Competitions for power can be waged through the strategic manipulation of key physical resources. Among these assets are those fashioned by craft specialists. Insofar as some participants in a network gain privileged control over raw materials needed to fashion items desired by all, techniques essential to the production process, the means by which finished items are distributed to consumers, and the use of these objects, they can advance claims to power over others (Costin 1991, 2001; Hayden 1995; Schortman and Urban 2004b). Those who regulate any strategic point(s) in the production-distribution-consumption cycle of a generally desired good can reward those who comply with their demands by granting them access to that item and punish resistance by denying access. They do so by admitting individuals to, or excluding them from, networks enacted through the exchange and use of craft items. Such connections may be as crucial to a person’s sense of self as they are to his or her physical survival (e.g., Ekholm 1972; Friedman and Rowlands 1977; Peregrine 1991).

Chapter 6 presents a case for the existence of a muted political hierarchy within the Roble phase Naco valley. In this chapter we examine to what extent elites gained and reproduced their power by insinuating themselves within
Crafts and Power

those processes by which certain tangible assets were acquired, fashioned, distributed, and consumed.

Production is broadly defined as the transformation of raw materials into finished items for use by the manufacturer, exchange with others, or both. Distribution, in turn, deals with the mechanisms by which completed goods are passed to those who will use or consume them. Obviously, these processes are interrelated. Each step in the cycle, however, may be implicated in the projects by which different networks are enacted and the goals of their members realized. The manner in which production, distribution, and consumption instantiate these interpersonal ties and are related to political struggles varies by industry and, within any one industry, over time.

The discussion that follows is organized according to these crafts for which there was evidence at Roble phase Sites PVN 144, PVN 306, and Naco: knapping obsidian blades, fashioning flake tools of chert and perlite through hard-hammer percussion, manufacturing ceramics, and spinning/weaving. Each case will be examined to determine who was involved in the processes of production, distribution, and consumption; how networks were embodied through the structuring of these three processes; and the extent to which such nets were implicated in contests for power. Primary attention is paid to blade knapping, the craft for which we have the most information. The implications of these findings for the organization of power and the construction of hierarchy at Roble phase Sites PVN 144, PVN 306, and Naco are summarized in the concluding section of this chapter.

OBSIDIAN BLADE KNAPPING

Evidence for fashioning obsidian blades here is seen in the distribution of those polyhedral cores and core fragments from which the implements were detached. Relying on such diagnostics means we cannot necessarily identify workshops where stone tools were made (e.g., Moholy-Nagy 1990). In fact, the recovery of most cores from trash deposits implies that the observed distribution reflects the general areas where blade nuclei were jettisoned or lost. Assuming that these find-spots are not far removed from the places where blades were manufactured and the cores stored, it is possible to use the available information indirectly to infer who was involved in fabricating blades, at what scales and levels of intensity, and in what contexts they worked.

Contexts and Intensity of Production

There are very slight indications of blade knapping at Site PVN 144; two polyhedral core fragments that were reused as sources of flakes detached by
direct percussion, one recycling flake from a comparable nucleus, and an exhausterd polyhedral core were found scattered among three middens situated beyond the main plaza. In addition, one distal core rejuvenation flake comes from Str. 144-2. These materials are not strong indicators of blade production at these locales, as all but one of the examples were likely employed as flake tools or sources for them. The one exception, the exhausted nucleus, was probably lost prior to its conversion into a flake core, as it was no longer a source of blades. In short, the few signs of blade manufacture identified at Site PVN 144 could well represent materials recycled from workshops located at unknown distances from their find-spots. They are therefore not necessarily indicative of blade production in or near the settlement.

Sixteen polyhedral cores not subsequently modified by other uses were found in Roble phase contexts at Site PVN 306. Although one of these nodules was encountered near a building (Str. 306-20 in the western principal plaza [WPP]), the rest were derived from middens not clearly linked to specific edifices. The distribution of these trash deposits hints at two potential patterns of obsidian blade production across the center. Two cores were located within and directly southwest of the WPP (including the one found in the environs of Str. 306-20). This association suggests that at least some blades were fabricated in the course of feasts and rites conducted within the center’s primary focus of religious devotion (see also Wells 2003). The majority of the polyhedral cores, however, were scattered over five discrete middens lying north and east of the principal plazas; they were not identified in trash deposits south and west of this architectural core, nor were they retrieved from all of the investigated northern middens. Insofar as the observed distribution accurately mimics the patterned spread of polyhedral cores within Site PVN 306 during the Roble phase, blade knapping was an activity pursued in domestic and public contexts by a limited array of specialists, most of whom resided in humble constructions north and east of the site’s architectural core.

The distribution of polyhedral obsidian cores at Naco indicates that blades were also fashioned primarily by artisans who lived in architecturally modest house groups. Five of the middens excavated beyond the main plazas but within Naco proper yielded fragments of blade cores, indicating widespread participation in fabricating these tools. Here, as at Site PVN 306, it seems that blade knapping was carried out primarily by people who were not members of the elite household and who operated largely beyond the direct supervision of those luminaries.

There is no evidence at Naco or Site PVN 306 that those who fabricated blades always enjoyed privileged access to their products. The Subop. 306AX/BK midden, for example, yielded the highest density of polyhedral cores at this center but not the largest concentration of blades (1.2 cores and 12 blades
The frequency and density of polyhedral nuclei are nowhere high in any absolute sense. Based on the available evidence, therefore, it seems that no one group of artisans was working full-time in this industry. Instead, the considerable demand for obsidian blades throughout the Naco valley was likely met by the combined efforts of multiple groups of artisans working on their own. The ubiquity of blades everywhere, even at Site PVN 144 where there is no strong evidence for their manufacture, indicates that these implements flowed in relatively sizable volumes along networks that linked producers with consumers within and across settlements. How these exchanges were organized remains an open question.

**Modes of Distribution**

One possibility is that market transactions were the means by which blades were acquired (Berdan 2003b: 94; Berdan et al. 2003: 101–102; Braswell 2003b: 156; Masson 2000b: 188–189; Smith 2005). As Ken Hirth and others have argued (1998; also see Dahlin et al. 2007), relatively even distributions of goods within sites and across regions may be diagnostic of transactions mediated through face-to-face exchanges at established locales. The open WPP at Site PVN 306, Naco’s southwest principal plaza, and the central plaza at Site PVN 144 may have provided venues for such interchanges. Nothing beyond the easy accessibility of these spaces, however, supports such a view. Outside these weak possibilities, there are no clear signs of a marketplace at any Naco valley settlement. Given the ephemeral nature of these economic venues throughout Mesoamerica (e.g., Dahlin et al. 2007; Jones 1996), however, our inability to identify them here is not surprising.

Through barter within markets or not, producers and consumers likely negotiated the transfer of blades largely on their own, without elite interference. This inference is based on the location of artisans’ domiciles outside
paramount households. By distancing themselves physically from this nexus of political power, knappers materialized their relative independence from direct elite control over their craft, an arrangement in which local notables must at least implicitly have acquiesced (Costin 1991, 2001). Knappers and consumers, therefore, were free to use the exchange of blades as a means of establishing and sustaining networks that served their own economic and social purposes.

It is important to bear in mind that however widely it was distributed within Naco, Sites PVN 144, and PVN 306, obsidian was imported from varying distances outside the Naco valley (tables 7.1 and 7.2). Given the paucity of detritus resulting from shaping cores, this material likely arrived in the basin in the form of polyhedral nuclei. Acquisition of the cores would have been a difficult process, requiring, among other skills, the ability to negotiate considerable cultural, linguistic, and purely physical distances and differences. The candidates most likely to have spanned these divides are local elites and merchants.

At present, it is difficult to decide whether local rulers or traders played the greater role in acquiring polyhedral nuclei. The Late Postclassic Mesoamerican world was spanned by merchants operating at various spatial scales and transporting considerable volumes of goods. The pocheca based in the Mexica empire are only the best known of these entrepreneurs (Berdan 2003a; Berdan et al. 2003; Hassig 1985; Pollard 1993). Anthony Wonderley argues that Naco was, in fact, home to an enclave of Pipil warrior-traders who had only recently ensconced themselves in the valley prior to the arrival of the last group of military adventurers, the Spanish (1981). He bases this interpretation on changes in material styles that have an arguably foreign inspiration. While this interpretation is plausible, we argue in chapter 8 that the observed stylistic shifts were more likely initiated by local lords with local goals in mind.

Even discounting the presence of foreign overlords does not preclude the possibility that itinerant merchants were active in the Naco valley during the fourteenth through sixteenth centuries. The stucco masks that adorn Strs. 144-8 and 144-18 (see chapter 4) may represent God M, a deity the Maya associated with merchants (Douglass and Mooney 2001; see also chapter 8). If this is the case, and if this supernatural figure retained its original meanings within its new context, then the masks may point to the presence of foreign traders within the Roble phase Naco valley. It is just as likely, however, that the basin’s
residents adopted this symbol and turned it to their own purposes (a point pursued in chapter 8). Exotic iconography, therefore, requires contact with the distant lands from which the motifs and ideas were derived but not necessarily the presence of resident foreigners (Masson 2000b: 41). There is no clear sign of the latter anywhere in the Naco valley during the fourteenth through sixteenth centuries. In the absence of such evidence, we suggest that parochial elites—either on their own or in association with traveling merchants—played the central role in acquiring goods from afar, including polyhedral obsidian nuclei.

**Elites and the Acquisition of Polyhedral Cores**

The rationale for arguing that elites played significant roles in acquiring polyhedral cores comes down to motive and opportunity (Clark and Parry 1990). Members of paramount households comprise the population segment best positioned to deal effectively with outsiders. They could have used the networks under their control to mobilize goods given in exchange for imports and had the time to master the symbolic structures deployed in communicating across cultural and linguistic boundaries. The brief reference in Spanish
accounts to Naco caciques who could apparently speak Nahuatl is but a tantalizing glimpse of such symbolic virtuosity (Pagden 1971: 407; Wonderley 1981). The manipulation of foreign-inspired motifs in ceramics and architecture outlined in chapter 8 further indicates just how deeply valley magnates were involved in interregional discourses.

Elites were also highly motivated to monopolize foreign contacts and the goods obtained through these transactions. Imports are, by definition, locally uncommon. Their rarity and association with whatever potency is linked to distant realms enhance their value in the eyes of local residents (Helms 1979, 1992, 1993). By controlling exclusively the parochial dissemination of foreign valuables, notables would have put themselves in an excellent position to convert equals into subordinates dependent on elite largesse for goods they desired but could only obtain from a single source. Those seeking power, therefore, would move to exclude the majority from participation in networks by which contacts with providers of esteemed imports were secured. Whether blade cores were obtained by leaders who traveled to other realms or from visiting merchants, we argue that the creation of hierarchy and centralization of power depended on the control of these transactions by paramount lords (Kipp and Schortman 1989).

**Blades, Cores, and Networks**

What we can surmise from the extant evidence is that, whatever modalities of exchange may have pertained:

1. Obsidian blades were made by specialists living at Naco and Site PVN 306.
2. Demand for these tools was relatively high among all segments of known Roble phase Naco valley populations.
3. This call for blades was not met by the formation of a few large-scale workshops but rather by the efforts of part-time specialists, each of whom fabricated blades in relatively low volumes.
4. The context of production was largely domestic, although these artisans occasionally fashioned blades during public gatherings in Naco’s and Site PVN 306’s ritual foci.
5. Recovery of most blade cores at Naco and Site PVN 306 from areas well removed from the centers’ monumental plazas implies that obsidian tool production and its subsequent distribution were not carried out under close elite supervision.
6. The ubiquity of blades at all three excavated sites, regardless of where knapping took place, strongly suggests that the mechanisms by which these tools were moved were relatively efficient and open to all.
Acquisition of the polyhedral cores from which blades were knapped required the ability to muster the economic, social, and cultural capital needed to acquire these valuables from afar. Such transactions were probably the only aspect of the obsidian blade production-distribution-consumption cycle that was monopolized by those who could mobilize such assets—that is, elites.

Following from these observations, there appear to have been several major networks involved with, and made manifest by, the distribution of obsidian blades and cores. One of these involved the interactions through which consumers acquired blades from knappers. Given that blades were used for a variety of mundane tasks, these transactions had strong economic implications. Houses and households depended on these commodities to meet basic needs. The decision to use imported items in such quotidian pursuits is an interesting one. Locally available perlite and chert were adequate substitute sources of tool stone; the former was used exclusively as such throughout the valley's Middle Preclassic occupation (1200–400 BC; Urban and Schortman 2002). It is likely, therefore, that obsidian blades had more than pragmatic significance to their users. Rather, the foreign origin of blades probably enhanced the implements' social significance, imbuing the mundane chores in which they were employed with meanings derived from their exotic and perhaps supernaturally charged sources (Helms 1979, 1988, 1993). Knappers and consumers were therefore participants in networks that had considerable economic and social significance to their participants.

For the most part, these webs were not hierarchically structured. Production of blades was dispersed away from architectural expressions of power, access to these tools was widespread and relatively even, and there is no sign that processes of distribution were centrally monitored or controlled. Consequently, extant evidence indicates that most of the local networks instrumental to obsidian exchanges were organized according to heterarchical principles in which manufacturers and consumers were linked directly to each other both economically and socially (Crumley 1979).

The precise nature of such heterarchical premises is difficult to reconstruct. The occurrence of cores in multiple domestic contexts indicates that several social groups were involved in fabricating blades. These tools, therefore, may have moved along different interaction webs, each focused on specific knappers. Given the uniformity of raw materials used in, and artifacts manufactured by, different artisans, it is impossible to distinguish among the products of distinct knappers. Consequently, we cannot parse out individual networks involving specific producers. It is also difficult to reconstruct how blade production and exchange were interwoven with other social and economic processes.
in constituting the shared projects that defined network membership. The transactions through which blades moved may have created only transitory links among artisans and consumers based on such shifting considerations as quality and cost. Alternatively, particular knappers and specific clients might have been united by enduring social ties, of which blade exchanges were just one tangible manifestation. The first scenario tends toward a market-based approach, whereas the second perspective imagines a situation in which transactions among individuals primarily expressed and reproduced long-lasting social relations. The utilitarian and social significance of the tools involved implies that the networks through which they moved so widely and easily were founded on both economic considerations and social commitments.

Complicating this situation are the polyhedral cores recovered from Site PVN 306’s WPP and Naco’s southwest principal plaza in apparent public contexts. Whether the resulting blades were employed solely within these locales or were taken away by participants in the gatherings for use elsewhere is unknown. What is clear, however, is that at least some blade fabrication was not embedded within social and economic networks focused on specific craft workers who resided within particular house groups. Blades fashioned and distributed outside these networks were likely implicated in other webs that incorporated other people, possibly including all those who attended rites and feasts conducted in public ritual spaces. The association of cores with ritual may also point to the sacralization of the ties in which some blades were used and disseminated.

While most intra-valley blade exchanges may have been founded on heterarchical premises, it is important to remember that elites also used blades. The only sign that notables might have produced such implements themselves is the one polyhedral core recovered from Operation 72 in Naco’s northeast principal plaza. As the behavioral significance of the deposit uncovered in Operation 72 is unclear, this evidence cannot be used to make a strong case for blade knapping in elite residential contexts. Thus local notables must have developed some means of obtaining blades from non-elite craft workers for their own uses. It is highly likely that the passage of blades between knappers and rulers enacted tributary relations rather than those founded on equal exchanges. Since labor was apparently successfully co-opted by the valley’s magnates for construction projects, it is reasonable to infer that other resources would have been incorporated in this upward flow of tributary services. The intra-valley distribution of blades, therefore, gave tangible expression to networks organized along heterarchical and hierarchical principles, depending on who was involved in the interactions and what their relative power positions were.

The second network involves the passage of polyhedral nuclei from the local agents who acquired the cores to those who would knap blades from them.
As discussed earlier, the interlocutors who commanded the requisite knowledge of foreign symbol systems to establish enduring ties with distant partners were probably valley magnates operating alone or in concert with merchants.

We hypothesize, therefore, that whereas production and distribution of blades within the Roble phase Naco valley were for the most part structured along heterarchical lines, the cores essential to this industry flowed through intra-valley webs that were hierarchically arranged. This is the step in the cycle of blade production-distribution-consumption most vulnerable to control by those seeking power. Individuals or groups who monopolized access to cores ultimately determined the flow of blades to all occupants of the Roble phase valley. Given the widespread dependence on these implements, or at least the high esteem their ubiquitous distribution implies, such oversight could have been a source of substantial power. Failure to follow the monopolists’ dictates could have led to exclusion from the raw materials needed to make tools central to performing daily chores. Just as important, failure to obtain nuclei would have translated into an inability to enact social ties through the exchange of blades.

The final network related to blade production considered here involves the long-distance ties through which cores moved. As argued earlier, the participants in this web likely combined itinerant traders with the leaders of different polities. The resulting net ultimately connected the Naco valley to the Ixtepeque and La Esperanza obsidian flows from which the nuclei were derived (tables 7.1 and 7.2). At this remove, it is impossible to say how many different notables from distinct realms were involved in these transactions and the extent to which the composition of the networks changed with time. The widespread distribution of obsidian blades within Sites PVN 306, PVN 144, and Naco attests to the reliability and regularity of these interchanges. Such ease of access to imported obsidian in a valley located great distances from the flows implies that whatever the precise structure(s) of the webs through which cores moved, they were fairly stable over time.

Our knowledge of Late Postclassic societies in Southeast Mesoamerica is, at best, spotty. The potential exchange partners of Naco valley elites, and their degrees of sociopolitical elaboration, cannot therefore be specified in any detail. This uncertainty means that reconstructing the hierarchical or heterarchical structures of interregional interaction webs can be carried out only on the most general level. Bearing these limitations in mind, there are several reasons to suggest that transactions linking notables and merchants occurred among equals. First, Naco and Site PVN 306 are large, complexly organized centers focused on monumental constructions that bespeak the power their leaders wielded within their own domains (see chapter 6). If, as seems likely, Naco, Sites PVN 144, and PVN 306 together comprised one extensive community,
then this center was certainly on the level of other known Late Postclassic capitals within southern Mesoamerica. The fact that Naco was singled out in early Spanish accounts as one of the most preeminent commercial entrepôts in northern Central America further implies that its rulers were not economically or politically subordinate to any of their contemporaries.

Second, there is no evidence for a dominant southern Mesoamerican polity whose rulers exerted dominion over considerable territorial expanses. The boundaries of the Mexica empire stopped well short of the Naco valley. Closer to hand, the political unit based at Mayapan in northern Yucatan never extended beyond a limited portion of the peninsula and was in disarray by AD 1451 (Kepecs and Masson 2003; Pugh 2003). Spanish chronicles of the Conquest period in the early sixteenth century mention complex polities in the nearby Sula Plain, whose residents were active participants in long-distance exchanges (Chamberlain 1966). Many of these same accounts, however, also treat Naco as the capital of a seemingly independent realm (Chamberlain 1966). Late Postclassic Southeast Mesoamerica, along with much of the contemporary neighboring Maya lowlands, therefore, comprised a fragmented political landscape divided among numerous small domains, each ruled from towns of modest sizes (Marcus 1993; Scholes and Roys 1948). In these circumstances no single set of rulers could dictate the terms of exchange to its benefit or to the detriment of others. Hence, elites from Naco and Site PVN 306 almost certainly interacted with their compatriots in contemporary realms on an equal footing. Obsidian cores, along with other goods, therefore, were likely transmitted among partners who were united by social bonds of cooperation and who communicated using mutually intelligible symbols. Some aspects of that symbol system are discussed in chapter 8.

**Summary**

Processes of obsidian blade production, distribution, and use within the Roble phase Naco valley were linked through the operation of at least three interconnected networks characterized by dramatically different memberships and structures. The cores essential to blade knapping were secured by a small group of elites at Site PVN 306 and Naco, who forged connections with their counterparts in other realms—either directly or through intermediaries—who could supply this item on a regular and predictable basis. As no one within these webs could consistently dictate the terms of exchange to their partners, ensuring reliable supplies of cores in sufficient quantities would have required creating social bonds that linked the participants as peers in enduring, fairly stable relations. These ties were bolstered through elites’ participation in a common symbolic system tied to the supernatural (Smith 2003b; chapter 8).
Obsidian cores moved from local notables to artisans at Site PVN 306 and Naco within webs that incorporated people of different social ranks. In fact, elite monopolies over the provision of such nuclei may well have formed a basis for the underlying inequalities. The blades these knappers produced were then distributed throughout the Roble phase Naco valley within networks enacted in part by such exchanges. For the most part, these connections were organized heterarchically among social equals (cf. Pugh 2002–2004). Thus the movement of blades materialized important interpersonal ties even as it ensured ready access to a widely used tool important in meeting daily needs. Transfer of blades to elite members of the webs probably took the form of tribute payments in which goods and services moved up, and defined, hierarchies. Here again, the passage of blades made tangible social relations, although now of an unequal nature.

The widespread distribution of blades across Sites PVN 306, PVN 144, and Naco suggests that these connections were persistent and ultimately tied all known residents of the valley to each other. Through networks organized along hierarchical and heterarchical lines, therefore, a tool implicated in a wide array of quotidian tasks was dispersed among all recorded segments of Roble phase Naco valley society. In the process, relations of equality and inequality operating on local and interregional scales and over roughly two centuries were regularly produced and reproduced.

**PERCUSSION FLAKE INDUSTRY**

This manufacturing stream is characterized by the fashioning of relatively simple, multi-purpose tools by hard-hammer percussion applied directly to nuclei of locally available chert, perlite, and in some cases exhausted polyhedral obsidian cores. Unlike blade knapping, this procedure required no specialized knowledge or skill set. Further, sources of chert and perlite are readily available throughout the Naco valley and would have been easily accessible to most, probably all, of its Late Postclassic occupants. There were few obstacles, therefore, to general participation in this craft.

Casual cores of perlite and chert were recovered from middens at Site PVN 306 (Subop. 306AR/BL, 306AX/BK, 306BI, and 306-83; three, two, one, and two cores, respectively), as well as in the vicinity of Str. 306-21, the monumental platform that divides the EPP and the WPP (two cores).

Diagnostics of the percussion flake industry overlap with those of the obsidian blade manufacturing stream at Site PVN 306. The same trash deposits that produced casual cores outside the principal plazas also yielded blade nuclei, and both blades and flake tools were apparently fashioned in the WPP, probably in the context of rituals and feasts. Blade and flake industries at Site
PVN 306 were therefore not parts of mutually exclusive practices. On the contrary, their pursuit coincided to a considerable degree in both domestic and public contexts.

The major difference between blade and flake production is that the latter was also conducted at Site PVN 144. Here, the fashioning of casual tools took place in much the same locations noted at Site PVN 306: in rural contexts (Artifact Scatters 17 and 27 and Op. 484, Midden 1) as well as near focal points of public gatherings (Strs. 144-5-1st, 144-8-1st, 144-18, and 144-11). Structures 144-8-1st and 144-18 are interpreted as venues where influential members of the Site PVN 144 community, and perhaps the entire Naco settlement cluster, met. Structures 144-5-1st and 144-11 are also thought to have been related to public activities conducted in the plaza they border on the east and the northwest, respectively. In the case of Str. 144-11, the implements fashioned were likely used in processing meat derived from snail shells (*Pachychilus* sp.) that was intended for consumption during communal events.

The patterned distribution of blade and percussion nuclei implies that the manufacture of stone tools generally was implicated in at least two different networks within the Roble phase Naco valley. One was centered on domestic groups, while the other was enacted within public rites that most, perhaps all, community members attended. As with blades, the flakes chipped off nodules in public settings may have figured in practices that forged a sense of unity within a network that included all those living at Sites PVN 306 and PVN 144 and in their vicinities.

Implements fashioned in more purely domestic contexts were almost certainly used by the manufacturers and exchanged with other participants in their social networks. This case has been made for blades. It may also have applied to flake tools at Site PVN 306, where the nearly isomorphic distribution of perlite, chert, and polyhedral obsidian cores suggests that the people who made implements from these nuclei were members of the same social groups; at least they deposited their trash in the same locales. The movement of blades and flake implements, therefore, probably materialized the same social webs.

At Site PVN 144, on the other hand, flake tools were apparently fashioned and used primarily, although not exclusively, in public settings, whereas obsidian blades made elsewhere were widely distributed throughout the settlement. The ways in which the use and exchange of flake implements instantiated network relations at Site PVN 144, therefore, may well have differed from those seen at Site PVN 306. At the very least, it seems that these tools were less integral to enacting ties between specific knappers and consumers at Site PVN 144 than they had been at Site PVN 306. In contrast, they may have been used mostly in performances that united all members of the former community. How webs materialized through the exchange of blades mapped
onto those made tangible through flake tool production, exchange, and use is unclear.

The totals of perlite and chert flakes combined are outnumbered by blades at Site PVN 144 everywhere except at Str. 144-18. The situation at Site PVN 306 is more complex. Here, flakes outnumber blades in most architectural contexts, including those associated with the site core. The ratio is reversed in middens situated beyond the EPP and the WPP except at Subops. 306AL/BQ and 306AX/BK, where flakes are more numerous. There is no clear correlation at Site PVN 306 between locales of apparent flake tool production and the prevalence of these implements. Rather, it seems that flakes moved toward areas where they were used intensively and that these places were not necessarily the same spots where blades were called for to the same extent. At Site PVN 144, either the activities in which flakes were so intensively used at Site PVN 306 were not conducted at the same scales, or blades were employed in place of flakes in the pursuit of these common tasks. The prevalence of blades, as opposed to flakes, at Site PVN 144 is especially notable, as there is no sign of the former’s manufacture here.

As was the case for blade production, the networks enacted through flake tool exchange likely operated on heterarchical principles. There is no sign that flake tool manufacture and distribution were centrally controlled. Instead, artisans resident in dispersed domestic groups or periodically congregating in public plazas apparently took responsibility for negotiating transactions involving these casual tools. Elite needs for percussion flakes may have been met by tribute payments.

Naco is distinguished from its neighbors by the nearly complete absence of evidence for the manufacture and use of flake tools. As noted in chapter 3, those of us working in the valley did not identify perlite as a distinct material category until 1992. The absence of nodules of this material in Wonderley’s collections, therefore, is at least in part a result of our joint failure to discern perlite’s significance in ancient manufacturing processes. Nevertheless, chert had long been recognized as a tool stone, and flakes of this material were retrieved from the Naco investigations. It is difficult, therefore, to escape the impression that cores other than those used in fashioning blades are completely absent from Naco collections and that flakes of all materials are very rare. The significance of implements made using hard-hammer percussion techniques in the economic and social transactions of Naco’s residents, therefore, was apparently slight.

**POTTERY PRODUCTION**

Evidence for the manufacture of ceramic vessels is sparse and ambiguous throughout the Roble phase valley. The clearest sign of participation in the
craft comes in the form of two fragments of fired clay molds, used to craft pottery bowls, found in the Subop. 306AR/BL midden east of Site PVN 306’s main group (figure 7.1). No firing facilities were clearly identified here or anywhere else at Roble phase Site PVN 306; nor is there evidence of ceramic manufacture at Naco.

Tools for pottery production were not identified at Site PVN 144. Here, however, the ceramic-lined pits that comprised Str. 144-5-2nd (Units 1 and 2) might have served as facilities for firing ceramics. The better preserved of these declivities, Unit 1, has walls that were subject to intense heat, creating a hard, impermeable surface on its base and flanks (Unit 2, immediately to the north, was too badly preserved to determine if it had also been subject to the same treatment). At 2–2.5 m in diameter and 0.42–0.45 m deep, Str. 144-5-2nd’s pits could have been sizable kilns. They might just as easily have been storage containers, however. The latter view is suggested by the fragments of white plaster found adhering to the sides of Unit 1’s earliest version and the fact that this basin was seemingly fired during its construction and not as part of its use.

A better contender for a firing facility is the second iteration of Unit 2. Fully 0.2 m of earth now filled the bottom of the northern of the two pits and supported a stone wall that projected 1.35 m south from the construction’s north edge. Burning was so intense within this newly reconstituted facility that it altered the pit’s earthen floor to a depth of 0.06 m. Clearly, during this interval Unit 2 was used to fire something; the north-south–running wall that bisects its interior possibly served as a baffle designed to direct the flow of heat (see also Masson 2000b: 82–85). As noted in chapter 4, Unit 2 may now have been a kiln or an oven. The seemingly domestic nature of the debris that accumulated in adjacent Unit 1 to the south at this time tentatively suggests the second view. This is especially the case because the southern deposit lacked clear evidence of pottery manufacture, such as distinctive tools and quantities

**Figure 7.1 Ceramic mold for pottery production**
of sherds from vessels that failed during firing. If this detritus was a by-product of activities conducted in Unit 2, then the latter was probably a large-scale cooking facility. The possibility that Unit 2 served as a kiln cannot be precluded, however.

The burned earthen surface that covers at least 43.4 m$^2$ east of Str. 144-5-2nd’s Units 1 and 2 may well be tied in to the use of these pits. Once again, while intense and likely repeated burning is attested to here, the sources of those fires are not clear. Both fashioning pottery and cooking remain possibilities.

It may well be that pottery vessels were fashioned at all three of the investigated settlements. Variations in paste among locally made decorated wares (especially the Nolasco and La Victoria Bichromes) strongly imply that at least two workshops were employing an equal number of distinct clay recipes involved in fashioning these widely used ceramic containers. Since we did not identify the location of the relevant production areas, it is impossible to infer the networks linking production, distribution, and consumption of pottery vessels.

**OTHER INDUSTRIES**

The remaining evidence for specialized manufacture is scant. Ceramic spindle whorls were found in small numbers dispersed across middens (Subops. 306AB/AD [five pieces] and 306AX/BK [one fragment]) and architectural contexts at Site PVN 306 (Strs. 306-21 and 306-72, with one spindle whorl coming from each of these locales; figure 7.2). A fragment of a sherd reworked as a disk, which might have also served as a spindle whorl, was recorded from the Subop. 306AB/AD trash deposit. Spindle whorls were not identified from excavated late prehistoric contexts at Site PVN 144 and Naco, although one of these items was retrieved from the Operation 63 midden located outside the latter center. The spinning of thread, likely associated with weaving, therefore, was apparently pursued at low levels of intensity across Site PVN 306, within the principal plazas (Str. 306-21) but primarily in domestic contexts outside the core. Based on the distribution of the sole tool we could link to this activity, there is little evidence for anything more than occasional participation in the craft.

Grooved, fired clay spheres, often called “net weights” in the literature (e.g., Masson 2000b: 121; Rice 1987: 204–208), that were derived from clear Roble phase contexts were found in middens at Site PVN 306 (Subops. 306AR/BL, 306AX/BK, and 306AC/AE; yielding 11, 1, and 4 pieces, respectively) and Naco (Operations 6F-3, 75, and 77; 17, 2, and 1 examples were found in each case, in turn). The functional significance of these items is uncertain. They have been linked to weaving and fishing by various authors (e.g., Rice 1987:
However they were used, these spheres seem to have been exclusively employed by people who lived well outside the monumental cores of Naco and Site PVN 306. Those who deposited trash in the Subop. 306AR/BL and Operation 6F-3 middens appear to have been particularly committed to the activities in which the grooved spheres were implicated. As with spindle whorls, “net weights” were not found at Site PVN 144.

**Summary of Craft Work**

Several patterns stand out in an overview of Roble phase manufacturing activities at Sites PVN 144, PVN 306, and Naco. First, production took place in both private domestic settings and public ritual contexts. Diagnostics of spinning/weaving, obsidian blade knapping, and the manufacture of flake tools from perlite and chert were recovered in the WPP and from shallow middens unassociated with surface-visible architecture at Site PVN 306. It is likely that the same artisans who worked from their residences also fashioned goods during public events. The more limited evidence of manufacture at Naco follows the same general pattern. At Site PVN 144 the few extant diagnostics of production are concentrated mostly within the main plaza, where the knapping of flake tools was probably carried out in the course of large-scale gatherings convened there.
Second, in no case was manufacturing volume high. The complex skills required to make some items, in particular obsidian blades, may have required at least part-time specialization (Clark 1987). In this case at least, considerable effort was likely invested in learning and practicing essential manufacturing techniques. Still, there is no sign that any Roble phase Naco valley artisans engaged in their crafts full-time. Rather, the needs of these communities for all manner of locally fashioned items were almost certainly met through the occasional fabrication of goods by a scattered cadre of craft workers producing to meet their own requirements and those of their neighbors.

Third, the evidence for craft production overlaps in several locales at Site PVN 306 and Naco. Most examples of this situation are found in middens outside site cores (Subops. 306AR/BL [blades, flake tools, spinning/weaving, pottery, use of “net weights”], 306AX/BK [blades, flake tools, spinning/weaving, use of “net weights”], and 306AB/AD [blades, spinning/weaving] and Operations 6F-3, 75, and 77 [blades, use of “net weights”]). Structure 306-21 also evinced signs of flake tool manufacture and spinning/weaving. In the last case, however, the items that signaled participation in crafts may have been associated more with activities conducted within the WPP and not at Str. 306-21 specifically.

Fourth, the only segment of the manufacturing stream in any known industry that was possibly monopolized by a single segment of the population involved the acquisition of polyhedral obsidian cores by elites residing at Naco and Site PVN 306. As argued previously, magnates who ruled from these centers were likely intermediaries in the transactions by means of which these essential assets were disseminated in the Roble phase Naco valley. Local notables, therefore, could have indirectly but effectively controlled the access of all valley inhabitants to a highly valued resource.

Fifth, manufacturing, as dispersed as it was, was centered primarily on Site PVN 306 and Naco. Even a moderately large center such as Site PVN 144 yielded only scant signs of specialized production. It may have been the case, therefore, that such items as obsidian blades and cloth were ultimately obtained within the Roble phase Naco valley from craft workers laboring at Site PVN 306 and Naco.

**Power and Crafts**

Processes of manufacturing, distributing, and consuming craft goods were incorporated within complexly related webs of interpersonal relations that ultimately linked all denizens of the Roble phase Naco valley. By insinuating themselves at crucial points in these three operations, enterprising members of specific factions could structure these interconnections to their advantage.
Hence, power would flow toward those who effectively manipulated the production, distribution, and use of generally needed or highly valued goods.

Evidence for such maneuverings is, at best, subtly expressed in the available data. Elites alone obtained polyhedral obsidian cores from distant sources by dint of their own efforts or through merchant intermediaries. These nuclei were essential to the manufacture of blades all members of the basin’s population needed or wanted to conduct basic quotidian tasks and engage in public rites. Further, the exchange of blades materialized social webs through which, ultimately, all members of houses and households were linked. Control over the local dissemination of cores thus had far-reaching social, economic, and ideological consequences for people of every rank. Such a monopoly would certainly have provided a strong motivation to acquiesce to the monopolists’ demands.

Power based on managing the distribution of obsidian cores in the basin, however, would have been fragile at best. On the one hand, there is no evidence that elites were in a position to control the acquisition of other goods essential to local manufacturing processes. The perlite, chert, clay, and, presumably, cotton used in the other known industries were easily obtained by those who lived in the Naco valley. Further, the skills used to fashion flake tools, pottery, and cloth were relatively simple and could have been mastered by most house and household members. The production streams described earlier, therefore, provided few opportunities for centralized monopolies.

Elite pretensions based on control over the acquisition and distribution of polyhedral nuclei were also threatened by the fragility of inter-societal exchange networks (see also Renfrew 1982). These webs were no stronger than the individual strands that comprised them. A disruption in any one of these connections would have reverberated throughout the web, to the disadvantage of all participants. As discussed in chapter 8, efforts were made to strengthen these interconnections by promoting common participation within a shared symbolic system. Nevertheless, the challenges of maintaining regular and reliable social connections across physical and political boundaries would have been considerable. Coupled with the threats to hierarchy posed by factions at home, sustaining political advantages based on a monopoly over the local dissemination of obsidian cores would have been difficult indeed.

A major question remains concerning how centralized control of the distribution of polyhedral nuclei translated into power over all members of a society. Certainly, artisans who received cores would have been indebted to their noble patrons for such “gifts.” The challenge would have been to transform this dyadic relation of inequality into hierarchical connections that extended outside an artisan’s house group and, as seen in the case of Site PVN 144, beyond the boundaries of the center where production occurred.
We hypothesize that artisans, even though they operated outside direct elite supervision, were integral to these magnates’ political machinations. By encouraging a few house groups, but not all, to engage in specialized manufacture, notables who ruled from the paramount households of Naco and Site PVN 306 created nodes in local networks where debt and social obligations were concentrated. Certainly, those seeking power had only limited control over these processes because their oversight of production was restricted. Elites could, however, favor certain house groups with “gifts” of polyhedral cores along with, presumably, the knowledge required to knap blades from them. These select social entities might then have been encouraged to expand their involvement in crafts, adding such specialties as percussion flaking of perlite and chert nodules as well as spinning/weaving and pottery manufacture. As fabricators of widely desired objects, each of these house groups enjoyed an edge in creating interpersonal social webs and materializing the existence of these nets through the exchange of the goods they produced. Other members of such nets would have owed the specialists something in return, if only because reciprocation was essential to maintain membership in the web; networks cannot exist in the absence of such interchanges. This is equally true of the relations between craft workers and their elite patrons, except that in this case goods and services flowed up the hierarchy rather than among more or less equals.

We suggest, therefore, that notables used their control over craft workers to tap into the flow of items and labor passing through the nets in which those artisans played important roles. In return for access to such key assets as obsidian cores and manufacturing skills, artisans redirected some of the social and economic resources owed them as members of distinct webs instantiated through the exchange of specialized manufactures. Such assets included the provision of tribute in the form of labor and goods.

This strategy would not have worked nearly as well if craft production had been conducted in a few large workshops. Such concentration of manufacturing activities on a sizable scale could potentially vest the power to create and manipulate social networks in the hands of strategically placed artisans. Unless the manner in which goods were made in, and distributed from, such production loci was tightly controlled by elite patrons, the craft workers could pose a serious threat to elite pretensions. By dispersing manufacturing activities widely, competition among craft specialists for adherents was ensured and the ability of each artisan to fashion networks in opposition to elite agendas accordingly diminished. Of course, the proliferation of different artisans posed its own problems. Primary among these would have been the need for magnates continually to negotiate social and economic relations with diverse producers and ensure their loyalty within networks focused on the rulers. On balance, the
latter efforts may have posed the slighter risk to domination strategies than did the more efficient but politically dangerous option of aggregating artisans in one social group.

Power, therefore, was exercised indirectly through elites’ manipulation of social networks in which they played crucial but distant roles. The wide dissemination of obsidian blades was essential to the success of these strategies because it was through the distribution of this valued item that debts were incurred, debts that ultimately redounded to the advantage of local rulers. The greater the number of consumers involved in such transactions, the wider the webs leaders could draw on for support through the mediation of knappers. In this way, numerous heterarchically structured webs could ultimately, if implicitly, be made to serve the purposes of hierarchy building. The very subtlety of this approach, requiring as it did the cooperation and coordinated action of numerous artisans who resided in diverse house groups, would have restricted the magnates’ ability to exert power. The resulting hierarchy required constant negotiation and renegotiation among the participants to sustain. Absolute power was therefore beyond the reach of the Naco valley’s Roble phase rulers.