One of the positive effects of the landscape approach to the human past has been the dismantling of the notion, often implicitly held, that settlements were islands in the midst of a sea of uninhabited or unused space. This notion has been subconsciously reinforced by settlement pattern maps wherein sites are depicted as black dots on a vacant white surface. The advent of sedentism did not bring to an end movement through the broader landscape beyond the settlement, but rather concentrated it in ways that have made it easier for archaeologists to detect. At the most mundane level, agriculturalists and pastoralists had to move between settlements, fields, and pasture. In addition to these subsistence-related activities, complex societies required movement for exchange in non-local materials used for marking and maintaining status differences.

Centralized polities cannot remain integrated without continuous interactions between political centers and their hinterlands. A holistic landscape approach not only recognizes the importance of these movements but also develops methods to document their traces and integrate them into economic and sociopolitical models.

As the material manifestations of movement through the landscape, the surviving traces of roads and paths have much to tell us about past societies. These features manifest both repetitive social, political, and especially economic activities but also can serve as models of social order (Earle 1991:10).
With regard to this distinction, any study of movement must engage the critical issues of intentionality and constraint.

All human movement is of course intentional; at no time was directionless wandering a systematic part of past social action. Movement may have been at all times purposive, but the associated landscape features may not have been deliberately created. Here we must make the important distinction between constructed and non-constructed features. The former are planned or even "overengineered" built features. The construction of a road does not automatically mean it was heavily traveled; they occasionally tell us more about where movement was intended to go rather than where it went. Furthermore, these intentions may be linked to a small subset of society (i.e., the planners and labor mobilizers) who may have also limited access to roads.

On the other hand, non-constructed paths owe their existence to continued use. Rather than being imposed by decision-makers, they emerge from the cumulative actions of many individuals. These movements are certainly purposive, but the formation of the path is never the explicit intention. Unlike constructed features, which may or may not have borne much traffic, the very existence of non-constructed paths is a testament to their use. Their width and depth are indicators of their span of use and the intensity of movement along them. This binary opposition between imposed constructed and emergent non-constructed features is not so simple, however; a broad range of variation exists in both, and non-constructed paths can be formalized into built roads (Hyslop 1991; Trombold 1991a). From an evolutionary perspective, non-constructed features may be closely associated with less complex societies. Large-scale formal features are a product of political action under chiefdoms and states, although most mundane economic movement still takes place on paths (Earle 1991).¹

The second issue is of constraint: what keeps the traveler on the route? Constraint can be external or internal. Constructed roads can have parapets or curbs that act to restrict traffic to the surface between them, or they may move through areas of walled fields (see examples in Hyslop 1984). Elsewhere it may be the presence of dense forest or marshlands. These constraints are external to the traveler, who is prevented from straying or strongly encouraged to stay on the path by the inefficiencies of traveling off of it. It is uncommon, however, to be so physically constrained. Far more common are internal cultural constraints in the form of property
rights, legal restrictions against trespassing, or socio-religious values about the proper way to travel. The degrees to which these elements of social practice are part of an individual’s cognitive structures determine whether he or she adheres to the path. For example, the depressed footpaths of the Arenal region in Costa Rica formed presumably because of the widely held belief that travel to and from cemeteries should be on elevated paths along ridges (Sheets, Chapter 8, this volume). Other, less identifiable cognitive constraints are operative in the Southwest United States today as well as in the past (Snead 2002; Ferguson, Berlin, and Kuwanwisiwma, Chapter 2, this volume).

This case study will focus on movement as manifested in the earliest phase of widespread urbanism in the Upper Khabur basin of northern Mesopotamia during the Early Bronze Age (EBA) (Figure 9.1). These settlements emerged simultaneously with an elaborate network of almost 2000 km of roadways. I will describe this archaeological landscape and then move to what it can tell us about political economy. First, however, I present an overview of EBA society and review the sociopolitical frameworks that have been employed. EBA society was the dynamic product of both bottom-up and top-down structures. My own understanding of the composition of society places a much greater emphasis on the bottom-up, or emergent, structures than do the most widely cited models. In the case of the agricultural and pastoral landscape, these structures included the widespread motivation to intensify production held by most or all households, and the imposed system of land tenure within which they were constrained in their activities. The deeply inscribed network of roadways was the unintended result of the recursive interaction of these forces.

THE SOCIOPOLITICAL CONTEXT OF EARLY BRONZE AGE LANDSCAPES OF MOVEMENT

Urban settlement in northern Mesopotamia appeared abruptly in the mid-3rd millennium BC. At the top of the settlement hierarchy were a series of mudbrick settlements of 65–120 ha. Most were composed of a high mound of 10–15 ha where non-urban settlement had existed previously, in some cases for millennia. These high mounds were surrounded by extensive lower settlements, which resulted from the abrupt demographic growth around 2600–2500 BC. By the end of the 20th century AD, excavation had
9.1 Urban settlements of the Early Bronze Age (mid- to late 3rd millennium BC) in northern Mesopotamia.
taken place at most of these sites, allowing us to make some generalizations about society at the time (e.g., Akkermans and Schwartz 2003; Stein 2004). Research has concentrated on the elite high mounds, revealing monumental temple and palace constructions. Specialized craft products included metalwork in bronze, gold, and silver, and mass-produced ceramics. Artistic styles and administrative technologies (clay sealing and cuneiform writing) were regionally distinct but clearly emulated those of the elites in the cities of southern Mesopotamia. In the infrequent times when archaeologists have investigated the non-elite lower settlements for this period, they have revealed dense but variable residential housing, packed tightly along narrow debris-strewn alleys (Pfälzner 2001). Although non-urban settlements have rarely been excavated, surveys have shown them to be generally in the range of 1–5 ha, with a few intermediate towns in the 10–25 ha range. The nature of settlement on these smaller sites is poorly understood, but is assumed to have been primarily agricultural with some pastoral component.

Publications on EBA northern Mesopotamia have often focused on issues of chronology and local developmental sequences, but a few regional syntheses have appeared, most prominently emanating from research at Tell Leilan and its region (Weiss 1997, 2000; Weiss and Courty 1993; Weiss et al. 1993). The approach adopted is ecosystemic, based around a highly centralized and hierarchical state that had incredible power over all aspects of society. According to this model, elites maintained their status by controlling the staple economy, in particular through the centralized storage and redistribution of cereals in standardized ration vessels. Cereal and animal production was intensified to sustain this political economy. Aspects of craft production, including elements as mundane as ceramic production, were also under the direct control of the state. The state could and did occasionally redistribute the rural population for purposes of economic efficiency and political control. In classic ecosystemic fashion, this model contends that EBA society remained in a stable equilibrium until forced to change by external factors (in this case, collapse at the hands of abrupt climate change). Other studies often implicitly adopt aspects of this centralized model.

Ecosystemic approaches have been criticized for underemphasizing conflict and competition within society (e.g., Brumfiel 1992; Brumfiel and Fox 1994; Stein 1998; Yoffee 2005). Michael Dietler has stated succinctly how archaeologists often assume that:
once symbols of political power and status have been ‘materialized’ and authority has become institutionalized, that somehow stability and permanence have been achieved and the work of relational micro-politics is made redundant and unnecessary. This is, of course, the dream and the ideological projection of every state apparatus: a kind of institutional fetishism that displaces contingent relations between people into stable relationships between people and permanently reified ‘objects.’ But nothing could be farther from the truth. The nasty little secret of history is that states and empires are very fragile, volatile, and transitory—far more so than their buildings and monuments. They are a fluid process rather than a durable thing, and they depend on constant hard work in the micro-political struggles of negotiation and legitimation to survive and operate. (2003:271–72; emphasis in original)

Far from being locked into a durable equilibrium state, complex society is to a large extent emergent from these processes of social and political renegotiation (van der Leeuw and McGlade 1997).

The sociopolitical model employed here attempts to address these critiques of hierarchical ecosystemic models. Instead of assuming a rational bureaucratic elite, it incorporates an emic social model which framed social and political relationships within the metaphor of the household at multiple levels of society. “House societies” have been well studied in recent decades (Carsten and Hugh-Jones 1995; Joyce and Gillespie 2000), but with some exceptions (e.g., Gillespie 2000) these have mostly been small-scale societies. Analyses of Sumerian, Akkadian, and Egyptian kinship terminology used in political contexts now demonstrate that the household has been a pervasive organizing metaphor for large territorial states in the Near East and Egypt since at least the 3rd millennium BC (Gelb 1979; Schloen 2001; Lehner 2000a, 2000b). The Patrimonial Household Model (PHM) of Near Eastern society (Schloen 2001) describes a society of nested households of various scales, ranging from the individual domestic unit to the extended lineage to temple households and up to the entire kingdom.

The PHM recognizes the limitations of political power and economic control in these early complex societies and reintroduces agency, history, and contingency. At first glance this arrangement of nested households might seem rigidly hierarchical. In fact, being based on continuously rene-
negotiated personal relationships rather than an inflexible bureaucratic structure, the vertical and horizontal connections between various households were highly dynamic, and are better characterized as heterarchical (Crumley 1987, 1995). To the extent that these relationships in the Near Eastern Bronze Age had a material basis, they revolved around commensalism (Di- etler and Hayden 2001; Pollock 2003) rather than staple redistribution. Thus, if a staple-based political economy (e.g., D’Altroy and Earle 1985) could be said to have existed, it involved small-scale exchanges of prepared food and drink for immediate communal consumption, rather than centralized storage and redistribution of bulk unprocessed cereals. To a considerable extent, however, these interpersonal relationships were probably based on exchange in high value items or non-material factors such as personal charisma and learned political skills (Schloen 2001). They are therefore based to a far greater extent on consensus-building between rulers and local elites and lineage heads than has been appreciated.

The necessity of continually reproducing the social hierarchy shifts emphasis from reified social units to the individual actors involved, a focus on agency that is increasingly common in archaeology (Brumfiel 1992; Dobres and Robb 2000; Dornan 2002). While the activities of specific individuals may be difficult or impossible to recover from the archaeological record, the dynamic structure of the PHM offers a set of goals and motivations that would have been widely shared across society, in particular the expansion of one’s household (in both the literal and metaphorical senses) and the acquisition or intensified production of any material resources which would aid such an expansion. In this sense, the PHM employs the “generic” individual (Bell 1992), perhaps at the expense of the possibility of resistance and individual creativity (Dornan 2002:315). We can envision these widely held motivations as the local rules which ultimately produce the global order of early urban society. In this sense, the PHM echoes new directions in research on complexity, which developed in the physical and natural sciences and is now increasingly being applied in the social sciences (Adams 2001; Lansing 2003; Kohler and Gumerman 2000; Wilkinson et al. 2007a). The totality of these social actions is the society itself. Since the heads of households of various scales are continuously renegotiating its structure, society is constantly in a state of unpredictable endogenous change. This “bottom-up” view of society is proving to be a powerful approach in archaeology (Erickson 1993, 2006b).
I frame my study of settlement and movement in northern Mesopotamia during the Early Bronze Age within the PHM and a landscape approach. Contrary to the expectations of the long-dominant centralized and hierarchical ecosystemic approach, I see the elaborate landscapes of movement as emergent from the activities of individuals within longstanding structures of land tenure.

THE ARCHAEOLOGICAL LANDSCAPE

The cultural landscape of the Early Bronze Age in northern Mesopotamia is spectacularly preserved. This situation is surprising for two reasons: its great age means that cultural and natural taphonomic processes have had more opportunities to remove archaeological traces, and its agricultural potential inevitably attracts destructive resettlement (Wilkinson 2003; Williamson 1998). The primary reason for this preservation is that land use in northern Mesopotamia has cycled between sedentary agriculture and pastoral nomadism. For example, northern Syria has been occupied by low-density sheep and goat nomads for the last millennium (Lewis 1987). The archaeological consequence of this cycling is a preserved landscape of almost 2,000 km of roadways, most dated to the Early Bronze Age (Figure 9.2).

In this chapter, I focus on the Upper Khabur basin of northeastern Syria and adjacent areas of northern Iraq. The basin consists of deep soils of alluvial origin, although today all drainages are downcut into the plain, which is no longer aggrading (Courty 1994). The mainstay of the agriculture today and in the past is rainfed winter cereal cultivation; however, pockets of irrigated summer crops, mostly cotton for the international market, have been steadily growing since the 1950s.

The Physical Traces of Past Movement: Roadways

The surviving roadways, variously called hollow ways, tracks (Ur 2003), or linear hollows (Wilkinson 1993), are broad and shallow linear depressions across the landscape (Figure 9.3). The features are similar to the paths of the Arenal region in Costa Rica (Sheets and Sever 1991; McKee, Sever, and Sheets 1994), but denser and of a larger scale. The northern Mesopotamian features were formed by alternating processes of compaction in the wet season and aeolian erosion in the dry season (Tsoar and Yekutieli 1992). The majority are between 60–100 m wide, up to 2 m deep, and range in pre-
9.2 Radial and intersite roadways of the EBA in the central Upper Khabur basin.
served length from several hundred meters to more than 5 km (Figure 9.4). However, precise measurements are difficult, since what survives on the surface are not the roadways themselves but rather the surface signatures of features heavily transformed by natural and cultural processes. In some cases the depressed track has been filled with locally eroded sediments, and in other cases, has been deepened by channeled surface runoff. In the former situation, the lack of topographic expression is offset by a signature of denser vegetation growth (i.e., crop marks; Wilson 1982). In the latter, the depressed topography collects moisture, which translates into darker soil in the fall and, again, more abundant crops in the spring.

Ground recognition of roadways is often difficult, so historically these features have been studied from above. Pre-modern roads were photographed opportunistically by the pioneer of aerial archaeology Antoine Poidebard (1934), although he was primarily interested in Roman military...
installations. In the 1950s, the government of Syria conducted an aerial survey in the process of developing the northern plains for agriculture. A Dutch soil scientist involved in this survey, Willem Van Liere, teamed up with the archaeologist Jean Lauffray to systematically map the roadways which were so apparent on the imagery (Van Liere and Lauffray 1954–55; Van Liere 1963). Recently, I have used declassified intelligence satellite photographs from the U.S. CORONA program to map roadways across northeastern Syria (Figure 9.5) (see Fowler 2004; Ur 2002a, 2003, Ur and Colantoni n.d.).

Roads and tracks are notoriously difficult to date; indeed, the great landscape historian and expert on Roman roads Christopher Taylor was one of the most pessimistic about the chances of success in this endeavor (1979:xii). Van Liere’s somewhat speculative dating of the linear features was confirmed through intensive systematic surface survey by Tony Wilkinson in adjacent areas of northern Iraq (1993; Wilkinson and Tucker 1995). Most typical broad linear features have particularly strong associations with sites of the Early Bronze Age (ca. 2600–2000 BC). This association was initially recognized by Van Liere and Lauffray and later confirmed by intensive survey in northern Iraq (Wilkinson 1993; Wilkinson and Tucker 1995) and in the Upper Khabur basin (Wilkinson 2000; Ur 2002a, 2003). A small subset of features can be dated by association with the late Antique to early Islamic period (ca. AD 500–900); these features are distinguished by their narrower width (around 50 m) and will not be discussed further here.

The survival of EBA roadways is a patterned product of closely related
cultural and natural factors. Within the Upper Khabur basin, they are disproportionately preserved in the central and western areas. This uneven distribution is the result of the basin’s climate and settlement history. Rainfall is high in the northern and eastern parts, where the foothills of the Taurus Mountains to the north trap moisture. The reliable rainfall results in local movement of sediments that obscure tracks. Another consequence of higher rainfall is reliable agriculture, so settlement has been nearly continuous, leading to greater attrition of landscape features. In the southern basin, lower rainfall encourages pastoralism, rather than agriculture, as the dominant economic mode. Elsewhere, taphonomic processes have had localized effects. For example, few roadways survive in the narrow floodplains of the major north-south seasonal drainages (wadis) because of long-term sediment aggradation. Subsequent pre-modern land use has taken a toll as well, especially around the Roman-Byzantine city of Nisibin (modern Qamishli), where an elaborate irrigation system probably erased evidence of roadways.

**Spatial Patterning in EBA Roadways**

Because sites in the Upper Khabur basin were constructed of mudbrick, their eroded remains offer few surface clues about the interface between
settlements and roadways. Around smaller sites, roadways appear to have originated around 100–200 m from the base of the site and radiate in a linear fashion. Around larger settlements, points of origin are clearer. At Tell Beydar, roadways articulate with gaps in its eroded outer wall and gullies in the central mound; these locations are probably the gates into the settlement (Lebeau 1997; Wilkinson 2000). More complex patterns of access can be discerned around the largest urban centers such as Hamoukar (Ur 2002b:25–26) and Tell Brak where roadways bifurcated as they approached the site; each bifurcation leads to a discrete point of access into the settlement.

Beyond the settlement, the roadways display different patterns at different scales of observation. At the regional scale, intersite roadways connect sites of the EBA throughout the basin. They tend to be straight but not rigidly so, and often they go around topographic impediments. At the local scale, roadways are composed of interconnected radial networks centering on individual sites. Unlike the intersite routes, whose destinations were other settlements, these local roadways disappear 3–5 km from their origin before reaching any identifiable destination. It would be misleading, however, to label these local features as “roads to nowhere.” Wilkinson (1993) argues that the radial roadways led farmers and draft animals to and from the fields, and shepherds and their flocks to the pasture beyond.

ROADWAYS AND THE ECONOMIC LANDSCAPE

To date, archaeologists have used these scalar roadway patterns exclusively to reconstruct the economic landscape, particularly with regard to the production of staples (cereals and animals) in the context of EBA urbanism. By the 1950s, Van Liere and Lauffray (1954–55:136) interpreted the radial patterning as an indicator of a society of autonomous and self-sufficient agricultural towns and villages. In fact, the radial patterning is similar to what would be predicted by geographic studies of traditional agriculture in Europe (e.g., Chisholm 1962) and modern agricultural towns in the Near East (Wilkinson 2003: fig. 6.13).

Such roadways represent efficient movement of labor and livestock to agricultural fields and pasture, and of agricultural and pastoral products back into the settlement. Traffic would have included not only human foot traffic, but also the sheep, goats, and donkeys documented by zooarchaeology and recorded in administrative tablets. More difficult to assess is the
significance of wheeled traffic. Although no physical remains of carts or chariots survive, they are a common motif carved into cylinder seals in the basin (Figure 9.6) (Jans and Bretschneider 1998; Matthews 1997), and clay models of wheels and carts frequently occur in the EBA (Moorey 2001; Oates 2001). The scenes on cylinder seals are military or ritual in nature, but the frequency of cartwrights (nagar ṣigigir) in the administrative tablets from the site of Tell Beydar (Salaberger 1996:95) implies that wheeled vehicles were used regularly for more mundane purposes.

![9.6 Wheeled vehicles depicted on EBA cylinder seal impressions from Tell Brak](image)

These patterned economic movements were probably typical of all phases of agricultural settlement in northern Mesopotamia, yet radial roadways are disproportionately associated with sites of the EBA, and to a much lesser extent with sites of the late 1st millennium AD (Ur 2003). The reason why the roadways of the EBA proved to be more deeply incised into the landscape, and therefore more durable, is the key to understanding the uniquely intensified nature of the EBA staple economy.

**EBA Roadways and Agricultural Intensification**

In placing the roadways of the EBA in their economic context, it is important to recognize that these features were not created to increase the efficiency of transportation. They formed as human, animal, and wheeled traffic alternately compressed the fine-textured soils in the wet season and then disturbed them in the dry season, which allowed for aeolian erosion (Hindle 1993:11; Sheets and Sever 1991:58–63; Tsoar and Yekutieli 1992; Wilkinson 1993:556–59). At certain times of the year, roadways did provide a more compact surface for pedestrian, animal, and wheeled movement,
but during the rainy season, their depressed linear morphology collected runoff. In the winter in the Upper Khabur basin today, roadways hold standing water and are avoided; instead, movement shifts to parallel routes across fallow fields.

If the roadways were muddy and inefficient for movement in the winter, why were they continuously used? In the case of northern Mesopotamia, movement was constrained onto roadways by the presence of cultivated fields bounding the tracks, or more accurately, by patterns of land tenure and social norms regarding trespass (Figure 9.7). Such constraints explain the patterning of the radial roadways. Within the cultivated zone, farmers, shepherds, and their flocks adhered to the roadways to avoid trampling crops. In the basin today, harvested fields are still valuable for the stubble they contain, the grazing rights to which are sold to pastoralists. If post-harvest fields were similarly valuable in the past, flocks would have been restricted year round, rather than only during the growing season, and roadway-forming disturbance would have been even more focused on the linear spaces between them.

At a certain distance, generally 3–5 km from the settlement, roadways reached the limits of the zone of cultivation and the start of the zone of pastoral land use. At this point, movement was no longer restricted by the presence of fields and thus could disperse. Dispersed movement meant dispersed compaction and disturbance, and therefore the depressed roadways did not form (Wilkinson 1994:492–93.)

The amount of pasture land beyond the cultivation fluctuates throughout the basin. In areas of low-density settlement, substantial pastoral land existed, whereas in other areas, such as the central basin between Beydar and Brak, the cultivated zones nearly abutted each other. In the latter case, more pasture probably existed but decreased as cultivation was expanded. This sequence would have had significant ramifications on the pastoral economy.

We can use radial roadway patterning to make inferences about the staple economy. Setting aside taphonomic issues, we can assume that the terminal ends of the roadway networks represent the boundary between the zone of cultivation within and the zone of pasture or non-agricultural land beyond it. Therefore, we can estimate the size of agricultural catchments and compare them to population estimates based on settlement size (Figure 9.8). Settlements whose agricultural catchments are larger than necessary
to sustain their own populations were surplus producers, whereas those with catchments smaller than necessary would have been surplus consumers. Tell Beydar, a small center of 17 ha, would have had to import food, while the towns in the surrounding region could have produced surpluses (Wilkinson et al. 2007a). Using the same method, major urban centers like Tell Hamoukar (98 ha) would have needed to import up to half of their cereal needs (Ur 2002b; 2004:222–31).

These calculations assume biennial fallow, a practice that serves to ameliorate the loss of soil moisture and nutrients as a result of cultivation. The landscape evidence presented here, however, can be interpreted to demonstrate that cultivation was intensified by violating fallow at the height of the EBA urban phase. If fewer or no fields were left fallow, movement would be constrained to the linear spaces between fields to an even greater degree; the intensified disturbance would result in deeper roadways than those cre-
ated during a fallowing regime. Thus the formation of deeply depressed roadways may be a tangible landscape manifestation of the reduction or elimination of the fallow. According to Esther Boserup (1965), fallow reduction is the classic form of intensification, but it has been difficult to document archaeologically (Morrison 1994).

The continuous distribution of abraded pottery that covers the areas between sites, with greatest density around EBA settlements, is further evidence of intensification. These “field scatters” have been documented from England to Oman (Bintliff and Snodgrass 1988; Wilkinson 1982) and
now are recognized in the New World (Killion 1992). Although such off-site scatters can result from a number of processes, continuous distribution is best interpreted as the remains of past manuring practices (Wilkinson 1982; Miller 1984; Charles 1998). Settlement-derived wastes were collected and deposited onto the fields as fertilizers. The organic component has long since decayed, but the incidental inorganic component (mostly potsherds, but also lithics) remains in the topsoil. Dense scatters surround EBA sites in northern Iraq and northeastern Syria (Wilkinson and Tucker 1995; Ur 2002a). The combined evidence of urban settlement patterns, deeply incised radiating roadways, and dense field scatters suggests that the agropastoral economy was intensive.

**Bottom-Up and Top-Down Structures in the EBA Staple Economy**

Proponents of hierarchical ecosystemic models might be tempted to interpret this intensification as the result of increased coercion and extraction from a growing elite based on a staple political economy. A review of the landscape evidence and excavation data, however, does not support this interpretation (Ur and Colantoni n.d.). Excavations of monumental palace and temple households in northern Mesopotamia have not identified large-scale cereal storage beyond what was required to sustain their own household members.

The analysis presented here suggests that EBA roadways were not constructed by a coercive central authority but rather emerged from the actions of individuals as they maintained their fields and took their animals to pasture. Similarly, field scatters marking manured zones are an aggregation of actions by generations of farmers fertilizing their fields. No evidence for state-controlled collection and redistribution of manure for intensification of agriculture has been documented. On the other hand, waste disposal within urban residential areas was highly localized. Household debris was thrown into the streets immediately outside of the house (a pan-Mesopotamian practice; Stone and Zimansky 2004:55), and animal wastes were possibly collected in sumps within courtyards (Ur and Colantoni n.d.). Manure was readily available to all farmers without the help of central authorities.

If the large elite institutions were not micromanaging the staple economy, what accounts for the clear evidence for agricultural intensification? Within the Patrimonial Household Model, the urban social fabric was composed of a dynamic arrangement of competing households of vari-

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If the large elite institutions were not micromanaging the staple economy, what accounts for the clear evidence for agricultural intensification? Within the Patrimonial Household Model, the urban social fabric was composed of a dynamic arrangement of competing households of vari-
ous scales; thus, intensification can be understood as one component of the continual renegotiation of the social hierarchy. Although status in EBA cities was not based primarily on the redistribution of staples, exchange in agricultural products played an important role at a more intimate scale. Communal consumption events involving alcohol and meat were important for the continual construction and maintenance of sociopolitical relationships. Archaeological studies of commensalism have focused on large-scale feasting events (Dietler and Hayden 2001), but if eating and drinking events were the arena in which these micropolitical processes played out, then every household had the motivation to produce more. Although the discussion has emphasized cultivation, animal production was also important. Indeed, the dramatic expansion of barley cultivation in the EBA may have been for fodder and meat production, as well as for human consumption (Charles and Bogaard 2001:325–26).

The focus thus far has been on the non-centralized aspects of the EBA economy and the possible motivations of politically ambitious actors within it rather than top-down control by elite households. To some extent, this is an attempt to redress the historical imbalance prioritizing top-down explanations such as the dominant ecosystemic model. The formation of the elaborate EBA systems of roadways, and more generally, the operation of the agropastoral economy, should be seen as a dynamic product of both emergent and imposed structures. The elite households certainly did extract surplus agricultural and animal products from dependents, but to a much lesser extent than supposed by traditional interpretations (Ur and Colantoni n.d.). On the other hand, the top-down approach best explains ownership of agricultural land.

Although no textual sources on land tenure from the Upper Khabur basin have been recovered, data exist for contemporary southern Mesopotamia (Renger 1995) and Ebla in western Syria (Grégoire and Renger 1988); the latter is especially likely to be comparable, given its cultural and environmental similarities. Although individuals could own movable property and house lots, all agricultural land was considered to be “owned” by the large elite households. Land was rarely “sold” but rather usufruct rights were granted, generally in exchange for a small portion of the yield. These usufruct rights could be re-granted down the hierarchy of households. Ideally ownership was retained by the largest household, but in practice lower-ranking households maintained practical control of land and it could even
be “inherited.” Only in the rare times of high centralization (e.g., the Ur III state) was the ideal form of exclusive elite ownership active (Renger 1995). Normally, de facto ownership lay elsewhere in the lower levels of the hierarchy of households (Schloen 2001).

In addition to land tenure, top-down economic control was probably limited to small-scale transfers of cereal and animal surpluses from small households to the larger ones which controlled agricultural land. These surpluses were probably consumed by the members of these larger households and expended in prepared form at communal events, rather than redistributed in bulk. The elite households were content to extract the apparently modest amount necessary for their own operation, rather than micro-managing a staple economy that ran quite smoothly on a household basis. Within this framework, the roadways of northern Mesopotamia formed primarily as the result of the movements of individual farmers and herders, acting primarily in the interests of their own households.

**POLITICS AND MOVEMENT WITHIN THE KINGDOM OF NAGAR**

Although not entirely separate from the economic sphere, we can place the roadways within the context of political action, which, much like the staple economy, was probably less centralized than assumed by ecosystemic reconstructions. As noted by Bell (1992), it is far easier (although still not unproblematic) to impute economic motives to individuals in the past than other motivations such as politics in the absence of explicit textual records. Fortunately, by the EBA, elite households in the urban centers of northern Mesopotamia had adopted cuneiform writing long in use in southern Mesopotamia. Although tablets are rare, we now have enough records from the sites of Tell Mardikh (ancient Ebla), Tell Beydar (ancient Nabada), and Tell Brak (ancient Nagar) to outline the political structure (Eidem, Finkel, and Bonechi 2001; Ismail et al. 1996; Sallaberger and Ur 2004).

Within the Upper Khabur basin, Nagar was the most important city and considered to be the political equal of the kingdoms of Ebla and Mari (Figure 9.1). The son of the ruler of Nagar married the daughter of the king of Ebla (Biga 1998), and the two royal households exchanged high-value luxuries such as silver, textiles, and specially bred equids (Archi 1998). The ruler of Nagar’s control over the central and western parts of the basin is likely.
He is mentioned in the tablets found at Nabada, and Nabada is listed as a dependent town of Nagar in the administrative tablets of Ebla. However, neither Tell Mozan (ancient Urkesh) or Tell Leilan (ancient Shekhna) appear as dependents of Nagar; therefore the eastern basin might have comprised one or more kingdoms independent of Nagar at the end of the 3rd millennium BC (Sallaberger and Ur 2004).

Our best interpretation of the internal operation of the Nagar polity comes from the more than 200 economic tablets from the site of Tell Beydar/Nabada, which primarily record lists of men, allocations of draft animals, and quantities of sheep and cereals (see Sallaberger 1996; Van Lerberghe 1996). Envisioned as a hierarchical, staple-financed state, one might expect these tablets to record the movement of cereals and animals from the “province” of Nabada to the central authority at Nagar. In fact, no material transfers of any kind between Nabada and Nagar are mentioned. Quantities of people, sheep, and draft animals are small and probably only describe the holdings of the major ruling household of Nabada itself, which appears to have operated independently of the nominal ruler of Nagar, at least in economic terms (Sallaberger and Ur 2004). The political relationship between Nagar and Nabada did not include exchange of staple products.

In ways closely connected to the landscape of movement in the basin during the EBA, the relative ranking of the ruler of Nagar and the elites in the major household of Nabada is documented in these tablets. The tablets record the allocation of cereals as feed for the donkeys of the ruler of Nagar for the number of days of his stay at Nabada, and they often mention his visits to other towns and shrines in the immediate area (Sallaberger 1996:95). The tablets list some 17 visits, averaging 3–4 days each; his donkey teams included up to 50 animals. The large quantities of cereals involved suggest that these must have been provisions for the ruler and his retinue in addition to donkey fodder (Widell 2004).

We can now imagine the ruler of Nagar moving along the roadways of his kingdom with a large entourage. Reading between the lines of these terse administrative tablets, we perceive the relatively decentralized nature of the kingdom, and the ruler’s somewhat tenuous hold on power.

Most tellingly, the ruler of Nagar was obliged to visit the provincial elites within his kingdom, rather than vice versa (although our textual sources are potentially unrepresentative). As with the dynamic web of social relationships comprising the fabric of urban settlements described above, the
ruler had to make the rounds of the polity, cementing his political ties with face-to-face interactions. During the brief era documented by the Beydar tablets, the ruler was a frequent visitor to the provinces. Rather than being institutionalized, the relationships upon which the kingdom of Nagar was built required continuous renegotiation.

In his movement across the plains of northern Mesopotamia, the ruler and his retinue must have passed by the farmers and herders as they took the same routes to and from their fields and pastures. The ruler’s regional travel between the capital at Nagar and the provincial center at Nabada may have followed the system of roadways mentioned above (Figure 9.2). The indirectness of his movements is evidence of the limitations on centralized power. In other cases, powerful elites were able to impose straight roads onto the landscape as in the case of the Maya rulers (Keller, Chapter 7, this volume), or possibly the causeways and canals of the Bolivian Amazon (Erickson, Chapter 10, this volume), and the administrators of the Roman empire (Greene 1986:34–39). Such power appears to have been beyond the ruler of Nagar. Within his kingdom, he moved from settlement to settlement, respecting the local roadway networks as well as the local socio-political hierarchies and patterns of land control from which they emerged (Sallaberger and Ur 2004:69–70).

CONCLUSIONS

The extensive EBA network of roadways in northern Mesopotamia survives as a durable but unintended consequence of a unique phase of social complexity and demographic growth. Around the major centers and smaller towns alike, intensification of crop and livestock production left a distinct and deeply inscribed mark, literally and figuratively, on the landscape.

The subsistence demands of an expanding population did not single-handedly drive this intensified staple economy and its associated network of roadways, however. Within the towns and cities, household heads jostled for political advantage and worked to maintain their existing relationships. This required personal interaction in the context of commensal events, some large and elaborated but probably mostly small-scale and routine, as when a patriarch played host to his extended family, or when the head of a neighborhood lineage entertained the heads of other locally important families. Animals and cereals were a critical element of this household-level
staple-based political economy. Cumulatively, these events placed a demand on the agro-pastoral system for the staples that greased the social gears: cereals for bread and beer, and livestock for meat consumption. These social and corresponding agricultural demands ultimately resulted in the linear features that remain etched into the landscape of northern Mesopotamia. This landscape was thus the product of a unique historical phase of emergent intensification within the constraints of the structure of the system of land tenure.

In northern Mesopotamia, the culturally familiar patterning of interconnected radial networks prevented Western researchers from venturing beyond economic interpretations. In some places, roadways can be interpreted as delimiting paths of movement through liminal or transitional zones, inspiring relief at homecoming in some and trepidation in others (Snead 2002). Although the roadways of the Early Bronze Age certainly held meaning to those who traversed them, it is inadvisable at present to speculate upon what it might have been. None of the laconic cuneiform texts available touch upon the kind of non-economic matters which would allow such insights.

Perhaps we might draw some conclusions on these aspects from the ultimate fate of this society. At the end of the 3rd millennium, all of the urban settlements were either abandoned or dramatically reduced in size. Although individual cities did reappear, urbanism on the scale of the Early Bronze Age experiment was never to return to the plains. When agricultural intensification returned, the emergent form, as manifested by roadways and field scatters, had been replaced by imposed varieties, road and irrigation systems stamped onto the landscape by the planners of the Neo-Assyrian, Seleucid, and Roman-Byzantine empires. Perhaps the competitive political economy, and its social environment, were ultimately found not to be worth the cost, and only with these later territorial empires were new landscapes of intensification again created. The EBA landscapes of movement, however, were never to be replicated.

NOTES
1. A terminological distinction is often made between non-constructed informal paths and intentionally constructed roads (Trombold 1991a:3; Hyslop 1991:29; Crawford 1953:60–62). The features discussed in this paper are non-constructed, but I refer to them as “roadways” for several reasons. Unlike most informal paths, individual features are linear and non-redundant. Furthermore, the term “path” has connotations about size
(small-scale) and means of transport (for humans, mostly foot traffic) that do not necessarily apply in this case study.

2. The long history of research in this area has produced competing and confusing variations in geographical and chronological terminology that will be mostly passed over in this chapter. Geographically, this region falls into northeastern Syria, northern Iraq, and southeastern Turkey, and is often referred to as Northern (or Upper) Mesopotamia or the Jazira (Arabic for “Island”). In absolute dates, the urban settlement phase began around 2600 BC and lasted until around 2000 BC (although these dates, particularly the end, are fiercely debated). In the most general Near Eastern chronology, this time spans the later Early Bronze Age (EBA). In the southern Mesopotamian historical chronology it would be considered the Early Dynastic III through Akkadian periods; and in the new “Early Jazira” chronology, it would be designated EJ III–IV (and possibly into EJ V).