in your blankets some night on any one of a hundred mesas, or in any one of a hundred canyons of the old abandoned land of the Pajaritans" (1953: v).

Our responses to the places where we work tell us about ourselves but provide only a limited guide to interpreting the history of the land. We cannot be what they were—the "ancestors" who shaped that country—so we have often kept them at a distance, talking about sweeping trends of culture and history that effectively leave the land out of the picture. For many archaeologists I know, this is almost a conscious act, a resistance to the allure of the landscape.

Contextual experience provides a framework for archaeological research that admits experience but also gives it more appropriate referents. Historical ethnography—in this case, the rich record of the Pueblo people—contains its own experience, within which observations of the land as it exists today have a vital place. There are clearly circumstances in which such context would be extremely difficult to establish, but the American Southwest is one in which it is to be found on all sides. Taking advantage of this should be seen as a sign of archaeological strength, not as yielding to unreliable instincts.

Ultimately the picture of the Pueblo world of the northern Rio Grande provided by contextual experience is an image of remarkable resilience. Despite

community reorganization and the proliferation of symbolic boundary maintenance, the persistent autonomy of small groups within Pueblo societies is striking. This persistence could be a more appropriate theme to highlight than the competition that propelled it. In the end, evidence for competition and integration in the community landscapes of the Pueblo world may reflect a fundamental contradiction within that world—the way in which, in the words of Alfonso Ortiz, "a society can be divided and united at the same time" (1969:8).

NOTES

Chapter 1. Landscapes

1. The outline for an archaeology of contextual experience that I present here is a modification of an approach I suggested a few years ago (Snead 2002b), differing both in depth of argument and in a shift from "space" to "place."

2. The challenge posed by diverse definitions of community should not be overlooked. For example, in Hohokam archaeology alone we now have "irrigation communities" (Crown 1987; Doyel 1980; Gregory 1991), "platform mound communities" (Fish and Fish 1992), and "ballcourt communities" (Wilcox and Sternberg 1983), all of which are seen as distinct modes of organization.

Chapter 2. Histories

1. For example, some of the Cochiti tales presented by Benedict (1931) and Lummis (1893) are set in parts of the Pajarito Plateau that were eventually abandoned in favor of the present community. In my opinion the historicity of these accounts is less important than the fact that they relate to a history of movement. For similar histories of the Northern Tiwa, see Fowles 2004a.

2. No explicit critique of these models is implied here. For most of them, settlement data are one element in a larger range of variables such as evidence for craft production and exchange that are used to support the argument for a particular organizational strategy.

3. Fieldwork at Burnt Corn has been part of a broader effort, the Tano Origins Project, supported by the National Science Foundation (BCS 0352702). For present purposes I refer largely to the survey components of this program, conducted in 2000 and 2006 (Snead 2001a, 2004). The documentary record for Burnt Corn is complex. Initial tree-ring dates for the pueblo itself (LA 359) were published under the designation LA 9144, a site number assigned erroneously in the 1960s. H. P. Mera initially called LA 358 "Arroyo Cuervo Plaza," but because the drainage is now known as Cañada de la Cueva, I have adopted "Pueblo Escondido" for that site. The dates for the primary occupation of Burnt Corn derive from the 2002 excavation season and may be modified when dates from more recent seasons become available.

4. Nomenclature has been a particular problem in T'obimpaenge. I originally used the term "Cañon Chimayo"—derived from the relevant USGS topographic quadrangle—for

the study area, but because Rito Sarco is a more familiar term, I use it here as a geographical referent, and I use "T'obimpaenge" to identify the community itself. Sorting out the names of the T'obimpaenge community houses was also a challenge, because the names used by Harrington (1916), Mera (1934), and Ellis (1964) are inconsistent. I have largely adopted Ellis's names, although she appears to have confused LA 245, K'ate Ouinge, with LA 264, Pueblo Sarco, which she did not visit and which was named later. I discuss this at greater length elsewhere (Snead 1995:79–80). The site of Cundiyo lies beneath the historic village of the same name and has largely been destroyed. La Caja is to the northwest, overlooking the Santa Cruz reservoir. Neither was recorded in detail during the project.

5. In my dissertation I called the Tsikwaiye community the Montoso Peak Study Area, in reference to the nearby summit. My use of a Tewa place name here does not necessarily imply that I think it was an ancestral Tewa settlement. The Tsikwaiye Community also provides a good example of how the idealized 2-kilometer-radius survey zone was actualized. The location of the Caja del Rio North community house meant that a substantial portion of the community core, defined in the abstract, would have fallen inside Bandelier National Monument across the river. Because I did not seek permission to survey inside the monument, our work was restricted to areas on the east side of the Rio Grande.

6. I originally correlated the primary occupation of the Tsikwaiye community with period 6 (AD 1290–1325) in the Bandelier chronology (see Snead 1995), but on further review the ceramics fit better with the subsequent phase.

Chapter 3. Provision

1. Agricultural systems designed to capture water washing down slopes are often referred to as *ak-chin* fields, after a practice documented among the Tohono O'odham in southern Arizona.

2. Recent data suggest that settlement during the Developmental period, prior to AD 1150, might have been concentrated in the same floodplains that the descendants of those people avoided (Cordell 1989:306). Reasons for this are not understood, largely because few sites of this period have been excavated, and if they were present at lower elevations, many would have been buried by subsequent alluviation.

3. Of course this might be due simply to the fact that gravel mulch gardens have been recognized consistently only in the past two decades, and no recent survey work has been done at San Cristóbal. Lang did not address the situation at San Cristóbal in his article on San Marcos (1995).

4. For instance, Lang (1977) recorded possible agricultural features associated with Colina Verde (LA 309, also known as Piedra Lumbre), a Coalition period pueblo on the east side of the Galisteo Basin.

5. The trail to Burnt Corn crosses one of these relatively flat, gravelly ridgetops, and telltale linear features suggest that this area might have served as a mulch garden. Despite regular searches, to date no ceramics have been seen in this location, and it is nearly 2 kilometers north of the pueblo.

6. There is anecdotal evidence for field structures along Galisteo Creek, but they have

not been formally documented. Several small, four- to six-room structures are known in the region, including the Waldo site (LA 9174) and the Lodestar sites. The excavator of Waldo suggested that it was a seasonal occupation (Hammack 1971) and thus a possible field house for people living elsewhere. Our data from Lodestar do not necessarily support this assertion (Allen 2006; Snead 2006a), and our excavations at "Slope House" (LA 134193) in the Burnt Corn community exposed a formal mealing bin, not typically associated with short-term occupations. The sites we considered field structures at Burnt Corn were also much smaller, usually one or two rooms in size.

7. Our survey of nearby Petroglyph Hill identified only 14 structures of pre-Columbian date on the entire 500-hectare tract, only a few of which resembled farmsteads or field structures.

8. It is difficult to understand the role of the pumice fields in this correlation, because we do not yet know how they were used. If all the pumice deposits in the Tsikwaiye area were planted thickly with corn, they would certainly account for much greater levels of production.

9. The data used in this study came from the main section of Bandelier National Monument. I think it likely that this pattern exists elsewhere on the Pajarito, too, and that irregular "rock alignments" that have been found either on mounds or on the adjacent ground surface, such as at the Coalition pueblo LA 394 (see Hoagland et al. 2000:7–43), are cobble alignments associated with field systems built in later periods rather than room foundations.

10. Tammy Stone (1993) argued that diversity in artifact assemblages associated with different Hohokam site types was more likely to be related to longevity of use than to functional differences. I emphasize function in my analysis, but differences in the ways sites were used and reused over time are clearly important. The comparatively brief occupations within my study areas might mitigate this factor, but to an unknown degree.

11. Analyzing scatters is particularly challenging because they are quite variable in size and date. Many of the scatters in the Tsikwaiye landscape, for instance, are extensive lithic scatters probably associated with Archaic period land use but also containing a few sherds from later periods. More detailed discussion of this analysis is available in Snead 1995.

12. The precise scale of the Nambe Lake project is not specifically described in the report, but the floodpool itself covered 56 acres. Survey was also conducted along the access roads, and some of the sites considered here were located in those areas (Skinner et al. 1980:19).

13. We need further survey along the eastern flank of the Tewa Basin to evaluate these inferences. I am particularly concerned about the absence of survey along the Rio Santa Cruz, one of the most productive agricultural areas in northern New Mexico. This means that it has been intensively used for several hundred years, with the associated negative effects on local archaeological resources. Logically the Santa Cruz Valley would have been the breadbasket of the Tewa Basin, and it ought to have a central place in our reconstructions of the Pueblo landscape.

14. One factor that does not appear in this evaluation of Pecos and Kuaa-Kay is the possible presence of more overt forms of competition, such as warfare. The absence of field

houses and field systems at these locations might in fact have resulted from particular historical circumstances that will require further study.

Chapter 4. Identity

1. Many other aspects of reservoirs recorded in the northern Rio Grande are difficult to interpret in functional terms. One of the reservoirs at San Lázaro, for instance, is a laboriously excavated, bathtub-size basin fed by grooves carved into exposed bedrock (Turney 1990:313). Even early commentators noted that some of the Pajarito reservoirs, particularly that at Puye, would have been ineffective at collecting rainfall (Hewett 1908:28), and Steen expressed puzzlement over the location of the "reservoir" amid other structures at the Guaje Mesa site (LA 12700) (Steen 1977:38). See Snead 2006b for a longer discussion.

2. Genevieve Head (personal communication, 2006) conducted a simple viewshed analysis illustrating that the location of Burnt Corn is actually relatively sheltered. It is highly visible from the immediate vicinity but effectively hidden from the valley of Galisteo Creek to the south. I expect that this position relates to the generally competitive conditions of the Late Coalition period.

3. One factor in the siting of Burnt Corn that we cannot yet evaluate is the possible effect of neighboring communities. Archaeological survey has been limited in the area, but I can safely say that the substantial public architecture represented by Burnt Corn Pueblo itself is replicated nowhere nearby. The inferred thirteenth-century San Lázaro community, 6 kilometers south, was probably contemporaneous, and if San Marcos existed in this era, it was a similar distance west-northwest. Interestingly, neither San Lázaro nor San Marcos is visible from Burnt Corn.

4. A sketch of the center shrine can be found in Peck 1999. The possible south shrine is a rock cairn on a prominent ridge overlooking the pueblo that was recorded as an isolated occurrence in 2000. On our return, we noted several associated petroglyphs and re-recorded the complex as CDC-40. More problematic is LA 134200, an unusual scatter of small stones atop a flat outcrop nearly 1 kilometer due east of Burnt Corn. It is an intriguing possibility, but I know of no archaeological precedents for such a shrine. GIS analysis of the grinding slicks is being conducted by Gregory A. Greene, who recorded them over a two-week period in 2006 (personal communication, 2007). The numbers presented here are from the field data and hence preliminary.

5. In order for this inference to be correct, there must be places along travelers' routes where petroglyphs *could* have been placed. In fact the geological strata associated with the bottom of the cañada in the vicinity of Burnt Corn is a loose conglomerate that would have made a poor surface for rock art. There are many other potential locations for rock art panels that were unused, however, and I am confident that the data collected so far support this argument. Research on the centrality of Petroglyph Hill in the Galisteo landscape has been conducted by Gary Hein, who has taken photographs of the summit as seen from sites throughout the region.

6. The present-day boundary between the Santa Fe National Forest and Cochiti Pueblo lies only a few hundred meters west of Los Aguajes. Because our work was restricted to federal property, we can only make inferences about the terrain beyond the line, although

some sites in that country—including a trail—were recorded during the Arroyo Hondo survey in the 1970s, at a time when it was accessible (see Dickson 1979).

7. The report of the 1930s excavations, assembled decades later by Gwinn Vivian (n.d.), emphasizes the artifact assemblage but includes little architectural information, which is also scarcely covered in Nels Nelson's notes. Salvage excavation at Los Aguajes might well reveal useful structural information even though the context is heavily disturbed.

8. Detailed recording of petroglyphs is a time-consuming process, and with a short field season in 1995 I felt that our efforts would be best expended on survey. Because we also lacked recording expertise, we documented a few petroglyph sites as examples, then identified 18 "localities" where petroglyphs were particularly dense as a guide for future scholarship. Los Aguajes is well known by rock art experts, and better information should ultimately be available.

9. Defensive considerations also played a role in siting the two northerly community houses in the group, Cundiyo and La Caja. We did not investigate intervisibility between the community houses other than Nambe Bugge and K'ate Ouinge, although it is an intriguing possibility. Cundiyo was probably visible from the other T'obimpaenge community houses, but I assume that La Caja was not, because it sits behind the ridge bounding the west side of the Rito Sarco Valley.

10. One of these probable shrines, situated on a high point west of the Rito Sarco, was apparently bulldozed. The evidence included some possible masonry fragments and associated artifacts scattered down the slope. My original interpretation was that this apparent structure had been a field house, but I am now convinced that this was in error, particularly because there is a substantial masonry field house on the terrace below.

11. One example is Colina Verde (LA 309, also known as Piedra Lumbre), which sits atop an isolated rise in the eastern Galisteo Basin (Lang 1977). This site can be seen for miles in all directions.

12. The distribution of shrines is another case in which older and newer survey data disagree. On the Pajarito Plateau, for instance, Charlie Steen found numerous Pueblo shrines in his reconnaissance surveys for Los Alamos National Laboratory in the 1970s, six of them resembling shrines as documented elsewhere (1977:17). In the late 1980s, the Bandelier Archaeological Survey systematically covered thousands of hectares but recorded only 10 shrines (Powers et al. 1999:146). We will need to better understand results from these and other projects before they become useful sources of comparison.

13. One flaw in this argument is that I assume that the plurality of petroglyphs were made during the time the Los Aguajes community house was occupied. Because I have implied that this sacred site had a long history, this correlation can certainly be questioned. It is worth mentioning that Petroglyph Hill includes glyphs that, by their style, were inscribed *after* Burnt Corn was abandoned.

Chapter 5. Movement

1. I use the term *trail* (which to me connotes a route of foot traffic of modest formality) in preference to alternatives such as *path, pathway, track*, or *route*. These terms are found throughout the literature, and it does not seem useful to strive for a more explicit definition.

2. James Stevenson to John W. Powell, 27 October 1880, Bureau of American Ethnology Papers, Letters Received 1879—1888, National Anthropological Archives, National Museum of Natural History, Smithsonian Institution.

3. I am indebted to Kurt Anschuetz (personal communication, 2003) for pointing this out.

4. Each of these endeavors was coordinated closely with the authorities at Bandelier National Monument, Los Alamos National Laboratory, and San Ildefonso Pueblo. The San Ildefonso study, conducted in 1991 and authorized by the office of the governor, is referred to only in general terms here.

5. These networks are the Tsankawi Mesa trail network (LA 70989), consisting of 74 segments; the Sandia Canyon trail network (LA 66885), which included 9 segments; and the North Mesa trail network, with 11 segments. The North Mesa trails were recorded by the Bandelier Archaeological Survey and have not yet been reexamined in detail. This network is thus composed of discretely defined "sites": LA 65683, 65687, 65738, 65740, 65741, 65743, and 70993. The 1991 reconnaissance on San Ildefonso land east of the park indicated that the North Mesa trail network extended at least 2 kilometers in that direction and evidently continued to the river.

6. The Old Pajarito Trail cannot be seen at Tsankawi, where it would have run through the valley to the west of the mesa, but climbs potreros farther north and south via major stairways. I also think it can be discerned elsewhere, such as on the mesa south of Rendija Canyon, where a disrupted stone cairn aligns with a pass through the potrero leading toward the Otowi community house and to Tsankawi beyond.

7. Van Zandt's review of the trails recorded at Bandelier gives an estimated mean width of 0.89 meter (1999:41). I am not very confident of either of our estimates, because I expect that different teams measured width differently, and in any event the character of the tuff bedrock differs across the Pajarito, and it probably erodes differently as well.

8. Comparative archaeological evidence of the complex relationships between roads, trails, and settlements over time can be found (see Dowdle 1987:280; Potter 1979:81), but more work on this subject would be useful.

9. Duchess Castle is named for Vera von Blumenthal, who built a home on the site in 1918 (Smith 2002:108). The pueblo itself was severely damaged in the process, and little of it can be discerned today. Our analysis of the relationships between trails and other elements of the settled landscape is complicated by cavate pueblos built into the cliffs, which are associated with several of the communities mentioned. The role of cavate pueblos in the Pajarito settlement system in general remains to be worked out.

10. The guard pueblo pattern may be even more widespread on the Pajarito Plateau, and further review of the survey data from other community houses might identify likely candidates. One possibility is that Shohakka (LA 3840) originated as a guard pueblo for Yapashi. Although the main trail leading to Yapashi climbs the Potrero de las Vacas much farther south, Shohakka lies roughly in between Yapashi and San Miguel (LA 370).

11. At first the berm feature had a distinctive un-Puebloan look to it, leading us to speculate that it had been built in some more recent period. Ultimately we were convinced

of its antiquity by the presence nearby of a historic trail with a connecting road, by its different structure, and by the fact that mature piñon pines were growing in the swale created by the trail or berm of the Caja del Rio North trail.

12. I am not familiar with any literature describing trail networks as they existed in areas of southwestern Colorado that were ancestral Tewa country, such as Mesa Verde. It might be that more detailed research would identify trails that were closer historical analogs to those of the northern Rio Grande.

Chapter 6. Competition

1. Open conflict that can be classified as "warfare" was indeed part of life in the northern Rio Grande, and we have considerable evidence for it at sites such as Burnt Corn Pueblo. Building the case for war is another argument, however, and here I forgo that challenge in place of identifying different forms of competitive pressures within Pueblo society.

2. La Caja, one of the outlying community houses in the Cundiyo Group, is also situated in a highly defensible position. In my dissertation I suggested that the regular spacing between the community houses at T'obimpaenge reflected competition between them. David Wilcox has pointed out to me that spacing at such a small scale could be explained in a variety of ways, and now that my colleagues and I are developing a better understanding of the organization and history of settlement clusters, I agree that this argument is not particularly strong.

3. In contrast, Kolb and Dixon (2002:529) documented that the precontact population of Hawaii was dispersed throughout the countryside despite endemic conflict.

4. The dating of San Marcos is insecure, owing to the shortage of tree-ring dates from that site. The roomblocks closest to the spring, with which both black-and-white and glaze ceramics are associated, are presumably the oldest, but saying much more than that is difficult. The hamlet I refer to here is the Sin Nombre community, located along Sin Nombre Arroyo southwest of Petroglyph Hill. At most it would have been home to a few families, although the presence of a shrine suggests that the community was constituted in a formal way.

5. Dating these relationships is shaky, and the presence of an earlier component beneath Tyuonyi (Onstott 1948) means that Caja del Rio North might relate to this earlier episode. Another challenge to my guard pueblo concept is that the other sites of this type that ring the Rito de los Frijoles date predominantly to the fifteenth century, a time when Caja del Rio North was empty. One possible explanation is that travel between the Pajarito and the Santa Fe area was more common in the fourteenth century than afterward, when monitoring traffic in that direction became less of a priority. I originally wondered if the Caja del Rio North community house had been built in its location by a rival group, perhaps to monitor Tyuonyi rather than to protect it, but this scenario now seems overelaborate and without precedent in the Pueblo context.

6. Pueblo Quemado is bisected by a state highway and can be seen on either side of the road between Chímayo and Truchas. Despite—or perhaps because of—this convenient

access it has not been recently documented. Developmental period sites have been recorded in the Santa Cruz district within 10 kilometers of T'obimpaenge (Paul Williams, personal communication, 2006), but they remain poorly understood.

7. This is not as clear a correlation as I would like. Published tree-ring dates from Cundiyo suggest that it was occupied in the mid-fourteenth century and thus was one of the later community houses in the valley (Smiley et al. 1953:18). There are also purported glaze wares at this site. Because it is unlikely that more substantive research will ever take place at Cundiyo, it may always be difficult to fit it into the broader pattern.

8. This feature is LA 127693, which I have designated the Otowi East Trail Network. There might be other reasons why trails lead to this spectacular but isolated mesa top, but given other known refuges, its defensive characteristics would have been obvious.

9. Research that Robert Powers is conducting on the Pajarito Plateau should provide some concrete data with which to examine a resource depletion hypothesis. Studies conducted elsewhere in the Southwest, such as the models created by Tim Kohler and Meredith Mathews (1988) for firewood consumption in southwestern Colorado, provide useful insights.

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